Environmental Sustainability in New Zealand Museums: A Case
Study of Te Manawa Museum, Gallery and Science Centre

by

Nina Helen Finigan

A thesis
submitted to the Victoria University of Wellington
in partial fulfillment of the requirements for the degree of
Master of Arts
in
Museum and Heritage Studies

Victoria University of Wellington

2012

Abstract

Environmental sustainability is becoming an increasingly essential component of modern life. The contemporary museums' role as public educators, and as guardians of tangible and intangible culture, places them in a unique position to address the various issues surrounding environmental sustainability, from climate change, to bio-diversity loss, to conservation. There is increasing momentum behind the idea that museums should not only engage with environmental sustainability, but that they indeed have a responsibility to.

Although museums throughout New Zealand are addressing environmental sustainability, there is currently no thorough examination of how they are doing this. Therefore, the aim of this dissertation was to find out the current state of environmental sustainability in New Zealand museums, and specifically how staff are approaching it. Through engaging in a case study of Te Manawa Museum, Gallery and Science Centre, Palmerston North, and specifically the environmentally themed exhibition *Te Awa/The River: Heart of the Manawatu*, this dissertation analyses and discusses the realities of addressing institutional environmental sustainability. While the previous literature surrounding this topic has addressed the many reasons why museums should engage with environmental sustainability, this dissertation has expanded on this by analysing and discussing the realities of addressing environmental sustainability from a staff perspective. Through interviews with five Te Manawa staff members, this dissertation has revealed that while museum professionals agree that engagement with environmental sustainability should become part of bottom line holistic sustainable development, the status of museums as trusted democratic institutions can place them in a conflicted space 'in-between' when dealing with polarising issues such as the environment. This is particularly relevant to the discussion around new-museological theory, and the importance of local context and reflexive community engagement, where the community essentially help drive museological direction and content.

Acknowledgements

I would like to thank, first and foremost, my primary supervisor Dr Lee Davidson for her unwavering support and encouragement. Both her positive affirmations and critical advice were always constructive and the source of countless pearls of wisdom throughout the entire process. Her warmth and positivity made our meetings a pleasure. I would also like to thank my secondary supervisor Dr Eric Dorfman, whose experience and vast knowledge of this topic provided me with an invaluable sounding board.

I would also like to thank the rest of the Department of Museum and Heritage Studies, particularly Dr Conal McCarthy whose support and enthusiasm throughout the duration of my study has been truly outstanding. I would also like to give special mention the administrative staff, Annie Mercer and Pippa Wiseheart, for being the ones who hold it all together.

The continual love and support from my family is something I could not do without. I particularly thank them for always encouraging me to pursue my passions in life, and for instilling in me the importance of education. Finally and perhaps most importantly I would like to thank Gareth, who, over the years, has put up with my academic pursuits, and provided continuous support, love and much needed distraction in stressful times.

Table of Contents

Introduction	1
Chapter One: Literature Review	8
Summary	20
Chapter Two: Research Design and Case Study Background	22
Introduction	22
Research Questions	22
Research Methodology	23
Research Methods	23
The Case Study	25
Data Collection and Analysis	26
The Case Study and <i>Te Awa/The River: Heart of the Manawatū</i>	27
Introduction	27
Te Manawa: Context	27
The Journey to <i>Te Awa/The River: Heart of the Manawatū</i>	28
Wider Institutional Setting	30
Summary	34
Chapter Three: Te Manawa and The Role of Museums	36
Introduction	36
The Role of Museums: Stewardship, Mediation and Leadership	37
The Role of Museums: Changing Behaviour	41
The Role of Museums: Building Relationships	45
Summary	51
Chapter Four: Institutional Engagement	54
Staff Practice	54
Policy: Putting Ideas into Action	56
Barriers to Achieving Environmental Sustainability	58

Incentives to Achieving Environmental Sustainability	60
Summary	61
Conclusion.....	63
Appendix A: Interview Schedule	69
Appendix B: Interviewees.....	71
Bibliography.....	72

Introduction

Biodiversity loss, climate change, a looming energy crisis, rising sea levels, overpopulation – the earth is straining under the weight of the almost seven billion inhabitants who demand use of its resources. As this population increases, the scientific community is stressing that our current way of life is on a collision course with our planet's finite capacities. We have all heard of these issues; perhaps sought them out independently or have accidentally come across these debates on the internet or in magazines. This information is everywhere and yet confusion about what it means at international, national and individual levels still casts a shadow over awareness and action. As this issue becomes increasingly essential to address, we must ask the important question of what information the general public is receiving regarding this imperative issue and where they are receiving it from. In 2011 the University of Western Sydney conducted an online survey involving 2,100 participants from across Australia, New Jersey and New York, along with focus groups and one-on-one interviews. The results of the survey concluded that:

81 per cent [of the participants] lacked confidence in information from corporations because they are driven by “profit motive” and a further 66 per cent were skeptical of information sourced from government because they were seen as having specific vested interests that have a focus on the “short termism” of the election cycle ... A further 57 per cent of our sample was suspicious of information derived from commercial media because they were seen as sources that sensationalize and supply a one-dimensional story.¹

If ensuring people are receiving the correct information is the first step in the raising consciousness, the distrust many people feel regarding the mainstream sources of this information is not a positive start. Conversely, the same study found that:

Cultural institutions, such as museums and science centers [while] not prominent in people's minds as information sources on climate change ... are seen as potentially one of the most trusted ... here

¹ Cameron, Fiona. “From Mitigation to Creativity: The Agency of Museums and Science Centres and the Means to Govern Climate Change,” in *Museum and Society*, Vol. 9, No. 2 (July 2011).

the expressive forms of an institution – its trustworthiness, its expertise and perceived impartiality – frames the capacity to intervene in debates ... marked by a high level of distrust and skepticism because it is perceived as lacking political agenda and therefore vested interests.²

These sentiments indeed reflect a cultural shift regarding the museum and its place within our society, which has been occurring steadily since the 1970s. While society at large has perhaps become more skeptical of our governing bodies, museums have slowly been extricating themselves from their past as proponents of ‘monocultural, eurocentric’³ agendas, to emerge as essential cultural spaces of democratic learning and discovering. Not only this, museums are viewed as ‘trusted institutions’ of ‘popular education and culture’, which places them in a unique position within society.⁴ This shift has provided museums with the invaluable position as trusted public educators, and places them in the perfect position to address the issues surrounding environmental sustainability through policy, staff practice, exhibition content and education programmes.

In addition, there is also the idea that a museum’s mission statement, which usually purports ideas of guardianship and preservation of culture for future generations, naturally aligns them with environmental sustainability. While traditionally this concept of guardianship has been limited to the tangible objects within a museum’s collection, as museums are increasingly turning outwards and becoming public forums in which the community expects to see themselves reflected, they must themselves reflect positive, community-minded behaviour. This concept has become particularly pertinent in our post-colonial time of cultural globalization, where ‘different identities come to the foreground.’⁵ As the contemporary museum continues to grow and develop along with their communities, and as environmentally sustainable development becomes an increasingly vital component of modern life, the museums’ position as cultural guardians, public educators and community leaders makes it essential for them to address environmental sustainability.

² Cameron, 93.

³ Arapata T. Hakiwai, “The Search for Legitimacy,” in *Heritage, Museums and Galleries: An Introductory Reader*, ed. Gerard Corsane (London and New York: Routledge, 2005), 156.

⁴ David Thelen, “Learning Community: Lessons in Co-creating the Civic Museum,” in *Heritage, Museums and Galleries: An Introductory Reader*, ed. Gerard Corsane (London and New York: Routledge, 2005), 333.

⁵ Jan Nederveen Pieterse, “Multiculturalism and Museums,” in *Heritage, Museums and Galleries: An Introductory Reader*, ed. Gerard Corsane (London and New York: Routledge, 2005), 170.

With the aim of helping to contribute to the local debate surrounding this topic, this dissertation is a case study looking at environmental sustainability in New Zealand museums. Through looking at one in-depth case study, this research provides a snapshot of how one New Zealand museum is addressing and interacting with ideas of environmental sustainability. Internationally, many museums are implementing policies to help put environmental sustainability into practice. For example, in an Australasian context, Museums Australia has produced a report which includes guidelines to help institutionalise sustainable practices. The report states that through institutionally incorporating environmental sustainability, museums have the potential to ‘serve as models of good practice in a wide range of activities including the management of their resources, decision making and policy development.’⁶ The report places environmental, economic and societal sustainability at the forefront of museum practice. However, the notion that economic and societal sustainability and development can only be maintained if environmental sustainability is simultaneously addressed is beginning to gain momentum: ‘For museums sustainability principles should guide both their day-to-day operations and their role in the community.’⁷

The report outlines three areas in which museums should aim to implement their sustainable practices: education; operations; and collections.⁸ Perhaps museums’ primary role in the promotion of sustainable practices is in education as they are spaces of democratic learning: ‘Museums can bring people together across differences and, in so doing, can help to promote individual and collective engagement with the ideas and issues of sustainability.’ These policies may be implemented at varying levels. However, as I will address in the following chapter, it is becoming increasingly essential for museums to address and internally communicate their stance on environmental sustainability clearly and effectively. This is not simply environmentally essential, but economically too, as museums face rising costs and funding cuts.⁹

⁶ Museums Australia Report, “Museums and Sustainability: Guidelines for Policy and Practice in Museums and Galleries,” www.museumsaustralia.org.au/userfiles/file/Policies/sustainability.pdf (accessed June, 2011).

⁷ Museums Australia Report, 3.

⁸ Museums Australia Report, 1.

⁹ Museum Association, www.museumassociation.org/news/13062011-local-authority-museums-cut-staff-in-last-year (accessed June, 2011).

Within this framework, I am interested in not only the institutional practices staff are engaged with, but also in where their thinking is individually regarding this issue. Although implementing policy is essential for achieving environmental sustainability within any institution, the process often begins with the initiative of staff members who recognise the importance of such issues. In light of this, I set out to ascertain if museum professionals in New Zealand consider this an essential issue for museums to address and why. In a New Zealand context, institutions such as the National Museum of New Zealand Te Papa Tongarewa incorporate kaitiakitanga¹⁰ into their approach to collection care, not only for their Māori taonga, but also in a more holistic manner. The concept is one of Te Papa's five central values, and through this they acknowledge the spiritual life-force of objects and their relationship to the health and well-being of the community at large.¹¹ There is potential for other museums to explore this concept as a way to reassess their understanding of their role as guardians of cultural and natural heritage for future generations.

As museums are public forums, they have the potential to be a platform through which these ideas and institutional policies can be communicated to the public at large. In a local context, for example, the Air Force Museum of New Zealand showcases their own environmentally sustainable policies online¹² by outlining their efforts to reduce their consumption of waste, water and energy on their website. National Services Te Paerangi has also addressed the issue of environmental sustainability in museums through a series of seminars entitled 'Making Sense of Sustainability'.¹³

While there are many international examples of museums engaging with environmentally sustainable ideas, there is no concise examination of a New Zealand museum engaging with these same issues. Of course, many local

¹⁰ Kaitiakitanga is a Maori concept relating to the idea of guardianship.

¹¹ The National Museum of New Zealand Te Papa Tongarewa <http://kupenga/Corporate/OurValues/Pages/KaitiakitangaGuardianship> (accessed October, 2011).

¹² Air Force Museum of New Zealand, www.airforcemuseum.co.nz/main/Our-Green-Museum (accessed June, 2011).

¹³ In 2010, National Services Te Paerangi conducted a number of seminars entitled 'Making Sense of Sustainability'. These seminars talked participants through the various stages of becoming a sustainable institution based on the ABCD model: A – awareness; B – baseline/benchmark; C – compelling vision/creative solutions; D – down to action. The sustainable models presented were based on the work of several organisations dedicated to helping businesses, communities, educational facilities and governments become sustainable such as Forum for the Future and The Natural Step.

museums exhibit their concern and engagement with this topic (particularly on their websites). However, there is no example of a case study which looked specifically at how museums are engaging both theoretically and professionally with environmental sustainability. Ideas regarding the museum and environmental sustainability are obviously out there, and through this dissertation I aim to clarify where New Zealand museums are positioning themselves in this dialogue.

The field of green museological theory and practice is growing rapidly, with museum professionals and academics alike addressing the issue of why these institutions are the ideal forums to publically explore such issues. Chapter One examines the current literature concerning this debate. However, it also addresses what can be looked upon as heralding the beginning of the thoroughly contemporary museum, namely new museological theory. This theory developed alongside post-modern notions of institutional reflexivity:

The museum world has undergone radical change since the 1970s. Political and economic pressures have forced its professionals to shift their attention from their collections towards visitors. Whereas in the past the museum tended to be exclusive and elitist, signs of a progressive opening-up and greater accessibility have appeared.¹⁴

These ideas were responsible for opening the museum up to the outside world and consequently set the scene for the exploration of culturally pertinent issues, such as environmental sustainability.

Chapter Two presents the central research questions: *What is the current state of environmental sustainability practices in New Zealand museums?* and *How are museums professional engaging with environmental sustainability?* It also outlines the research design, which includes the methodological approach and research methods of the data collection and analysis. The research methodology for this dissertation is based on a case study of Te Manawa Museum, Gallery and Science Centre, Palmerston North. I chose Te Manawa as it represents a kind of medium of the museum world – a regional museum which weaves together the facets of science, art and social history into one mid-sized institution. While examining multiple museums of various sizes would have been

¹⁴ Max Ross, “Interpreting the New Museology,” in *Museum and Society*, Vol. 2. No. 2 (July 2004), 84.

ideal, the scale of this research dictated that this was not possible. Instead, this dissertation focused on one institution and through this endeavored to gain a thorough and comprehensive snapshot of how one New Zealand museum is interacting with these ideas. Indeed, while this is only representative of one museum, this case study provides some indication of the current state of environmental sustainability in New Zealand museums, as well as what the future may hold. The primary research method used for this study was interviews with five Te Manawa staff members representing the various divisions – art, design, science, education and senior management.

Chapter Two also sets up the contextual background against which my research took place by looking briefly at the institutional structure of Te Manawa. However, the bulk of this chapter is spent exploring the details of an exhibition currently on show which holds particular pertinence to this study – *Te Awa/The River: Heart of the Manawatū*. Through my visits with the museum and interviews with staff, this exhibition revealed itself to be of central importance to this study. Although my primary aim was to gain access to the opinions of staff members in order to understand where Te Manawa positions itself in the green museological debate, I found that *Te Awa* succinctly crystallised the realities of addressing the politically charged topic of the environment. This chapter therefore examines the realisation of this exhibition, from conception to execution, a journey which was not short of controversy.

Chapters Three and Four presents the six main themes from the interviews:

- the role of museums – generally and in relation to environmental sustainability
- museums’ ability to change/influence behaviour
- Te Manawa’s relationships with the community and other external bodies
- staff practice
- institutional policy
- barriers and incentives to achieving environmental sustainability within the museum.

This material represents the foundation on which this research builds an understanding of the current state of environmental sustainability in New Zealand museums. Secondly, and perhaps most importantly, this material is analyzed and discussed in order to answer my central research questions.

The conclusion then restates the aims and summarises the key findings of the research, points to the implications of the findings for both theory and practice and acknowledges the limitations of the work. It also points to possible directions for future research, and specifically where the findings of this study could lead to further developing and understanding the state of environmentally sustainable museological practice and theory in New Zealand.

Chapter One: Literature Review

This chapter addresses the literature surrounding the issue of environmental sustainability in museums. The literature relating to the development of green and environmentally sustainable museology sits within a wider intellectual framework, not necessarily relating to the green museum itself. First, this chapter addresses the development of museum studies by specifically looking at the complex interaction between theory and practice – the framework within which this dissertation is positioned. With this in mind, this section then addresses the further theoretical issues that can be viewed as the precursors to environmental sustainable development in museums. In establishing the theoretical background for green or sustainable museology, the texts I deem as significant explore the concepts of new museological practice, the acknowledgement of intangible natural heritage, and the role of museums as educators as well as stewards of heritage – both natural and cultural. Because this study straddles the theory/practice binary, this section also refers to literature and ideas emerging out of museums, an essential component in the development and growth of museum studies.

