Environmental struggles: 'business as usual' budget control technologies versus organisational rhetoric

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Environmental struggles: ‘business as usual’ budget control technologies versus organisational rhetoric

Subject discipline: Management accounting

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Declaration of originality

I certify that the substance of this thesis has not been previously submitted for any degree and is not currently being submitted for any other degree or degrees. I certify that to the best of my knowledge any help received in preparing this work, and all sources used, have been acknowledged in this thesis.

Wendy Lucille Taylor   BBS (Accountancy), CA, MBA
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Abstract

This DBA thesis seeks to explore the inter-relationship of disciplinary technologies implicated between budgetary controls and environmental sustainability ideals.

The research was carried out using a case study of Unitec, an institute of technology, based in Auckland, New Zealand’s largest city. Unitec has three main campuses across the city, and is largely dependent upon central government funding for its degree, diploma, and applied training for employment skills to over 21,000 students, supported by over 1,150 staff. During 2011, Unitec formally launched an Environmental Sustainability Strategy (ESS) document, in conjunction with releasing $100,000 seed funding which targeted specific environmental sustainability projects.

The aim of the research was to investigate what influences sustainability reforms at an individual organisational level, with the focus to be the relationship between budgeting and environmental sustainability. The context of economic reality is presented in the form of Unitec’s 2012 annual budget cycle. The case study provides insights into the influences of budgetary realities and ESS rhetoric which became under-resourced; this is done using a Foucauldian critical approach to evaluate the roles of participants, identify power struggles, and critically reflect upon how the ESS challenged, but succumbed to, Unitec’s ‘business as usual’ budgeting approach.

The contribution of this research arises by demonstrating through an in-depth case study how disciplinary power is used within a budget process to influence an organisation’s environmental sustainability goals. Whilst budget controls manifest in regular reviews of progression toward chosen strategies, it is shown in this case how budgetary processes acted to impede implementation of an agreed high priority organisational strategy notwithstanding internal and external stakeholders’ expectations arising from the ESS.
List of abbreviations

ACE Adult and community education (Section 4.2.1)
BBRT Beyond budgeting round table (Section 2.3.4)
BMS Building management systems (Section 4.4.4)
CSS Critical social science (alternative methodological approach)
EFTS Equivalent full time students, Unitec, 2010a, p. 5
ESS Environmental Sustainability Strategy released May 2011 (Section 4.3.4)
FMs Financial managers (Section 2.3.2)
HS&E Health, safety and environment (Section 4.5.2)
IPC Investment project committee (Section 4.5.2)
ISS Interpretive social science (alternative methodological approach)
LED Light emitting diode, a low-energy use, long-lasting form of electric lamp (Section 4.6.2)
KPI Key performance indicator
MCS Management control systems, including the budget process (Section 2.3.1)
NFM$s Non-financial managers (Section 2.3.2)
NZQA New Zealand Qualifications Authority
PSS Positivist social science (alternative methodological approach)
SAC Student achievement component (referring to NZ government funding measurement for domestic revenue) Unitec, 2010a, p. 33
SCCBS Southern Cross Business School (within Southern Cross University)
SCU Southern Cross University
TEC Tertiary Education Commission (Section 4.2.1)
TEIs Tertiary education institutions (Section 4.2.1)
TRACK Teaching, Research, Advocacy, Campus operations, and Kaitiakitanga (or guardianship) are the major areas of Unitec’s environmental strategy focus, known as ‘TRACK’ (Section 4.4.1)

Unitec Unitec Institute of Technology (includes all campuses unless otherwise indicated)
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Chapter 1  Introduction

“We’re only scratching the surface but we are already actually making huge inroads. And environmental sustainability is becoming part of the culture quite fast.” Source: S6, describing the influence of the environmental sustainability strategy implementation.

1.1. Background and motivations

Considerable pressure has been imposed by various stakeholders for organisations to reconsider their approach to the natural environment (Tilt, 2006). The consequent demand for ‘sustainability reports’ has also grown, with the reporting and decision-making focus sometimes upon economic sustainability rather than environmental sustainability (Adams, 2004). The competing priorities of cultural, economic, ecological and social dimensions of sustainability determine how decision makers approach accounting for sustainability (Lamberton, 2005). Further, the prioritising of environmental sustainability might implicate how organisations change, by implementing strategies for resource efficiency and waste (with consequent cost) reduction; or redefining policies and procedures to include environmental sustainability in their micro-processes, to enable a competitive advantage for their ‘green’ stakeholders. Some organisations may also change their culture to incorporate aspects of sustainability as part of their core beliefs (Adams & McNicholas, 2007). While governmental, societal and customer demands for environmental sustainability have risen, a matter not well researched is whether those demands have translated into change at the implementation level of an organisation’s budget.

The motivations for this research is threefold: first, the researcher’s desire to explore why an organisation might seek to demonstrate ambitions toward an aspect of environmental responsibility; second, acknowledge how powerful internal decision-making accounting processes might influence the achievement of environmental responsibility aspirations; and three, by one organisation’s particular desire to implement an environmental sustainability strategy.

1.2. Aim of thesis

The aim of this thesis is to investigate what influences sustainability reforms at an individual organisational level, with the focus to be the relationship between budgeting and
environmental sustainability. The context of economic reality impinging on decision-makers is presented in the form of the annual budget cycle which mostly occurred after the launch of an organisation-wide environmental sustainability strategy. With this broad aim, a case study is used to investigate how the budget process influences or is influenced by environmental sustainability objectives, explore who is involved, and identify their role in how disciplinary power is used to achieve the environmental sustainability objectives.

1.3. Objective of thesis

The thesis objective is to explore and address answers to the core research question of:

Does sustainability thinking influence the budgeting process? If so, in what ways? And is this a two-way relationship?

The answer to this question emerges from considering matters arising from the key issues:

1. Is there a two-way relationship between sustainability thinking and the budgeting process, and in what ways?

2. In what ways do the budget setters and sustainability managers mobilise power and knowledge to advance their relative agendas?

3. Is the use of power and knowledge by these individuals influenced by narrations in their organisation’s current context?

Exploring these questions from a Foucauldian perspective, particularly of disciplinary technologies used within power relationships, provides valuable insights from the facts of the case study. The most appropriate methodology to offer answers to the core research question is introduced in Section 1.6 below. However, the next section outlines the anticipated contribution of this research to the literature.

1.4. Contribution and gaps in prior research

This thesis seeks to contribute to the literature by exploring the gap between budget control reality and environmental sustainability rhetoric. A view is offered to address a gap in the literature of how disciplinary power is used within a budget process to achieve an organisation’s environmental sustainability outcomes. By critically reflecting upon how and why an organisation’s environmental sustainability objectives are influenced by the power of
the annual budget machine, supported by Foucault’s disciplinary power theories, this research contributes to the literature. Further, the insights provided by the case study indicate how the budget setters used internal control mechanisms to shape the (ultimately mendicant) outcome for environmental sustainability strategy initiatives.

The literature indicates that further work is required in examining change at various levels within, and actively engaging critically with, organisations (such as Adams & Larrinaga-Gonzalez, 2007). Adams & Whelan (2009) considered that internal communications, organisational culture, and power structures all influence how organisations might change. They also considered that indentifying how individuals go about changing an organisation’s external disclosures in realising of this change is important. These sentiments are echoed by others, including O’Dwyer & Unerman (2007). For Cooper & Hopper (2007), to understand management accounting, researchers must examine power relationships and conflicts between political, social and economic contexts.

Some studies have critically investigated power relations in financial settings (such as Garland, 2007, with Foucault’s power relationships interpreting personalities in a finance department), and some have considered social responsibilities in management control systems (as does Durden, 2008, with a broad social agenda case). An under-researched area is apparent: a Foucauldian critical view exploring disciplinary technologies used within a budget process relating to an organisation’s pursuit of environmental sustainability objectives. An informed critique of disciplinary techniques impacting upon (and by) the budget setter as anticipated by this thesis will offer significant political implications for understanding power relations within an accounting situation.

With modern organisations’ information networks supporting accountabilities and power relations increasingly invested in localised teams, it is expected that critical reflection offers insights into management’s planning and control processes. Possible implications may include senior management placing formal trust in developing power relationships, while having appropriate disciplinary techniques in place, perhaps by changing employees’ personal objectives and position descriptions.

Despite the harsh criticisms levelled at Machiavellian-styled budgetary controls and the alternatives offered by movements such as ‘Beyond Budgeting’, the budget remains a key management planning, control and evaluation tool. Such criticisms, according to the Better Budgeting Forum, 2004, have been constructive in improving traditional budgeting
processes. Consequently, it is reasonable to presume that opportunities exist to learn and possibly add organisation-wide value from assorted power, social and economic struggles that routinely challenge the budget setter.

1.5. Key terms

Various key terms and definitions are used throughout this thesis. These terms, as defined in Appendix A, are: budget process or budgetary control process; critical accounting; critical theorising; disciplinary technologies; environmental responsibility; environmental sustainability; environmental struggle; Foucauldian; management control systems; power relations; and, stakeholders.

1.6. Methodology

The reasons supporting the choice of methodology and method of analysis are developed with consideration of the theories explored within the literature review and the nature of the research objectives. The methodology chosen follows a qualitative approach in order to gain a deeper understanding of the case data complexities, rather than what might be offered using a quantitative approach. The subsequent analysis informs the findings to support the thesis and its conclusions.

In order to discover how the research questions might be best answered, the methodology chapter discusses in detail the selection of the approach and the methods used. A critically reflective approach is considered most useful to analyse the how and why of power relationships, the participants, their history, and their roles, while focusing on aspects of disciplinary technologies. The chosen application of the case method offers the opportunity for in-depth analysis of a single organisation, of its formal and informal control mechanisms, and how these arose.

A quantitative research process is not followed, as explained further in the methodology chapter, despite inherent limitations of qualitative research methods introduced in Section 1.7. Quantitative research often draws on qualitative studies to support and validate interpretations of data (Anderson & Widener, 2007, citing Jick, 1979) and so the present research is positioned as an early study of an under-researched area which may be of assistance to future investigation, regardless of the methodologies deployed by that investigation. The ability to reflect upon data, its context and situational uncertainties, its
theoretical position and contributions as practiced in qualitative research is acknowledged in providing depth to theoretically significant findings, which might otherwise be considered as independent facts (Ahrens & Chapman, 2007), and direct this thesis towards a qualitative and critical approach.

Part of the literature review chapter outlines justifications for using Foucauldian critical theory, which is then applied for this thesis in the methodology chapter. The methodology section discusses issues and complexities in selecting an appropriate avenue of investigation, and also outlines methods for sourcing, collection and management of data. Selection of appropriate data methods assists in triangulation and offers a qualitative solution to construct validity and reliability, to support the conclusions and implications.

1.7. Scope and limitations

The scope of this thesis is limited to exploring disciplinary aspects of power relations within a financial budget process of one case organisation at one point in time. Critically reflecting upon political, social, and economic struggles and rationales within a budgetary control process context suits a Foucauldian analysis (Ezzamel, 1994). This is particularly the case for how disciplinary technologies are developed in pursuit of particular power relationships.

Various limitations will be elaborated upon in the methodology chapter, and arise from the nature of the approach and the narrow context of the case selected. However, the context and experiences of both the case and Foucauldian-styled interpretation suggest a range of variability which will be welcomed for the wealth of potential insights.

Foremost of the limitations: a Foucauldian approach offers opportunities for deep insights of one possible truth, but there is no claim to absolute truth (Kearins & Hooper, 2002). As the case data and findings are contingent upon both situation and context, conclusions made are merely indicative, and any generalisations are therefore unlikely.

A second limitation is in the nature of the data taken from the case. The interviewees are intended to be a representative sample of all key elements and drivers for data collection purposes, subject to agreement by the case organisation. All data collected, therefore, portrays a potential sample bias or is incomplete. The data collected will therefore include inherently conflicting fragments, supported by each individual’s practices and experiences (Kearins & Hooper, 2002).
Further limitations include the economic environment at the time of the study, which may influence decision-making in a certain way. This impact will be noted within the contextual factors of the case, but may have a significant impact nonetheless. The timing of the data collection should ideally be within close proximity to the annual budget preparation cycle, to improve participant recollections. Interview and researcher bias are also factors, which can be minimised through using multiple and reliable data sources. Contradictions, gaps, external influences and anomalies are all possible outcomes.

By limiting the analysis to a Foucauldian perspective of disciplinary technologies evidenced in exercising power relationships, alternative theoretical views are not pursued. Similarly, revisiting the same case at a later time may indicate further insights, but these aspects are also beyond the scope of this thesis.

1.8. Structure of thesis

The body of the thesis is divided into five chapters, being: the introduction, a brief literature review, methodology and method, data analysis and findings, and conclusions and implications. These chapters each have introduction, body, and summary sections. The objectives of each chapter are discussed further below.

The objective of Chapter One is to introduce the background to the thesis, the aims and objectives, and anticipates the contribution to the identified gap in prior literature. It then indicates the key terms used, and introduces the chosen methodology and method. The scope of the thesis and its limitations are then outlined, followed by an overview of structure used to address the core problem and associated questions.

The objective of Chapter Two is to examine the literature relating to budgetary controls and an organisation’s environmental sustainability objectives. From this review of the literature, a gap is identified, which gives rise to various research questions. To address this gap, the chapter includes details of critical theory relating, in particular, to Foucauldian disciplinary technologies and mechanisms of control as exercised within power relations. The chapter also considers what stakeholder theory presents of relevance to understanding environmental sustainability struggles. The chapter closes by restating the research questions.

The objectives of Chapter Three are: firstly, to deliberate upon three widely used methodological approaches to empirical accounting research into social reality, and to justify
the most useful approach for this research; and secondly, to justify and detail the case study research method. The chapter opens by discussing why a qualitative, and not quantitative, methodology is adopted. Three common methodological approaches to social science research are then explored, being: positivist, interpretive, and critical. Each approach is introduced, contrasted, and evaluated in relation to the literature gap of budgeting and environmental sustainability. The three approaches are presented in a summary table, to compare characteristics of beliefs about: knowledge, social reality, the social world, theory and practice, and knowledge implications. The chosen critical approach is then justified, and related back to Foucauldian disciplinary power dynamics.

The second part of Chapter Three justifies and details the case study research method used. Guidance provided by the chosen theoretical lens indicates that case studies are useful for exploring nuances of social behaviours. The case study data was collected from semi-structured interviews using open-ended questions, publicly available documents, researcher observation, and assembled into a database to improve triangulation and analysis. The interviewees were grouped according to their respective levels of budgetary influence.

The objective of Chapter Four is to discuss the findings of the case study, and critically reflect upon the evidence relating to disciplinary power, from a Foucauldian perspective. The case organisation (Unitec) is introduced, and contextual aspects of its culture and values are explored in relation to environmental sustainability, followed by an examination of Unitec’s role in pursuing its environmental sustainability objectives. Unitec’s budgeting process is then discussed, followed by a review of the roles within the budget’s disciplinary power networks. Personal motivations of staff in relation to environmental sustainability, and factors giving rise to resistance and conflict between environmental sustainability ideals and the budgetary process, are also examined.

Chapter Five concludes the thesis by critically reflecting on the outcomes arising from a Foucauldian analysis of the findings. The conclusions drawn then offer insights into the research aims and objectives from within the constraints of the case situation. Implications for theory, policy, practice, and future research are also suggested. The chapter objectives are summarised in Table 1.1 below.
**Chapter Title** | **Chapter Objective**
--- | ---
Chapter One Introduction | State the background and motivations, aim and objective of the thesis, summarise the intended research contribution, and then outline: key terms, methodology and method used, scope and limitations, and thesis structure.

Chapter Two Disciplinary technologies and budget control literature | Provide a literature review on budgetary control and environmental sustainability, and detail a core theoretical focus using Foucault’s disciplinary power ideas.

Chapter Three Methodology and research method | Deliberate upon three dominant approaches to qualitative accounting research, and justify the methodological choice suitable for a case study. Justify and detail the use and design of the case study research method.

Chapter Four Case data – context and a Foucauldian-styled critique | Discuss the data and findings of the case study, and critically reflect from a Foucauldian perspective upon evidence of disciplinary power.

Chapter Five Conclusions and implications | Draw conclusions, supported by the critically reflective methodology and case study analysis, to offer answers to the research questions. Implications for policies, practice and the accounting profession; limitations; and potential areas for future research are indicated.

| **Table 1.1 Chapter objectives as used by this research** |

**1.9. Summary**

The introductory chapter has outlined the background and motivations, research aims and objectives of the thesis, and contribution anticipated of the research. Definitions, key terms, the methodology, and the research method to be used are introduced. The scope and limitations are also outlined, together with the thesis structure to be used to address the research questions.

This research offers an informed critique of an aspect of an accounting control process, which is anticipated to contribute to budgeting and forecasting practices when applied to environmental sustainability strategies. As Cooper and Hopper (2007) indicate, critical theorists consider that accounting is continually shaped by political, social and economic struggles. By demonstrating a case application of Foucault’s theories of disciplinary mechanisms within budgetary power relationships, this thesis aims to draw out the human factors involved in rationalising political, social and economic accountabilities at a point in time. How budget setters are influenced by, or in turn influence, environmental aspects of an
organisation’s culture and values are explored by this research. Foucault’s ideas are used to expose the dynamic power relationships of the case study.

The next chapter details supporting aspects from the literature, focusing on Foucault’s critical arguments to ground, inform and support the case investigated. Critically analysing the historical development of budgetary processes and reflecting upon their power mechanisms and disciplinary technologies contributes to the theoretical aspects of this thesis.
Chapter 2. Disciplinary technologies & budget control literature

“Politics, as a technique of internal peace and order, sought to implement the mechanism of the perfect army, of the disciplined mass, of the docile, useful troop, of the regiment in camp and in the field, on manoeuvres and on exercises” (Source: Foucault, 1995, p.168).

2.1. Introduction

The aim of this thesis is to investigate what influences sustainability reforms at an individual organisational level, with the focus to be the relationship between budgeting and environmental sustainability. Specifically, the research set out to better understand how budget processes are influenced by (or themselves influence) environmental responsibility objectives, who is involved, and their role in how disciplinary power is exercised to achieve these objectives. Reflecting upon disciplinary techniques informed by a Foucauldian critical theory perspective (as demonstrated by this thesis) offers a means of making visible influences, and analysing power structures involved. The context is set within the essentially political landscape of an organisation’s budget process.

The intent of this chapter is to identify a gap in the literature regarding relationships between budgetary controls and environmental responsibility objectives. This literature elaborates upon key terms introduced in Section 1.5, but more importantly, considers relevant research surrounding a gap identified from the literature as follows. Firstly, Section 2.2 defines and examines the environmental struggle within goal-seeking organisations and how this struggle arises; then Section 2.3 reviews how budget controls are influenced by organisational factors; Section 2.4 considers what stakeholder theory presents of relevance to the environmental struggle within organisations; then, within this frame of environmental responsibility and budgetary control, Section 2.5 identifies the research gap between budget processes and sustainability thinking, giving rise to the research questions; and Section 2.6 then introduces the core critical theory of Foucauldian disciplinary technologies and mechanisms of control to inform and address the literature gap to be researched. A summary of the research questions are provided at the close of this chapter, introducing the intended approach to answering them.
2.2. Environmental struggles within goal-seeking organisations

This section considers the priority of environmental responsibility objectives of an organisation within its unique political, social and economic setting. Firstly, what is the environmental struggle within goal-seeking organisations? Then: a brief discussion on the primacy of shareholder profit motives, the importance of environmental responsibility for some organisations, and the role of accounting in reflecting environmental struggles.

2.2.1. Environmental struggle defined

This research focus stems from the motivation to better understand the struggles between two opposing points of view. These views are between: firstly, organisations being primarily held accountable for social responsibility, and within this, seeking to protect the environment in some way; versus secondly, organisations wanting to primarily produce profits (or for non-profits, to meet key short-term stakeholder demands) so creating value by incidentally protecting the environment.¹ These positions could be likened to the former tending toward a longer-term stakeholder view with the latter taking more of a shorter-term shareholder view. This dichotomy grounds this research in the so-called ‘environmental struggles’ frame. One might ask: does short-term profit always come before other organisational responsibilities? For this research, the challenge to achieve environmental responsibility objectives, while balanced with the need to create value or profit, is referred to as ‘environmental struggles’.

Prioritising of profit motives, or the shareholder view is discussed further in Section 2.2.2. The relevance of the stakeholder stance for this research is discussed further in Section 2.4.

For strategic reasons, organisations might prioritise specific environmental responsibility objectives along with making profits or managing costs. Some organisations exist primarily to provide social services, such as local government councils with core environmental service objectives (Ball, 2005). However, all organisations operate within a web of external and internal relationships. In stakeholder theory terms (in Section 2.4), an organisation manages groups of influencers, thus influencing outcomes (Gray, et al, 1997). Further, choosing the degree of priority, level of decision-making, disclosure, or action regarding environmental

¹ While some organisations aspire to be environmentally responsible in some way, it is also recognised that some organisations will adopt a clear view that environmental protection is not a corporate responsibility but instead is a social or political/governmental task. Such organisations are not part of the ‘struggle’ this project will deal with, since they do not have a view about their role and the environment; that is, they do not enter into the debate about whether corporations should protect the environment because it is good for profit or because it is good for society.
objectives is solely the responsibility of the organisations involved. Within this web of relationships at any one time, groups may therefore struggle to meet their own objectives, arguably to some degree dependent upon circumstances beyond their control (such as a global financial recession).

2.2.2. Profit motives and shareholder value priorities

Most modern organisations would not exist without prioritising profit motives, or other means of satisfying stakeholder needs. Friedman (1970) argued that in ‘free’ capital markets, the sole responsibility of executives is to maximise profits for shareholders, within society’s rules. Should politically powerful corporates fail and cease operations, potentially from those same executives’ hands, considerable social and moral costs arise beyond that of lost shareholder value (Owen, 2005).

For maximising shareholder value, Friedman (1970) argues, costs should be avoided for preventing pollution beyond immediate interests of the organisation or current legislation. Others argue that using accounting and business to find new ways to provide shareholder value is unsustainable (Gray, 2006). Given recent ecological trends, Gray contends that “reporting on (un)sustainability will demonstrate that modern international financial capitalism and the principle organs which support it are essentially designed to maximise environmental destruction” (2006, p. 793). He tasks accounting researchers to consider a wider view of value, than that for shareholders; to look more closely at environmental sustainability, and bureaucratic control conflicts between political, social and traditional economic interests. This research uses an aspect of this bureaucratic control mechanism of power, that of the budget process (explained further in Section 2.3).

Organisations may have considerable non-economic responsibility, particularly society’s public service providers in their capacity as long-standing environmental stewards (Ball, 2005). This role might include: planning, and controlling waste; managing infrastructure networks, and actively promoting energy efficiency. Environmental stewardship philosophies are increasingly flowing across private sector practices, some promoted through government initiatives, such as for environmentally sustainable procurement by supply chains. Costs to organisations can be high if managers choose to ignore information about the neglect of potential environmental protection activities, as demonstrated by Burritt & Schaltegger (2001). The authors advocate a close connection by corporate managers between budgeting practices and eco-efficiency measures (taking a view of the relative environmental
impact added). Further, integration of eco-efficiency and budgeting is suggestive of opportunities for managers to add value by applying an environmental management tool. Other authors also consider that ignoring environmental sustainability is becoming increasingly perilous for organisations wanting to take advantage of value-adding innovations (such as Gray, 2006).

Recognising the chasm existing between profit motives and environmental matters, irrespective of any value-adding potential, is discussed briefly next.

2.2.3. Why environmental responsibility is important

Early twenty-first century politics frequently mix environmental or ecological with financial or economic issues. However, the theories of these two ‘ecos’ appear irresolutely disparate. ‘Green’ commentators call for urgent action, specifically for ecological theory to affect organisational behaviour (Montuori & Purser, 1996). Ecological theorists challenge industry to reconsider its role in relation to ‘externalities’. On the other hand, Montuori & Purser (1996) posit a postmodernist view, warning of potential chaos from well-intentioned economic or accounting regimes. Stakeholder theories supporting bureaucratic control, economic growth and power relationships have led to questioning the role of shareholder primacy for wealth creation and exponential growth.

Unanswered ‘eco-related’ questions remain, such as: How can ecological values invite economic valuations? How can the economics of laissez faire capitalism sustain environmental causes? Paring down further, how do stakeholder interests of environmental concerns reconcile with modern accounting narratives, the subjects of postmodern critique? Within the state of environmental concerns, Bebbington & Thomson (1996) confirm that ‘sustainability’ could be described along a weak-strong spectrum. Gray (2010) contends that modern human societies could not survive at the strongest end of the spectrum. However, some authors suggest “radical change and substantive action [by] business” and society would be required to achieve strong sustainability, also ascribed as a point where stakeholders engage with “low self-interest” (Collins, Kearins & Roper, 2005, p.9). Their model of stakeholder engagement places weak-sustainability at the other end of the spectrum, characterised by high self-interest, pristine capitalism, and ‘business as usual’.
The position for ‘business as usual’, which could also be considered as economic sustainability of the business, has:

... come to be referred to as the business case for sustainable development that is predicated on continued economic growth being required to ultimately serve the needs of the world’s poor, with the market allocation mechanism being seen as able to ultimately resolve problems of limited resources” (Collins, Kearins & Roper, 2005, p.7).

At an organisational level, a ‘business as usual’ approach to sustainable development might be considered a defensive strategy in environmental management, by attempting to limit harm, instead of focusing upon ways to change, and actions to improve the environment (Colby, 1991). Also, the ‘business as usual’ growth economy exposed uneconomic growth, by going beyond maintenance of sufficiency, and in which orthodox economics was chastised by Daly (1977) and Waring (1988). However, ‘business as usual’ is a term that also has implications for internal decision making: alongside the ‘core competence’ view of good management (Prahalad & Hamel, 1990), ‘business as usual’ implies a status quo strategy that will necessarily impede some forms of organisational change – such as change towards environmental sustainability. Such an observation has been made by Bebbington & Gray (2001) but appears to be novel in the relevant literature considering the interrelationships between accounting and environmental sustainability within organisations.

In considering the literature linking environmental activities with environmental disclosures and organisational change, Tilt (2006, p.19) identified the need for further “fieldwork on firms’ internal strategies and behaviour”, and investigation into the influences or drivers which initiate organisational change, indicating “changes to their underlying ethos”. Thomson & Bebbington (2005) also identify need for improved qualitative understanding of both explicit and implicit social and environmental narratives. They suggest that future research could improve stakeholder engagement by using theoretically informed evaluations to better understand the nature of relationships with the organisational machine. Such an observation brings budgeting to the fore as a central – and powerful – part of the organisational machine.

Accounting has been identified as a means to reinforce “the dominant ethos of the organisation” (Larrinaga-Gonzalez & Bebbington, 2001, p.285). Nevertheless, Larrinaga-Gonzalez & Bebbington (2001) point to a lack of research from a critical perspective using
detailed examples into the dynamics of particular organisations reacting operationally to environmental change initiatives. Recent research into how and why organisations might become more environmentally active includes Kokubu & Kitada (2012), who investigated conflicts arising from traditional responsibility accounting and controllability for profit-seeking organisations in reducing waste. The authors note that for the cost of waste to become relevant, a manager’s responsibility should be expanded to include accountabilities, some of which are uncontrollable, and cover a wider range than the current span of control. In that contribution is the important recognition that environmental sustainability and internal managerial matters are intricately linked and are not easily extracted from conflicts within organisations. The management of stakeholder conflicts within control processes, particularly an organisation’s budget review, are discussed further in Section 2.4.2, and the specific gap in the literature, the focus of this research, is identified in Section 2.5.

The concept of environmental sustainability embraced by this research is aligned to that of the Brundtland Report (World Commission on Environment & Development, 1987), as a generally recognised interpretation. The report outlined the ambition for sustainability as meeting the needs of the present world without compromising the ability of future generations to meet their own needs. Economic, ecological, social and cultural dimensions of sustainability are implicated by the Brundtland Report’s ambition (Lamberton, 2005). However, it is also recognised that individuals have their own interpretations of what environmental sustainability means to them personally.²

Within organisations, how might accountancy regimes (particularly the budget process) become implicated in pursuing environmental responsibility objectives? Accounting’s role is discussed next.

2.2.4. Environmental responsibility struggles within the role of accounting

Aside from accountability purposes, accounting plays its role in providing management information for control and decision-usefulness (Gray, et al, 1997). Critical theorists consider “accounting is not an inevitable outcome of market forces or technological change but is implicated in, and reflects political, social and economic struggles, the outcomes of which are contingent” (Cooper & Hopper, 2007, p.209). As indicated in this chapter’s introductory quote, a Foucauldian perspective considers politics as a means to “internal peace and order”

²This meaning of sustainability will also be explored further with each of the research participants (refer Section 4.4.3).
(1995, p.168). However, when budget setters are tasked with achieving environmental responsibilities, how might they meet their objectives for creating order using the organisation’s internal decision-making mechanisms? The issue here, which this thesis seeks to understand, is whether a two-way relationship between sustainability thinking and the budget process may exist with each influencing the other in different ways.

The constituent elements of accounting overlap with each other but it is possible to identify evidential instances where those elements are mostly apparent. Accounting’s political element can be seen in professional regulations, standard setting processes, common practice, and accountability frameworks. Accounting’s social element can be seen in the link of micro aspects influencing culture and values, or motivating local struggles, with macro or international challenges facing societies. Accounting’s economic element appraises the value attributed to resources. Over time, changes to resource availability might be seen as influencing political, social or economic elements, and reflected within internal accounting processes, such as the annual operating budget.

These political priorities, social needs and economic themes in turn ground and support accounting’s standardising frameworks and ethical practices, established and maintained by regulatory bodies. Frameworks shroud accountants in a mantra of objectivity, conservatism and rationality in an attempt to reduce market uncertainty. By declaring its objective of neutrality, accounting has been criticised as masking its power (Montagna, 1997), for suppressing accounting innovation (Kaplan, 1984; Chenhall, 2003), and otherwise rational processes inhibiting change to the extent that Dillard & Ruchala (2005, p.625) refer to as “moral inversion”. When the effect that standardising frameworks, such as those of accounting, “invade the area of right so that the procedures of normalisation come to be ever more ... engaged in ... law” the potential of disciplinary power is indicated (Foucault, 1980, p.107).

Drawing upon accounting’s implication within and reflection of political, social and economic struggles, this research enquires into an aspect of participation within internal decision-making processes - that of the budget setter’s disciplinary power. Aside from broad social and ethical justice ideals and particularly environmental responsibility, this thesis also considers political needs engineered into accounting narratives, such as the budget process, discussed next.
2.3. Budgetary control systems within political, economic and social roots

Political priorities, economic themes and social responsibility need to implicate accounting narratives and in turn to reflect how disciplinary power is used within one management decision-making tool, the budget process. This section considers: what a budget process embraces; how a budget process might use both formal and informal controls to deal with uncertainty and conflict; evolving budget control influences and insights into how stakeholder interests contribute value to that process; and rounding off with, criticisms of the budget process, better budgeting, and beyond budgeting considerations.

2.3.1. Definition and evolving role of budgets as a management control system

Three components necessary for effective management control systems (MCS) are: communicating specific objectives, monitoring of performance, and motivating behaviours for achieving objectives (Norris & O’Dwyer, 2004; Lindsay, Lindsay & Irvine, 1996). Drawing on control systems theory, Lindsay, Lindsay and Irvine (1996) add that should one component be absent, the effect of those remaining is reduced. Conventional MCS are information tools to assist managers but with contributions from sociology and industrial psychology.

The definition of MCS has evolved over the years from one focusing on the provision of more formal, financially quantifiable information to assist managerial decision making to one that embraces a much broader scope of information. This includes external information related to markets, customers, competitors, non-financial information related to production processes, predictive information and a broad array of decision support mechanisms, and informal personal and social controls. (Chenhall, 2003, p.129)

As with evolving MCS, the traditional role of the budget process appears to be changing. The context of management control information appears to have moved beyond a cost or quantifiable internalised basis to include the contributions of an organisation’s external influences – its stakeholders (ICAEW & CIMA, 2004). Practical applications of budgetary controls in varying forms remain important for organisations to effectively manage resources within stakeholder networks.

Of significance for this research are: a) the traditional role of the budget process in organisations (considered below), b) the potential to drive value through strategic planning
and budgeting (discussed in section 2.3.3), and c) the scope for better budgeting or ‘beyond budgeting’ (expanded upon in section 2.3.4). The purpose of a budget is in connecting an organisation’s current position with the path it plans to take and outlining a means of achieving that direction (ICAEW & CIMA, 2004).

The two primary purposes of the traditional budget process are planning and controlling. The budget process also involves co-ordinating, motivating and evaluating tools, designed to reduce conflicts and communicate expectations - these aspects are considered in discussing controls, section 2.3.2.

The planning phase focuses upon developing goals and preparing budgets to achieve those goals. A typical planning cycle of business has four steps (Demming, 1998):

- **Check.** The cycle starts with the questions: Where are we right now? What does the short-term future look like? What is the competition doing?
- **Aim.** In the next step, we ask: What is our purpose? What does success look like? Are we on trajectory to meet our medium-term goals? Does our strategy need to change?
- **Plan.** The third step focuses on the questions: What actions (if any) do we need to take to improve our performance? What resources do we need? What impact will these actions have on our performance?
- **Act.** In the fourth step, the issue becomes: How should we execute the plans and manage the existing business?

A budget process is potentially ineffective without good planning and sufficient suitable control mechanisms to support the chosen plans. Managers implement controls to improve the organisation’s co-ordination towards achieving the desired goals as planned. Formal and informal controls are discussed further in section 2.3.2.

Budgeting has various benefits for organisations, although some are disputed by critics (criticisms are covered in section 2.3.4). Briefly, advantages of well-planned and effectively controlled budget processes include: timely communication of plans throughout the organisation; anticipation of the future; allocation of resources; identification of potential bottlenecks; integration of organisational units into a single co-ordinated direction; and establishment of benchmarks for evaluating actual performance (Garrison, Noreen, & Brewer, 2008).
Comparisons of actual performance to budgeted targets contribute to traditional variance reporting and analysis, and management by exception processes. The impact upon the responsibility area and the individual could be measured through standard costing and budgeting. Taking a Foucauldian view of standard costing Miller & O’Leary (1987, p.242) observe that it results in the “implanting of … norms of physiological behavior for the worker at the bench, but also the mental activity … of the executive”. For practitioners or Foucauldians, the budget process provides information for influencing and normalising decision making through self-controls, permeating all levels of the organisation. Process control formality and potential to deal with conflicts and uncertainty are considered next.

2.3.2. Formal and informal control measures within the budget process

Modern applications of MCS, including budgets, have been grouped into two broad forms: the less formal organic forms which tend to be data-rich, flexible, and responsive; and more formal mechanistic forms, which rely more upon rules, procedures or processes (Chenhall, 2003). Chenhall (2003) suggests budgetary control systems are both organic and mechanistic, according to the control culture of the organisation. Mechanistic forms are characterised by high budget use and a more formal, budget-constrained, performance evaluation style; whereas organic forms are characterised by budget slack, participative budgets, flexible budgets, and other less formal social controls.

The formal measurement process of MCS for social accounting, according to Durden (2008, p.688), offers “explicit measures and a systematic monitoring approach that reflects social responsibility aspects.” These comprise mechanistic forms of organisational control or formal MCS referred to by Chenhall (2003), and which Norris & O’Dwyer (2004, p.177) consider to link “organisational goals, budgets, reward criteria, performance appraisal standards, and codes of ethics … [to direct behaviour].”

Informal controls, on the other hand, “consists of shared values, beliefs, and traditions that guide the behaviour of group members” (Norris and O’Dwyer, 2004, p.177, citing Falkenberg and Herremans, 1995). They add that such values, beliefs and traditions are acquired through interactions with co-workers and management, forming the basis of social controls. (In)formal controls of organisations can be constant and calculating, as are Foucault’s disciplinary techniques upon the efficient “docile useful troops” (in section 2.6.4).
Overall, control mechanisms indicate the importance of considerable power relationships identified within the budgetary process. Libby & Lindsay’s (2007) survey findings of 212 respondents concluded that while the budgeting process had its faults (Section 2.3.4), budgets were generally indispensable as a management control and performance evaluation tool. They also found that budgeting processes are evolving. They suggest that the BBRT principles (Appendix B), when combined with existing budgeting models, might prove fruitful if designed specifically for an organisation’s context. The survey confirmed that budgets are unlikely to be abandoned, and when used appropriately continue to be a staple management control mechanism.

From an economic perspective, interests of an organisation’s decision makers are not necessarily homogenous and can potentially conflict (Göx & Wagenhofer, 2007). To minimise potential for conflicts, procedures and control information ideally align incentives of individual decision-makers with the objectives of the firm so that budget procedures should ensure “unbiased reporting of resource requirements by division managers” (Göx & Wagenhofer, 2007, p.399). Further, uncertainties as to cost or customer loyalty for instance, may influence decisions in ways not intended in the budget, depending on information available to supposed rational decision makers. One means of attempting to reduce uncertainty is through regular forecasting, to complement or replace budgeting cycles (de Waal, 2005).