First, it is important to outline the discipline of museum studies itself and particularly the correlation between theory and practice, as it is in this binary that this research is positioned. The discipline of museum studies has always straddled the academic and professional spheres, with much debate over which sphere informs the other and where the emphasis of research should lie to enhance the development of the field. As Julia Harrison points out, ‘Intellectual crises for museums are not new. The modern museum is a public democratic institution, and this does not flow smoothly from its conflicting nineteenth century scholarly and entertainment roots.’¹⁵ While museum studies is often perceived to exist on the periphery of more traditional academic disciplines as it is not ‘academic enough’, it is also simultaneously viewed as being outside the professional museum sphere as it is ‘over-intellectualised’ and disconnected from ground-level

¹⁵ Julia D. Harrison, “Ideas of the Museum in the 1990s”, in *Heritage, Museums and Galleries: An Introductory Reader*, ed. Gerard Corsane (USA & Canada: Routledge, 2005), 39.

museum practice.¹⁶ So where exactly is it located? Labrum and McCarthy outline the complexities surrounding the placement of museum studies and propose that its relevance indeed lies in the fact that it exists somewhere between the academic and professional worlds, and that the split between these two spheres is artificial.¹⁷ Indeed, they argue not only that the most productive and meaningful work conducted in museum studies comes from a collaboration of theory and practice, but that they are in fact always linked and form part of a symbiotic relationship. It is within this framework of reflexivity and cross-disciplinary research that this dissertation is positioned.

Forming another side to the development of reflexivity within the museum is the development of new museology. While it is generally understood to be a relatively recent phenomenon of the 1970s and 1980s, ‘new museology actually follows the tradition among museum people dating back to the nineteenth century of considering the museum as an educational institution in the service of society.’¹⁸ People are placed at the centre of new museology:

A crucial element in the structure and organization of the “new” museum is that it offers the population an active role in shaping and participating in the museum ... Ideally the museum will be supported by the public itself and the population will at the same time be the actor and object of the museum’s work.¹⁹

Deidre C. Stam’s essay “The Informed Muse: The Implications of New Museology for Museum Practice”, discusses the changing face of the museum and questions traditional museological approaches to the ‘issues of value, meaning, control, interpretation, authority and authenticity.’²⁰ New museology insists that the ‘past must be set aside, reconstructed, transformed from a century of bric-a-brac into a nursery of living thought.’²¹ The supporters of this theory see the traditional structure of the museum as being closed off, compartmentalised and ‘external[ly] isolate[d] from the larger society’, and rather encourage a more

¹⁶ Bronwyn Labrum and Conal McCarthy, “Museum Studies and Museums: Bringing Together Theory and Practice,” in *Te Ara* (November 2005), 7.

¹⁷ Suzanne McLeod in Labrum and McCarthy, 7.

¹⁸ Andrea Hauenschild, “Claims and Reality of New Museology: Case Studies in Canada, the United States and Mexico” (Smithsonian Centre for Education and Museum Studies), 1.

¹⁹ Andrea Hauenschild, 2.

²⁰ Deidre C. Stam, “The Informed Muse: The Implications of ‘New Museology’ for Museum Practice,” in *Heritage, Museums and Galleries: An Introductory Reader*, ed. Gerard Corsane (USA & Canada: Routledge, 2005), 55.

²¹ George Brown Goode, quoted in Stam, 54.

‘holistic approach to the information with which they deal.’²² This theoretical framework is becoming more and more necessary for the contemporary museum. As they increasingly become sign-posts of our societies, the actions, ideas, philosophies and missions they promote must be in line with contemporary thought. New museological theory ‘encourages improved understandings of the complex social environment in which museums operate’, which highlights the need for museums to be a part of their communities through encouraging open dialogue both internally and externally.

This approach seems to encourage museums to think beyond their tangible collection, which was traditionally viewed as their bread and butter – it is what keeps visitors enthralled and coming back for more. It was the ‘concrete and tangible’ nature of the museum that had been its focal point throughout its history.²³ However, this notion has been increasingly challenged over the past two decades. Indeed, the ‘rationale for new museology was that it was driven by the local community; social subjects and concerns replaced objects as its focus, community needs drove the museological development and the museum was not necessarily confined to its building.’²⁴ Museums are increasingly being viewed as forums through which important intangible issues can be raised within their own walls. Intangible cultural heritage can be described as the aspects of our cultural existence that we cannot touch. According to UNESCO, the definition of intangible culture:

... includes traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts.²⁵

At the root of this definition is community and people – the crux of new museology. However, also central to the health and stability of these traditions is the health and stability of the world within which they exist, which itself is becoming increasingly unstable.

²² Stam, 67.

²³ Julia D. Harrison, “Ideas of Museums in the 1990s,” in *Museums, Heritage and Galleries*, ed. Gerard Corsane (USA & Canada: Routledge, 2005), 38.

²⁴ Harrison, 43.

²⁵ UNESCO, <http://www.unesco.org> (accessed April, 2011).

Perhaps no contemporary issue facing the global community is comparable to the environmental concerns that threaten our planet. With the loss of ecosystems increasing at a rate previously unseen, and the impact of climate change becoming more and more essential to address, the concept of living in an environmentally sustainable manner is becoming increasingly vital. The concept of sustainability has become something of a buzz-word of the twenty-first century. However, the most useful definition was provided in 1987 by the World Commission on the Environment and Development in the text *Our Common Future*. The report stated that ‘sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’²⁶ A common view of sustainable development is one that interlinks economic, social and environmental sustainability. However, it is essential to understand that these interlinked dimensions have become unbalanced, and indeed, unsustainable. W.M. Adams has highlighted the need for a revision of the established model to accommodate the changes required:

The three pillars of sustainable development, from left to right, the theory, the reality and the change needed to better balance the model

27

The last model represents the idea that the health and endurance of economic and social development rely entirely on environmental sustainability, without which life collapses.

However essential these issues are, unless the global community at large takes heed of the importance of their contribution to the problem along with the fact that they are also part of the solution, the message will be lost. The complex and expanding role of the contemporary museum provides the perfect stage to

²⁶ World Commission on Environment and Development, “Our Common Future” (Oxford and New York: Oxford University Press, 1987), 43.

²⁷ W.M. Adams, “The Future of Sustainability: Rethinking Environment and Development in the Twenty-first Century,” Report of the IUCN Renowned Thinkers Meeting (January 29-31, 2006), 2.

educate the wider community on the importance of ‘living lighter on the earth’²⁸ by doing so themselves, while at the same time extending their role as stewards of tangible and intangible cultural and natural heritage.

The contemporary literature exclusively focused on green and sustainable museum practice can only grow from this point. However, as it is a relatively new concern it only represents a small portion of the texts within museum studies. There are, however, many scholars and museum professionals who have incorporated these issues into the current debates around museological practice. Sarah Brophy and Elizabeth Wylie write extensively on the issue of incorporating green ideology into the museum space:

Why shouldn’t museums – as places of learning, exploration and demonstration and as models of community-minded behaviour – be ahead of the curve? If our job is to teach and inspire, then we are perfectly situated to model green behaviour both in pursuit of our missions and support of communities.²⁹

The notion of correlating a museum’s mission with sustainable practice is one that permeates most of the contemporary literature in this burgeoning field. It is not just a matter of ‘building our way out’ of climate change through green-architecture, which is an attractive but expensive process. Instead, making institutional changes to practices and habits and addressing environmental issues in exhibitions and public programmes will be what puts museums at the forefront of environmentally sustainable developments.³⁰

Indeed, while large institutions with bigger budgets may seem to have the greater capacity to ‘go green’, smaller museums may actually have an advantage in their size. While larger institutions usually have much more bureaucratic processes which can slow down and hinder progress, smaller museums can often make decisions faster and in a more holistic manner than their larger counterparts. This may provide them with a greater opportunity to make sustainable institutional changes.

²⁸ Eric Dorfman, “The Sustainable Museum: A Global Review,” paper presented at Challenges and Perspectives: New Roles of the Natural History Museum in Response to Global Change, National Taiwan Museum, Taipei (October 28-29, 2010).

²⁹ Sarah Brophy and Elizabeth Wylie, “It’s Easy Being Green: Museums and the Green Movement,” in *Museum News* (September/October 2006), 1.

³⁰ Sarah Brophy and Elizabeth Wylie, “Saving Collections and the Planet,” www.aam-us.org/pubs/mn/savingcollections.cfm (accessed May, 2011).

Museums have long been the stewards of our tangible cultural heritage. In addition to this, in the post-new museological era, intangible cultural heritage has also become a focus for museums where cultural practices such as music, dance or indigenous cultural knowledge is explored, particularly through public programmes. Natural history museums have long been the guardians of tangible natural heritage for the purposes of both research and preservation. However, the concept of intangible natural heritage is gaining momentum in the museum world and indeed is increasingly viewed as an essential component to ensuring meaningful engagement with environmental sustainability. The relationship between intangible natural heritage and environmental sustainability is both necessary and complicated. While the components essential to the intangible, natural world exist independently of human definition (such as the ‘noise of a river eroding its surrounding rocks, the smell of a pine forest, the call of a bird and the whistle of the wind ...’³¹), it is through human interaction with the natural world, and our dependence on it for our notions of identity and belonging, which defines its ‘heritage value.’³² As the text *Intangible Natural Heritage* suggests, the success or failure of environmental sustainability is intrinsically connected to our emotional connection to the surrounding environment. Museums can play an integral role not only in addressing and interpreting intangible natural heritage, but also in helping visitors rediscover our place in the natural world.

Essential to this process is educating and engaging the public on the symbiotic relationship between our existence and cohabitation with the rest of life on earth. This is a vital step on the path to communicating the importance of sustainability through museums. Michael J. Novacek of the American Museum of Natural History writes emphatically of the need to engage and educate the public on these matters. He views the focus on global warming as a potential hindrance to the promotion of other environmental and biodiversity issues, which have become sidelined and are relatively easy for the general public to ignore as they may not noticeably affect them on a daily basis:

³¹ Eric Dorfman and Janet Carding, “Towards a Unified Definition of Intangible Natural Heritage,” in *Intangible Natural Heritage: New Perspectives of Natural Objects*, ed. Eric Dorfman (New York: Routledge, 2011), 161.

³² Ibid.

... the swamp-out effect that the current focus on global warming is having on other environmental topics once again illustrates the problem of changes in public opinion that are not adequately informed. There is now a tendency in public dialogue to decouple various environmental problems and ignore their synergistic effects.³³

However, the relative success of public awareness of global warming is also a platform from which these issues and their ‘synergistic effects’ can be communicated. Novacek outlines that museums can help ‘build on the welcome increase in public interest in global warming by demonstrating the synergistic effects of other environmental disruptions.’³⁴

In questioning why the issue of biodiversity loss has not had the same comprehensive coverage as global warming, Novacek sites major issues such as the ‘antagonism of corporate interests and lack of vision, and even resistance, of leaders and governments.’ However, he also places much of the emphasis on the general public in being a catalyst for change: ‘... if a lack of public understanding or concern persists, it is highly unlikely that either governments or businesses will change course.’³⁵ Accordingly, essential to inspiring public interest in the biodiversity crisis is relating it to familiar and relevant concepts. Emphasising our reliance on the balance of the environment and its ecosystems, and indeed how our disruption and destruction of these environments may impact on our existence, is vital.

Determining why humanity, and consequentially museums, must take responsibility in communicating these issues was established by Ehrlich and Wilson in their text *Biodiversity Studies: Science and Policy*. They created a framework for communicating these messages through concepts that are relatable to individuals and institutions alike:

(i) we have, as Earth’s dominant species, and ethical and moral responsibility to protect diverse life; (ii) biodiversity has conferred enormous economic benefits to humans in the form of foods, medicines, and industrial products; (iii) species are the working parts

³³ Michael J. Novacek, “Engaging the Public in Biodiversity Issues,” in *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 105: In Light of Evolution II: Biodiversity and Extinction (August 12, 2008), 11573.

³⁴ Novacek, 11575.

³⁵ Novacek, 11571.

of natural ecosystems that provide the essential services necessary to sustain life.³⁶

In communicating such concepts, museums have an essential role to play as mediators between the scientific community and the general public. Indeed the ‘unique position that [museums] occupy between the academic world and the general public’ is one of their most important and significant assets. Many of the misunderstandings around the subject of biodiversity are issues of:

... science illiteracy, the related lack of public familiarity with ecological and evolutionary processes ... an uncertainty as to why biodiversity conservation is good for individuals and society ... impoverishment of experiences that put people into nature ... and competitive choices (even subliminal ones), such as unsustainable consumerism.³⁷

Like climate change, sustainable biodiversity must be linked to easily relatable concepts in order for it to be communicated effectively. According to Novacek, ‘exposure to science falls to museums ... and similar venues devoted to ... public education. These institutions are thus critically important in educating people on biodiversity issues and other environmental problems.’³⁸ As author Paul Hawken points out, museums have the capacity to transform the minds of the ‘biologically illiterate’: ‘Museums offer us the possibility of discovering our true home here on Earth, and knowing where we are, we may more fully know who we are and can be.’³⁹

Brophy and Whyllie also emphasise that a museum’s duty to address environmental issues does not only result from its roles as public educators, but also because of their often massive running costs:

Museums have this responsibility not only because of their status as educational sites but also because they are inherently large consumers of energy. This is more so for larger museums, whose vast interior spaces, multiple exhibitions with round the clock lighting, collection store rooms with 24/7 temperature and humidity control, and even cafes all require huge amounts of energy.⁴⁰

³⁶ Ehrlich and Wilson quoted in Novacek, 11574.

³⁷ Novacek, 11572.

³⁸ Novacek, 11576.

³⁹ Paul Hawker in, “Saving Collections and the Planet.”

⁴⁰ Brophy and Whyllie, “It’s Easy Being Green: Museums and the Green Movement,” 2.

Brophy and Wylie assert that ‘with this degree of impact, sustainable design, construction and operations in museums can have positive global consequences.’⁴¹ A combination of this large energy consumption and other economic factors means museums are facing rising electricity and maintenance costs. As funding (or lack of it) is a never-ending issue within the cultural sector it will become increasingly essential for museums to find ways to cut costs by reassessing their energy usage. All over the world museums are facing funding cuts and staff redundancies, while simultaneously having to deal with rising costs. Worrying statistics from New Zealand’s Museum Association claim that 40% of local authority museums have had to cut staff over the past year. Half of the respondents to the study claimed that 25% of their workforce had been lost due to redundancies.⁴² Establishing long-term changes to alleviate the strain on budgets through initiating sustainable practices is not only an ethical issue museums must face, but a fundamentally essential one in a world where resources are becoming increasingly expensive, scarce and precious.

Despite the notion that ‘green and collections care [do] not mix’,⁴³ much of the literature asks ‘can museums afford to not go green?’ Brophy and Wylie assert that incorporating green practices can be a part of every museum and like-minded institution, regardless of whether or not they initially see it as in line with their missions. As they stress, ‘green can save you money ... and keeps the environment clean and safe for your objects, buildings, and visitors. Isn’t that mission support?’⁴⁴

The process of moving towards sustainable practices may be easier said than done. However, there are initiatives set up throughout the world to assist museums and other institutions on their path to a more sustainable future. Within the United Kingdom, Greener Museums is one such programme that provides museums with the practical skills and knowledge that allow follow through and take action on ideas that can otherwise become stagnant. Greener Museums is a ‘sustainability company that serves museums and the cultural sector ... [and] ...

⁴¹ Ibid.

⁴² “Museum Association,” www.museumsassociation.org/news/13062011-local-authority-museums-cut-staff-in-last-year (accessed June, 2011).

⁴³ Brophy and Wylie, *The Green Museum*, xiii.

⁴⁴ Ibid, 2.

works with museums of all kinds and sizes, all over the world, to help accelerate progress towards sustainability.’ Through this initiative:

Participants followed a curriculum designed to develop sustainability knowledge as well as leadership, advocacy and project management skills ... The programme helped each museum to establish a baseline – an environmental and financial footprint – so that each museum was able to identify its top issues and measure performance. Through our online curriculum, each sustainability leader learned about different aspects of sustainability to help them identify projects that will save costs in the short and long-term.⁴⁵

Educating the museum workers themselves is indeed the first step in establishing a change that will flow from the inside out of the institution.

In keeping with the notion of institutional theory (discussed briefly in the below paragraph), the notion that ‘social learning and behavioural changes’ are fundamental in the process of reaching sustainability is increasingly acknowledged. This applies within the museum itself. In terms of a museum’s operations, these institutions ‘can serve as models of good practice in a wide range of activities including the management of their resources, decision making and policy development.’ In regard to collection management the issue is a little more complex, as while collections are indeed national treasures, it is important to also acknowledge that ‘they may become a future liability if we fail to collect, conserve and document with our long-term obligations and liabilities in mind.’⁴⁶ The issue of endlessly collecting and stockpiling three-dimensional objects is indeed already a liability for many museums, as the cost of storage and conservation increases as collections themselves expand. Some experts predict that, faced with this reality, many museums will look towards practices that ‘favour acquiring singular works that truly energize galleries and encourage sharing among institutions’, rather than endlessly acquiring new acquisitions. There may also be the added benefit that ‘this shift will force museums to dig deeper into their own collections, researching them more and understanding them better.’⁴⁷

How might the concept of sustainability be incorporated and implemented into museums at a foundational level? Jennings and Zandbergen use institutional

⁴⁵ Greener Museums, <http://greenermuseumsleadership.org> (accessed June, 2011).

⁴⁶ Ibid.

⁴⁷ Brophy and Wiley, “Saving Collections and the Planet.”

theory as a tool to understand how ‘consensus is built around the meaning of sustainability and how concepts or practices associated with sustainability are developed and diffused among organizations.’⁴⁸ While a coherent definition of institutional theory is difficult to come by, it can be described as:

Consider[ing] the processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behaviour. It inquires into how these elements are created, diffused, adopted, and adapted over space and time; and how they fall into decline and disuse.⁴⁹

Jennings and Zandbergen suggest that the ‘greater the association between the concept of “sustainability” and essential daily activities of organisations, the more recognised, widespread and legitimate the concept becomes among them.’⁵⁰ They suggest that associating sustainability with concepts of ‘modernity’ may be a way to change thinking: ‘Members of modern nations look not only to economic development, but also for balanced social development within local ecosystems.’⁵¹

Once again, education is the lynchpin for achieving a change in thinking, both within museums and society at large. At the 2005 Museums Australia Conference, Liza Dale-Hallett highlighted that the ‘journey to a sustainable future ... is a cultural change that seeks to understand the interdependences and fundamental links between people (their attitudes, values and lifestyles) and the environment.’⁵² According to Stutter and Worts ‘part of the challenge around sustainability is helping individuals and groups gain an enhanced sense of consciousness about their world ... museums can help by encouraging people to become more conscious of critical relationships that link them to nature and to other people.’⁵³ By highlighting these relationships and that we do not exist

⁴⁸ P. Devereaux Jennings and Paul. A Zandbergen, “Ecologically Sustainable Organizations: An Institutional Approach,” *Academy of Management Review*, Vol. 20, No. 4 (1995), 1015.

⁴⁹ W. Richard Scott, “Institutional Theory: Contributing to a Theoretical Research Programme,” *Great Minds in Management: The Process of Theory Development*, eds. Ken G. Smith and Michael A. Hit (Oxford, UK: Oxford University Press), 1.

⁵⁰ Jennings and Zandbergen, 1025.

⁵¹ Ibid, 1026.

⁵² Liza Dale Hallett, “Looking Forward or Looking Back: Museums and the Future” (paper presented at the annual Museums Australia Conference, Sydney, May 4, 2005).

⁵³ Glen Stutter and Douglas Worts, “Negotiating a Sustainable Path: Museums and Societal Therapy,” in *Looking Reality in the Eye: Museums and Social Responsibility*, eds. Robert R. Janes and Gerald T. Conaty (Calgary, Alberta: University of Calgary Press, 2005), 147.

outside the capacity of natural ecosystems, museums could act as catalysts for inspiring the general public to consider their personal actions.

In a specifically New Zealand context we also have the potential to draw on Māori concepts of sustainability and guardianship of taonga, known as kaitiakitanga. This concept is based in the idea that all life is interconnected, with no one species or object being more significant than another. Traditionally, it was a way for Māori to understand and balance their relationship with the environment and to find their place within it. Kaitiakitanga can be described as ‘the responsibility to live respectfully with the environment ... to maintain the delicate balance between tangata whenua and the natural environment.’⁵⁴ Sustainability is the central issue of this concept and many Māori believe that it is now more urgent than ever – ‘kaitiakitanga cannot be postponed or taken lightly. It is a daily obligation to our nation.’⁵⁵ However, it also represents a multifaceted relationship ‘between people and the natural environment, between tangible and intangible dimensions, between organic and inorganic material, and between past and future ...’⁵⁶ Although the issue of bi-culturalism is extremely complex in relation to this issue, as many Māori believe that the values of kaitiakitanga were eroded by colonialism and Pākehā governance⁵⁷ (as well as contesting if non-Māori can exercise kaitiakitanga at all),⁵⁸ it is also acknowledged that this is an issue that affects all:

Should New Zealand embrace the kaupapa of kaitiakitanga then both Māori and non Māori will have greater opportunities to leave future generations with sound environmental principles. Māori should take a lead role as active kaitiaki to promote these principles in the wider community for the benefit of all.⁵⁹

⁵⁴ Pita Sharples, “Foreword,” in *Māori and the Environment: Kaitiaki*, eds. Rachael Selby et al. (Wellington: Huia Publishers, 2010), vii.

⁵⁵ Ibid, x.

⁵⁶ Mason Durie, “Understanding Universal Value: How Relevant is Indigeneity?” in *Māori and the Environment: Kaitiaki*, eds. Rachael Selby et al. (Wellington: Huia Publishers, 2010), 239.

⁵⁷ Rachael Selby, Malcolm Mulholland and Pataka Moore, Introduction in *Māori and the Environment: Kaitiaki*, eds. Rachael Selby et al. (Wellington: Huia Publishers, 2010), 2.

⁵⁸ Margaret Mutu, “Ngati Kahu Kaitiakitanga,” in *Māori and the Environment: Kaitiaki*, eds. Rachael Selby et al. (Wellington: Huia Publishers, 2010), 16.

⁵⁹ Selby, Mulholland and Moore, 9.

Summary

Museums and their roles and definitions are never static but constantly in a state of flux. As the development of new museological thought in the late twentieth century and the changes brought about by post-modernism, globalisation and multiculturalism have shown, museums are reflexive sites. Likewise, the literature surrounding this topic is constantly evolving, having first emerged out of the development of new museological theory. These theoretical developments made it possible for museums to become reflexive sites by essentially turning inside out, placing communities at the centre of their missions and functions. This opening up paved the way for ‘social subjects and concerns’ to become a focus, as well as providing museums with the opportunity to examine their place within the societies which they serve. These developments laid the foundation for the argument that museums should address environmental sustainability not only as an extension of their roles as stewards of our cultural heritage, but also as public educators.

While some museums seem to be addressing the issue of environmentally sustainable practice within their institutions, public programmes, workshops (as shown by National Services Te Paerangi) and exhibitions, these developments have not been examined in a New Zealand context. As the international literature on this topic expands, it is essential for this country to keep up with these developments, especially as we are often viewed as a ‘clean and green’ nation – the legitimacy of which is shaky at best.

The literature surrounding this topic is also largely focused on the reasons why museums should address environmental sustainability which, although a concern of this dissertation, only represents one facet to the development of the field. Consequently, one of the primary aims of this dissertation is to establish where museum professionals locate themselves in engaging with and promoting environmental sustainability. Although the literature presents a strong case as to why museums should be spaces where these ideas are explored, presented and discussed, my aim is to add to the current body of literature by directly examining if museum professionals indeed believe it is a concern they should be addressing in their institutions and furthermore, what form, if any, this current interaction takes. While international trends seem to point at museums becoming more and more aware of their centrality in communicating these issues, it is difficult to

establish where this country's museums locate themselves on the spectrum of environmental sustainability. My research will contribute to filling this gap in the literature by thoroughly examining one case study in a specifically New Zealand context.

Chapter Two: Research Design and Case Study Background

Introduction

The purpose of this chapter is to present the various steps of the research process. This chapter details the entire research process from the central research question, to the research methodology and methods, to the data collection and analysis. It also presents the theoretical rationale behind the research choices throughout this process.

Research Questions

This dissertation seeks to answer the central questions: ‘What is the current state of environmental sustainability practices in New Zealand museums?’ and ‘How are museum professionals interacting with environmental sustainability?’

The research for this dissertation was based around a single in-depth case study at Te Manawa Museum, Gallery and Science Centre, Palmerston North. The following sub-questions were devised to help answer the central research questions:

- *What* does Te Manawa view as its museological and societal role in relation to environmental sustainability?
- *Where* is Te Manawa engaging with environmentally sustainable ideas and practices – both inside and outside the museum walls?
- *Why* does Te Manawa think sustainability is an important issue to address? And in some instances, why staff think it is not as pressing to address?
- *Who* is engaging with these ideas within the museum and within the immediate community?
- *How* are staff addressing the issue individually, collectively and within the community?

Research Methodology

The methodology used in the research for this dissertation was based on a case study approach. The most appropriate definition of ‘case study’ in this particular instance is as follows:

A case study is here defined as an in-depth, multi-faceted investigation, using qualitative research methods, of a single phenomenon. The study is conducted in great detail and often relies on the use of several data sources.⁶⁰

Case studies have had a long and varied journey in the history of social sciences. As Jennifer Platt points out, it ‘is a term that has been used in a variety of ways, not all of them clear, and some of them mutually inconsistent.’⁶¹ Case studies are also open to the interpretation of the research context and can be ‘both a major category distinguishing complete alternative research styles, and a passing description meaning no more than that the study is of a single case.’ According to Platt, the case study methodology first gained traction in inter-war US sociology and was seen as the antithesis of a ‘statistical method.’ There was an emphasis on the method’s ‘superior access to personal meanings ...’ and it was ‘assumed ... that case studies could in some way offer a basis for generalisation.’⁶² In the context of this research, the use of the case study is aimed to achieve this very thing.

Research Methods

Interviews are the main research method used in this dissertation, supplemented by documentary and policy research. In order to gain the most useful and unfiltered information from the participants, an open-ended method was used in the interview process. As Michael Patton points out, ‘the purpose of open ended interviewing is not to put things in someone’s mind ... but to access the perspective of the person being interviewed. We interview people to find out from them those things that we cannot observe.’⁶³ In order to keep the interview

⁶⁰Jennifer Platt, “Case Study,” in *SAGE Handbook of Social Science Methodology*, eds. William Outhwaite and Stephen P. Turner (Los Angeles & London: SAGE, 2007), 111.

⁶¹ Ibid, 100.

⁶² Ibid, 101.

⁶³ Michael Q. Patton, “Qualitative Interviewing,” in *Qualitative Evaluation and Research Methods* (Sage Publications: Newbury Park, California, 1990), 278.

data at a manageable level, the ‘standardised open-ended interview’ method was used as opposed to the ‘informal conversational interview’ or the ‘general interview guide approach’.⁶⁴ While perhaps the latter two techniques would yield more spontaneous and unprompted responses from the participants, as a relatively inexperienced interviewer, it seemed it would be wiser to maintain semi-structured and therefore more focused interviews by having ‘a set of questions carefully worded and arranged with the intention of taking each respondent through the same sequence and asking each respondent the same questions with essentially the same words.’⁶⁵ Not only did the use of this technique mean that the raw data was easier to analyse and unitise, but it also ‘reduce[d] the possibility of bias that comes from having different interviews for different people.’⁶⁶ It also meant that the interviews were focused and the time used efficiently. Naturally the interviews still varied in content and length from person to person, however having a standardised format meant that the emerging content and themes were relatively consistent.

I had anticipated that reviewing Te Manawa’s policy documents would provide a large portion of my primary documentary research. Through this I had hoped to ascertain whether or not environmental sustainability is incorporated into Te Manawa at an institutional level. This could be anything from staff recycling, to energy reduction goals, to reuse of material. However, as Te Manawa has no sustainability policy at this stage, to a large extent this particular avenue was not followed. Regardless, a mix of unpublished and official documents relating to exhibition development, as well as local government policy, provided me with useful contextual information to position my research in. While the interview process provided invaluable first-hand information, unobtrusive documentary research is essential for gathering facts as opposed to opinions.⁶⁷

⁶⁴ Ibid, 280.

⁶⁵ Ibid, 280.

⁶⁶ Ibid, 281.

⁶⁷ A. Kellehear, “Unobtrusive Methods: An Introduction,” in *The Unobtrusive Researcher: A Guide to Methods* (St Leonards, NSW: Allen & Unwin, 1993), 5.

The Case Study

By using Te Manawa Museum, Gallery and Science Centre as a case study I endeavored to research current museological practices regarding environmental sustainability in a New Zealand context. I wished to gain a snapshot not only of institutional developments, such as exhibition content and design, and education programmes, but also much more generally ascertain what staff at Te Manawa view to be their museological role in promoting and addressing environmental sustainability.

I chose Te Manawa as my case study for several reasons. It is a mid-sized, regional museum where the fields of science, art, natural and social history meld together in one cultural institution. Supporting this are the many education programmes, special events, performances and workshops that are held there every year. Because it has a smaller number of staff I felt that gaining a useful and accurate cross-section of the entire institution would be a much more manageable and achievable objective, rather than choosing a larger institution which I would not be able to explore holistically. However, because Te Manawa's practices and programmes are so varied I also felt that it would provide me with an interesting cross-disciplinary case study.

Te Manawa has also engaged in several initiatives that indicate their interest and concern over environmental sustainability. One of their exhibitions, *Te Awa/The River: Heart of the Manawatū*, focuses on the Manawatū River as a source of sustenance for the region. The fact that they have chosen to educate the public on the importance of the natural environment in sustaining the region's way of life shows that they already have a desire to communicate such ideas. Te Manawa has also initiated several education programmes that have aimed to put the spotlight on aspects of environmental sustainability, such as a program focused on water quality, and another on flooding and erosion.

While it would have been ideal to engage in several case studies across New Zealand to gain a definitive idea of national trends, the limited timeframe and scale of this research dictated that this was not possible. However, I believe that holistically engaging in one thorough case study imbues the research with a certain veracity that superficially engaging with two or three case studies would not.

Data Collection and Analysis

Prior to conducting my research I received ethics approval from Victoria University, Wellington. Each prospective participant was provided with an information sheet outlining the research and their role in it. Following the interview process, each participant was also offered the opportunity to read their transcribed interviews and make corrections, or to entirely withdraw their consent for their participation in the research if they so desired. Security of the interview data was assured. However, as the interviewees' identities and roles at Te Manawa are essential to developing a greater understanding of their professional interaction with environmental sustainability, confidentiality in the completed dissertation was not assured.

I interviewed five Te Manawa staff members from various departments: Stephen Fox, Chief Executive; Neil Phillips, head of exhibition design; Alastair Thompson, head of the education team; Miriam Sharland, science curator; and Sophie Thorn, art registrar. I had also wanted to interview Manu Kawana, Kaihatu. However, our schedules never allowed for this to occur. Each interview with a digital voice recorder and then transcribed in preparation for data analysis. Although I followed the 'standardized open-ended' interview method, which meant that I was able to deviate from the set interview questions, I tried as much as possible to maintain consistency between each interview. I adapted the interview questions somewhat depending on the expertise and role of the interviewee, for example, discussing sustainable design with the Exhibition Team Leader, education with the Education Team Leader and policy with the Chief executive.

The data analysis for this study followed an inductive approach. As Maykut and Moorehouse highlight, an inductive approach to data analysis essentially means that data is not sought out in confirmation of a hypothesis, but rather 'what becomes important to analyse emerges from the data itself, out of a process of inductive reasoning.'⁶⁸ To decipher the meanings within the interviews, I used the 'constant comparative method' of data analysis, as described by Glasser and Strauss. This proved to be a useful way to

⁶⁸ P. Maykut & R. Moorhouse, "Qualitative Data Analysis: Using the Constant Comparative Method," in *Beginning Qualitative Research: A Philosophic and Practical Guide* (London: The Falmer Group, 1994), 121.

compartmentalise the transcribed data and also allowed me to find common threads of meaning within the interviews. This essentially meant that the meanings within the data were allowed to speak for themselves, rather than being imbued with meaning by the researcher, and consequently meant that as a researcher I could remain relatively impartial and retain a comparatively objective approach to the data.