The ability of the budget to deal with uncertainty has been a point of conjecture by those promoting regular forecasting over traditional budgetary regimes (such as Hope, 2006). However, the overarching rationale of budgetary controls is that organisations are enabled to act, rather than having to predict the future. Hope (2006, p.90) adds that quick forecasting “is more important than (even accurate) prediction – because accuracy is rarely achieved.” Both budgets and regular forecasts suffer from inaccuracies and produce dysfunctional impacts. For example, to illustrate potentially both the dysfunctional impact of forecasting as well as poor legislative drafting processes, the New Zealand forestry industry’s response to benchmarks introduced in late 2007 for establishing an Emissions Trading Scheme, invited forestry management to fell trees sooner than expected, under the proposed Climate Change (Emissions Trading and Renewable Preference) Bill 187-1 (effective from 1 January 2008). (Such premature harvesting giving rise to a reduced carbon ‘sink’ was arguably not the intention of the bill.)
Senior management might also consider uncertainties from external disclosures to financial markets and analysts of periodic expected earnings results. Potential gaps might exist between market expectations and motivational targets used within the organisation. ICAEW & CIMA (2004) considered the onus to be upon organisations to communicate such disclosures with honesty and integrity.

In summary, the budget process aspires to distil information useful for decision making to a range of stakeholders as an enabling tool for an organisation to achieve its objectives. Uncertainty and conflict are inherent in the budget processes, which arguably contribute to its evolutionary nature. In practice, comparison of quantitative aspects of actual to budget performance is predominantly in monetary terms, supported by normalised volumes, such as net tonnes sold. Since budgetary analysis processes arose during the scientific management era and continue to evolve as part of MCS (Chenhall, 2003), evolving controls are covered next.

2.3.3. Evolving budgetary controls

Twentieth century engineers of the scientific management era, such as Taylor, Gantt, Gilbreths, Cooke and Emerson, recognised the need for expanding the disciplinary power base to support devolving organisational MCS. At the time, considerable criticism of factory system profiteering had arisen, with some engineers pursuing political and economic issues and short-term profits without considering social implications (Church & Alford, 1960 originally published 1912).

Also influential in shaping MCS was sociological and psychological multi-disciplinary support for developing management control processes (Fleischman & Funnell, 2007; Miller & O’Leary, 1987). “A strength of ‘alternative’ approaches is that they show the potential conflict between individuals and groups and how MCS may be implicated in these struggles” (Chenhall, 2003, p.159).
Such alternative approaches suggest MCS are used, for better or for worse, to (Baxter & Chua, 2000, cited in Chenhall, 2003, p.159):

… legitimate particular power relationships within organizations or enable groups within society to maintain their command over resources or political direction. MCS may be motivated by mimicry and compliance… [and] may be instrumental in limiting progress because it inhibits innovative thought or it may have a role in assisting in the adoption of change by providing the basis to control the new initiatives.

Aside from indicating power relationships, these alternative approaches offer opportunities for advancing organisational change, as Adams & McNicholas (2007) note. They affirm that supporting stakeholder engagement to add value is in itself a powerful driver of change. Baxter & Chua (2003) indicate various approaches as significant in benefiting management accounting, from a Foucauldian approach, and indicating shifts in power as influential in disjointed changes in social practices.

According to Bhimani (1999, p.432), Foucault rejects any “absolute, overarching, unifying” frameworks of MCS. This sceptical approach suggests “organisational practices are ultimately socially rooted and devoid of essence.” Further, many practices are not able to be generalised. Bhimani (1999, p.433) adds that Foucault’s “reality of the past” in given contexts defines truths, these in turn support MCS, and offer an explanation for the emergence of individual self-controls:

… The espousal of particular truths creates invisible self-willed controls within individuals, and thereby renders possible the existence of particular and compatible management controls.

MCS for the purpose of an organisation’s governance seek to constrain individual’s behaviours by imposing limits on their actions (Miller & O’Leary, 1987). The specific mode characteristics of such MCS, to be effective, should accord

with the subjective orientation of the individual and that which corresponds to the organisation’s socially constructed role, both of which are linked to historical antecedents and contemporary rationalisations (Bhimani, 1999, p.433).
Bhimani’s (1999) emerging ‘new’ history from a Foucauldian approach contends that management control truths arise conceptually, directing both the individual and the organisation. Further, that these concepts should be considered though their historical developments. This social construct indicates context is very relevant to budgetary controls.

Johnson & Kaplan’s (1987) claim that all important developments in management controls were made by 1925 ignores such advances as the “wide diffusion of budgeting, direct costing, mathematical variance analysis, accounting for uncertainty, linear programming, project management” (Fleischman & Funnell, 2007, p.385). The 1990s onwards could be referred to as the information age (De Waal, 2005), with management’s focus, and consequently that of MCS, moving from cost-cutting to value creation (ICAEW & CIMA, 2004). Networks increasingly support organisational communication and information sharing for decision making. Perhaps this change in budget control rationales is not disconnected from increased concern for the environment by organisations. Within the budget process, one may ask: whose power and whose priorities are ultimately pursued, and whose value accrues (Gray, 2006)?

The twentieth century contributed significant developments in management’s control strategies and the budget process. Productivity levels in the US had eased since the 1930s Depression, but innovative steps especially by Japan after the end of the Second World War had increased the standard of competition internationally. This contributed to adoption by some decision-makers of alternative stakeholder influences and evolving (in)formal budgetary controls used within organisations, criticisms of which are considered next.

2.3.4. Criticisms of budget processes

Despite the reaffirmation of the importance of traditional budgetary controls, numerous issues regarding budgets continue to beset decision-making processes. Early research indicated budgets were used by autocratic management regimes focused on mistakes (Argyris, 1952), with budget processes tending to stifle innovativeness of entrepreneurial managers (Kaplan, 1984). Charles Horngren, contributor to management accounting texts for four decades, also noted that “numerous managers are extremely unhappy about budgeting” (Libby & Lindsay, 2007, p.47).

When limited resources are to be managed economically, issues of democracy predominantly hinge upon qualitative concerns for justice and equity ideals. Moral issues are suggested to
be so great as to be irresolvable for the public sector, while outcomes are more economically
driven in the private sector (Fleischman & Funnell, 2007). Significant challenges face
traditional annual budget process democracy concerns, seven of which are: ‘gaming’; short-
termism; number-driven performance; locus of control; communication of information; costs 
of compilation could be better invested in management; and, flexibility.

Firstly, issues of ‘gaming’ might arise when a budget setter overstates anticipated costs, and 
subsequently, when actual costs are less than budgeted, easily achieves budget. Profit centre 
hierarchical structures encourage achieving profit and return on investment (ROI) budget 
targets. Kaplan (1984) notes that historically, this lead to tightening of cost control, but 
discretionary spend can only be minimised to a certain level. Findings from a recent US 
study indicated that ‘gaming’ markedly impacted upon long-term organisational performance 
39 percent of the time by those companies reporting gaming behaviours (Libby & Lindsay, 
2007).

Secondly, reducing expenditures on innovation, new product or process development, 
knowledge development, promotions, market research, and assorted tangible and intangible 
assets leads to economic frailty when using short-term profit as an economic wealth indicator 
(Kaplan, 1984).

Thirdly, measuring actual performance through financial indicators is less complex with 
budgets providing quantitative support (which can be manipulated). Lean accounting 
proponents criticise traditional budgets for neglecting non-financial drivers contributing to 
business wealth creation and co-ordination of strategies (including Hansen & Mouritsen, 
2007). A recent study suggests that US managers may not be using budget performance as a 
rigid evaluation lever as previously thought (Libby & Lindsay, 2007). Other indicators 
suggested for long-term achievement toward corporate goals include project innovations, 
market leadership, customer satisfaction levels, employee development and length of service, 
and senior management’s team-building skills.

Fourthly, responsibility for budget ‘control’ is often contentious. Indirect support costs 
attributable to a cost centre may not be controllable by the cost centre manager, and the rate 
of attribution affecting the cost outcome may be disputed (Hogheim, et al, 1989).

Fifthly, issues of ethical co-ordination and sharing of information arise across various 
business units and stakeholders to achieve corporate objectives and aid innovation.
Communication is often lost within the budget process, as noted in Johnson and Johnson and Emerson Electric (Libby & Lindsay, 2007). Thus the annual budget tool does not normally actively promote trust or communication between business units, even though the budget “may be the only means of communication, coordination, and control across the organisation” (Libby & Lindsay, 2007, p.48).

Sixthly, time and cost of preparing budgets, compared to the time using the data available from the process may be problematic. A 1999 study confirmed that finance staff spent most of their time gathering and processing data, often budget related, while only 21 percent of their time related to analysis and interpretation (Hope & Fraser, 2003).

Lastly, there is a reluctance or difficulty in changing the budget process to gain more flexibility. This criticism has encouraged flexible forecasting regimes, often prepared at a higher level to avoid consuming financial resources. High level forecasts ideally provide indicative outcomes on a timely basis and are regularly reviewed for market updates (ICAEW & CIMA, 2004). The Beyond Budgeting Round Table (BBRT) also supports forecasting while promoting bottom-up empowerment rather than top-down control. Appendix B indicates the principles of flexible structure and adaptive management promoted by BBRT.

### 2.3.5. Responses to budgeting criticisms

A counter to the budgeting democracy issues indicated above appears to be evolving. Practical benefits of using a stakeholder perspective (discussed in section 2.4) are found to be appealing within internal control processes, as are direct linkages between external reporting and internal decision making (Durden, 2008). Foucauldian historians such as Fleischman & Funnell (2007, p.388) consider all that is generally required for an organisation’s MCS is the “direction decision making should take”, rather than acknowledging accounting numbers as accurate indicators. The implication is therefore that perceptions and interests of information users are expanding from the narrower shareholder focus.

Mintzberg (2007) also calls for management to engage with stakeholders rather than for business decision making be driven by external reporting requirements. He suggests that long-term corporate health benefits arise by focusing upon brand, products, services, customers, employees, responsible leaders, and “compensation systems that encourage corporate effort…[and] collaborat[ive] relationships based upon trust and respect”. Mintzberg advises that a responsible budgeting process (in conjunction with rolling forecasts
for instance) that creates business value, motivates, influences, co-ordinates, and communicates throughout the organisation achieves these outcomes.

Recent research has found philosophical changes in decision making processes. During 2001, Cranfield University surveyed fifteen large European and US budget users (ICAEW & CIMA, 2004). The researchers found that targets involved competitor benchmarks, explicitly focused on market position strategies. Uniform IT databases supported a common set of numbers with which to manage change drivers rather than having to respond to outcomes, as in disjointed networked information systems.

The 2004 UK Better Budgeting forum noted a focus change from that of cost-cutting to value creation. The changes in management focus indicate a shift away from financially driven results towards a stakeholder approach by building trust and co-operation between teams, towards a “culture that values openness and flexibility” (ICAEW & CIMA, 2004, p.3). Forum participants specifically indicated management credibility with financial markets demanded honest and realistic communication, adding: “… there needs to be a clear line of sight between the numbers used to run the business and those communicated externally” (ICAEW & CIMA, 2004, p.5).

Recent studies into an organisation’s MCS and socially responsible decision making consider the area linking internal accounting for decision-making to external reporting (such as for sustainability) to be under-researched. These studies include: Adams, 2002; Adams & McNicholas, 2007; Durden, 2008; Norris & O’Dwyer, 2004; Parker, 2005. According to Miller & O’Leary (1987), accounting needs to further integrate human sciences, particularly industrial psychology and sociology, to pursue encouraging achievement of budgets. They suggest that Harrison’s 1930 classic Standard Costing text construed such encouragement as commonsense.

While factory systems of the scientific management period were evolving, and standard costing was becoming more widely practised, stakeholder theory was also developing. Various stakeholder concerns reflected in the budget process are reviewed next.

2.4. Stakeholder theory support for environmental struggles

As indicated in earlier sections of this chapter, there is a developing theme of participation by various parties within an organisation’s internal decision-making processes. These parties
have potential disciplinary power to influence outcomes in various ways when organisations implement programmes within their budgets to action environmental objectives. The body of knowledge supporting relevant stakeholder contributions briefly discusses core theory, and prioritising of potentially conflicting environmental struggles views.

2.4.1. Stakeholder theory

First use in management literature of the term ‘stakeholder’ is considered to be by Igor Ansoff and the Stanford Research Institute in 1963 (Freeman, 1984, p.31). They defined “stakeholders [as] those groups without whose support the organization would cease to exist.” For Freeman, stakeholders have more rights than those arising from being mere managers’ instruments. They include shareholders, employees, managers, customers, suppliers, and local communities (and of course, including the natural environment). The stakeholder perspective was considered subordinate to that of the firm’s profit objectives (Ansoff, 1965, pp.37-38):

The firm has both (a) ‘economic’ objectives aimed at optimizing the efficiency of its total resource conversion process and (b) ‘social’ or non-economic objectives…In most firms the economic objectives exert the primary influence on the firm’s behaviour and form the main body of explicit goals used by management for guidance and control of the firm [while] the social objectives exert a modifying and constraining influence on management behaviour.

Peter Drucker also considered that non-economic benefits to society were incidental to generating economic results principally for shareholders. Drucker posited (1954, p.8):

[M]anagement has failed if it fails to produce economic results. It has failed if it has not supplied goods and services desired by the consumer at a price the consumer is willing to pay. It has failed it is does not improve or at least maintain the wealth producing capacity of the economic resources entrusted to it.

One core of stakeholder theory proposed by Freeman (1994, p.414) was from an ecological standpoint, suggesting companies “ought to be governed ... in accordance with the principle of caring for the earth”, and that managers “ought to act ... to care for the earth”. While recognising that organisations exist to provide returns to shareholder investors, this thesis seeks to further illustrate an aspect of ‘stakeholders’, particularly environmental sustainability within a broad social accountability context. Governmental and regulatory bodies comprise
one stakeholder group which an organisation must consider. Adopting only the minimum of changes required to comply with environmental and related reporting regulations might be referred to as environmental reactivity, while environmental proactivity refers to those organisations actively reducing their environmental impact (Gonzalez-Benito & Gonzalez-Benito, 2010). Over time, an organisation might move from a reactive stance through mere legislative compliance, to more actively engage with its environment, such as establishing consultative advisory panels (Tregidga & Milne, 2006).

Iterations of the Global Reporting Initiative (GRI) aim to provide best practice non-compliance reporting guidelines for multi-stakeholder perspectives towards sustainability (www.globalreporting.org). However, Gray (2006, p.808) remains sceptical of compliance by potential GRI adoptees for “reporting anything much beyond the trivial is still proving elusive”. A recent study investigated internal and external pressures to adopt social and environmental sustainability practices (Collins, et al., 2010). One finding indicated that the strongest internal pressures to adopt environmental strategies came from senior managers’ personal values and beliefs. Lodhia, Jacobs & Park (2012) in their study of Australian public sector environmental reporting over the 2007/08 year confirm the minimal impact of GRI and external legitimacy. They also posit that internal stakeholders’ interests and legitimacy might be an explanatory factor for reporting (and thus attention to) environmental practices. Additionally, they argue that coercive isomorphism is an explanatory factor (and it could be said with its consequential budgetary impacts).

While acknowledging significant advances in environmental reporting on (un)sustainability over recent decades, Gray (2006) contends that the accounting notion of value ignores the wider context. However, the parameters connecting organisational perceptions of stakeholder environmental pressure and actual environmental behavioural influences need to be further explored (Gonzalez-Benito & Gonzalez-Benito, 2010). This latter work provides some preliminary research into contextual and internal organisational aspects of the perceived determinants of stakeholder environmental pressures, and focuses upon characteristics of the pressured company. The authors also suggest that other unexplored characteristics might influence organisational behaviours with environmental stakeholders.

The theory discussing visibility of stakeholder concerns, struggles, or voices is considered further in Section 2.6. Next, embracing stakeholders from within the internal budget process is discussed.
2.4.2. Managing stakeholder conflicts within the budget process

This section discusses how the budget process might contribute to encouraging stakeholder involvement within internal decision-making surrounding environmental struggles, to achieve desired environmental responsibility outcomes. Various actions occur within decision processes, but will be limited here to stakeholder participation within the budget setting.

The budget setter is embroiled within a maze of power relations and environmental struggles, between stakeholders and the budget process. There may be potential value from integrating budget processes with environmental sustainability (Burritt & Shaltegger, 2001).

Firstly, stakeholder power struggles: organisations face many challenges in engaging across the range of stakeholders having sustainability concerns (Adams & McNicholas, 2007). Adams (2002) noted a vacuum of stakeholder dialogue and power in certain organisations purporting to be socially responsible. However, she later found organisations might demonstrate their acceptance of environmental responsibility “through a clear statement of values with corresponding objectives and quantified targets” (Adams, 2004, p.732). Economic demands might however significantly soften the impact of engaged stakeholder dialogue unsupported by legislation (Owen, Swift, & Hunt, 2001). For a public service organisation following an environmentally responsible agenda, environmental accounting was found to erode certain activities, while questions continued about “what order and constellation of political, social or functional pressures would bring about positive change” (Ball, 2005, p.368).

Secondly, power struggles of the budget process or system combine formal and informal management control mechanisms, which typically monitor and reward. Formal systems include transparent processes through ‘official’ channels, and informal controls are influenced by corporate culture and attitudes of senior managers. Some commentators demand further research engagement with internal decision making processes (Adams, 2002). Adams also found that decision-making processes appeared to be influenced by the degree of (in)formality, the role of various departments, and the extent of stakeholder engagement. She acknowledged the difficulty in determining the effect of corporate culture. Few case studies have explored the design and operation of such systems incorporating stakeholder responsibility issues (Durden, 2008).
Various informal control aspects influence change towards environmental accountability, such as embedding values and integrating these into planning and decision processes, influences and commitment of senior managers, corporate culture, shared values, power relationships and communications (Adams & McNicholas, 2007; Durden, 2008; Jazayeri & Hopper, 1999). Informal controls may dominate, and even conflict with formal mechanisms (Norris & O’Dwyer, 2004).

Adams & McNicholas (2007) found that public service organisations desiring to achieve change towards more sustainable practices benefit from integrating such issues into planning and decision-making processes and accountability values. They also indicate further research is needed in non-corporate organisations of senior manager attitudes to sustainability issues “and problems of power” (2007, p.384, quoting Lewin, 1947).