By the time the data analysis had been completed, each part of the five interviews had been placed in collective units of meaning. While each interview differed from the next depending on the interviewees' background and personal and professional opinions, there were common threads found throughout each interview.

The Case Study and *Te Awa/The River: Heart of the Manawatū*

Introduction

This section first briefly looks at the overall institutional structure of Te Manawa to provide the contextual backdrop against which my research took place. Understanding the function of the museum within the immediate community, its relationship with its primary funding body and the organisation of the institution will provide this framework. The exhibition *Te Awa/The River: Heart of the Manawatū* is then addressed, which emerged as a pivotal issue during the research process and also provides another interesting example of Te Manawa's interaction with ideas of environmental sustainability. This exhibition provided the opportunity to address a myriad of issues within one neat (environmentally-focused) entity – from political controversy, to exhibition development, to museum practice and policy. Once again, this provides a contextual springboard which will then launch the broader discussion and analysis of the interviews in Chapter Four and Five.

Te Manawa: Context

As Te Manawa's website states, it is the only 'regional museum in New Zealand to weave together the three disciplines of history, art and science' under one institutional framework. They also charge themselves with being 'a store house of

regionally and nationally important collections of Taonga Māori, New Zealand contemporary art, social and natural history’, and through their exhibitions aim to ‘explore the past; seek to inform today and pose questions about tomorrow.’⁶⁹ The museum is located across two main buildings that house the exhibitions, education rooms, storerooms and offices. One building is dedicated solely to the art exhibitions, offices and storerooms, while the recently renovated building houses the social history and Māori galleries, as well as the Rugby Museum, *Te Awa*, a temporary art exhibition space and the education centre, as along with offices, classrooms and storerooms. The management of Te Manawa is presided over by a Trust Board, of which 50% are selected by the Palmerston North City Council, who is the museum’s predominant funding body and currently provide 85% of the museum’s funding. Te Manawa’s staff body consists of teams made up of senior management, exhibitions, social history, art, sciences, corporate services, marketing and customer services and education.

The meaning of the name ‘Te Manawa’ is two-fold. It originates from the word ‘manawa’ which means ‘heart’, as well as ‘Manawa-tu’, the ‘name given to the Manawatū River by the ancestor Haunui. As he came upon the river, the awe inspiring presence of the river made his heart stand still.’⁷⁰ This double meaning is intended to not only convey the literal ‘heart’ of the region and its namesake – the Manawatū River – but to imply that the museum is also the heart of the community.

The Journey to Te Awa/The River: Heart of the Manawatū

Te Manawa has gone through several large changes over the last year and has also recently merged with the New Zealand Rugby Museum in time for the 2011 Rugby World Cup held in New Zealand, bringing another element into the mix. The addition of the Rugby Museum coincided with (and indeed helped bring about) the wider institutional and exhibition redevelopments. One of the most significant and indeed pertinent to this study is *Te Awa/The River: Heart of the Manawatū*, an exhibition that ‘shares the stories of the Manawatū River and

⁶⁹ Te Manawa Museum, Gallery and Science Centre, www.temanawa.co.nz/about-us.html (accessed January, 2012).

⁷⁰ Ibid.

traces the progression of the river from its source to the sea.⁷¹ While only one of the many exhibitions on offer at Te Manawa, its theme, content and political context make it relevant for a deeper analysis and discussion. Indeed, as my research progressed, this exhibition became an increasingly important vehicle through which many key issues relating to environmentally sustainable ideas within the museum were articulated. *Te Awa*'s focus on environmental themes relating to the Manawatū River and its surroundings, from bio-diversity loss, extinction, weather systems, farming, to sustainability, make this exhibition central to this dissertation. In addition to this, the process of creating the exhibition offers an insight into the potentially controversial and divisive social consequences of addressing environmental issues.

Once again, the emphasis on the river being the 'heart' of the community is brought to the foreground. There are strong messages relating to environmental sustainability in the exhibition content, which are also relayed on their website: 'Water is crucial for life, and *Te Awa/The River*, celebrates the Manawatū River as a symbol of the interdependence of all living things.'⁷² The exhibition highlights the myriad species of flora and fauna that rely on the river for survival, as well as those that are now extinct largely thanks to human intervention in the landscape. It also highlights the dependence we as humans have on the river by exhibiting the ways in which farming practices rely on it: 'Perhaps most importantly of all, discover how your actions affect our river and the lives of all those who depend upon it.'⁷³ This is an especially pertinent connection considering the Manawatū is a region heavily reliant on agricultural production.

In the early stages of planning, the rationale for this exhibition was outlined by the then science curator Angela Handforth as follows:

Our culture and the people of the Manawatū have an interest in and value their surrounding natural environment. Many environmental concepts are important to Māori and cultural values influence environmental politics and policies, as well as many of our everyday decisions. Environmental issues and related concepts such as sustainability are increasingly important to our young people and a growing influence in many of our schools.

⁷¹ Ibid.

⁷² Te Manawa Museum, Gallery and Science Centre, www.temanawa.co.nz/about-us.html (accessed January, 2012).

⁷³ Te Manawa Museum, Gallery and Science Centre, www.temanawa.co.nz/exhibitions-calendar/listing,727,te-awa---the-river.html (accessed February, 2012).

The River exhibition (working title) at Te Manawa seeks to play a part in the growing interest in our surrounding environment, how we use it and how we protect it for future generations. It will seek to provide visitors not just with the facts, but to challenge the way they view their environment and encourage a deeper understanding and a greater empathy towards the Manawatū region.⁷⁴

The desired key concepts of the exhibition also highlight the exhibition's environmental themes:

The Four Key Concepts Underlying Environmental Education are:

Interdependence

This highlights the relationships between all living things (including people) and their physical environment. It states that a useful way of looking at the environment is to view it as a set of interrelated systems – the biophysical, social, economic, and political systems (Fien and Gough, 1996).

Sustainability

The concept of sustainability is linked to the concept of sustainable resource management, which deals with the use of both renewable and non-renewable resources.

Biodiversity

Biodiversity is the variety of all life on earth – plants, animals, and micro-organisms, the genes they contain, and the ecosystems they form. A focus on biodiversity recognises the interrelatedness of all parts of the biological world and the impact that people have had on living systems.

Personal and Social Responsibility for Action

Environmental quality relies on the everyday actions of individuals. The quality of the environment depends, to a large extent, on people taking positive action to help resolve environmental problems.⁷⁵

Wider Institutional Setting

The external organisations involved in the support of this exhibition were many and varied and included: Palmerston North City Council, Manawatū District Council, Central Energy Trust, Science Centre Trust, Eastern and Central

⁷⁴ Angela Handforth, "Introduction," in *Semi-Permanent Exhibition at Te Manawa Museum. Working Title: River* (October 2008), 1.

⁷⁵ Handforth, 3.

Community Trust, Horizons Regional Council, Infinity Foundation Limited, Endeavour Community Trust, and the Lion Foundation and Pub Charity.

The political context in which this exhibition was conceived, executed and opened is of considerable interest to this research. Te Manawa is a Council-controlled organisation under the Local Government Act 2002. This means that, as previously mentioned, the Council currently appoints 50% of their board and is the museum's predominant funder at 85%. In Part 5: *Council controlled organisations and council organisations* of the Act, it states that the:

- (1) The principal objective of a council-controlled organisation is to—
 - (a) achieve the objectives of its shareholders, both commercial and non-commercial, as specified in the statement of intent; and
 - (b) be a good employer; and
 - (c) exhibit a sense of social and environmental responsibility by having regard to the interests of the community in which it operates and by endeavoring to accommodate or encourage these when able to do so ...⁷⁶

In this Act, part (1)(c) has obvious implications in relation to environmental sustainability. More generally, the Palmerston North City Council has outlined that 'Palmerston North is a leading city in the quest to become environmentally sustainable',⁷⁷ as part of their Vision for the Future, as well as the Community Outcomes that include a city that is 'attractive, clean and green.'⁷⁸ Under this goal, the Ten Year Plan states that Palmerston North City Council:

... will play a major role in keeping the environment healthy and safe through things like recycling, treating of sewerage, and planting street trees. We will keep doing these things. But, we want to do more. To make sure we do the right things our first step will be to develop a Sustainable City Strategy. This will set out how we can help make Palmerston North more sustainable ...⁷⁹

⁷⁶ New Zealand Legislation, "Local Government Act 2002," http://legislation.govt.nz/act/public/2002/0084/latest/DLM171881.html?search=ts_act_local+government_resel&p=1 (accessed November, 2011).

⁷⁷ Palmerston North City Council, "Vision," www.pncc.govt.nz/YourCouncil/CityCouncil/Vision/ (accessed October, 2011).

⁷⁸ Palmerston North City Council, "Community Outcomes," www.pncc.govt.nz/YourCouncil/CityCouncil/CommunityOutcomes (accessed October, 2011).

⁷⁹ Palmerston North City Council, "Summary of Council's Strategic Direction, City Future Unit" (October, 2011), 2.

The Council also recognises that the interdependence of all facets of sustainable development will become more essential in the future:

Environmental Sustainability – here the focus is on:

- Sustainable energy use at work and at home
- Sustainable energy use to move around the city
- Increasing the health and extent of native biodiversity on land and in water
- Decreasing waste
- Managing water

Social and Cultural Sustainability – here the focus is on:

- Māori engagement
- A strong community sector
- Active citizenship
- A safe and healthy city
- Co-ordinated physical infrastructure (community, recreation and cultural facilities)

Economic Sustainability – here the focus is on:

- Enhancing quality of life
- Maximising connectivity
- Raising skills and increasing participation at work
- Stimulating investment
- Supporting priority sectors
- Improving business performance⁸⁰

As Te Manawa is a Council-controlled organisation the requirements stipulated under this Act provides a relevant contextual framework for the continued Council support of the museum. What is interesting in terms of the political dynamic in creating *Te Awa* are the polarising opinions that often dominate discussions around environmental sustainability. One of the most relevant in this case is the dynamic between the Palmerston North City Council and Horizons Regional Council (who were a chief sponsor of *Te Awa*), a relationship that has been tested over the very subject matter of the exhibition – the Manawatū River. Horizons are responsible for the management of the river. As of August 2010 ‘members of the Manawatū River Leaders Forum signed an Accord to take action

⁸⁰ Ibid, 3.

to improve the state of the Manawatū River.’⁸¹ The goals of the Action Plan are to ensure that:

1. The Manawatū River becomes a source of regional pride and mana.
2. Waterways in the Manawatū Catchment are safe, accessible, swimmable, and provide good recreation and food resources.
3. The Manawatū Catchment and waterways are returned to a healthy condition.
4. Sustainable use of the land and water resources of the Manawatū Catchment continues to underpin the economic prosperity of the Region.⁸²

This initiative followed reports that the ‘Manawatū River is one of the most polluted in the Western world.’⁸³ Research was undertaken by Roger Young of the Cawthorne Institute into the state of the Manawatū River. In a report he stated that:

On November 26th 2009, the Dominion Post ran a front page story focusing on the health of the Manawatū River and included a headline pronouncing the river as the ‘worst in the west’. Measurements of GPP (and ER) from the lower Manawatū are higher than has been seen in any other sites around the world where this measurement has been conducted ... However, only a tiny fraction of the world’s rivers have been tested using this approach and it is likely that other rivers would have higher measurements if they were tested. Our research DOES NOT indicate that the Manawatū River is the worst in the western world. Nevertheless, our results so indicate that the Manawatū River is very unhealthy
...⁸⁴

This disclosure resulted in somewhat inflated media coverage and a polarising debate ensued on the depleted state of the river and who was to blame. According to Horizons regional planning and regulatory group manager Greg Carlyon there had ‘been “considerable” and “sustained” breaches of one of [Palmerston North

⁸¹ Foreword in *Ours: The Manawatū River Leaders Accord Action Plan* (Horizons Regional Council, 2011).

⁸² Ibid.

⁸³ Jon Morgan and Kelly Burns, “Our River of Shame,” *Dominion Post*, November 26, 2009, www.stuff.co.nz/environment/3097651/Manawatū-River-among-worst-in-the-West (accessed January, 2011).

⁸⁴ Roger Young, “Ecosystem Metabolism in the Manawatū River” (Cawthron Institute, 2011), 2.

City Council's] discharged consents, and some degree of non-compliance with two others.'⁸⁵ This interaction made the issue of the river a challenging exhibition topic for Te Manawa to undertake, precisely because it is Council funded and Horizons was a primary sponsor of *Te Awa*. However, as Young states in his report 'recognition of the poor health of some of New Zealand's waterways is the first step in trying to rehabilitate them ... Collaborative efforts involving the full range of stakeholders involved with water management is the best way forward.'⁸⁶

Although the plans for *Te Awa*'s development were already well underway by the time the public uproar emerged regarding the polluted river, the situation presented the museum with a complex situation, one that could be capitalised on to the benefit of the debate because of increased public awareness. However, at the same time also put the museum in a potentially difficult position because of the polarising nature of the debate. Indeed, the timing of the pollution scandal worked in conjunction with *Te Awa*. The exhibition and political scandal essentially brought to the forefront the question of what a museum's role is in the twenty-first century. As I discuss in the following chapter, through the interview process it was revealed that the staff at Te Manawa see the museum as occupying a cultural and social middle-ground where these socially and politically charged conversations can take place.

Summary

The aim of this chapter has been to outline the research process of this dissertation, as well as to establish the contextual background to Te Manawa's prior interaction with addressing environmental sustainability within the museum. Although the museum has no environmental sustainability policy, the development of *Te Awa* exhibits their concern with the local environment. Because of the controversy associated with this exhibition, it also shows that they have a depth in understanding regarding the potentially polarising nature of the

⁸⁵ Emma Goodwin, "Sewage Causes Big Stink," *Manawātū Standard*, September 22, 2011.. www.stuff.co.nz/manawatu-standard/news/5613517/PNCC-blamed-for-river-pollution (accessed January, 2012).

⁸⁶ Young, 2.

debate. The following two chapters address the six key themes that emerged from the interview and analysis process.

Chapter Three: Te Manawa and The Role of Museums

Introduction

This chapter looks at the first three themes that emerged from my interviews, which refer specifically to the role of the museum in contemporary society. The second part of the findings, presented in Chapter Four, looks at the institutional implications of incorporating environmental sustainability into the museum. These six key themes provided work towards answering this dissertation's central research questions – *What is the current state of environmental sustainability practices in New Zealand museums* and *How are museum professionals interacting with environmental sustainability?* – by directly addressing the sub-questions *what, where, why, who, how*.

Te Manawa provided an interesting case study in part because, institutionally, it had already begun to think about environmental issues and the role that museums could potentially play in illuminating and engaging with these ideas through *Te Awa*. As the subsequent discussion will show, bringing this exhibition together was a highly challenging and somewhat controversial process. While Te Manawa obviously believed that environmental issues were necessary to address and indeed warranted a large scale, semi-permanent exhibition, at the same time it was interesting to note that Te Manawa had no institutional environmental policy. While environmental sustainability has been identified by Chief Executive Stephen Fox as being one of the museum's goals for the future, I had made the assumption that this would have emerged as a part of the redevelopment process.

Six key themes emerged from the analysis of the interviews with staff at Te Manawa. These were: the role of museums – generally and in relation to environmental sustainability; museums' ability to change/influence behaviour; Te Manawa's relationships with the community and other external bodies; staff practice; institutional policy; and barriers and incentives to achieving environmental sustainability within the museum. Most of these categories are interconnected and weave in and out of each other at various points, although it is still useful for each to be analysed individually.

Generally, there was consensus among the interviewees that environmental sustainability should be addressed within the museum. However, the emphasis and rationale shifted between the interviewees largely based on their background, current role at Te Manawa, and personal interest in the subject, all of which greatly informed their professional opinions. Some had thought about the topic in great depth prior to the interviews and were up to date with contemporary literature and practice regarding environmental sustainability in museums, despite the fact that the issue had not been addressed at an institutional level as yet. Most agreed that at this early stage, individual departments were approaching things like recycling in their own ways, but it was the enthusiasm of certain staff members that would really drive the institution to implement a widespread policy.

The Role of Museums: Stewardship, Mediation and Leadership

This section examines the material that emerged from discussions around the role of contemporary museums. The ideas brought up were not necessarily related to environmental sustainability directly. However, understanding what museum professionals perceive their role to be at a foundational level is essential in determining whether or not engaging with environmental sustainability is something museums should be moving towards. The ideas discussed ranged from traditional notions such as collecting, preserving and exhibiting, to much more contemplative discussions around a museums role as neutral mediators. This was especially around politically and socially charged topics, such as the environment. Indeed, this very general question often led the interviewees to explore and discuss the relationship between museums and environmental sustainability and what this might look like.

The idea that museums are storehouses for cultural heritage was an important concept for all of the interviewees, with the emphasis not only on collecting and interpreting these objects, but also their preservation for ‘future generations.’ These two words hold particular significance in the discussion around the climate and biodiversity crisis our world faces and indeed can help reveal the wider role that museums play in promoting environmental sustainability through their primary role as collectors and preservers. Drawing on the World Commission on the Environment and Development’s definition of

sustainable development mentioned in the literature review as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’,⁸⁷ then it seems incompatible, and perhaps even contradictory, for museums to not address and promote environmental sustainability in some way as part of their missions to protect and preserve for the future.

The importance of community was highlighted as a major focus for the museum, with most of the participants emphasising that museums must be places open to all and that they must work in collaboration with the community. Indeed, as the name suggests, Te Manawa sees itself as the ‘heart’ of the community. In line with this thinking, some believed that museums must remain fairly neutral, especially in debates that can polarise the community, such as environmental sustainability, and this is perhaps especially so with a publically-funded museum. Chief Executive Stephen Fox indeed stressed the fact that issues around environmental sustainability ‘get polarised very easily. [There are] really strong parties on either end of the spectrum that polarise the issue and that’s both a challenge but also an opportunity as there’s a lot of middle ground for [museums] to go straight in there as start to, not negate, but certainly reduce the impact of those really strong views.’ At the same time it was thought that museums could also be places where the community is challenged, with Fox stressing the notion that museums can be ‘safe places for unsafe conversations’, where ideas are discussed and shared ‘fairly, equally, equitably, rationally.’

Education team leader Alastair Thompson felt that museums were still going through a transitional phase in the mind of the public and that environmental sustainability could play an interesting part in this continuing journey:

I think part of our brief is to not only mirror but also help lead and I think possibly museums and art galleries are still going through that position of people thinking that they are something for the elite or something for the intellectual or certain age of people, so I think by being environmentally sound we start to break down some of those barriers. And it brings us in to the current, as opposed to perhaps being viewed as old or obsolete.

⁸⁷ World Commission on Environment and Development, *Our Common Future* (Oxford and New York: Oxford University Press, 1987), 43.

Part of the democratising and popularising of the contemporary museum, from an elitist space for a select few, to being viewed as an integral and increasingly essential part of a community, is based around remaining relevant. It is interesting that the term ‘old’ in this context could be equated with ‘obsolete’. This suggests dusty shelves crammed with objects that speak only to times gone by, unappealing and dull – a place for hushed voices. As Education Team Leader Alastair Thompson points out part of the process of engaging audiences is making exhibitions relevant and speak to the future in some way. He also emphasised the idea that museums are continually evolving institutions:

We are ... going through a lot of change and [Te Manawa] is still ... finding out its identity and where we sit within the community. And that’s an evolving thing ... where we’re at now as opposed to 18 months ago is quite different and where we’ll be in another 18 months will again be quite different.

Like the societies they reflect, museums are dynamic and ever-changing – this is an essential component to both their popular appeal and social importance.

Most of the interviewees brought up the idea that if museums address environmental sustainability in their exhibitions, this should be reflected in their institutional practice. This was specifically in relation to *Te Awa*, where the ideas and concepts relating to living in an environmentally sustainable manner conveyed in the exhibition may not be reflected at an institutional level. Exhibition team leader Neil Phillips felt that ‘one of the things that museums need to be behind the scenes is “walking the talk” if you like. I think that we should, if we’re going to talk about sustainable practice as a positive thing, we should be trying to follow that as well.’

Especially interesting were the conflicting ideas that museums should at once remain fairly neutral on politically charged topics such as environmental sustainability and not be seen as politically or socially biased, as they are forums for many ideas, opinions and people. However, at the same time the interviewees felt that museums should also be sites where challenging and difficult conversations are initiated. This all adds to the rather complex space the contemporary museum occupies as museologist Jennifer Barrett points out:

Recent aspects of museum development reveal a desire to be more reflexive, attempting to understand the museum as advocating multiple ways of interpreting the world and its history, by emphasising the importance of consultation with communities in devising exhibits ... As one of the essential aims of recent museology has been to demystify the authoritative function of the museum, as necessary to represent diversity, to attract new publics to the museum, and to encourage new forms of visitation and engagement ...⁸⁸

Employing new forms of visitor engagement is no trivial matter, but rather an essential step on the path to creating economically and socially sustainable museums. As a result, it is not difficult to see that museums occupy a rather strange and sometimes difficult ‘space-between.’ They must at once produce exhibits and programmes geared towards improving what might be called the social and cultural well-being of society, but cannot be seen pushing a particular agenda. Te Manawa staff interviewed thought that while environmental issues should be presented to the public in a truthful and honest manner, museums must not be viewed as weighing too heavily on one side of the debate. The development of *Te Awa* is an instance where strong opinions on both sides of the debate had to be somewhat neutralised for public display. At the same time, as Stephen Fox points out, museums are, or should be, ‘safe places for unsafe conversations.’ It seems that in this instance, although Te Manawa has a desire to challenge their visitors with their exhibitions and programmes, they were wary of courting controversy and polarising the community on an issue that had already received negative and inflammatory attention.

In line with this thinking, one important role museums can play in environmental education is as communicators, by translating difficult and complex scientific ideas and thereby making that information accessible to the public. Te Manawa science curator Miriam Sharland indeed felt that her primary role is as a ‘science communicator’ who takes ‘quite complex ideas’ and puts them in forms that the ‘general public will understand.’ This was particularly essential in developing *Te Awa* because of the large amount of negative press and misinformation the public received during the pollution scandal. Once again, it seems that museums occupy a middle-ground where they not only have to mediate between the academic community and the public, but also the media who

⁸⁸ Jennifer Barrett, *Museums and the Public Sphere* (Chichester, UK: Wiley-Blackwell, 2011), 6.

are drawn to sensationalist and polarising stories, such as the Manawatū River pollution. Indeed, as pointed out in the literature review, ‘science illiteracy’ and misinformation can act as a major barrier in the quest for personal sustainable living.⁸⁹

The Role of Museums: Changing Behaviour

One of the most interesting ideas discussed was that museums have the potential to change people’s behaviour. While this section relates to the role of contemporary museums discussed above, its significance regarding museums and environmental sustainability warranted deeper examination. It was also an idea that a majority of the interviewees felt strongly about. Many interviewees believed that this is indeed one of the primary roles of the modern museum and is achieved through encouraging visitors to engage in public dialogue surrounding important contemporary issues through education and exhibition programmes, as well as the museum itself exhibiting sound community-minded behaviour.

Alastair Thompson expressed the idea that a museum’s goal is to have every visitor walk out the door slightly different to how they came in. This can be in relation to many things, but particularly in this context most interviewees thought that, if approached appropriately, museums could play a major role in changing people’s perceptions around environmental sustainability. Likewise, a majority of participants thought that if museums exhibit sound, community-minded behaviour themselves and ‘walk the talk’ it could have a ripple effect throughout the community. As Neil Phillips pointed out, ‘I think that there’s a role to play for museums in taking good information and good science and good practice and planting a flag in the ground and saying, “yes this is a positive move for our community and we are going to demonstrate these behaviours”...’ This would involve taking an honest look at what the future might look like and presenting it to the public in a non-inflammatory, honest way. As Stephen Fox pointed out:

...as unpleasant as [looking at the difficult aspects of environmental issues] is, it makes it topical and meaningful ... that old adage of ‘museums are safe places for unsafe conversations’ – then there’s a

⁸⁹ Novacek, 11572.

place for us to actually facilitate those discussions and conversations and explorations, in whatever form that might take.

Despite the fact that the interviewees felt that museums should not push particular agendas, the idea that museums have the ability to change people's behaviour was such a major consideration. This is indeed a claim that at once carries immense challenges and limitless possibilities. It places museums in a crucial and advantageous position to be the catalyst for change by educating the public and giving them access to information they might not otherwise be able to attain. As pointed out earlier in this dissertation, without an empathetic and knowledgeable public '... it is highly unlikely that either governments or businesses will change course.'⁹⁰ Stephen Fox felt that part of the role museums could play as is to change perceptions around 'what is environmental sustainability' and who practices it. As he pointed out, the stereotype of the leftist, dreadlocked 'greenie' has been somewhat diminished in recent years, as the surge in support the New Zealand Green Party received in the 2011 election can testify. Fox felt that this change in public perception could be capitalised on, despite the potential challenges of locale: 'my sense is that the dialogue is in the minority in [Palmerston North]. And maybe that's because we are an agricultural city and quite a conservative city. Another reason why I think there's a role for us to rattle the cage a bit.'

Most interviewees felt that it is essential to show visitors the personal benefit of changing to more environmentally friendly behaviour before behavioural change can occur. As Miriam Sharland pointed out, a future addition to *Te Awa* will attempt to do this very thing. In preparation for *Te Awa*, Te Manawa conducted interviews with farmers from around the Manawatū region who have made the decision to switch to more sustainable farming practices, with the express objective to exhibit behavioural changes from an unexpected source. Stephen Fox emphasised the need to show the community the positive repercussions from such changed behaviour:

... in terms of that bottom line, that's actually ended up being better for [the farmers]. And they're the messages that are important to get out so people don't just think it's a bunch of greenies or whatever. But

⁹⁰ Novacek, 11571.

I think that slowly that perception is shifting, but I think the more we can do to open up the floor to help that perception shift.

If people are not environmentally conscious in the first place, showing them how they might save money through sustainable living is one way to capture their interest. There must first be a spark that ignites further personal investigation and understanding, and museums can play an essential role by helping to aid this process. Miriam Sharland felt that challenging perceptions and exhibiting positive change is essential as ‘people have to see what’s in it for them’ before they change their behaviour. She also felt that it was a case of first making people ‘aware’ of the issues and then ‘enabling’ them to make a change in their own lives.

Some museums are upfront about engaging in the mission to change people’s behaviour. As Stephen Fox pointed out, Te Papa has employed the mantra ‘Changing hearts, changing minds, changing lives’ for their strategic vision for the future. They have also chosen to make ‘saving the planet’ a part of this vision: ‘Te Papa will engage and excite by conducting leading-edge research and by modeling environmentally responsible practices that are smart, accessible, and inspiring.’⁹¹ While Fox felt that the use of the phrase ‘saving the planet’ may appear to be somewhat ostentatious, the intention behind Te Papa’s words are actually very much in line with the concept of ‘changing people’s behaviour.’ Through engaging in and promoting sound environmental practices through their own institutional practices as well as exhibitions and programmes, Te Papa has the potential to create a ripple effect throughout the community. Te Manawa is less explicit in their goals at this point but, as Stephen Fox points out, they value the motivation that drives Te Papa’s goal:

... of course it’s not about [saving the planet] – they’re not going to send out boats to confront whaling ships ... it’s about awareness and enabling people to make the change. I think that’s the other area for us as a museum – it’s beyond awareness. Wouldn’t it be fantastic if we could actually enable people to say ‘I’m going to make that change.’

Capturing children and young people’s imaginations was another interesting idea that several participants felt was an important path to explore.

⁹¹ Museum of New Zealand, Te Papa Tongarewa, www.tepapa.govt.nz/AboutUs/Vision/Pages/Part1Impactonthenation.aspx (accessed November, 2011).

Alastair Thompson highlighted that many schools already incorporate environmental education into their curriculum, if even at an unofficial level, meaning children are growing up with a greater awareness of environmental issues from an early age. For Thompson, capitalising on developments happening within schools around the country relating to environmental education is essential. He felt that through their work with schools, there is a ‘huge trend towards the environment and that whole concept of sustainability. We see it in schools more than anything and we try and obviously factor that in to our programmes ... I ... see a lot of schools as starting to lead that. At the moment it seems that they’re silos. I think that’s the first stage in change.’

Science Curator Miriam Sharland also felt that children seemed much more receptive to new ideas, perhaps because they were not old enough to be ‘stuck in their ways.’ Indeed, the exhibition proposal prepared for *Te Awa* explicitly outlined that Te Manawa should take advantage of the work happening in schools: ‘Environmental issues and related concepts such as sustainability are increasingly important to our young people and a growing influence in many of our schools.’⁹²

There is also the issue of changing behaviour within the museum. Although the messages of *Te Awa* are strong and intended to make the visitor consider their own actions and lifestyle, it was felt among most of the interviewees that staff members are less likely to take the information from the exhibition and apply it in their professional practice. When asked if she thought that Te Manawa staff would take heed of the messages in *Te Awa*, Miriam Sharland was hesitant: ‘I don’t know, but I doubt it ... it’s funny, it often seems to be children who bring those messages home and are much more concerned about these things that adults ... I think that people just get set in their ways as they get older, and people get more cynical as well.’ The possible reasons why staff may not be as readily influenced by exhibitions as the public are multiple, and perhaps should even be expected if there is no official policy in place to make environmentally sustainable practice an institutional priority. As mentioned, many interviewees felt that it is essential for museums to not only produce

⁹² Handforth, 1.

exhibitions and programmes on the topic, but to also institutionally ‘walk the talk.’

It is also important that information presented by museums does not end up wrapped up in what might be called the ‘doom and gloom’ side of environmental education. Miriam Sharland outlined this as her approach to *Te Awa*: ‘to focus on it not from a negative point of view, saying ‘oh it’s so polluted’, but rather what does this mean to our region and taking that as a central point to explore our environment.’ While presenting the reality of the environmental crisis and what the future might look like if changes are not made is essential, it is also important for visitors to feel empowered to make personal changes rather than feeling like the outcome is beyond their control. *Te Awa* achieves this quite successfully by presenting visitors with a number of small and personal changes they could make in their lives that will make a difference if done collectively. Showing visitors just how much excess waste, water, power could be eliminated from their daily lives with little personal consequence is a good method of empowerment.

The Role of Museums: Building Relationships

One of the key institutional foci for Te Manawa which came through during the interviews was the importance placed on the museum’s relationships with the community and other organisations. The community of course refers to the people of Palmerston North, the Manawatū and beyond; the external organisations varied from the Palmerston North City Council, to Massey University, to environmental groups, to schools. The relationship Te Manawa has with these groups varies greatly. However the interviewees highlighted that it is through these relationships that a museum can realise its full capacity as a public institution. This has a major impact on how museums approach issues like environmental sustainability as in many ways it is the community which defines the museum. Keeping this in mind, the interviewees thought that the museum should be a reflexive institution with a consciously outward focus, reflecting the needs and interests of the community. Indeed, this was seen by most interviewees as the museum’s *raison d’être*.

As Te Manawa is a Council -controlled organisation, their external outlook obviously begins with that relationship. With Palmerston North City Council outlining environmental sustainability in their strategic plan for the city, there is a lot of opportunity for Te Manawa to create a deeper partnership with their primary funder through being involved in some of their green initiatives. As Stephen Fox points out: ‘the vision for the city has the word sustainability in it, and it’s certainly one of the strategies that the city is pursuing, so in that sense there are good opportunities for us to collaborate and to work with the city in its various forms.’ Fox highlighted that capitalising on changes occurring at a governmental level is a way for museums to be included and recognised in a public way: ‘as more local governments and regional councils start to move in to that zone [sustainable development], by their very nature the rate payers are being pulled along with them, so that in itself is an action that gives credibility ...’

However, most interviewees felt that the relationship with the wider community, beyond the City Council, is the most institutionally important and nourishing. Alastair Thompson emphasised the idea that the museum is:

... a place of celebration, a place of opportunities, a place of opening the door to new ideas and experiences ... it’s probably also a place that people own ... a way also to engage and encourage the community and another way to share with the community. That community can be a range of things both close and distant and that can be on and offsite.