The political process of the distribution of organisational power through budgetary controls and actual performance, some consider, to be exploitative (such as Miller & O’Leary, 1987; Fleischman & Macve, 2002). One means of ensuring that intended objectives are achieved is through performance measurement systems, of linking a manager’s or group’s objectives with suitable rewards or penalties.

Traditional financial performance measures did not capture customer quality and innovation demands of the changing competitive environment. Furthermore, if these measures were used in assessing rewards for managers they could have dysfunctional consequences, with managers maximising their own returns at the expense of the company (the principal-agent problem). (Fitzgerald, 2007, p.223)

Two remedies are suggested to move from potentially dysfunctional measures, instead to management of targets, and consequently, stakeholders:

The first school, the stakeholder approach, advocated the addition of non-financial performance measures, closely linked to corporate strategy, to supplement traditional financial measures [such as by a Balanced Score Card]. The second school, the shareholder approach, argued that the key to improved performance was to be found in focusing solely on ‘new’ financial measures based on the residual income concept [or Economic Value Added (EVA)]. (Fitzgerald, 2007, p.223)

Fitzgerald notes: “budgeting [remains] the cornerstone of traditional management control ... how to measure that performance remains an open question” (2007, p.239). His management
perspective also portrays an extensive network of performance related stakeholder interests in the budget process outcomes. Stakeholder participants would therefore include employees, customers, suppliers, and shareholders, and potential environmental considerations.

In support of employee ownership through management network structures, Hope (2006) offers the BBRT (refer Appendix B) view that front-line staff as a team set the plans, having a direct vested interest in achieving those plans, whereas senior management establish strategic direction, guide operational standards, and monitor actual performance. Further, Hope indicates that removing dysfunctional aspects of rewards systems, such as manipulative behaviours, might occur where all employees are working together within groups, and that rewards should go therefore to the business unit or entire organisation.

In summary, participative stakeholders who contribute, influence, and in turn create value through empowered teamwork and self-managed teams, continue beyond the scientific management era. Environmental struggles associated with disciplinary powers of budget process also continue. Next, the identified gap in the literature to which this thesis contributes is considered.

2.5. Research gap and questions arising

This section identifies a literature gap regarding how budget processes interact with the stakeholders involved in environmental struggles. The research questions are then indicated.

2.5.1. Literature gap identified

Some studies have critically investigated power relations in financial settings (such as Garland, 2007, using Foucault’s understanding of power relationships in a finance department), and some have considered social responsibilities in management control systems (as does Durden, 2008, with a broad social agenda case). A link between the external reporting literature and aspects of an organisation’s internal values is indicated in Lodhia, et al, 2012. They argue that “in order to fully understand the nature and role of environmental reporting researchers must understand how environmental reporting practices can change social values” (p.644). This implies that researchers will also need to understand how environmental practices impact upon or change internal organisational values.

Public sector accounting researchers have applied Foucault’s work associated with power and discipline (for a recent review, refer Jacobs, 2012). To date a Foucauldian critical view of
how disciplinary power is used within a budget process to achieve environmental sustainability outcomes is absent from the literature. That is, the literature is yet to provide a critical reflection on how the budget process (essentially quantitative) influences, or is in turn influenced by organisational targets regarding environmental sustainability. Using Foucault’s insights into disciplinary techniques could assist in identifying how this impact, coercion or influence occurs. Addressing this gap through appropriate research may be able to determine if a two-way relationship between sustainability thinking and the budget process exists, wherein each influences the other in different ways while pursuing the organisation’s environmental struggles.

The gap identified within the literature provides an opportunity to critically investigate an aspect of the role of internal control mechanisms in contributing towards environmental sustainability aspirations of organisations. By offering a Foucauldian view into who is involved, what the participant’s roles are, and how the control process interacts with environmental sustainability objectives, this research is anticipated to contribute to the literature.

2.5.2. Research questions arising

For the purpose of this research, the budget process arguably depends upon disciplinary power, which Foucault suggests is derived from various instruments. The research questions are targeting underlying mechanisms of power which coerce docile bodies and normalise judgements within the budgetary control process. The research will also attempt to discover what motivates achieving the standard set within this process, and what disciplinary techniques are involved.

Foucault (1995) suggests discipline of docile bodies is operationalised through defining a confinement space, drawing up timetables, prescribing movements, imposing exercises, and constructing tactics. Section 2.2.4 indicated the budget process instruments are framed around such timetables, procedural standards, common entrenched practices, and tactics that implement strategies - to manage time, space and resources. Further, that disciplinary power is made visible from using techniques of hierarchical observation, normalising judgements or standards set, and examination determines achievement to those standards (Foucault, 1995). A discussion of these theoretical points is provided in section 2.6.
This research will test the application of aspects of Foucault’s disciplinary power theory. In the context of the evolved budget process for the case organisation, the subject of this research, various levels of the budget process will be investigated. Normalising imposes homogeneity but also measures gaps and indicates risks. When normalising and observation are combined, into an examining process, disciplinary power is exercised, such that achievement can be rewarded, or actions indicated for non-achievement. The degree of achievement can be made visible, for example through interval reporting of Actual versus Budget performance.

The current operating context for the case organisation may be a determining factor for this project. For example, it may have a strong environmental sustainability focus indicated within its core strategies, and thus consider its budget process as being strongly influenced by environmental responsibilities. In this situation, operating budgets may be expected to support longer-term environmental sustainability strategies, rather than, say, short-term motives. This contextual consideration might have arisen when the organisation was operating within a stable political situation. However, if governance infrastructures have changed, other short-term (say 1–3 years) priorities such as economic performance may well have been accorded ascendant priority over strategies for environmental responsibilities. This change may have arisen when newly-acquired assets required capital support over the medium term (say 3-5 years) to reduce operating risks. Consequently, it may be that sustainability thinking of those responsible for setting budgets has both influenced the budget process as well as had the reciprocal effect, dependent upon the case organisation’s current context. This research will focus upon the most recent budget cycle only but will do so with a view towards the case organisation’s context and its past in order that the research may address the first of three research questions:

*Is there a two-way relationship between sustainability thinking and the budgeting process, and in what ways?*

An organisation’s core strategies ideally indicate or suggest specific considerations for environmental objectives (Owen, 2005). Issues of organisational culture, senior management commitment, resources, management skills and reward systems have been found to significantly affect environmental responsibility outcomes (Adams & McNicholas, 2007; Jazayeri & Hopper, 1999; O’Dwyer & Unerman, 2007). Amongst these issues is where formal and informal budgetary control mechanisms reside and these mechanisms are
observable materialities that provide, amongst other things, opportunities to address this project’s second research question:

In what ways do the budget setters and sustainability managers mobilise power and knowledge to advance their relative agendas?

Considering possible influences of organisational history and context of the current budget round would include an organisation’s normalising tools, such as budgetary procedures, hierarchies, culture, vision, mission or values statements or narratives. There ought to be some test as to the compatibility between environmental preservation and maintaining organisational economic productivity as indicated by the use of such normalising tools. The effects of normalising and inducing the power of control mechanisms are considered further, within Foucault’s disciplinary technology theories (refer Section 2.6.3). Thus, for budget setters and environmental sustainability managers, a third research question arises:

Is the use of power and knowledge by these individuals influenced by narrations in their organisation’s current context?

If this influence exists, it may arise formally (through procedures, position descriptions, and personal objectives, thus directly impacting upon motivations and rewards) or informally (such as from peer pressure). At an innermost layer or micro-level of power/knowledge relations, is the core question of this investigation:

Does sustainability thinking influence the budget process? If so, in what ways? And is this a two-way relationship?

It is anticipated that trends will arise from analysing and critically reflecting upon the data (including interviewee responses), and meanings for ‘sustainability thinking’. Based upon the data collected, the research outcomes will be informed by a Foucauldian view of who is involved within the budget process, what role they take, and how technologies of discipline coerce various power relations. Core theoretical support for the research is considered next.

2.6. Core theory – a Foucauldian disciplinary technology view

To address the research gap identified, this thesis will attempt to use Foucault’s arguments to ground, support and inform the investigation of accountability control mechanisms associated with budget processes, to elaborate upon issues of power through disciplinary technologies. Foucault’s views offer an alternative critique to traditional interpretations of economic practices, and so are explored here to better understand how an aspect of struggling
stakeholder participation might emerge. Further, a Foucauldian approach is considered to be readily applicable to modern accounting technologies in making stakeholders “visible and governable” (Cooper & Hopper, 2007, p.219).

Analysing the various confused and obscure influences that comprise power mechanisms within a budget process directs this inquiry towards disciplinary technologies. Such technologies are useful for “meticulously subordinated cogs of a machine … permanent coercions … indefinitely progressive forms of training”, leading ultimately to “automatic docility” (Foucault, 1995, p.169). What coerces the ‘disciplined mass’ to achieve budget targets? How might the budget process or system exhibit such complex power or knowledge relations? Aspects of disciplinary technologies exercised upon individuals such as surveillance, resistance, hidden power struggles, and representations will be investigated and discussed in turn within an organisation’s discourse of truth (the budget’s target), archaeology and power/knowledge mechanisms from a Foucauldian perspective. This section thus traverses Foucauldian perspectives by focusing on the following: a systems view; disciplinary power and knowledge; disciplinary technologies; docile bodies; constant permanent surveillance; resistance and struggles; and cultural representations of disciplinary power.

2.6.1. A systems view

Barratt (2004) promotes Foucault’s contributions as offering alternative and informed views for criticising and reflecting upon management’s accountability practices and systems. Considering components of systems and signs, Foucault (1994, p.xx) provides an indication of what lies waiting and hidden beneath:

A ‘system of elements’ … is indispensable for the establishment of even the simplest form of order. Order is, at one and the same time, that which is given in things as their inner law, the hidden network that determines the way they confront one another, and also that which has no existence except in the grid created by a glance, an examination, a language; and it is only in the blank spaces of this grid that order manifests itself in depth as though already there, waiting in silence for the moment of its expression.

This order may be controlled through disciplinary techniques involving time and space dimensions. Such networks or grids suggest surveillance techniques of disciplinary power
across distributions of bodies. The language or signs might comprise representations of culture, values and beliefs. The moment of expression indicates Foucault’s resistance mechanism.

In the context of this project, an annual budget might be said to combine elements of such a system of order. Budgetary controls can be framed from within an organisation’s inner constructs or formal reporting channels, or implied from hidden informal communication networks. Such channels and networks combine with the organisational culture to influence and direct organisational performance.

Supporting the system of order or control and internal accountabilities are numerous power relations, manifesting into the single ultimate ‘truth’ represented, in our case, by the ‘signed-off’ annual budget. The discussion that follows applies some of Foucault’s contributions in understanding of power and knowledge to budget controls.

2.6.2. Disciplinary power and knowledge

Systems of order signify certain characteristics applicable to the bodies and minds of the participants. These participants can act individually, as groups, and en masse towards achieving management’s control objectives throughout an organisation’s hierarchy, for example in meeting group sales growth targets or an individual product’s waste specifications.

Meeting rudimentary lowest level process controls and thus top level organisational budgets is often regarded as a responsibility extending beyond senior managers and increasingly emphasis is directed towards individuals ‘at the coal face’. What governs an individual to act in the best interests of the organisation, and to be accountable for his/her actions in the particular instance? How do power relations cause the individual to act in a particular way? Defining and characterising forms of power exercised upon and by individuals are discussed next.

Foucault’s (1991) interests included the exercise of power relations upon individuals who freely act as they see fit. Foucault developed assorted views “about power, freedom and hope” which lead to an “absolute capability to tame and subject individuals” (1991, p.5). In considering acts of rational governing, Gordon (1991,p.5) defines Foucault’s later view of

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3 The ‘disciplined mass’ ideals of docile bodies, normalisation and coercion are discussed in later sections.
power as “‘actions on others’ actions’: that is, it presupposes rather than annuls their capacity as agents; it acts upon, and through, an open set of practical and ethical possibilities”. Further, in characterising human society and political interests of individuals, power relations are omnipresent, even if subversive, or silent as in the case of Foucault’s ‘plebs’. Violent acts or physical force are not normally part of these power relations.

The exercise of power requires a production or discourse of truth, for power to become established, or consolidated, or implemented (Foucault, 1980). Demonstrating truth for any organisation might be expressed or become visible through matters such as culture; policies and procedures; representations by esteemed colleagues to contemporaries and stakeholders; and future expectations and accountabilities from pursuing strategies and implementing control measures.

The exercise of power in the pursuit of truth requires “technologies of normalization”, selection of priorities, and a target (Foucault, 1980, p.137). Normalising (or standardisation) falls into the realm of discipline (discussed later). In assessing priorities, regard is necessary of limitations and motives of power relations, or resistance to power (also discussed later). The targets of power could be limited by the silent “plebeian quality … which responds to every advance of power by a movement of disengagement” (Foucault, 1980, p.138), thus prompting modified power networks to refocus the pursuit of the targeted truth.

Foucault (1980) also uses a term le dispositif to refer to the interchangeable devices or apparatuses of discourse. These apparatuses or dispositifs link the characteristics of the structure to the dynamics of the situation, for this thesis, the control process. “The apparatus is thus always subscribed in a play of power, but it is also always linked to certain co-ordinates of knowledge which issue from it [and] condition it” (Foucault, 1980, p.196). Applying this, it may be observed that each organisation has its own unique budget process and collection of knowledge. Seen as a system, it is the effect of a series of parts, comprising the interchangeable relations between the elements. For instance, a budgetary system which monitors cost control. Such a system could be about overspend offences, detective surveillance, regulating cash flow, support for planning and forecasting, anticipation of obstacles to be prevented, improvement of processes by the sharing of information, a communication tool for benchmarking and motivating, amongst other uses. The dispositif or apparatus is useful for everything at once, the priority depending upon context, strategic requirements, or audience.
The plethora of co-ordinated knowledge that support the ultimate budget truth are traditionally selected from the range of total knowledge available to an organisation. The knowledge that is excess or disregarded or subordinated is not incorporated into the system of order. Foucault considers two aspects of subjugated knowledge: first, the contemporary historical content that has emerged but been disguised by functions or systems; and second, knowledge that is disregarded due to its source’s credibility or rank. He suggests that both aspects are rich ground for criticism, and allow rediscovery of the “ruptural effects of conflict and struggle” (1980, p.82). Traditional budgets are often criticised for undemocratic practices of harbouring knowledge or burying conflicts and ethical justice struggles (as does Horngren referred to by Libby and Lindsay, 2007) or stifling innovation (including Kaplan, 1984). It could be argued that hidden struggles within the budget process harbour potential opportunities for alternative courses of action.

Accountability pressures imposed upon managers for results against target means, for this study, the need to expose underlying and hidden power struggles and structures. Having briefly discussed the political form and characteristics of power relations, the next discussion considers how aspects of exercising power came about.

2.6.3. Disciplinary technologies

Disciplinary technologies have a significant role associated with producing and governing a politically useful body in the pursuit of truth. From his work in mental institutions and prisons Foucault offers historical and theoretical insights into normalising and inducing the power of control mechanisms.

The exercise of disciplinary power, according to Foucault, stem from three core instruments: hierarchical observations, normalising judgement, and the examination. Further, discipline individualises its effects, in that “discipline ‘makes’ individuals; it is the specific technique of a power that regards individuals both as objects and as instruments of its exercise” (1995, p.170). Individuals are coerced or conditioned to conform to the organisation’s standards by various means, including selection, rewards, and organisational structures, culture, policies and procedures. These three legs of disciplinary technologies are readily evident throughout the budgetary control process, and each of Foucault’s instruments will be discussed next.

For the first leg of disciplinary technologies - hierarchical observations, power effects are induced by coercion and visibility. Thus, virtually all organisations implement divisions of
labour with trusted supervision to relay conformity to strategies and objectives, compliance with standards, and minimisation of waste. A formal network of integrated disciplinary power to command is necessary to survey operations, to allow timely information flows to and from business decision makers to ensure objectives are met, and to direct strategies. Lateral or informal networks are also integral to the process (Foucault, 1995). "Surveillance thus becomes a decisive economic operator both as an internal part of the production machinery and as a specific mechanism in the disciplinary power" (Foucault, 1995, p.175). An organisation’s co-ordinated planning ideally integrates information flows from the bottom up, as well as from the top down. Foucault affirms that such integrated disciplinary power is permanent, all-pervasive and constant in its affect upon individuals within the hierarchy. Self-controls are considered further in section 2.6.5.

The second leg of disciplinary technologies imposes a homogenising effect or normalises judgements of individuals. Normalising acts by comparing, differentiating, hierarchising, homogenizing and excluding (Foucault, 1995). It measures gaps, determines levels, recognises specialities, and considers differences as useful. For budgets, control mechanisms normalise through: comparing actual to plan to measure gaps and isolate priorities; according different recognitions or reward to levels of performance to plan; recognising that specialists might entail different responsibility performance measures such as profit expectations; and, noting that differences in process may entail higher risk capacity or development potential. While budget controls impose an homogenous equality of direction toward chosen strategies, disciplinary power via management hierarchies normalises through various mechanisms at appropriate times.

The final leg of Foucault’s instrument triad combines the hierarchy into a ritualised assessment of progress towards the norm. It establishes truth through imposing a non-physical force in terms of a grade and transforms a ceremonial power/knowledge into a “political investment” (Foucault, 1995, p.185). Just as members of any professional body or guild must pass examinations to gain entry, budgetary power manifests in the dreaded (usually annual) review process. Progress toward the organisation’s norm might be assessed for each responsibility manager by his/her colleagues usually aided by evidence of financial measures against budget. Such managers are physically visible to their colleagues and subject power upon their subordinates. The individual manager is in turn an object of such power and knowledge, subjected, regulated and dominated by the potency and arrangement of disciplinary power (Foucault, 1995).
Coercion to achieve the particular goals is a function of combined particular hierarchical, normalising and assessment criteria of each instance. Such power and knowledge should be considered as a positive force, “it produces reality; it produces domains of objects and rituals of truth” (Foucault, 1995, p.194). Foucault also acknowledges Castrel in considering disciplinary technologies as a “decisive resource … more corrective and reparative than preventive in function” (1991, p.295). Foucault views the individual as both the cog at the core of any society, but also as a result of disciplinary technologies of power relationships of the group.

What does this individual, the fruit of disciplinary technologies, coerced into docility, and conforming to the budgeted norm, look like?

2.6.4. Docile bodies

Disciplinary power, as we have seen above, can be exercised upon individuals and groups. Disciplines coerce individuals by using technologies much more subtle than that of physical force or violence. Foucault’s research into the philosophies behind disciplinary coercion of individuals stems from military and political controls during the classical age, and applies equally to modern organisational hierarchies where the effects of disciplinary power are also evident in budgetary social controls. He suggests a perfect society has (1995, p.169):

… its fundamental reference … not to the state of nature, but to the meticulously subordinated cogs of a machine, not to the primal social contract, but to permanent coercions, not to fundamental rights, but to indefinitely progressive forms of training, not to the general will but to automatic docility.

Governing the individuals of any organisation, to aspire to achieve objectives through implementing strategies, is akin to idealising the politics of “the mechanism of the perfect army, of the disciplined mass, of the docile, useful troop… on manoeuvres and on exercises” (Foucault, 1995, p.168). Some dissent is inevitable, possibly giving rise to pockets of resistance (discussed below). However, for the majority, disciplinary control mechanisms are most effective when embedded at the individual level, such as upon Napoleon’s soldiers or a city’s citizens, to form the “disciplined mass” referred to in this chapter’s opening quote.

For Foucault, the ideal “docile, useful troop” is disciplined through practices of distributions and techniques. The art of distributions considers four characteristics bestowed upon disciplined bodies: cellular, organic, genetic, and in combination. A cellular effect aims to
“derive the maximum advantages and to neutralize the inconveniences” (Foucault, 1995, p.142). Organising cells, or a contained unit, might refer to a standardised unit of labour output. The organic effect arises from each individual having his/her own ‘space’, organising space to know where and how to locate individuals. An application to accountabilities might be through an organogram or office/desk locations. The third characteristic of a genetic effect refers to the creating of useful space for ease of supervision. An example: organising operational divisions to isolate similar characteristics as for profit/cost centres, to compare or improve individual performance. Lastly, the combinatory effect, that of hierarchy or rank which “individualises bodies by a location that … distributes them and circulates them in a network of relations” (Foucault, 1995, p.146). A docile body knows its place within the assigned “complex spaces” of the organisation; such distributions “permit circulation … establish operational links … indicate values … guarantee obedience … [and economise] time and gesture” (Foucault, 1995, p.146).

Along with characteristics of space are techniques for controlling and coercing an individual’s activities. Foucault considers such techniques include timetables, prescribed movements, imposed exercises, and arranging tactics. An organisation’s accountability timetables include quarterly report regimes or budget review process frameworks. Procedural documents might prescribe movements or control development for standard operations. Imposed exercises could arise through common practices, meeting formats, or an organisation’s culture, such as the assigning of office space by rank or using intranets/email over face-to-face discussions. Tactics define how the body relates to or manipulates the object, for example, a recipe, bill of materials, or plan of action. Such tactics coerce the docile body within the process.

Characteristics and techniques evident upon the individual indicate “discipline is a political anatomy of detail” (Foucault, 1995, p.139). The social body, as units within an organisation’s control structure, is subjected to the dynamics of disciplinary power at a micro-level upon the individual and group. Foucault refers to an analysis of the strategy of war which minimises waste and magnifies control, as giving rise to (Foucault, 1995, p.163):

… the need to invent a machinery whose principle would no longer be the mobile or immobile mass, but a geometry of divisible segments whose basic unity was the mobile soldier with his rifle … [his] minimal gestures, the elementary stages of actions, the fragments of spaces occupied or traversed.
In order to gain most from the sum of the parts of the machine, Foucault indicates that discipline power moves beyond merely “an art of distributing bodies, of extracting time from them and accumulating it, but of composing forces in order to obtain an efficient machine” (Foucault, 1995, p.164). The docile individual body is thus reduced to its functional use within the disciplinary machine as is precision in the system of command. This efficient body principle is realised through disciplinary practices of: sequential combinations according to timetables, actions of body and machine, and specific timing (Hopper & Macintosh, 1998).

The co-ordinated energies of the coerced individual and group combine with appropriate timing to thus focus disciplinary power in applying strategies through meticulous instruction and action. Foucault’s efficient docile body principle is applied to direct individuals into obedient objects by “modest, calculating and constant” (Hopper & Macintosh, 1998, p.133) coercion. Maintaining a constant watchful gaze over these bodies subjected to disciplinary power is considered next.

2.6.5. Constant permanent surveillance

The act of implementing a routine accountability of actual performance to plan is, for Foucault, a technique of making the effects of power felt, but also making those affected visible. Such systems of reporting at various levels have at its source an individual’s performance to a predetermined standard subjected to a permanent surveillance. Foucault (1995) describes the metaphor of the panoptic gaze based upon Bentham’s Panopticon, as a system of surveillance of individuals.

A panopticon is a frequently utilised architectural design in prisons, allowing surveillance over all cell blocks arranged in a circular pattern, each cell window facing towards a single figure within a central tower. The tower’s windows open onto the inner ring, and the cells along the periphery face into the ring. Each cell is back lit by a second window, casting an image towards the central tower. Prisoners are under constant view, but cannot view each other or the central figure. For Foucault, the panoptic effect is to “induce in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power” (Foucault, 1995, p.201). Surveillance is thus automatic, although not necessarily continuously exercised and occurs without the knowledge of the subject.
The functioning and disciplinary power of the gaze is subject to the system of architecture. The effects of power can be increased by the use of panopticism, if exercised continuously within a social body’s foundations, and as a disciplinary technology. For Foucault, panoptic discipline “improves the exercise of power by making it lighter, more rapid, more effective, a design of subtle coercion for a society to come” (1995, p.209). Such positive effects of a dynamic, ubiquitous surveillance society are evident throughout the economic workings of capitalism; self-imposed budgetary controls are just one instance of such workings.

Analysis of the effects of power relations provides opportunities for improvements to control systems and panoptic interventions. Networks of disciplinary power can be viewed as a mechanism for innovation and adding value (Foucault, 1980, p.119):

What makes power hold good, what makes it accepted, is simply the fact that it doesn’t only weigh on us as a force that says no, but that it traverses and produces things, it induces pleasure, forms knowledge, produces discourse. It needs to be considered as a productive network which runs through the whole social body, much more than as a negative instance whose function is repression.

Points of repression, subjugation, political struggle and resistance suggest further opportunities for investigating the effects of disciplinary power.

2.6.6. Resistance and struggles

Disciplinary power that coerces and subjects individuals into a submissive, docile state such that they resolve their own difficulties might be considered an ideal. For Foucault, the use of continuous uninterrupted, individualised disciplinary technologies historically reduced the need for physical force. Technologies supporting disciplinary power coerce or influence both individuals and groups to minimise waste, are less risky or uncertain, and most importantly, reduce resistance. Foucault’s (1980, p.142) strategic orientation towards resistance:

… there are no relations of power without resistances; the latter are all the more real and effective because they are formed right at the point where relations of power are exercised; resistance to power does not have to come from elsewhere to be real, nor is it inexorably frustrated through being the compatriot of power. It exists all the more by being in the same place as power; hence, like power, resistance is multiple and can be integrated in global strategies.
Resistance to panoptic effects, in Foucault’s view, ought to be strategically analysed. Further, that struggle is at the core of power relations, of what is considered truth, through imposing power or knowledge relations to support such conjectures.

For the purpose of this thesis, what is the impact of what Foucault refers to as subjugated knowledge, or knowledge that does not support the primary truth (such as a budget target)? The views of global theories or truths have tended to be prone to localised criticisms, which Foucault (1980) suggests have come about from a reprioritisation of what is important to individuals. One part of subjugated knowledge comprises disguised knowledge within functional systems and theory which emerges from critical struggles and conflicts. The other are sourced from local or regional knowledge previously disregarded as being inadequate or naïve, but for which criticisms raise their profile. Rediscovery of these marginalised gems of historical struggles are considered by Foucault (1980) as genealogies, opposed primarily to effects of centralised power linked to functions of institutional truths. Capitalist market regimes might be considered such institutional truths.

From an economic perspective, the dominant view of organisations pursuing short-term profit motives supposedly for the benefit of shareholders pervades power struggles of other stakeholders. Foucault raises some unanswered questions regarding this web between power relations and economic purpose (1980, p.89):

… in the first place, is power always in a subordinate position relative to the economy? Is it always in the service of, and ultimately answerable to, the economy? Is its essential end and purpose to serve the economy? Is it destined to realise, consolidate, maintain and reproduce the relations appropriate to the economy and essential to its functioning? In the second place, is power modelled upon the commodity? Is it something that one possesses, acquires, cedes through force or contract, that one alienates or recovers, that circulates, that voids this or that region? Or on the contrary, do we need to employ varying tools in its analysis – even, that is, when we allow that it effectively remains the case that the relations of power do indeed remain profoundly enmeshed in and with economic relations and participate with them in a common circuit?

He goes on to suggest analysis of power ought to be on two fronts. First, that power is exercised through actions and it effectively represses. Second, that power is war (and not politics) continued by other means, and that politics represses warfare but does not dispense
with it, leaving continuing “struggles and submission” (1980, p.92). Mechanisms that repress stakeholder voices, such as an organisation’s environmental issues would not appear to dispense with these struggles at all, but leave them to become active at a more suitable juncture.

Associated with the mechanisms of power that repress struggles and maintain a submissive individual are the representation of discourses within an organisation, discussed next.

### 2.6.7. Cultural representations of disciplinary power

A further aspect of disciplinary power exercising coercion or repression of individuals occurs through an organisation’s culture, values and beliefs. But is there a central representation of an organisation’s power? Foucault suggests that this is not the case.

Foucault takes a cautionary view of the “whole thematic of representation which encumbers analyses of power” (1980, p.188). He considers that representatives of power do not consider the “complexity of mechanisms at work, their specificity, nor the effects of inter-dependence, complementarity, and sometimes of blockage …” Further, he notes that disciplinary power arises from complex interactions from particular instances, issues and effects of power, including those beyond economic or operational influences. Also, that context may change over time.

Representations of disciplinary power are part of Foucault’s systems of discourse (1990, p.101):

> We must make allowance for the complex and unstable process whereby discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling-block, a point of resistance and a starting point for an opposing strategy. Discourse transmits and produces power; it reinforces it, but also undermines and exposes it, renders it fragile and makes it possible to thwart it.

An organisation’s culture, values and beliefs form a control network for imparting knowledge at a moment in time, giving meaning and influencing how ideas are implemented. This discourse of culture, having developed over time, is both dynamic and motivating. For Foucault, it is the discourse that produces knowledge, not the subject. His genealogy approach suggests knowledge and discourse are constituted from an historical form (1980).
The truths of such discourse tend to be results of political or economic influences of the historical context.

Humanity has the dual and simultaneous position of both object and subject of power (Foucault, 1980). Individuals behave as objects of power, while subjected to its influences. These individuals are also subjected to discourse, a product of power and knowledge. Their interpretations and actions may well vary according to their social backgrounds, inclinations, gender, religion, and other characteristics. Meaningful outcomes depend upon subjects identifying with the propositions represented by the discourse. Discourse therefore has the capacity to control outcomes, including accountability reporting and the budget process.

### 2.6.8. Influences of disciplinary power for this research

Accounting researchers have used Foucauldian support to understand budgeting controls, and so this section reviews that literature. Miller & O’Leary (1987) illustrate Foucault’s power and discipline ideas using budgetary and standard cost connections with social and organisational practices. Ezzamel (1994) found that an incremental budgeting process could fail as a disciplinary regime, and confirmed accounting knowledge’s central role in situations of struggle. He used Foucault’s power/knowledge framework to illustrate the ‘truth’ of accounting arguments proposed for cost reductions, where those truths were challenged and refuted by an alternative set of accounts. According to Ezzamel (1994, p.220), those endowed with accounting knowledge can “ruthlessly expos[e] the arbitrariness and selectivity of accounting procedures and the incompetence or partiality of accounting practitioners”.

Chua (1986) outlines a critical approach to accounting controls, indicating Foucault’s disciplinary ideas of setting norms and normalising individual and group behaviours as indicated through standard cost accounting techniques used within budgetary control processes. Some critical theorists, such as Chua (1986), view accounting controls as contributing to the constant watchful gaze by management. These controls suggest an accounting mystique from embedded influential ideologies.

The issue of how budgeting and environmental sustainability influence each other may be conceptualised as a subset of the emancipation issues discussed by some recent accounting scholars (such as Jacobs, 2011; Molisa, 2011; Galhofer & Haslam, 2003). Environmental sustainability can be thought of as a value that needs emancipation, via an avenue to disperse power, or seeks to instil a more inclusive regime than the prevailing ones. As Jacobs (2011, p.515) confirms, “without someone letting go of positions of influence, power status and
resources emancipation is impossible”. Further, that critique offers useful insights into accounting’s role within complex political, social and economic contexts (discussed further in section 3.1.4). More recently, Cooper & Hopper (2007) contend that understanding mechanisms of power and conflict, as exhibited by budgetary controls, can suggest avenues for social improvement.

From the above, it can be seen that disciplinary power in Foucault’s critically reflective view represents networks of repression, influence and coercion, supported by institutions promoting political or economic agendas. These networks are intertwined with social normalising of communities and individuals. Complex interactions of political discourses support these power networks, with individuals coerced or influenced to function as a disciplined “docile, useful troop”, from the chapter’s opening quote. An organisation’s internally embedded accountability system outcomes are normalised from an inherently reactive process, the underlying disciplinary power and knowledge processes of which are anything but reactive. Positive outcomes from such power networks offer value potential when made visible.

The network of accounting systems used within the budget process illustrates how disciplinary power systematically, subtly and constantly apply the will to truth of discourses (useful for example, for communicating and influencing budget targets), applying distributions, asserting timetables, and arranging priorities and assorted tactics. For individuals and groups, exercise of disciplinary power stem from hierarchical observations induced by coercion and visibility, normalising through comparison and analysis, combining into the examination or assessment of actual versus budgeted performance. Efficient bodies are coerced into docility, by modest constant calculating techniques and distributions of time and space, while resistance is mitigated. Self-controls are implemented at micro levels, supported by the watchful constant gaze upon the visible subject.

Budgetary control systems offer management a means of “an inspecting gaze” (Foucault, 1980, p.155) when comparing actual performance to planned. Underlying disciplinary technologies from this budgetary gaze (or surveillance mechanisms) and power relationships can be pervasively normalising. An ideal situation (for management, at least) potentially occurs when the docile, useful troop achieves self control; when “each individual ... is his own overseer … thus exercising this surveillance over, and against, himself” (Foucault, 1980, p.155).
Foucauldian insights indicate local struggles are never removed, and that resistance is always at the core of how disciplinary power is exercised. Points of resistance to a central truth provide opportunities for strategic analyses, to improve and add innovative value. Representations of discourse indicate complex dynamic interactions of disciplinary power, the truth dependent upon current political or economic or social influences. Critically analysing localised budgetary control truths and reflecting upon their power mechanisms, distributions and disciplinary technologies contributes to the theoretical aspects of this thesis.

2.7. Chapter summary

This research will investigate the role of disciplinary power in an empirically-based critique within the budgetary process, to address a gap identified in the literature. Absent from the literature is a Foucauldian critical view of disciplinary techniques used in power relations within a budget process influencing environmental sustainability outcomes. The research will examine the network of subtle, constant, and systematic techniques which coerce the disciplined mass within a single budget cycle. The traditional budget process readily offers examples of arranging distributions, timetables, priorities, and tactics. Modest constant calculating techniques and distributions of time and space are applied to individuals and groups, while resistance is mitigated. Also, self-controls are implemented at micro levels, made visible by a watchful constant gaze.

Contextual issues of politics, economics and social/stakeholder influences will be relevant to this research. Historically, influences have contributed to an organisation’s values, culture and beliefs of internal decision-making, particularly those influencing the budget setter’s actions. By taking a qualitative view of how the budget process influences organisational targets for environmental sustainability, the following research questions will be addressed:

1) *Is there a two-way relationship between sustainability thinking and the budgeting process, and in what ways?*

2) *In what ways do the budget setters and sustainability managers mobilise power and knowledge to advance their relative agendas?*

3) *Is the use of power and knowledge by these individuals influenced by narrations in their organisation’s current context?*

These three questions will be asked of the case organisation with respect to their environmental sustainability objectives, the research being in the form of a case study.
The next chapter considers the methodological choices to support the data method, collection and analysis chosen to inform a response to the core curiosity of this research. That curiosity can be captured as: “Does sustainability thinking influence the budget process? If so, in what ways? And is this a two-way relationship?”
Chapter 3. Methodology & research method

Having identified relevant literature relating to budgetary controls, stakeholder theory and Foucauldian critical theory surrounding the research issues in Chapter 2, the chosen methodology and research method are both justified in this chapter. While Kearins & Hooper (2002) commend using Foucauldian theorisation for accounting research, they confirm that Foucault’s methodological and method choice is much less clear. For this research, the methodology section below therefore considers the chosen critical theory thinking options from common approaches, incorporating indications from Foucault’s methodology. Then, a method section outlines how the research will be performed within the researcher’s chosen thinking framework. Finally, issues of quality, managing ethics and limitations associated with this research are considered.

3.1. Methodological choices

Laughlin (1995) noted a growing trend during the 1980s of academics, interested in empirical research into the nature of accounting, using broad theoretical and methodological themes drawn from social and political theorists. Also, Laughlin notes that the previously dominant normative accounting research was not popular in practice, nor had normative theory illuminated greater understanding of accounting systems in organisations. Various schools of thought have since influenced accounting research, such as Miller & O’Leary’s (1987) use of French critical theory. Laughlin elaborates upon previous approaches to empirical research, and suggests a reconsideration of key factors along a continuum of methodological choice, in conjunction with change and theory choice dimensions.

For Laughlin (1995), the dimensions of choice in methodology, theory, and desire for change each range from high to low. The theoretical lens used is interconnected with the methodological choice, linking the role of the observer with assumptions regarding human nature. A highly theoretical lens indicates the bias or subjectivity of the observer has minimal effect upon the process, and the observer’s perceptions have little relevance; to the low end of the spectrum, where the observer is totally unconstrained or uninvolved in theory, and free to observe within his or her own perceptions. Laughlin’s methodological dimension locates French critical theory at the lower level of theoretical nature of methods, ascribing a low degree of need for change choice, and a medium level of theory choice given prior
theorisation. He merits French critical theory as a methodological choice, having such contributors as Foucault; where the observer actively takes a position within the discovery process, the observer’s role adding strength to the research. For empirical research into better understanding the nature of accounting, one such school of thought applying French critical theory was used by Miller & O’Leary (1987). They sought *inter alia* an understanding of nuances of power relationships influencing the workforce by social reforms, and notions of efficiency, within strategies of “rendering visible the level of functioning of the individual” (p.249). By taking a qualitative approach to their historical research, Miller & O’Leary could then better explore and critically reflect upon the nuances of the governable person in relation to the ‘norms’ of standard costing than if a quantitative approach is taken. The next section then indicates why this research adopts a qualitative approach in preference to a quantitative approach.