As mentioned, the interviewees thought that the community rightly view themselves as stakeholders of the museum and therefore that Te Manawa should reflect the issues most pertinent to that community. As Stephen Fox pointed out, this public positioning provides an opportunity for Te Manawa to fulfill the expectations of the community: ‘we are publically funded so there are the rate payers’ expectations; there are the tax payers’ expectations ... so we can’t just do things behind closed doors. We are out there in the public, so we have to be transparent ...’ Once again, this is in line with new museological theory, where the museum represents a metaphorical and literal mirror in which contemporary society is reflected. This is particularly pertinent when addressing environmental sustainability as Neil Phillips points out:

I think that because the role that museums have in terms of being a venue for the community as well as the wider world, then really whatever is relevant in terms of people and society at present is something that museums should be focusing on. And of course the environment and sustainability and climate change – it is all very important at the moment and for that reason museums should be taking an active role at mediating the information that comes out around that.

The decision to focus on contemporary issues is not to say that historical exhibitions are irrelevant or that the wider community are not interested in historical material, but rather that museums should endeavor to create personal connections with their visitors through their exhibitions and other programmes. Indeed, Te Manawa has strived to achieve this element of personal connection in *Te Awa* through the innovative carpet map, which had ‘men in suits on their hand and knees’ at the exhibition opening searching for their houses. This carpet is doubly effective as it also works to reconnect visitors with their surrounding environment – an important step to encouraging environmentally sustainable living.

Indeed, showcasing good community support by addressing pertinent contemporary issues ideally creates a cyclical relationship, where the museum and community are in mutual support of one another. Essential to this is extending the role of the museum beyond the exhibition floor. As education team leader Alastair Thompson’s role is focused on fleshing out the work done within the museum he says: ‘[whereas some] ... see their job as ending right when the exhibition goes on the floor ... I see that as just the beginning.’ Part of this continual engagement is to encourage the people of Palmerston North to view Te Manawa as an integral part of their community. As Stephen Fox points out, ‘I suppose the point is that one of our aims is to get people back. Repeat visitation is critical to us because we don’t have high tourism, so we need the community to come back, come back, come back. So assuming we get that right, we’ve got opportunities to change people’s lives, to make them engage ...’

Once again, this brings up the issue of neutrality. While issues like environmental sustainability often require strong voices, the interviewees felt that museums should potentially remain neutral on issues like this which have the potential to polarise the community. This was especially essential in creating *Te*

Awa, a case where Te Manawa had to make their position on the subject transparent. As Stephen Fox points out:

The first thing is to set up really the really clear expectation that [Te Awa] is neutral, so that the conversations are had in a constructive sense and that the dialogue is constructive, rather than something that is singular or one-sided. It's not easy obviously...with Horizons trying to fine the Council over polluting [the Manawatū River] ... But there are so many voices, so we've had some interesting conversations with sponsors ... [and] with people like Mike Joy⁹³ ... who comes along and challenges that paradigm and says 'this is not acceptable, this is a polluted river' and 'what do we need to do to clean it up'. And that's really what we need to focus on. It's not so much diatribe that goes on, but the solutions... We can acknowledge there are views, but it is through getting [people] together [we will discover] what the solution is going to be.

As Neil Phillips points out:

Organisations like Te Manawa have interesting relationships with the community because every community group feels that they have a stake in the [institution], which they do. And because of that it makes it more difficult to be politically aligned with one group or another because we have to be welcoming to all sort of groups ... There is a public expectation for sure, [and] it can be tricky to mediate.

Being an outwardly-focused museum not only dictates the importance of building lasting connections with people within the community, but also of building and maintaining relationships with other institutions and museums in the immediate area and beyond. This idea was important to Stephen Fox, as was the question that he had posed to his staff on many occasions: 'Do you want to just be a regional museum?' This question is not intended as a criticism of regional or small museums, but rather is used as a means to encourage staff to consider their roles beyond their regional locale. As Fox highlights:

I've asked [staff] a couple of times over the course of the last few years – 'do you want to just be a regional museum?' And resoundingly the answer has been 'no'. We've got a story to tell all New Zealand. As do all other museums, and it's just about creating those connections and those opportunities to do that. What makes us

⁹³ Mike Joy is the Director for the Centre for Fresh Water Ecosystem Management and Modeling at Massey University, Palmerston North.

unique? The Manawatū, so of course we're going to focus on that, but not exclusively.

So we do look at what's happening in the Manawatū, but we think about it in a wider context; and we like to think about it in terms of the rest of the country. We don't want to be constrained by the fact that we are in the Manawatū. Because you don't want to just be a regional museum. It's easier to be a great regional museum. It's much harder to be a regional museum that has relevance here and beyond. And it brings the community back ... to realizing what their connection is, not just here, but to the bigger picture.

This is an ideal framework to support a museum's journey to addressing environmental sustainability, as it is important for other organisations and groups to be involved in the process to address environmental sustainability in a meaningful and impacting way.

Again, this idea is more applicable to museums that are publically-funded such as Te Manawa. However, the idea that museums are places owned both literally and metaphorically by the people is one that is only growing in momentum. It is therefore important that if museums are to remain socially relevant, they are seen to be reflecting the most pressing and socially pertinent issues in a way that links the past, present and future. For many, it is about relating to people on a personal level. As art registrar Sophie Thorn points out: 'if you go into a museum and you have a personal connection with something, you're going to go and show everyone. And you feel that kind of ownership. I feel that the interactive carpet is about people feeling ownership of this institution, and that is a really important thing.'

Many of the participants felt that Te Manawa's focus on building meaningful and long-lasting external relationships had increased in recent years, meaning not only that they are focused on building relationships with the general public, but also building and maintaining relationships with other institutions and organisations. Most visibly there is the important relationship with the City Council. However, they also maintain important relationships with the 'library and community services, as partners and as stakeholders.' In terms of environmental issues, Te Manawa has built many other external relationships with organisations such as the Green Rig which functions as a mobile 'greening education' programme in the form of a giant 14 wheel truck. The truck, initiated by Horizons Regional Council, aims to bring 'fun stuff about the environment

straight to your place. Packed full of interactive exhibits, demos, resources and technology, it will help you take up the eco-challenge in your batch, backyard, barn or business.’⁹⁴ Collaborating with programmes such as this allows museums to become part of a network of compatible organisations that support the proliferation of information regarding environmental issues into the community. Te Manawa has also taken on the blue duck (whio) as their mascot, an endangered endemic bird, which indicates their desire to address environmental issues. The Blue Duck project, which began with Te Manawa staff organising ‘a trip up to check stoat traps in the Ruahines’, is planned to be an ongoing project. As Miriam Sharland points out: ‘it’s something we intend on doing every few months – take some staff members and the work minivan and go up there and do some hands on conservation work.’

In terms of addressing environmental sustainability in the wider community, in 2011 Te Manawa received a Department of Conservation Award in ‘appreciation of the numerous conservation stories they share with the community through the exhibitions, events and education programmes.’⁹⁵ This award was in recognition of the efforts predominantly of the science and education teams at Te Manawa who ensure that:

Conservation themes and topics have often featured in science cafés and floor talks, and are a regular feature in Te Manawa’s education programme for schools. A regular supporter of Conservation Week, Te Manawa hosted the Slugs, Snails and Spider Tales: A Closer Look at Conservation exhibit in 2009, and in 2010 it ran the Manawatū Wildlife Photographer of the Year competition.⁹⁶

Playing host to and supporting such events is an essential part of creating meaningful links within the community, and helps to keep the museum as constant presence, and therefore in the forefront, of community activity. Another element of this is tapping into other educational institutions. This is particularly important for the education team who are part of an advisory group formed by the Ministry for Education which includes ‘Massey lecturers, primary and secondary teachers [who] meet at least twice a year ...’ Maintaining relationships with other

⁹⁴ The Green Rig, www.greenrig.co.nz/welcome, (accessed November, 2011).

⁹⁵ Department of Conservation, www.doc.govt.nz/about-doc/news/media-releases/2011/conservation-award-for-te-manawa/ (accessed November, 2011).

⁹⁶ Ibid.

learning institutions is an essential way to share knowledge, keep up with national and international developments, and to maintain a continuing presence in both the public and academic worlds.

Another practice which keeps Te Manawa in constant communication with the external world is its focus on its relationship with local iwi, predominantly with Rangitane. The museum's kaihatu is a role dedicated to ensuring this lasting, positive connection with the local iwi. The focal point of the role has somewhat shifted in recent years. The position was formerly called 'kaitiaki' (guardian, custodian), which indicates a much more inwardly-focused role as a guardian of Māori taonga than that of the kaihatu, which has a lot to do with building and maintaining external relationships. In discussing kaitiakitanga, knowledge of the concept varied from interviewee to interviewee. When asked if they thought kaitiakitanga could be a useful concept for museums to draw upon, most thought it could and should be incorporated at a fundamental level and that 'museums should be drawing on these concepts ...' and it represented 'a really positive relationship and influence on New Zealand.' Art registrar Sophie Thorn thought that museums should capitalise on a younger generation being more aware of Māori concepts such as this, but at the same time felt that in relation to the concept of guardianship and environmental sustainability, New Zealand museums have a useful 'metaphor' to use but did not think that other countries could not use a similar holistic approach. She pointed out that many international museums are far ahead of this country in this regard, despite the availability of this metaphor. Te Manawa's incorporation of the role of kaihatu is another indication of their dedication to the concept of kaitiakitanga, as it seems to be a role that is incorporated at most levels of institutional structure.

Summary

This chapter has sought to establish how the role of museums can be linked to the discussion around environmentally sustainable ideas and practices. Te Manawa staff interviewed outlined the various ways they felt museums could be interacting with environmentally sustainable ideas and how this might enrich the museum's mission to be the 'heart of the community.' First, it was acknowledged that the museum's role as steward of cultural heritage and the additional role of

preserving that heritage was of primary importance. The idea that this is not just for contemporary society but rather for ‘future generations’ was particularly important. This has obvious implications concerning environmental sustainability, and is discussed at length in the literature concerning this topic. Related to this is the importance the interviewees placed on Te Manawa’s relationship with the community and other organisations around Palmerston North. The interviewees emphasised that as the community felt themselves to be stakeholders in the institution, it was important that issues they believed to be pertinent were addressed. This can be applied to *Te Awa* (which resulted from the community’s concern over the state of the Manawatū River), where Te Manawa attempted to present a balanced and rational evaluation of the situation in a topic that is often clouded with misinformation and overpowering voices.

This can be related directly to the concepts of new museology discussed in the literature review, where people and communities are placed at the centre of a museum’s function. This chapter has shown that staff at Te Manawa are indeed engaging and working within this paradigm and attempting to put it into practice through various forms of engagement with the community, environmental organisations and local iwi. These relationships are viewed to not only enhance Te Manawa’s standing within the community, but also reveal the potential museums have to fulfill their roles as public educators.

Related to this, one of the most interesting findings from the interviews, particularly articulated by Stephen Fox, was the idea that while museums were an appropriate place for the discussion of difficult and complex ideas that perhaps challenge the community, they must also remain fairly neutral on politically charged topics such as the environment. As this chapter has emphasised, Te Manawa is viewed as place for many voices from within the community. Indeed, as highlighted in the introduction for this dissertation, this neutrality is why museums are such entrusted institutions within our communities, specifically because they do not push particular agendas. This places them in a somewhat difficult position when discussing issues such as the environment, as the development of *Te Awa* highlighted. In a similar manner, this chapter has highlighted that museums occupy a further middle-ground through being mediators. This is especially the case for the science curator, who sees her role as aligned with ‘science communication’ rather than traditional curation. While they

cannot push particular agendas, the interviewees maintained that they could help enable the general public to look at environmental sustainability not only through the sound information relayed in exhibitions and by drawing the public's attention to their surrounding environment, but also through engaging in sustainable practices themselves, such as recycling and engaging in conservation in the wider community. Through this outward thrust, Te Manawa staff thought museums to have the power to influence and literally change societal behaviour.

Chapter Four: Institutional Engagement

This chapter is a continuation of the findings from the interviews, and examines the institutional realities of addressing environmental sustainability within the museum: staff practice, institutional policy, and barriers and incentives to becoming an environmentally sustainable institution.

Staff Practice

This section discusses the various practices Te Manawa staff engage in which reflect environmentally sustainable ideas. Most of the interviewees felt that many staff members already engage in sustainable practices without categorising them as such, but rather through habit and necessity. Throughout the interview process it became apparent that capitalising on the enthusiasm and capacity of staff is one of the first steps to institutionalising such behaviour.

Discussions around what museums could (or should) be doing institutionally to encourage environmental sustainability among staff members were prominent in most of the interviews. All participants felt that Te Manawa's multi-faceted nature meant that there was great scope to explore environmental sustainability in a cross-disciplinary way, providing the opportunity to weave together the multiple perspectives on hand at the museum. At the same time, the idea was discussed that addressing environmental sustainability should primarily be the responsibility of the science team at Te Manawa (or science museums in general) as it seems to be more naturally aligned with their subject matter. Art registrar Sophie Thorn particularly felt that as her position at the museum is specifically centred around collection care, her focus would always fall to providing the best conditions for the collection regardless of environmental impact: 'I think in terms of environmental sustainability and my job there are other things that need to come first ... We use a lot of resources to control those environmental conditions and they probably do suck away a lot of power, and there's a lot of work involved in sealing off places, but again that's to preserve the objects in the best way possible.'

Many thought that the opportunity to draw on the experience and enthusiasm of staff members to help encourage environmental sustainability was

possible, but is not currently capitalised on to its full potential. At the same time, most felt that museum staff had a natural tendency to reuse, with Neil Phillips stating that museum staff ‘always have a consciousness about not wasting material’ usually as a consequence of limited funding and resources. This idea seemed to be especially strong among the education team. Most staff members had come from teaching backgrounds where, as Alastair Thompson pointed out, resources are often even scarcer than in museums, which encourages the team to find uses for recycled material. This varied from using recycled yoghurt pottles and coffee grounds in the education programmes, to finding use for construction material left over from Te Manawa’s redevelopment.⁹⁷ This idea was also brought up in terms of exhibition design, where the concept of ‘cradle to cradle’ design is an important concept in the reuse of resources. Neil Phillips talked about his previous role at the Whanganui Museum several years ago where these ideas were already being picked up: ‘we talked about recycling material and designing to recycle rather than designing a system for one exhibition. Instead, maybe we can use that across multiple exhibitions.’ Most participants thought that the flow-on effect of these unofficial processes and enthusiasm of staff would be the catalyst for creating official policy regarding institutional environmentally sustainable practices.

The interviewees felt that the motivation to institutionally initiate and engage in environmentally sustainable practice more often than not comes from personal interest. Many of the interviewees who felt strongly about officially incorporating it into the structure of Te Manawa were also personally passionate about living in a sustainable manner. For example, Miriam Sharland’s desire to influence Te Manawa’s institutional sustainability was motivated by her personal interest:

I look at the skip everyday and think ‘god that’s a lot of waste.’ And that if we had more time, we could be passing it on to people who could use it. So I’d been through the carbon zero process before with

⁹⁷ The education team found an innovative use for the by-products created during the redevelopment process using recycled material. Team leader Alastair Thompson provided an example of this innovative thinking in the new education programme ‘Dinosaur Dig’. This is an interactive activity located in an area just outside the newly renovated building which utilises reused concrete pipes, earth and other material leftover from the renovation process to create an educational, interactive display focused on prehistoric discovery.

my previous company, which was not a museum. But as I'd been through it, I thought 'if we can do it there we could do it here as well.'

When discussing the exhibition design of *Te Awa* with Neil Phillips, I had anticipated that the content in the exhibition would have in some way informed its design and construction. From an outside perspective, this seems like the perfect opportunity to explore a sustainable design specifically because of the environmentally charged content. Although he was not involved in the early phases of its design, his understanding of why sustainable design was not explored fell to the usual institutional causes that slow such developments and innovative thinking. In this instance Phillips felt that a primary cause of this was 'designers reverting to techniques that they are comfortable with and know because of time and money.' He also outlined that often the outcomes you work towards as a designer may 'have very little to do with sustainable exhibition design', regardless of your desire to work in such a manner. However, one shift towards environmentally sustainable modifications has been addressed in the choice of lighting, something that has become common museum practice:

... there has been a real shift to using LED lighting for the reasons of low power and energy usage and that's a positive move ... For some reason it seems to be a popular topic and an easy one ... maybe that's just around the fact that [the lights] are off the shelf items so you can just go and buy them and say 'we're sustainable' as opposed to changing our practices ...