3.1.1. Justification of qualitative over quantitative methodology adopted

The purpose of this research entails discovery of any hidden power mechanisms, if they exist, influencing budget setters with regard to environmental sustainability objectives. Taking a critically reflective approach to better understand these influences indicates qualitative research is preferred to quantitative, discussed further next, before justifying the use of critical social science methodology.

A qualitative approach will be taken for two main reasons. Firstly, prior research indicated further investigation is needed into various attitudes and decision making motivations impacting on environmental accounting and sustainability (Tinker & Gray, 2003; Bebbington, Brown & Frame, 2007). Even though various articles examined external reporting influencers, links to internal decision making and control processes were indicated. They include the influence of corporate culture (Adams, 2002); integrating sustainability values (Adams & McNicholas, 2007); the contribution of management involvement and commitment and the timing within the economic environment (Jazayeri & Hopper, 1999). In divulging such power/knowledge insights, a quantitative approach is considered inadequate due to its limitations in being unable to deal with as many influences as those offered with a qualitative approach, such as through a case study investigation. Secondly, in-depth analysis of a single organisation affords opportunities to locate and explore power/knowledge relationships or influences from within the case detail. As indicated in section 3.1.2, patterns of social behaviour pre-exist for positivists. Of the quantitative data found to lie outside these
patterns, the influences affecting these outcomes are often not examined. This research is interested in the influences of a stakeholder view for environmental sustainability, those influences lying outside patterns of perceived normal political order of the shareholder view.

Qualitative analysis might be considered limited when compared to that of quantitative analysis, from a positivist’s view (Neuman, 2006). He confirms that statistics and mathematics provide a considerable formal body of knowledge supporting quantitative analysis, which is not available to qualitative analyses. This is not seen as a disadvantage for rich qualitative social science analysis, as data can have multiple meanings, is contextually relevant, and consistent plausible detailed explanations can be offered for concepts and complexities within a social setting.

Quantitative research often draws upon qualitative methods to offer valid explanations for, or interpretations of unforeseen results (Anderson & Widener, 2007). The ability to reflect upon data, its context and situational uncertainties, its theoretical position and contributions as practiced in qualitative research, means “data are not untainted slices of objective reality but aspects of recorded activity that a study finds significant for theoretical reasons” (Ahrens & Chapman, 2007, p.299).

In summary, a quantitative research process is not followed, despite inherent limitations of qualitative research analysis. For the purposes of this research, a qualitative research approach is considered most useful to explore context, explain concepts, and illuminate complexities in depth. The type of data required also indicates a qualitative approach is necessary to gain a sufficiently deep understanding needed (Ahrens & Chapman, 2007).

The following methodological sections briefly chart characteristics of common approaches to research, before justifying why a critical approach is relevant for this research. Aside from the position of the observer, assumptions about understanding reality, knowledge and measurement are addressed for each of three major social science approaches, broadly termed as: positivist, interpretive and critical. Each approach is considered below in its principle form, subject to on-going debates and overlaps.

3.1.2. Positivist approach

Positivist social science (PSS) has emerged from the natural sciences, is the oldest, and most widely used of the three major approaches (Neuman, 2006). Variations within PSS include
logical empiricism, functionalism, positivism, naturalism, and behaviourism. (The following analysis is largely sourced from Neuman, 2006.)

For PSS research, social science should be value-free and objective. In seeking truth, PSS generally uses consistently applied logic, systematic approaches, and norms for reducing bias and subjectivity in order to discover truths. Non-science includes the likes of: traditions, personal experiences, astrology, religion, magic, or assumptions based upon common sense not otherwise built upon science.

An underlying assumption about empirical rationality supports PSS, allowing prediction of social reality patterns, but that reality essentially already exists. A further assumption is that social reality follows stable patterns, and does not change over time. The relevance of PSS research is in discovering causal laws which enable people to control or predict aspects of social reality. This knowledge relates to potentially improving society, as an instrument for achieving goals, and for PSS researchers to improve efficiency and effectiveness of organisations. Mainstream accounting research has been linked to the claimed virtues of neutrality, and generalisable knowledge to predict and control for better informed judgements (Chua, 1986).

Aspects of PSS are found to be limitations for this research. Firstly, relevance issues indicate social reality can be reduced to abstract patterns. However, this perspective ignores aspects of peoples’ actual social behaviours, values, and political situations which are of note for this research. People do not always observe the patterns identified (or social norms), nor act in a rational or logical manner (say, for political reasons). This resistance to the norm is otherwise unexplained by PSS, and suggests a broader stakeholder view will offer further insights of environmental struggles, relevant for this research.

PSS assumes a stable social order rather than human society having changing political influences (Neuman, 2006). Other limitations relate to the objective nature of inquiry. Difficulties with quantifying subjective aspects are felt to potentially reduce the importance of, or altogether ignore, valuable ‘softer’ qualitative insights supporting aspects of participant understanding, beliefs, influences, culture and values. It is arguably inevitable that some researcher prejudice is implicit as the researcher is human. Alternative interpretations are not addressed or challenged by the PSS researcher, so potentially slowing adaptive innovations not otherwise identified and tested. Statistical analysis also may ignore context, again
limiting the usefulness of research PSS application to practice. Projects lacking measurable hypotheses are therefore not suitable for PSS.

In summary, a PSS approach begins with a general causal law, and applies this to a logical empirical test for cause and effect upon observed and measurable facts of social reality. Researcher prejudice, bias, or subjectivity is minimised by using objectivity and rationality characteristics. For accounting research, recognising market dynamics is a driver of practice contribution. Hopwood (2007) challenges more traditional accounting research to innovate in response to risk and business model changes over time, advancing knowledge in process dynamics and wider settings. In indicating that accounting researchers fall into the category of “social scientists ... concerned to maintain the accuracy of the present” (p.1373), he tasks research to engage more with practice, to gain insight into dynamic competitive markets of changing knowledge. Non-traditional approaches which look beyond ‘the norm’, tending towards more qualitative aspects, are considered next.

3.1.3. Interpretive approach

Interpretive social science (ISS) broadly considers meanings behind social actions and people’s motives and behaviours within groups. ISS variants include ethnomethodology, grounded theory, symbolic interactionism, and “discovery of meanings and theoretical codes” (Laughlin, 2004, p.274). Whereas positivists collect measurable statistics, interpretive researchers observe minute aspects of social behaviour gathered over considerable time, to qualitatively understand how social meaning is created. (Again, Neuman’s 2006 text is the principal resource for this analysis.)

For ISS research, understanding goes beyond externally observing daily life, and takes a reflective approach for subjective meanings attached to social activity. ISS researchers have a transcendent perspective by intimately associating with ordinary people. Social context and reasons for shared meanings are relevant in developing further understanding of what is happening. Common sense guides ISS researchers as to routine social interactions, distinct from scientific knowledge, but neither common sense nor scientific laws answer all questions (Neuman, 2006).

Social reality is as humans perceive it or experience it internally, and is an accomplishment. The constructionist view assumes that interacting with other humans purposefully with intent and meaning creates social reality.
Humans create and reinforce shared meaning by interacting with other humans. The ISS researcher explores meanings of a social reality searching for possible reasons for an activity, to better understand events. ISS is characterised by voluntarism, where individuals make subjective but conscious decisions.

ISS theory takes a narrative form by describing and interpreting experiences and internal realities of participants. Explanations should be understood by the people being studied. Typically, ‘thick’ descriptions provide meanings, values, interpretations, or rules of participants in their social routines. Theory and contextual evidence combine to support accurate descriptions when the researcher has achieved a sufficiently deep understanding of participant perceptions and reasoning. Prediction may occur if understanding is sufficiently deep. Facts arise from the context of the social setting and the particular people involved, often from taken-for-granted assumptions which are not stated.

Relevance for ISS is being able to comprehensively reflect upon how society gets things done, by gaining deep understanding of the subjective diversity of human experiences. A practical orientation toward the value of knowledge for ISS is achieved in this integration with understanding social choices. Empathy and sharing with social values, views and feelings support ISS’s adoption of relativism, where all values have equal bearing.

Resulting from its exploratory subjectivity and small sample size, the interpretive approach is considered by most positivists to have little scientific appeal. Despite ISS seeking empirically rich subjective understanding, this approach is limited in its degree of objectivity (Ahrens, 2008). Chua (1986) also indicates major flaws in ISS for accounting research: firstly, a fundamental inability for judging explanation adequacy; secondly, lacking an evaluative dimension; and thirdly, the narrow focus ignores other possibly major conflicts between communities. For the purpose of this thesis, ISS is found limited by its overt subjectivity and relativism. Contextual factors could provide more meaning when considered in their longer-term setting, rather than as passive actors for ISS. Understanding social settings provide humans with knowledge to uncover relationships and empower them to change or improve their social world. These exposing and empowering characteristics are beyond the scope of ISS (Neuman, 2066).

In summary, interpretive social science is a qualitative methodology, to discern context and empathetic subjective understanding of human social behaviours. Deep social meaning is
determined from reflecting upon extensive observation of often non-stated assumptions. However, the inherently political dynamics of human society remain hidden, which critical social science seek to expose. The qualitative approach of critical social science is considered next.

3.1.4. Critical social science approach

Critical social science (CSS) includes subjective and humanist influences of ISS, extending ISS by being critically reflexive and essentially political, thus empowering human society to improve. Variations of CSS include emancipation (Jacobs, 2011), class analysis, dialectical materialism, structuralism, Marxism, post-modernism, and feminism (Neuman, 2006). Other paradigms can also be used, such as constructivism, participatory/co-operative paradigms (Guba & Lincoln, 2005), but based on reasons advanced in this thesis a CSS approach has been preferred.

CSS research seeks to reveal foundations of social order for emancipation. It does this by using theory and systematic research to discover hidden truths or to reveal illusions and ideology. Subjective and objective data is gathered from human relations in historical events, current perceptions, conflict situations, and from strategies for the future. Critical reflection of these insights exposes conditions of misleading conceptions (false consciousness), which mask power and control over resources. The value of internal and external knowledge influences behaviours leading to empowerment and liberation. When explanations are provided to the organisation, transformative action is encouraged by the researcher, to mobilise action. This knowledge and potential for action confronts issues of social justice, and is therefore political in its aspirations for social order.

Social reality for CSS is at multiple levels, having a realist orientation. Observed surface reality often does not disclose underlying drivers of power mechanisms. Further, empirical data must be collected to expose underlying causes, forces and conflicts of social reality. Contradicting perspectives within these inner layers indicate that power mechanisms are not fixed, and are termed dialectic, or can change over time. Insights from theories and concepts inform and challenge what is recognised of reality, suggesting influences, interpretations, and categories of relevance. Further, understanding reality of components requires an understanding of the universe that surrounds these components, such as in the case of accountants, whose existence is determined from within their social contexts (Chua, 1986).
According to CSS, humans are rational decision makers, and can be misled. Human potential is considerable, but often unrealised when people lose sight of relationships with their created situations. Potential can be realised when people recognise underlying power forces, and then using that knowledge enables them to change their situations (Neuman, 2006).

CSS theory takes an approach that blends inductive and deductive reasoning, to question ‘what-if?’ under alternative frameworks. In gaining a deep understanding of what is shaping human behaviours, researchers consider alternative explanations of the hidden possible truth(s). Theory testing occurs when explanations are applied to real-life situations, and the results verify the theory or suggest further refinement is needed. Practice and theory for CSS are closely inter-twined. Theory provides a lens through which the researcher can interpret relevant physical evidence. Theory might suggest certain contextual, historical, value sets, or other underlying structural influences to inform the interpretation of what evidence is uncovered.

Relevance for CSS is where knowledge empowers people to actively take control of their situations. CSS uses critical reflection through emancipation, which potentially transforms social reality through structural changes (Jacobs, 2011). A Foucauldian view of knowledge holds that truth arises “from the forms of domination within which it operates at a particular time” (Chua, 1986, p.620.)

Values are significant for CSS, as social research starts with a point of view or moral stance, which leads to a political action. The knowledge of social realities, which according to CSS control people, is power. How and what the researcher studies, and what happens to the results, all entail aspects of value attributes (Neuman, 2006).

For Chua (1986), the role and context of mainstream accounting can be better understood through critique. Though not supported by a common theoretical understanding, critical theorists claim accounting systems share various characteristics (Chua, 1986). These include exposing: firstly, as wealth transfer is involved across social classes, accounting narratives support conflict, and are disguised by supposed rational calculation; secondly, “critique emphasizes the totality of relations (social, economic, political, ideological)” by looking at the role accounting narratives play, including implicating conflicts; thirdly, a focal point includes non-neutrality of accountants, with self-interest embedded within professional ideologies; fourthly, dominant power is effected via knowledge, such as through tools of normalising, surveillance, and governance; and fifthly, the claim that accounting’s role as a
powerful tool for social control and reducing conflict has been obscured by PSS mainstream accounting thinking.

The boundaries limiting the extent of change are set according to what people believe is possible. A person’s culture, resource materiality, beliefs, values, or religious norms may contribute to limiting factors (Neuman, 2006). CSS outcomes may be limited the researcher’s initial choice of theoretical stance, overlooking alternative power structures. Also, with reliance on subjectivity similar to that of ISS, aspects of objectivity may also be overlooked. CSS is reliant on qualitative research methods, and assumes an initial moral stance or values position, indicating the research is not unbiased. CSS researchers consider that the nature and their role as participants add value to research outcomes, while quantitative PSS researchers consider CSS to lack investigative rigor for the same reasons.

In summary, CSS seeks to expose underlying power mechanisms of human society, thus empowering people to act on that knowledge and to improve their social reality. A CSS approach uses theory to inform categories of relevance, and critical reflection for exposing how underlying power mechanisms relate to control. Empowerment from such knowledge can be used for both political and social change.

3.1.5. Summarised characteristics of main approaches

Characteristics of three major methodological approaches to social science research have been considered from earlier parts of Section 3.1. These are summarised in Table 3.1 below.
### SUMMARY OF CHARACTERISTICS OF MAJOR METHODOLOGICAL APPROACHES FOR SOCIAL SCIENCE RESEARCH

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social science and human beings</td>
</tr>
<tr>
<td>Theory versus practice</td>
</tr>
<tr>
<td>Relevance orientation of knowledge</td>
</tr>
<tr>
<td>Values perspective</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>POSITIVE</th>
<th>INTERPRETIVE</th>
<th>CRITICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>External forces shape social actions of rational individuals having little free will</td>
<td>Internal meaning of actions by individuals, having freedoms of choice, constantly making sense of their societies</td>
<td>Individuals have unrealised potential, trapped by illusion and conflict, choices constrained by variable limitations</td>
</tr>
<tr>
<td>Uses logical deduction from repeatable observed facts to connect to laws</td>
<td>Describes sustained deep meanings from a group’s social interactions context</td>
<td>Informed by a theory and critical reflection of underlying conditions, empower people to change</td>
</tr>
<tr>
<td>Instrumental orientation; knowledge enables people to control events</td>
<td>Practical orientation; knowledge enables empathy with shared experiences (apolitical)</td>
<td>Dialectic orientation; knowledge empowers people to alter power structures (political)</td>
</tr>
<tr>
<td>Only considered when choosing a research topic</td>
<td>Integral to society; no values are wrong, only different and all equally relevant</td>
<td>Position begins with values; some views are right, some wrong</td>
</tr>
</tbody>
</table>

Table 3.1 Comparison of methodological characteristics

Source: Adapted from Neuman, 2006, Table 4.1, and Chua, 1986

#### 3.1.6. Justification of critical approach adopted

Of the three major methodological approaches to research, a CSS approach is followed for this research despite its associated limitations. Potential application of each approach is next.

When people are in a powerless situation, having little ability to control their lives such as in undemocratic political situations, research using a PSS approach may offer the best fit (Neuman, 2006). However, for Ahrens & Chapman (2007, p.301) “positivistic accounting researchers are frequently unaware of the possibility of social reality’s emergent, subjective, and constructed properties – constructed possibly in response to their own theories”, as illustrated by Hines (1988). Qualitative researchers agree that “social reality is emergent, subjectively created, and objectified through human interaction” (Chua, 1986, p.615). Researcher bias or otherwise influencing research outcomes are aspects having little scientific appeal for PSS. Objective observations of PSS are considered not to provide as rich insights of contextual influences as more subjective ISS or CSS approaches might offer (Laughlin,
CSS considers that the objective rationale of positivists is “narrow, antidemocratic, and non-humanist” (Neuman, 2006, p.94), as PSS overlooks political influences, ignores process dynamics of current social structures, and lacks critical reflection.

Of the two remaining dominant approaches, ISS offers deep understanding of a society’s inner knowledge through its subjective localised approach, without judging the value of meanings. Neuman (2006) states that CSS criticises ISS for holding social ideas above social conditions, and that short-term localised settings overlook valuable contextual contributions. Also, ISS does not take a political stand, so does not sufficiently focus on issues that might contribute to people improving their lives.

Adopting a CSS approach is most relevant in situations where context indicates that people are questioning, resisting or struggling against power domination. Strategies designed to achieve environmental sustainability objectives in a situation where the shareholder’s profit motive dominates is one such example. The influences supporting adoption of environmental sustainability objectives, and the follow-through to strategies and decision networks for achieving objectives necessarily considers the political order of the case organisation’s budget control structures.

Taking a values position is important at the outset for CSS, in terms of theory, methodology, and change dimensions (Laughlin, 1995, 2004). Appropriate theory can inform and interpret objective facts when linked with subjective values and meanings. Research via a CSS approach can offer theoretical support exposing the dynamics of social conditions by reflecting upon who dominates and who does not (Neuman, 2006). A further consideration relates to the roles that participants and researcher have in the power situation.

The role of the observer, or researcher, is directly linked to the methodological approach through the level of subjectivity associated with the empirical engagement chosen (Laughlin, 2004). As indicated for the PSS approach, the targeted degree of objectivity aims to minimise observer subjectivity. ISS fully relies upon a subjective approach, requiring complete observer immersion. For CSS, there is an intermediate level between the other two approaches, not altogether ignoring researcher intuition and imagination. Theory provides a structure to inform and guide the CSS researcher’s role.

Laughlin (1995) assigns the Foucauldian view of French critical theory, a branch of CSS, to the lower end of his change dimension. As human society progresses through history, one
phase of disciplinary power is considered to dominate over others. Neither wrong nor right forms of power exist, only that one source of power dominates at a particular point in time, and that social progress involves power dominance changing from one source to another. Foucault’s (1995) perspective of disciplinary power attempts to uncover how power is exercised in the context of a particular situation, who is involved, and what roles they take. There is no expectation for a single truth or generalisations using Foucault’s philosophies; that all-seeing person does not exist, and instead, skeletal theories explain accounting in practice (Laughlin, 2004). Also, that skeletal theory is applied by engaging with empirical research of actual practice, by developing interpretation and reflection.

This research seeks to utilise an application of Foucauldian critical theory, by critically reflecting on how power is used within a suitable empirical study; specifically, to learn about how environmental sustainability issues and budget issues interact with one another. Management control history is contextually determined with concepts shaped by modern rationales (Bhimani, 1999). Foucault considers the traditional form of history to be that “which transforms documents into monuments ... aspires to the condition of archaeology, to the intrinsic description of the monument” (1972, p.7, emphasis in original). Instead of the stable structures of PSS, Foucault posits that methodological issues associated with histories of thought and knowledge make discoveries at points of discontinuity, by questioning the ‘documents’. Such questioning involves what is meant, the degree of truth and by what right, “whether they were sincere or ... misleading, well informed or ignorant, authentic or tampered with. But each of these questions ... pointed to ... the reconstitution ... of what the documents say, and sometimes merely hint at ...” (Foucault, 1972, p.6). CSS researchers therefore need to investigate what is happening to power at outer points of “discontinuity and difference, [and avoid hasty categorising] notions of threshold, rupture and transformation, the description of series and limits” (p.14).

Central to Foucault’s questioning of documents which support the system of right is an analysis of methods of control. He raises five methodological issues to consider when analysing domination and suppression measures in pursuit of a system of right (Foucault, 1980). First, research ought to focus upon the extreme limits of power, how it is institutionalised, and what disciplinary techniques or instruments are used at these points. Second, the researcher should investigate power at points where its effect is directly upon its object or target (such as budgetary effects upon responsibility managers). This involves revealing the minutiae contributing to “continuous and uninterrupted processes which subject
our bodies, govern our gestures, dictate our behaviours ...” (p.97). Third, individuals within
an organisation’s network are vehicles of power, so simultaneously are both the effect as well
as the instrument applying power. Fourth, within this network, the researcher should analyse
the ascendency of power. The links connecting generalised power mechanisms engaged with
micro elements start from the techniques and tactics of its most insignificant of elements
through to “the manner in which they are invested and annexed by more global phenomena”
(p.99). Last, the researcher should accept that knowledge is not an ideological construct but
is constantly evolving from subtle yet strategic techniques of power.

In summary, when individuals challenge the status quo of their social groups and seek to
improve their society in some way, then research using a CSS approach is considered
appropriate. By using a CSS approach, this research seeks to reveal hidden power influences
involved in decision making for environmental sustainability objectives within a budget
process. By focusing upon points of discontinuity found when strategic techniques of power
are exercised in localised systems, such as practiced in a budgetary control process, tactics of
domination can be exposed. As Foucault suggests (1980, p.101):

It is only if we grasp these techniques of power and demonstrate the economic advantages
or political utility that derives from them in a given context for specific reasons, that we
can understand how these mechanisms come to be effectively incorporated into the social
whole.

3.2. Using a case study research method

Having decided upon a qualitative CSS methodology, next is an appraisal of what constitutes
the most appropriate method for rigorous research. The method of data narrative is now
developed, guided by prior theory for data collection and analysis. Typically, qualitative
research data is collected from multiple sources, such as interviews, observations and
documents (Laughlin, 2004). This section considers how the qualitative use of the case study
method is appropriate for this research, providing a definition, justification, then design
quality criteria and tests for validity and reliability, procedures for data collection, and
finishing with the data analysis process.
3.2.1. Definition and characteristics of case research

Yin (1994) provides detailed guidance for applying case-based research. He defines a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p.13). Context and actual situation are clearly indicated, and could apply to both qualitative and quantitative research.

Aside from phenomena and context, other characteristics are typical of case study design. These include: the challenges of dealing with many variables, a result or outcome arises through triangulation of multiple sources of evidence, and benefits from taking an initial theoretical stance to guide the collection and analysis of data (Yin, 1994).

An alternative critical theorist stance is offered by Cooper & Morgan (2008). For them, case-based research in accounting is most useful where research interest is in a combination of three features: firstly, multiple variables found in complex or changing phenomena; secondly, details of events or activities that occur in actual practice; and thirdly, context and phenomena are inter-related. Their definition for case study research is: “an in-depth and contextually informed examination of specific organisations or events that explicitly address theory” (p.160). While incorporating characteristics also identified by Yin, this second definition is explicitly theoretically driven and therefore more relevant for the purposes of this research, so adopted here.

3.2.2. Justification of case research

Having defined case study research, this section justifies why case research is most appropriate for this investigation. Case study research “is extremely useful in raising questions, highlighting issues, developing and testing theory, and providing guidance in solving problems” (Cooper & Morgan, 2008, p.161). Yin (1994) outlines four reasons supporting case-based research: the type of research questions, as guided by the chosen theoretical lens; considering a theoretical position; the extent of investigator interactions with actual behaviours; and lastly, the extent of focus upon historical versus contemporary events. These four justifications are elaborated upon below.

As indicated in section 3.1.6, the theory chosen should inform the study approach and indicate the most appropriate methods for collecting and analysing data. As the research is
set within an aspect of accounting control, this suggests an application of Foucault’s theories of disciplinary power, using a critical approach to inform the research.

The first issue of justification raised by Yin (1994) dealing with the type of research questions is guided by theory to focus upon context and events within the research method. The core question seeks out ‘how’ the budget setter is influenced by or in turn influences sustainability thinking, and his/her role in achieving environmental sustainability objectives. To examine in-depth contextual details of the case organisation, a wide complement of evidence is collected from: histories, surveys, archival records, pilot studies (experiments), and observations (Yin, 1994). These collection methods are common across other methodologies, which in turn approach data with different questions, such as: ‘how much?’ questions might be answered by statistical analysis of archives; ‘what?’ questions might be answered by experiments or analysing best practice observations (Cooper & Morgan, 2008). Also, ‘where?’ and ‘who?’ questions might be answered by detecting patterns from questionnaires or archives.

Qualitative case studies, according to Yin (1994), are suited to questions of ‘how?’ or ‘why?’.

Yin’s (1994) second matter of justification specifies the position taken in either testing or building theory. For Cooper & Morgan (2008), cases involving CSS are selected to demonstrate theory testing, (including falsification) provided through logical deductions.
Alternatively, they indicate that ‘paradigmatic’ or exemplar cases usually contribute towards theory building by providing persuasive and compelling narratives about features or events. By taking a theoretical position at the outset, to inform the research process, this research commences with deductive rather than inductive reasoning. Initial observations relating to the research questions either confirm or falsify the initial theoretical standpoint. Initial outcomes may in turn contribute to further theory as research analysis progresses. This research takes an initial deductive stance which ultimately may also become, to a lesser extent, inductive.

Yin’s (1994) third matter of justification indicates the role of the researcher in the case research process. Some authors indicate it to be an advantage for researchers to participate in social research (Cooper & Morgan, 2008), in contributions to exploring contextual issues of values and expertise. They indicate that rich case studies typically have “more in-depth discussion and analysis of ... complex and dynamic issues than other research approaches. In particular, the case researcher can analyze items that are not easily measured” (p.165). Acknowledging the benefits of the researcher’s active involvement in the research process as well as possible data production, Yin (1994) indicates the researcher should have little control over research events. For this research, the researcher does not control case strategies, outcomes or participant responsibilities. The researcher has previously not been involved in any capacity with the case organisation prior to applying for permission to research, and has participated only as an observer since then.

The fourth and final justification for case based research is the focus upon contemporary, as opposed to historical, events (Yin, 1994) producing useful knowledge relevant for accounting practitioners (Cooper & Morgan, 2008). Contextual dynamics of the organisation, economy, society and politics contribute toward contemporary values, influences and power of the participants to this accounting research. Reflecting upon the inter-relatedness of contemporary issues will contribute to research and decision-making for the organisation as it moves through a change process.

Alternative qualitative research methodologies and their associated methods, including action research, grounded theory, or multiple case studies, are not pursued by this research. Cooper & Morgan (2008) argue that action research does not use as robust a theoretical base as case studies. This project applies pre-existing theory, thus grounded theory methods are not pursued. The option of using multiple cases, where “comparisons across organisations is
sought, so that each organisation can be studied less intensively” (Vaivio, 2008, p.74) is also not the intention of this research. Instead, an in-depth investigation can contribute to research by divulging details of ‘how?’ or ‘why?’ Complementary approaches used in conjunction with case studies contribute to improving data analysis. These approaches might include pilot studies (as experiments, to answer ‘what?’ questions to test interview responses) and surveys of archival data (to review ‘how much?’ questions) from historical decision processes (Cooper & Morgan, 2008).

In summary, case research provides the favoured course when a contemporary focus is needed to answer how and why questions, and where the researcher has little control over outcomes (Yin, 1994). Discovering and critically reflecting upon complex contextual in-depth knowledge via case research into how disciplinary power influences budgetary outcomes is relevant for this investigation.

3.2.3. Research design quality criteria and tests for validity and reliability

Having now justified the suitability and relevance of using a case study for this research, various criteria to maintain research validity and reliability within this chosen format are now discussed. Qualitative researchers target achievement of both high validity and high reliability. This discussion indicates what tests and strategies have been used to establish and maintain high validity and high reliability within the research design implementation process.

Validity, or trustworthiness and investigative rigor, is necessary for contributing towards and maintaining a true and fair view of social events. Further, researchers should “create a tight fit between their understanding, ideas, and statements about the social world and what is actually occurring” (Neuman, 2006, p.196). Conversely, misrepresented interpretations of events or inaccurate narratives contribute to low validity.

Reliability refers to consistency and dependability. Reliability arises from a blending of data from multiple sources, such as interviews, participation, and observations taken from across various channels, with the objective of gaining consistent and stable outcomes or insights. As social research situations are often dynamic, and potentially not stable, benefiting from diverse insights arising from broad sources of data (Neuman, 2006). Reliability criteria are more easily achieved when characteristics are able to be clearly identified and accurately measured.
Validity and reliability are inter-related, as reliability is needed to offer validity, but reliability does not guarantee validity (Neuman, 2006). Neuman (2006) describes a metaphorically good fit between reliability measures and a valid definition for truth as being similar to consistently hitting the centre of a rifle range target.

Yin (1994) indicates tests for validity and reliability within case study research. Together with parallels between quantitative and qualitative research rigor or trustworthiness from Guba & Lincoln (2007), these tests are summarised in Table 3.2 below with the application of each discussed next.

<table>
<thead>
<tr>
<th>TEST</th>
<th>CASE STUDY TACTIC</th>
<th>PHASE OF RESEARCH IN WHICH TACTIC OCCURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Construct validity</td>
<td>- Use multiple sources of evidence</td>
<td>- Data collection</td>
</tr>
<tr>
<td></td>
<td>- Establish chain of evidence</td>
<td>- Data collection</td>
</tr>
<tr>
<td></td>
<td>- Have key informants review draft case study report</td>
<td>- Composition</td>
</tr>
<tr>
<td>2 Objectivity / Confirmability (Guba &amp; Lincoln, 2007)</td>
<td>- From multiple sources of evidence</td>
<td>- Data collection</td>
</tr>
<tr>
<td></td>
<td>- Procedures documented and followed for:</td>
<td>- Data collection</td>
</tr>
<tr>
<td></td>
<td>- Interview procedures</td>
<td>- Research design</td>
</tr>
<tr>
<td></td>
<td>- Archival Interpretations</td>
<td>- Data analysis &amp; findings</td>
</tr>
<tr>
<td>3 Internal validity / Credibility</td>
<td>- Do pattern matching, member checks</td>
<td>- Data analysis</td>
</tr>
<tr>
<td></td>
<td>- Interviewees reviewing transcripts</td>
<td>- Data analysis</td>
</tr>
<tr>
<td></td>
<td>- Triangulation</td>
<td>- Design, data collection &amp; analysis</td>
</tr>
<tr>
<td>4 External validity / Transferability</td>
<td>- Use replication logic in multiple case studies</td>
<td>- Research design</td>
</tr>
<tr>
<td>5 Reliability / Dependability</td>
<td>- Use case study protocol</td>
<td>- Data collection</td>
</tr>
<tr>
<td></td>
<td>- Develop case study database</td>
<td>- Data collection</td>
</tr>
</tbody>
</table>

Table 3.2 Tactics for case study design tests

Source: Adapted from Yin, 1994, p.33, Fig 2.3, and Guba & Lincoln, 2007

Construct validity for case-based research occurs when the appropriate measures and procedures are in place (Yin, 1994). Operationalising construct validity is the process where the researcher’s draft report is compiled from sequential evidence which is in turn collected
from multiple data sources, and reviewed by key informants. For this research, evidence is sourced from: interviews, observations, and reviewed literature and archival records of the case organisation. When converging, these sources contribute to refining concepts and understanding within the data analysis phase, in section 3.2.9.

While quantitative research takes an overtly objective and neutral view of research, Ahrens (2008) indicates there is no longer the absolute divide between subjective and objective research. A necessary aspect of case research is that results can be confirmed across multiple researchers or events, even though each researcher contributes his/her own perspectives to qualitative outcomes. Confirmability is a parallel for objectivity, in that observer participation will have a neutralising effect or contribute minimal distortions, so reduce bias. Confirmability can be improved through documented and applied procedures for checks and controls throughout the research process. A further test for confirmability would be to perform an audit of negative data events reconstructions which contradict initial findings (Guba & Lincoln, 2007).

Confirmability is applied through reviewing data capture and reconstruction procedures of this research, due to some sources of evidence used being of an objective nature (such as data sourced from interviewees, observable archives and documented strategies of the organisation studied). Adhering to documented procedures across multiple data sources for this research will improve confirmability aspects of investigative rigor or trustworthiness.

Establishing a causal relationship is necessary for explanatory or causal research (Yin, 1994), as part of improving internal validity or credibility. Credibility can also be improved by linking inter-connected social conditions, by using different sources to arrive at an explanation or cause. Triangulation using data collected broadly from archives, attitudes and observed behaviours contributes credibility to converging lines of inquiry (Yin, 1994). Credibility can be built up from using triangulation techniques (as referred to in construct validity) and using multiple perspectives, of the triangulated data. Searching and cross-checking of multiple links to support findings will enhance research outcomes. From their social relationships, participants are the best to judge the credibility of research results, also termed ‘member checks’ (Neuman, 2006, Guba & Lincoln, 2007). Credibility can also be improved when interviewees have reviewed transcripts.

External validity for social research is to test for generalisability or transferability of findings to other situations. Some aspects of internal validity can be extended for replicability (Yin,
1994). For Guba & Lincoln (2007, p.19), transferability refers to the “degree of fit” of the thickly (a subjective quality) descriptive narrative findings applied to other situations. However, as this research takes a Foucauldian view of disciplinary power in a single social situation, even if sufficiently thickly descriptive, gauging a single point in time applies a unique situation. Despite deeply researching aspects within the budget process, key influences anticipated will come from organisation’s unique blend of participants, strategies, priorities governance, and promoted culture. Therefore, generalisability is inherently unlikely from this research.

The last test for research quality noted in Table 3.2 is reliability. Reliability is an operational test for consistently repeating outcomes from accurate use of procedures or instruments (Yin, 1994). Reliability for qualitative case research can be increased by using procedures or instruments to: focus the researcher on the stated goals, to address the intended audience only, and consider potential problems; consider research categories such as project overview, field procedures, potential questions and related information sources, and report/outcome guidance (Yin, 1994). Reliability is also termed ‘dependability’ in social research, and might be confirmed by an independent external review which examines the results of the process, from data collection, trends developed, and outcomes decided (Guba & Lincoln, 2007).

For this research, transparency of identification and measurement of characteristics will be enhanced by using case method protocols for data collection indicated in section 3.2.6, and compiling a comprehensive single database of all data collected. The single database will be used to indicate trends, connections and linkages, and includes notes, documents, archival data, and interview narratives as outlined in section 3.2.8. Adhering to the case study protocols and using a single database for all data collected will add reliability to the investigative rigor and trustworthiness of this research.

### 3.2.4. Case design – unit of analysis

Having now indicated quality tests employed for this case study research, the next step is to select the most suitable case design from which to base this research. This section selects from various types of case studies, choosing a case to study, and number of interviews to achieve data saturation.

This research uses a critical unit of analysis of a single case study and the reasons for this choice are indicated next. Cooper & Morgan (2008) offer four types of case studies
supporting accounting-related theory development. The four types each take a unique unit of analysis: extreme, maximum variation, critical, or paradigmatic. There is also the question of researching across multiple cases or from within a single organisation only.

By focusing investigations upon outlying or deviant elements, the first type of an extreme case can readily convey understanding about theoretical limits. An extreme case could take single or multiple forms, and may look for example, at dishonourable governance responses outside ‘normal’ financial market behaviours to offer future regulatory insights. As environmental sustainability strategy is ‘mainstream’ being supported within core strategies of the case organisation this case type does not apply to the current research.

Maximum variation cases comprise those sharing a characteristic, and are selected for significant differences, such as users of a particular accounting system or control strategies (Cooper & Morgan, 2008). This type usually involves multiple cases to test theory or to provide comparative insights, with additional value arising from supporting detailed contextual inferences (time and researcher resources permitting). Maximum variation cases are also not applicable to the current research.

Cooper & Morgan’s (2008) third type of case is a critical case, which tests, revises or builds upon theory. The authors indicate that this type usually takes a single example having a strong strategic focus, which if proving a theory to be false, logically deduces that theory to be false. Critical cases generally study a single organisation, providing deep insights into features and influences of interest, such as information for investor decision-making, but this type does not offer generalisations. Multiple cases offering contextual or political comparisons, for example, are also possible, and would be most valuable if able to provide deep insights. Selection of the appropriate case is significant to demonstrate the situation clearly.

The final type is the paradigmatic case, being a contextually significant convincing example seeking to demonstrate development of a new theory. Paradigmatic research might be developed through a longitudinal study of a single organisation’s introduction and roll-out of a new performance measurement system, typically informed by theories at the outset. Again, as this research seeks to demonstrate an application of current theory, a paradigmatic type is not applied.
Further, Yin (1994) justifies single case studies when such an investigation satisfies at least one of three criteria. Firstly, the single case study provides a critical case for confirming, challenging or extending a theory. Secondly, the single case study provides an extreme or unique situational finding if investigated. Or thirdly, the unusual possibility for access has arisen from researcher privilege, and the opportunity to contribute to social knowledge ought to be taken. In the case of this research, applying a Foucauldian view of environmental struggles, as discussed in Chapter 2, to confirm, challenge, or extend an aspect of French critical theory, satisfies the first of Yin’s criteria for using a single case study.