Once again it seems that if it is not an institutional priority, working to achieve environmental sustainability is often placed in the 'too hard basket.' As Neil Phillips points out, 'I think there is an awareness as opposed to a desire at this stage and I think it might take some group discussions around how we as a team want to see ourselves moving forward. And I'm pretty positive about it. But unfortunately it seems that getting the opportunity for everyone to talk and think and to probably read a bit is actually really hard.'

Policy: Putting Ideas into Action

As there is currently no environmental sustainability policy at Te Manawa, this section discusses the opinions of the interviewees regarding the idea of implementing such a policy. The importance placed on this varied from person to

person. However, most of the interviewees thought that as environmental sustainability is being recognised as a major international museological shift, it is important for Te Manawa and New Zealand museums in general to remain at the forefront of best practice.

Most participants agreed that initiating widespread institutional policy regarding environmental sustainability is a vital next step, with Miriam Sharland stating that it should be ‘part of the bottom line.’ Without a policy, many initiatives simply do not get off the ground, so it first must be made a priority. As Stephen Fox pointed out, if one item is prioritised others inevitably get left behind: ‘like any strategic priority, if it’s a priority it will work. That will happen, something else may not, and that’s the decision you make. You can’t do everything so have to pick out what’s important.’ Turning ideas into policy must be considered in the wider context of the museum’s future strategy. Fox recognised that environmental issues have not been at the forefront of policy-making in the past: ‘Is it the way we think as an institution? No, probably not. Is that right? No ... [however] the fact that we don’t think about those things at the moment doesn’t mean that we’re not going to.’ Indeed, environmental sustainability has been recognised by the museum as a pillar of their ‘strategic direction forward’, along with other hot topics like the ‘digital environment.’

It seems that the most critical step in a museum becoming more environmentally sustainable is through implementing a workable and meaningful policy to supplement the work that staff already engage with on a daily basis. Getting these ideas to the discussion table, it seems, is half the battle:

... it is [about] making it a big issue for the organization. At the moment everyone is aware of it and everyone works towards it, but in their own little way; making baby steps towards making it part of our process. But if at some point we can make it a key goal for Te Manawa to achieve, and allocate time to achieving that, we’ll be able to make that big step.

There seemed to be consensus among the interviewees that members of staff who were personally passionate about the issue, would be the ones to drive the institutional commitment: ‘I think it’s only a matter of time ... it’s a case of two or three key people driving it and leading the way and making a couple of decisions around what it looks like.’

Barriers to Achieving Environmental Sustainability

During the interviews, all of the participants brought up issues that they saw as being barriers to achieving institutional environmental sustainability. In the literature concerning museological environmental sustainability a wide array of potential barriers to engaging with it institutionally are presented. These can vary from the belief it is at odds with good collection care; that it is too costly, both in terms of time and resources, along with the fact that (by nature) museums are inherently large consumers of energy. All of these ideas were discussed by the interviewees as potential obstacles to engaging with sustainability at a widespread, institutional level.

One of the most common ideas that ‘going green’ is at odds with essential institutional practices such as collection care was discussed by several interviewees. Preserving objects is traditionally seen as a primary museological purpose, and therefore controlling the microclimate inside the storerooms and the galleries twenty-four-seven is an essential part of this role. Naturally, those whose jobs are defined by the task of preserving objects by the best possible means are unlikely to be the first to switch to greener practices. This idea was especially pertinent for the art registrar Sophie Thorn, who felt that the responsibility for environmental education should fall with the science team. In line with this thinking, there is also the notion that it does not fall into the domain of art galleries to be involved in social education. As Thorn pointed out, when questioned about the relationship between museums and environmental sustainability, from her perspective, ‘there’s an idea that museums are here to educate as well as preserve our culture ... more in the museum part than the art gallery. But I think that could be a part of their role.’

Unsurprisingly, the issue of limited money and resources is a massive barrier to many museums that simply do not have the time or funding to make large institutional changes. Neil Phillips felt that museum workers ‘stick to what they know’ because time and money is short. There is often not much room to move and adapt within the confines of deadlines and budgets that must be adhered to (or come under). There is also the notion that going ‘green’ initially requires a large monetary investment in order to be implemented in a meaningful and long-lasting way. While this may be the case for large-scale developments,

such as building construction and adaptation, as we have seen there are many low cost activities that can be encouraged which add to the sustainability of the institution.

It is also time-consuming to make institutional changes. Without specific time allocated and set aside to address what these changes might be, and how they could be implemented, ideas can remain stagnant. Neil Phillips pointed out that being ‘time poor’ is one of the primary reasons exhibition design may remain in the past and underdeveloped: ‘There’s quite a lot of development and thought and prototyping that needs to go into the development of [sustainable design practices], and unfortunately we don’t have the time to do that sort of prototyping.’ Related to this is simple institutional slowness, especially in mid-sized to large institutions, with multiple departments that can often be disconnected from one another. Gaining consensus across an institution when departments might have very different foci and priorities can be a difficult task, made even more difficult by a lack of policy to bind them on an issue.

Another potential barrier is the idea that ‘going green’ is difficult or even unachievable in a building that is not specifically designed as a ‘green’ building. More often than not, renovating museum buildings on a tight budget does not allow much room for innovative green design. Museums do what they can, but when environmental sustainability is not part of institutional policy, it is unlikely to be incorporated in building and renovation plans. Large museums that have large budgets and missions that are in line with being holistically sustainable are often the only ones to have the resources to really go green from the foundation up.

There is also the fact that museums are high consumers of energy and resources. The examples of this are many, from exhibitions, to round the clock lighting and temperature control, to exhibits and interactives that suck up power. As an interviewee pointed out, even in *Te Awa* with its environmental messages, several of the interactives that imitate a ‘flood-plain’ scenario are inefficient in their consumption of energy and water resources.

Incentives to Achieving Environmental Sustainability

Despite all of these barriers, the participants also discussed various incentives to achieving environmental sustainability in museums. Like the barriers, these are many and varied, and the driving factors range from environmental consciousness to public relations and cost cutting.

In spite of the fact that it may cost money to lay the foundations to being environmentally sustainable, it can eventually save the institution money and resources. With power consumption proving to be the highest running cost to most museums, switching to things like energy efficient and sensor lighting were ideas that most participants thought were easily achievable green practices that led to energy savings. Art registrar Sophie Thorn emphasised that this is actually better for the objects on display in the galleries as they would be exposed to less harmful light. However, as Stephen Fox points out, while standards around humidity and temperature in museums have always been strict, these may be shifting:

... energy consumption is our biggest operational cost. And that's about running things 24/7, 50% humidity plus or minus 2 degrees – those sort of standards. I realize there is movement around these standards because of this, the whole idea of sustainability. There is a bit of movement around realizing the validity of those regulations [and] acknowledging that a minor adjustment can make a big difference in terms of reduced costs of energy.

Although many associate going green with spending money, throughout the interview process it became apparent that museum staff already engaged in sustainable practices and recycling material as a way of saving money. As Neil Phillips points out:

While it would be great to say it's because we are all so environmentally aware, the reality is that recycling exhibitions and material is really important for museums as it saves us money and so therefore from when I started working in museums and exhibitions there was always a consciousness about not wasting material. I could take you downstairs now and show you the storerooms that are filled with what looks like junk, simply because we can't bear to throw them out because we know they're going to be useful for something one day. So it's not the idea of recycling for sustainability hasn't always been at the forefront of our minds, but it's certainly something that has been practiced ever since I've been working in museums.

There is also the idea that addressing environmental sustainability is an essential part of being a holistically sustainable institution, where economic, social and environmental sustainability all contribute to long-term survival of an institution.

It is also important to acknowledge external incentives such as the QualMARK standard, which help encourage museums to become more environmentally sustainable. Many of the participants thought that achieving a bronze, silver, or gold ENVIRO rating would not only be part working towards best practice, but would also provide important PR opportunities and national recognition of excellence, innovation and social consciousness. Stephen Fox acknowledged these two sides to achieving a nationally recognised standard, and that although becoming environmentally sustainable is a major goal, it is also a means to achieve national recognition. However, as he pointed out: ‘if that’s the vehicle that incentivises the action then that’s fine.’

Summary

This chapter discussed the ways in which staff at Te Manawa are already engaging with environmentally sustainable ideas, how they are approaching the notion of institutional policy, and what they understand the barriers and incentives to engaging with this sustainability to be. This research has shown, perhaps unsurprisingly, that personal interest and job focus play a major role in how staff approach environmental sustainability. Both Miriam Sharland and Neil Phillips had strong feelings about the importance of personal sustainability, and so this naturally informed their professional opinions. It has also identified that staff whose job focus is primarily on the preservation and care of the museum’s objects are more concerned about maintaining high standards in that role, and consequently perhaps less likely to embrace institutional changes which threaten the stability of those objects.

This chapter also explored how staff regard the implementation of an environmental sustainability policy. Although most interviewees agreed that policy represents a vital next step towards meaningful engagement, establishing exactly how the institution would get to this stage was more complicated. As Alastair Thompson highlighted, Te Manawa is still discovering its identity and

although this is an ever-evolving process, the choices that are made now, at this time of environmental crisis, will work to define that identity.

Conclusion

This dissertation has sought to answer the questions *What is the current state of environmental sustainability practices in New Zealand museums?* and *How are museum professionals engaging with environmental sustainability?* through looking at one in-depth case study. This is important as theories of addressing and implementing environmental sustainability in museums is quite different from actually putting it in action. The academic and practical discourse surrounding this topic is growing, and it is therefore essential to have an understanding of where New Zealand museums are locating themselves in this dialogue. Through discussions with staff at Te Manawa Museum, Gallery and Science Centre, this dissertation has crystallised their various opinions and rationales within the framework of the current literature on this topic. This dissertation has contributed to the gap in the research by looking at the practicalities of institutionally engaging with environmentally sustainable ideas, primarily through the creation of the exhibition *Te Awa*, and how this relates to the ideas discussed with the interviewees, as well as the in the current literature.

This study has gone some way towards enhancing our understanding of how New Zealand museums are engaging with environmental sustainability through identifying what staff consider their role to be, addressing the issue of policy and institutional practice, and how the museum relates to their community. This dissertation confirms previous findings presented in the literature review and shows specifically that ideas such as reflexive community engagement, new museological theory, as well as the ability to influence and change behaviour, are particularly important to the contemporary museum. These ideas also hold particular pertinence for the development of environmental sustainability in the museum. It also supports the idea that New Zealand regional museums are engaged with ideas of environmental sustainability in complex ways and are currently at a point where the decision to take that engagement further, into practice and policy, is approaching.

As this research represents such a multi-faceted and ever-evolving topic, it is challenging to succinctly collate the findings into one neat answer of exactly what the current state of environmental sustainability practices in New Zealand

museums is. However, there are several conclusions to be drawn from this study that help to answer this dissertation's central questions. The word 'threshold' encapsulates this complex reality. Te Manawa is indeed approaching a threshold regarding its own implementation of environmental sustainability within the museum. Individual staff members are engaging with various forms of sustainability practices, from attempting to initiate carbon footprint analysis, to reusing by-products of the redevelopment process, to discussing more sustainable design processes. However important this individual work is, it is difficult to meaningfully progress without an institutional policy in place to ensure best practice. This is the point of the threshold – to maintain the same stance or to engage in a stronger push towards meaningful engagement.

One of the most significant findings of this study is the conflicted way staff are approaching environmental sustainability. While they wish to exhibit good community-minded behaviour as well as responsible education, they are wary of polarising the issues surrounding environmental sustainability. This is primarily because, as a publically-funded institution, they must be seen as democratic spaces, open and belonging to all in the community. The development of *Te Awa* illustrated this polarisation, and also provides an example of how a museum approaches and works around such controversy. As this research shows, staff had to negotiate through the difficulties of dealing with strong environmental advocates who felt the exhibition should take more of a hardline stance, whilst acknowledging other voices in the community who may be more resistant to change.

Indeed, this study has also revealed the centrality of local context when addressing environmental issues. Although this topic is part of a national dialogue (and indeed Te Manawa wish to have a wide national focus), addressing the concerns of the immediate community were essential to the success of *Te Awa*. If relating environmental exhibitions and programmes to familiar concepts is indeed the most effective way to capture the interest of visitors, as the literature purports, then relating it to local concerns and issues is essential. In line with this thinking, Te Manawa successfully grasped onto the community's concerns surrounding the Manawatū River in *Te Awa*, whilst maintaining a strong connection to the region's agricultural focus in an attempt to maintain the balance needed to satisfy both sides of the debate. Indeed, it is through this balancing act that museums

have retained the trust of the public, perhaps lost by governments and mainstream news sources outlined in the introduction to this dissertation. This research has indeed confirmed that staff believe it is important for museums to retain this perception as being trusted and un-biased institutions in order to fulfill their missions.

While this dissertation is only representative of this one specific case study, the findings reflect much larger national museological developments. It is important to acknowledge that museums do not work in isolation. Staff bring the experiences and conversations of their previous roles to new positions and museums; they attend conferences and meetings where new museological ideas and trends are discussed. It is therefore not likely that these ideas exist in isolation at Te Manawa. It is also important to acknowledge the effect of the public's interest in the issue. As the public's awareness and engagement with ideas of environmental sustainability grows, so do their expectations as consumers. This research therefore provides a point from which further discussion around this issue, particularly the notion of correlating the ideas new museological theory and environmental sustainability within the theory/practice binary, can be launched.

As Te Manawa Chief Executive Stephen Fox pointed out, practising institutional sustainability is not a matter of 'saving the planet.' Rather, it is about being conscious and mindful citizens committing to the view that 'sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'⁹⁸ If museums are charged in part with protecting our cultural heritage for 'future generations' as the interviewees maintained, then a flow-on of this 'protection' encompasses engaging in sustainable practice for the benefit of future generations, as well as helping to educate the wider community on these issues.

While gaining institutional consensus on exactly what environmental sustainability means to a museum, why they should address it, and whose responsibility that might be is no small task, it is important for museum professionals to be engaging with these ideas. Engagement and discussion, and making this conversation a part of institutional dialogue, can only aid in the growth of not only this topic, but museological theory in general. Indeed, creating

⁹⁸ World Commission on Environment and Development, *Our Common Future*, 43.

consensus around a particular behavioural change is dependent on normalising that behaviour, which involves aligning daily institutional practice and official policy. Although Te Manawa has no official policy yet, many of the staff already engage in some form of sustainable practice or have skills that could be drawn on to help create institutional policy. This indeed reflects the ideas of institutional theory discussed in the literature review, where engagement with environmentally sustainable practices on a daily basis helps transform practice into habit.

Throughout the research process, I became aware of the potentially arduous and challenging task of implementing an environmental sustainability policy. Indeed, the process of actually getting to the policy stage appears to be the most challenging task of all. It requires dedication and co-ordination of time, money and resources. As many of the interviewees pointed out, being a reasonably large multi-faceted institution can result in a disconnect existing between departments, which can in turn make it difficult to implement widespread institutional changes. The interviews revealed that one of the most important first steps is to dedicate time for staff discussion and to gain consensus as to how the museum will move towards its version of environmental sustainability. Perhaps most significantly, it also requires a shift in mentality. While my research established that museum professionals are very much aware of the role they play as public educators, which environmental education is very much a part of, I do not think that the ideas discussed in the literature review – that museums indeed have a responsibility to address these issues for multiple reasons – have been explored fully in the workplace. Perhaps this is a result of the slight separation that still exists between the academic and professional spheres. As I have discussed, writing and theorising about these issues versus actually implementing policy and changing behaviour are very different things. However, I would argue that in order for such a policy to be approached and implemented meaningfully, museum staff should be encouraged to consider the unique cultural position museums hold, as well as the deeper implications of their missions. Truly considering the cultural space museums occupy, beyond collecting and exhibiting, ideally as sites dedicated to public education, democracy, discovery, innovation and inspiration, is a crucial step towards meaningful engagement with environmental sustainability in the museum.

The findings of this study suggest that while there is much scope for the development of this topic in the professional sector, both academically and practically, it is an issue that museum professionals are thinking seriously about nonetheless. As many of the interviewees pointed out, the key to furthering such discussions is to capitalise on individuals in the workplace who are willing to push the conversation into the forefront of professional dialogue. Research, particularly from within the museum, is also an essential area which greatly influences museological practice. Contemporary issues such as this, which are literally unfolding before our very eyes, offer up particularly interesting possibilities for research, partially because museums and society are engaged in parallel experiences of the issue. As we have seen, this can create a turbulent and emotionally charged dialogue within the museum. However, this example is perhaps a perfect reflection of new museological theory where museums and the societies which they serve are essentially on mutual path of discovery, learning and questioning. As several interviewees pointed out, even the modest ambitions of this dissertation may indeed cause Te Manawa to consider the question of where it is positioned in this debate. Indeed, this study represents the theory/practice model, which underpins the field of museum studies, in action.

Environmental sustainability is becoming an essential topic for all museums to address, regardless of size or focus. It represents a necessary facet of creating holistically sustainable institutions and organisations where economic, social and environmental sustainability work in a symbiotic relationship, each essential for the continued existence of the institution. Although we have seen economic growth become the primary focus of our society to the detriment of environmental or social stability, the idea that this is entirely unsustainable in the long-term is beginning to be widely recognised. Indeed, although this dissertation has been entirely focused on environmental sustainability, it must be acknowledged that being economically and socially sustainable are crucial both as individual concepts and in conjunction with each other. The idea that all three ‘pillars of sustainable development’, including environmental sustainability, are equally important and interlinked is critical for institutional longevity. I argue, however, that environmental sustainability is the lynchpin – the essential concept that will help us to conserve, not only our museums and objects, but traditions, ways of life, and of course, our environment. Without the stability of Earth’s

ecosystems, without consistent and predictable temperatures for which we rely on for so much, without understanding that we are not detached from our environment, but in fact wholly reliant on it, it is difficult to see a bright future ahead.

As it seems that policy is the lynchpin in putting ideas into motion, perhaps the next step in the continuation of this research would be to specifically examine how museums are implementing environmentally sustainable ideas and to create a model which other museums could use to as a platform to begin addressing it in their own institutions. There are a multitude of organisations set up to help businesses become more sustainable and there are of course local examples of museums working with other museums attempting to become sustainable. National Services Te Paerangi provides an invaluable resource to many small, underfunded museums throughout the country and has already engaged with museums regarding environmental sustainability and provided pathways and models to aid in this process.⁹⁹ However it would be valuable to go beyond this phase by directly engaging several museums from around New Zealand who are interested in trialing sustainability models. These museums could then be part of a long-term research project where the implementation of a sustainability model is trialed and evaluated – pre, during and post-implementation - to assess its workability. It would be valuable to work in conjunction with National Services Te Paerangi during the research, to investigate, research and action a meaningful, workable environmental sustainability model tailored and specific to New Zealand museums.

⁹⁹ Refer to footnote 47.

Appendix A: Interview Schedule

An overview of my interview questions are listed below:

- Could you tell me a little about your role here at Te Manawa?
- What is your background?
- What do you feel is the role of museums in contemporary society?
- What do you feel there is the relationship between museums and environmental sustainability?
- Te Manawa is a multifaceted institution, weaving together art, science and history. What kind of opportunities do you think this provides for addressing issues like environmental sustainability?

- The diagram above displays the theory and reality and change needed to balance sustainable development. What part do you see environmental sustainability playing in the economic and social sustainability, not only of Te Manawa, but of your region in general?
- What opportunities do you think are provided with museums moving away from solely focusing on their tangible collections?
- Museum have traditionally been places where Western and European understandings of the world have been conveyed, however this has increasingly been challenged over the past few decades. Māori concepts of sustainability and guardianship of taonga, known as kaitiakitanga, which can be described as ‘the responsibility to live respectfully with the environment...to maintain the delicate balance between tangata whenua and the natural environment...’? To what extent do you think museums could draw on this cultural knowledge to enhance understanding of guardianship and environmental sustainability?
- Do you see environmental sustainability as being in line with Te Manawa’s mission statement?

- Has there been any investigation into Te Manawa's energy usage or carbon footprint per annum?
- The combination of funding cuts to the cultural sector and rising energy costs are facts that most museums have to face. To what extent do you see the promotion of environmental sustainability within Te Manawa as being beneficial to the economic sustainability of the institution?
- Do national incentives such as the Tourism New Zealand QualMARK Enviro Awards provide constructive and valuable incentives for museums to extend their environmental sustainability initiatives?
- I see that Te Manawa has already instigated several environmental education programmes in the past - the Creative Recycling programme and the Water Quality Programme. Could you explain to me the processes which lead to these initiatives?
- Will these programmes be revisited in the future? Are there any new programmes centred on environmental issues that you could discuss with me now?
- Palmerston North City Council has several Environmental Education programmes – do you see potential for future collaboration on these issues?
- Could you outline some of the ways your previous education programmes have made issues relating to the environment relevant and applicable to the public?
- To what extent do issues around environmental sustainability, such as choice and reuse of material, lighting etc play a role in the development and design of exhibitions at Te Manawa?
 - If yes, could you give me some examples?
 - If no, why do you think this is?

Appendix B: Interviewees

Stephen Fox, Chief Executive.

Stephen arrived at Te Manawa 3 years ago from Australia and has a background in museums and heritage, with previous roles at the National Museum of Canberra and at the Museum of Australian Democracy at Old Parliament House, Canberra. Stephen has identified environmental sustainability as one of Te Manawa's future strategic pillars.

Miriam Sharland, Science curator

Originally from the UK, Miriam's background is not in museums, but as a journalist, freelance writer and sub-editor. Though the science curator, Miriam primarily views her role as a science communicator. She is passionate about environmental sustainability both personally and professionally.

Neil Phillips, Exhibitions Team Leader

Neil has had a long career in the museum industry. He is also professionally and personally interested in sustainability. In his previous position at the Wanganui Museum as art technician he drafted an environmental sustainability policy. Neil is also personally passionate about sustainability.

Alastair Thompson, Education Team Leader

Alastair's background is in teaching, his previous position as principle of a primary school. In his role at Te Manawa he oversees a team of educators who are engaged with education programmes with schools, tertiary groups and early childhood facilities. He also leads the public programmes which look at creating partnerships with community groups and other organisations. Sustainability, particularly reuse of resources, plays a big part in Alistair's professional life.

Sophie Thorn, Art Registrar

Sophie's position at Te Manawa follows from a similar position at Napier Museum. As the art registrar, her focus is centred on the maintenance and preservation of the museum's art collection. Consequently, wider considerations of environmental sustainability are not a professional priority for Sophie at this stage.

Bibliography

Adams, W. M. "The Future of Sustainability: Rethinking Environment and Development in the Twenty-first Century." Report of the IUCN Renowned Thinkers Meeting. January 29-31, 2006.

Air Force Museum of New Zealand,
<http://www.airforcemuseum.co.nz/main/Our-Green-Museum>. Accessed June, 2011.

Barrett, Jennifer. *Museums and the Public Sphere*. Chinchester, UK: Wiley-Blackwell, 2011.

Brophy, Sarah., and Elizabeth Wylie. "It's easy being green: Museums and the Green Movement." *Museum News*. September/October (2006): 38-45.

Brophy, Sarah., and Elizabeth Wylie. "Saving Collections and the Planet." www.aam-us.org/pubs/mn/savingcollections.cfm. Accessed May, 2011.

Brophy, Sarah., and Elizabeth Wylie. *The Green Museum: A Primer on Environmental Practice*. Lanham, New York, Toronto, Plymouth UK: Altamira Press, 2008.

Cameron, Fiona. "From mitigation to creativity: The Agency of Museums and Science Centres and the Means to Govern Climate change" in *Museum and Society*, Vol. 9, No. 2 (July 2011): 90-106.

Dorfman, Eric. "The Sustainable Museum: A Global Review." Paper presented at Challenges and Perspectives: New Roles of the Natural History Museum in Response to Global Change, National Taiwan Museum, Taipei. October 28-29, 2010.

Dorfman, Eric., and Janet Carding, "Towards a Unified Definition of Intangible Natural Heritage." In *Intangible Natural Heritage: New Perspectives of Natural Objects*, edited by Eric Dorfman, 160-177. New York: Routledge, 2011.

Durie, Mason. "Understanding Universal Value: How Relevant is Indigeneity?" In *Māori and the Environment: Kaitiaki*, edited by Racheal Selby, Pataka Moore and Malcolm Mulholland, 239-250. Wellington: Huia Publishers, 2010.

Department of Conservation. www.doc.govt.nz/about-doc/news/media-releases/2011/conservation-award-for-te-manawa. Accessed November, 2011.

Harrison, Julia D., "Ideas of the Museum in the 1990s." In *Heritage, Museums and Galleries: An Introductory Reader*. Edited by Gerard Corsane. USA & Canada: Routledge, 2005. 38-53.

Platt, Jennifer. "Case Study." In *SAGE Handbook of Social Science Methodology*, edited by William Outhwaite and Stephen P. Turner, 100-118. Los Angeles & London: SAGE, 2007.

Qualmark Responsible Tourism. "Enviro Awards."
www.qualmark.co.nz/pdfs/Enviro%20Awards. Accessed May, 2011.

Goodwin, Emma. "Sewage Causes Big Stink." *Manawatū Standard*, September 22, 2011. Accessed January, 2012. www.stuff.co.nz/manawatū-standard/news/5613517/PNCC-blamed-for-river-pollution.

Greener Museums, www.greenermuseumsleadership.org. Accessed May, 2011.

The Green Rig. www.greenrig.co.nz. Accessed November, 2011.

Hallett, Liza Dale. "Looking Forward or Looking Back: Museums and the Future." Paper presented at the annual Museums Australia Conference, Sydney, Australia. May 4, 2005.

Handforth, Angela. Introduction in *Semi-permanent exhibition at Te Manawa Museum. Working title: River*. October 2008.

Harrison, Julia D. "Ideas of Museums in the 1990s." In *Museums, Heritage and Galleries: An Introductory Reader*, edited by Gerard Corsane, 38-53. London and New York: Routledge, 2005.

Hakiwai, Arapata T. 'The search for legitimacy.' In *Heritage, Museums and Galleries: An Introductory Reader*, edited by Gerard Corsane, 154-162. London and New York: Routledge, 2005.

Hauenschild, Andrea. *Claims and Reality of New Museology: Case studies in Canada, the United States and Mexico*. Smithsonian Centre for Education and Museum Studies. Accessed April, 2011.

Jennings, P. Devereaux., and Paul. A Zandbergen. "Ecologically Sustainable Organizations: An Institutional Approach." *Academy of Management Review*, Vol. 20, No. 4 (1995): 1015-1052.

Kellehear, A. *A Guide to Methods*. St Leonards, NSW: Allen & Unwin, 1993.

Labrum, Bronwyn., and Conal McCarthy. "Museum Studies and Museums: Bringing Together Theory and Practice." In *Te Ara* 30 (2) (November 2005): 4-11.

Manawatū River Leaders Accord. Foreword in *Ours: The Manawatū River Leaders Accord Action Plan*. Horizons Regional Council, 2011.

Maykut, P., & R. Moorhouse. "Qualitative Data Analysis: Using the Constant Comparative Method." In *Beginning Qualitative Research: A Philosophic and Practical Guide*. 126-149. London: The Falmer Group, 1994.

Morgan, Jon., and Kelly Burns, "Our River of Shame," *Dominion Post*, November 26, 2009. Accessed January, 2011.
www.stuff.co.nz/environment/3097651/Manawatū-River-among-worst-in-the-West.

Museums Australia. "Museums and Sustainability: Guidelines for Policy and Practice in Museums and Galleries." www.museumsaustralia.org.au. Accessed June, 2011.

Museum Association, www.museumsassociation.org/news/13062011-local-authority-museums-cut-staff-in-last-year. Accessed June, 2011.

Mutu, Margaret. "Ngati Kahu Kaitiakitanga." In *Māori and the Environment: Kaitiaki*, edited by Racheal Selby, Pataka Moore and Malcolm Mulholland, 13-36. Wellington: Huia Publishers, 2010.

The National Museum of New Zealand, Te Papa Tongarewa.
kupenga/Corporate/OurValues/Pages/KaitiakitangaGuardianship. Accessed June, 2011.

The National Museum of New Zealand, Te Papa Tongarewa.
<http://www.tepapa.govt.nz/AboutUs/Vision/Pages/Part1Impactonthenation>. Accessed June, 2011.

Nederveen Pieterse, Jan. "Multiculturalism and Museums." In *Heritage, Museums and Galleries: An Introductory Reader*. Edited by Gerard Corsane. London and New York: Routledge, 2005. 163-183.

New Zealand Legislation, "Local Government Act 2002,"
http://legislation.govt.nz/act/public/2002/0084/latest/DLM171881.html?search=ts_act_local+government_resel&p=1. Accessed November, 2011.

Novacek, Michael J. "Engaging the Public in Biodiversity Issues," *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 105: In Light of Evolution II: Biodiversity and Extinction (August 12, 2008): 11571-11578

Palmerston North City Council. "Vision."
www.pncc.govt.nz/YourCouncil/CityCouncil/Vision/. Accessed October, 2011.

Palmerston North City Council. "Community Outcomes."
www.pncc.govt.nz/YourCouncil/CityCouncil/CommunityOutcomes/. Accessed October, 2011.

Palmerston North City Council. "Summary of Council's Strategic Direction, City Future Unit." www.pncc.govt.nz/.../community-outcomes-and-current-strategic-direction. Accessed October, 2011.

Patton, Michael Q. "Qualitative Interviewing." In *Qualitative Evaluation and Research Methods*. 277-359. Newbury Park, California: Sage Publications, 1990.

Ross, Max "Interpreting the New Museology." In *Museum and Society*. Vol. 2, No. 2 (July 2004): 84-103.

Scott, W. Richard. "Institutional Theory: Contributing to a Theoretical Research Programme." In *Great Minds in Management: The Process of Theory Development*, edited by Ken G. Smith and Michael A. Hit, 460-485. Oxford UK: Oxford University Press, 2005.

Selby, Rachael., Malcolm Mulholland and Pataka Moore. Introduction to *Māori and the Environment: Kaitiaki*, edited by Rachael Selby, Malcolm Mulholland and Pataka Moore, 1-12. Wellington: Huia Publishers, 2010.

Sharples, Pita. Foreword to *Māori and the Environment: Kaitiaki*, edited by Rachael Selby, Malcolm Mulholland and Pataka Moore, vii-xi. Wellington: Huia Publishers, 2010.

Stam, Deidree. "The Informed Muse: The Implications of 'New Museology' for Museum Practice." In *Heritage, Museums and Galleries*, edited by Gerard Corsane, 54-70. London and New York: Routledge, 2005.

State of the World: Innovations for a Sustainable Economy. 25th Anniversary Edition. www.worldwatch.org/files/pdf/SOW08_chapter_3.pdf. Accessed January, 2012.

Stutter, Glen., and Douglas Worts "Negotiating a Sustainable Path: Museums and Societal Therapy." In *Looking Reality in the Eye: Museums and Social Responsibility*, edited by Robert R. Janes, Gerald T. Conaty, 129-152. University of Calgary Press, 2005.

Thelen, David. "Learning Community: Lessons in Co-Creating the Civic Museum." In *Heritage, Museums and Galleries: An Introductory Reader*, edited by Gerard Corsane, 333-338. London and New York: Routledge, 2005.

Te Manawa Museum, Gallery and Science Centre. www.temanawa.co.nz/about-us.html. Accessed January, 2012.

Te Manawa Museum, Gallery and Science Centre. www.temanawa.co.nz/exhibitions-calendar,listing,,,727,te-awa---the-river.html. Accessed February, 2012.

Te Manawa Museum, Gallery and Science Centre. www.temanawa.co.nz/exhibitions-calendar,listing,,,727,te-awa---the-river.html. Accessed February, 2012.

UNESCO, <http://www.unesco.org>. Accessed April, 2011.

World Commission on Environment and Development. *Our Common Future*. Oxford and New York: Oxford University Press, 1987.

Young, Roger. “Ecosystem metabolism in the Manawatū River.” Report prepared for the Cawthron Institute, 2011.