In summary, a single critical case is selected, to apply Foucault’s disciplinary power theories of how an organisation might pursue environmental sustainability objectives within its budgetary control process. As with all case types, providing insight into sometimes ambiguous, complicated situations helps to extend support for or rebuttal of theory. This investigation involves a single organisation, being the unit of analysis. Depending upon the range of interview participants, it may be beneficial to split the case into sub-cases, for comparative analysis – this split possibility will be considered as the research progresses.

3.2.5. Case design – choosing a case to study

Having decided to select a single critical case as the unit of analysis, the next issue is to decide on how to choose a suitable case to study. Cooper & Morgan (2008) confirm that for a critical case study, the case selected is to allow for falsification of a theory. By examining how disciplinary power is exercised within the budget process for influence over environmental sustainability strategies of the organisation, this research seeks to better understand whether the shareholder primacy theory may be disproved in this case.

The case study requires access to an organisation being sufficiently large to have multiple management hierarchies, as well as having an environmental sustainability strategy. Preliminaries to proceed with the research with this case organisation included: having prior ethical approval from Southern Cross University (SCU), searching for a suitable organisation, and gaining permission from the organisation selected.

3.2.6. Case design – case study protocols

Permission from the case organisation was an integral step in the case study process. Ethics Committee approval from SCU was obtained initially, and was also sufficient for the case organisation’s ethical research requirements. The case organisation had recently been in the
press having released an environmental sustainability strategy document, together with announcing winners of an environmental sustainability investment fund across its business units. This news sufficiently sparked the researcher’s interest in the possibility of case research in order to approach the case organisation. The researcher had not had any contact with the case organisation prior to this research request.

Chapter 4 describes the case organisation: an educational institution in New Zealand, named Unitec Institute of Technology (hereafter ‘Unitec’). This section describes aspects of the agreement entered into with Unitec. From the outset, Unitec chose to be named in any research outcomes. However, it was agreed that any participants will have their identity remain confidential throughout the research, with the aim that they provide information as freely as possible. In the event of publication, this thesis will disguise all participant identities.

Permission was requested from those named in an initial list of potential participants as provided by Unitec; each was provided with an outline of the research aims, purpose, and the research approach, a consent form and an information sheet (Appendix C). Potential participants were invited to freely participate in the research, through indicating that they understood what was intended by completing and returning the consent form. The invitation also included an information sheet: advising that if participants chose to withdraw at any stage, they could do so without consequence; that there was no advantage or disadvantage in taking part in the research; that interviews would be recorded with a subsequent transcription for interviewee confirmation; and that management would not be advised by the researcher as to who did or did not ultimately participate.

When not in the researcher’s possession, interview recording equipment, interview transcripts, and observation notes were all stored securely at the researcher’s lockable home office. Any preliminary handwritten notes were destroyed once copied and stored electronically. Electronic copies of all documents and the research database were stored in the researcher’s password-protected computer, with backups regularly taken, and both backups and computer are securely retained.

An intermediate step was added for regularly reporting research progress to Unitec’s Environmental Sustainability Manager. It was proposed that the researcher report back monthly to indicating progress and any issues, etc., to improve reliability of draft findings.
Finally, once research outcomes were presented to Unitec’s board, and to each interviewee who had indicated that they wished to be advised on the research outcomes, a results summary was distributed by the researcher.

3.2.7. Case design – number of interviewees

Yin (1994) specifies the optimal number of interviews is dependent upon the research purpose, what the outcomes are to be used for, and resources available. Allowing for the size and structure of Unitec (refer Chapter 4); the time resource provided by Unitec for the interviews to assist with the research; the difficulty in obtaining access to alternative organisations; and, numbers of in-depth interviews carried out in similar case-based research across numerous levels of responsibility, it was considered that at least 12 interviewees should provide sufficient data for this research. This was reviewed as the research progressed and was confirmed to be sufficient.

Unitec proposed 19 staff names across various levels of responsibility, departments and locations from the four campuses for the researcher to contact. A subsequent review of Unitec corporate documents confirmed that staff holding the positions nominated by Unitec were involved in an appropriate spread of responsibilities and activities to be able to reflect on matters of interest to this research project. A mutually convenient schedule of interviews was then determined on the researcher’s initiative.

3.2.8. Data collection process

Associated with having obtained suitable permission to conduct interviews is the process of collecting data. To collect appropriate data for this research requires researcher preparation, protocol development, and suitable sources for supporting data (Yin, 1994). For case research, procedures need to be sufficiently clear for replication, and linked with theory.

Data collection requires the researcher to be adaptive and flexible when designing interviews. Preparations included: asking and interpreting appropriate questions; being a good listener; awareness of mood and context; minimising researcher bias; and having a good grasp of issues so as to isolate ambiguities, which may require additional evidence to achieve clarification (Yin, 1994). For this research, the researcher had the sole responsibility of the data collection process, and had to consider any, and redesign the process for, problems encountered.
A data collection protocol contributes to additional research reliability. For the researcher, this protocol indicates the project overview and purpose, and an information schedule of when and where data is to be collected (to help plan resources). Also, to help focus upon core issues, a list of research questions and probable sources of information about the organisation’s functionality is generated. The protocol rounds off with the report format as a guide only (Yin, 1994). Chapters 1, 2 and 3 of this thesis provide these protocol details.

For the purposes of this research, documents used to unmask a point of discontinuity (such as initially promoting an environmental sustainability strategy within a budget process) will include interview transcripts, documented observations, archives, and other documents. As part of the data collection procedures, interview questions bear a relationship to an application of the theory described in Chapter 2. Interviews, as a source of evidence, may suffer from: bias arising from question construction or respondents; interviewee’s recall ability; and interviewees’ providing what the researcher wants to hear (Yin, 1994). These issues may however be offset by the provision of insightful, causal links and focusing upon points targeted to the research topic.

For the purposes of this research, in-depth interview data is to be collected, sufficient to analyse core influences and values relating to environmental sustainability. Open-ended questions allow interviewees to offer descriptions they consider suitable, with the skilled interviewer probing for specific details pertinent to the research focus. As shown in Table 3.3 below, Neuman (2006) indicates arguments for, and limitations in, using open-ended questions.

A semi-structured interview protocol was used, employing open-ended questions. The interview questions (Appendix D) are based upon the case study protocol within the research scope, and directly link to the research questions as follows. The first part of the interview asked interviewees for their views about environmental sustainability and influences of Unitec’s sustainability objectives. This linked to the first research question by defining what environmental sustainability means for each interviewee. The next part asked the participant to describe his/her involvement within Unitec’s budget process, which linked to the second research question by considering aspects of formality, exploring conflicts, culture, values and motivation. Interviewees were then asked for their involvement within phases of the budget process in influencing sustainability objectives. This again linked to the second research question, but this time focusing upon environmental sustainability influences. Subtle
meanings were anticipated with regard to how disciplinary power is brought to bear in achieving sustainability objectives. The next interview section guided the interviewees to consider their involvement with environmental sustainability in conjunction with their individual objectives for the next annual budget round. This linked across all research questions, by indicating inter alia contextual influences, beliefs, points of resistance or conflict, and how these are managed individually. The obligatory ‘anything else?-type’ question wrapped up each interview.

<table>
<thead>
<tr>
<th>ADVANTAGES OF OPEN-ENDED QUESTIONS</th>
<th>LIMITATIONS OF OPEN-ENDED QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• They permit an unlimited number of possible answers</td>
<td>• Different respondents give different degrees of detail in answers</td>
</tr>
<tr>
<td>• Respondents can answer in detail and can qualify and clarify responses</td>
<td>• Responses may be irrelevant or buried in useless detail</td>
</tr>
<tr>
<td>• Unanticipated findings can be discovered</td>
<td>• Comparisons and analysis become very difficult</td>
</tr>
<tr>
<td>• They permit adequate answers to complex issues</td>
<td>• Coding responses is difficult</td>
</tr>
<tr>
<td>• They permit creativity, self-expression, and richness of detail</td>
<td>• Articulate and highly literate respondents have an advantage</td>
</tr>
<tr>
<td>• They reveal a respondent’s logic, thinking process, and frame of reference</td>
<td>• Questions may be too general for respondents who lose direction</td>
</tr>
<tr>
<td></td>
<td>• Responses are written verbatim, which is difficult for interviewers</td>
</tr>
<tr>
<td></td>
<td>• A greater amount of respondent time, thought, and effort is necessary</td>
</tr>
<tr>
<td></td>
<td>• Respondents can be intimidated by questions</td>
</tr>
</tbody>
</table>

Table 3.3 Advantages and limitations of open-ended questions

Source: Adapted from Neuman, 2006, Box 10.5, p.287

Given the limitations with interview data collected from open-ended questions, and to increase rigour from triangulation, other corroborating evidence was necessary. Assorted data was collected via observations, archives, and other documents. These sources provided sufficient material for contextual support in relation to the research questions. Researcher observations also contributed to triangulation.

Data collected from various sources was stored securely, with regular backups taken. That included assembling data into a database with which to better manage the analysis phase. To
improve reliability, a single database was constructed using NVivo version 9.1 software to assemble responses from interview transcripts, and to incorporate other referenced evidence. The database formed the basis of analysis (section 3.2.9), providing a ready chain of evidence linking sources with citations to report conclusions.

To improve construct validity, triangulation of data collected from all sources provided converging lines of inquiry (Yin, 1994). Further, data saturation was achieved at the point where no further points of contention or conflict were indicated with some extent of redundancy in the observations. Having discussed the data collection methods deployed, the data analysis process is discussed next.

3.2.9. Data analysis process

Qualitative case research employs methods not dissimilar to quantitative research, both relying upon tightly constructed theoretical and descriptive narratives (Yin, 1994). Protocols for data analysis to be used in this research are now discussed. These protocols aim to be sufficient for potential replication of the study. However, within management accounting research, Cooper & Morgan (2008, p.172) hold that attempts at replication “tend to be elaborations rather than replications”, due to situational changes over time affecting the outcomes.

The purpose of data analysis, informed by Foucault’s disciplinary power theories, is to identify disciplinary power struggles within the complex and dynamic links connecting the budget process with environmental sustainability and thus of how participants use their power to influence outcomes within the role of accounting. Data collected indicative of contextual influences and political philosophy help to understand the role of participants in reconciling budgetary controls with environmental sustainability discourses perceived to support an aspect of democracy.

This research uses an explanatory approach to analysis, similar to hypothesis testing in quantitative research (Yin, 1994). Yin indicates that case study explanations are built from: identifying causal links discerned from critical reflections; a narrative form; and are iterative in nature. These iterations start with theory-based initial thinking, moving to collecting data, revising thinking, review of theory, reviewing data collected, again reflecting critically, possibly revisiting data sources for clarifications and repeating this process as needed.
To assist with triangulation and to reduce deviations from the research focus, all case data collected, including interview transcriptions, was assembled onto a single database using NVivo (as discussed in Section 3.2.8). The chain of evidence can then be logically linked and readily supported by citations.

Foucault offers a genealogical approach for data analysis, as one possible explanation of power practices. Genealogy originates with localised influences at an individual or micro level, and frequently considers how local priorities are implicated within the dominant bigger picture (Kearins & Hooper, 2002). It might be conceived that local knowledge not conforming to the dominant view has been subjugated by “the order imposed by functionalist or systematising thought is designed to mask” (Foucault, 1980, p. 82). Uncovering power struggles behind historical knowledge within the context of conflicts, so investigating contingencies, conflicts and fragmentation is at the core of Foucault’s genealogy analysis. Genealogists take a sceptical questioning view of history and progress, treating the present as a stage of power struggles, rather than more conventional historiography’s acceptance that the present is the pinnacle of contributing events (Kearins & Hooper, 2002).

In the absence of an explicit process by Foucault for analysing *inter alia* the effects of disciplinary power, Kearins & Hooper (2002) indicate steps for using Foucault’s genealogical method, specifically for histories but also for contextual references. “To arrive at an analysis which can account for the constitution of the subject within a historical framework” (Foucault, 1980, p.117), the analytical steps are: first, to focus upon the past to diagnose the present; second, isolate what statements really mean and their effect by closely examining document details (including interviews) and going beyond what is patently said and done; third, identify a pragmatic historical interpretation arising from the analysis, indicating struggles and context of environmental practices, possibly from non-linear events or fads, who is involved, and the effects; and last, consider individual and group views, types of objectives pursued, how discipline is exercised, and forms of any power including self-controls (Kearins & Hooper, 2002); this mix will also include personalities and shared histories (Wooffitt, 2005).

Aside from an historical context, evidence also arises from power exercised within any form of text, including interview transcripts and observations, potentially giving rise to a Foucauldian view of discourse. Foucauldian discourse analysis is a method indicating “strategies of power and the interests served by specific dominant interpretations”
By focusing upon the constituents of objects and subjects and how these are made available to people, a Foucauldian discourse analysis may expose disciplinary constraints used to influence how Unitec’s society acts through engaging in political and ideological issues. Interrogating the text to reveal how underlying rules influence behaviours by allocating rights and responsibilities⁴, can be performed by identifying the objects involved and people responsible (Wooffitt, 2005).

To achieve internal validity for data triangulation, patterns were matched. Pattern matching is a mode of analysis where the internal validity of the research is strengthened when findings from multiple sources provide coincidental patterns (Yin, 1994). Findings from researcher observations are combined with data collected from interviews and other documents to contribute to identifying various patterns. Analysis will begin as data is being collected. Interviewees are introduced next.

3.2.10. The interviewees introduced

A sample of Unitec’s employees who have direct involvement within the budgetary process were interviewed. Interviewees were then split into two categories, determined by the degree of disciplinary power they formally exercise through budgetary controls; these categories are termed ‘Staffers’ or ‘Directors’⁵. These identifiers have been used to retain interviewee confidentiality. Interviewees are summarised in Table 3.4 below, indicating their primary roles at Unitec.

Interviewees having roles more closely aligned to staff positions largely responsible for carrying out tasks for teaching, research, advocacy, or campus operations, are termed ‘Staffers’ for the purpose of this data analysis. Staffer roles may have considerable responsibility and be influential upon behaviour changes, but are generally perceived within Unitec as not having as much budgetary power as Directors. Seven interviewees fell into the Staffers troupe, and are randomly identified as S1 through to S7. Staffers hold roles at various levels of Unitec’s hierarchy: S1 is an analyst; S2 and S7 are lower-level managers, and S3 and S6 are mid-level managers, in support services; S4 and S5 are senior lecturers having contributed to various academic strategic reviews.

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⁴ Such as appropriateness of inquiry, or responsibilities of certain roles.
⁵ These labels are not in general use within Unitec. Instead, they are confined to this research.
Table 3.4 Interviewees’ primary roles at Unitec, as developed for this research

Those interviewees holding ‘Director’ roles represent faculty directors, deans, professors, senior managers, or members of Unitec’s senior leadership. Directors are instrumental in the budgetary control process of holding disciplinary power. Director interviewees number five in all, and are randomly identified as D1 to D5. All Directors hold numerous strategic committee posts, and include: D1 with the Investment Project Committee, D2 with strategic planning, D3 is a Dean, and D4 and D5 are within Unitec’s executive.

Ultimate responsibility for Unitec’s purse strings may well be with those holding Director roles. However, a curiosity for this research is whether Directors also direct environmental sustainability behaviours through budgetary controls. Further, rarely can power be exercised without recourse to other organisational members, and so this research also seeks to understand the interchanges between Staffers and Directors in the spaces where budgetary and environmental sustainability considerations meet at Unitec.
In summary, this research attempts to apply Foucault’s genealogical lens with a degree of critical reflection to analyse the data collected in the context of Unitec’s environmental struggles within the budgetary cycle. Emphasising Unitec’s historical context assists to clearly identify the evolution of environmental sustainability and budgetary control influences (Chua, 1986) within the case. Critical exploration and reflection upon the data collected is also used to expose inflexibilities within accounting ideology and discourses that inform and shape Unitec’s societal potential for achieving environmental sustainability outcomes. Such analysis seeks to identify how discourses are used to sustain environmental struggles at Unitec, and to bolster the disciplinary power of certain stakeholders.

3.3. Quality issues, ethical issues, limitations of the method

While case study research can provide deep insights into subjects and objects by highlighting or testing issues surrounding theoretical considerations, and guiding problem-solving, some aspects suggest reduced investigative rigour and other weaknesses. Issues and concerns with qualitative case study research managed within this research relate to: bias and investigative rigour from information manipulation as discussed in section 3.2.3 and section 3.2.8, having been partly redressed within the protocols specified; difficulties with research generalisations and replication; and operational constraints.

A particular aspect of researcher bias concerns the case selected and theoretical stance taken. Criticisms of these choices indicate possible insensitivity to any unforeseen empirical findings (Cooper & Morgan, 2008). To minimise issues of empirical insensitivity or theoretical inflexibility, this research uses critical reflexivity within the case protocols.

Difficulties in generalisations from qualitative research findings are similar to quantitative sampling issues. Cooper & Morgan (2008) suggest that accounting researchers tend to focus upon statistical generalisations to populations, such as large studies of trends or patterns from archival data; whereas there are also situations of when and why empirical generalisations will apply, depending upon context and other specific details. The relevance of this research arises by demonstrating a case study of an empirical situation of disciplinary power, within the scope of the case studied, and informed by the theoretical stance taken. The data collected will be from a limited number of sources, but will be in the nature of a detailed narrative of multiple influences. While replication of case method is subject to unique
contextual influences and investigator skills, opportunities exist to elaborate upon current literature by further researching those particular influences.

As Foucault’s perspectives interrogate genealogical micro-practices to discover power relations, he makes no claim as to generalisability of his works (Kearins & Hooper, 2002). These discoveries are intended to present one potentially narrow view of how power is exercised, based upon the data collected and the case context. As a result, Foucault’s genealogical method is criticised for a lack of objectivity, but it is also contended that accounting topics such as standard-setting frameworks are constructs of subjectivity arising from arbitrary choices, and so studies of accounting topics are inherently subject to criticisms of subjectivity.

Operational issues arise directly from the narrow scope and the resources available for the research. Constraints relate to available data sources, context, data volume, and differing interpretations of outcomes. The interview protocols in section 3.2.6 indicate how data issues, including reaching data saturation from multiple interviewees, were addressed. Reliance upon corroborating evidence from multiple sources, including contextual support, was utilised to assemble the analysis. However, a further criticism of case research regards the volume of data taking considerable time to analyse and the result being a lengthy document (Yin, 1994) and this research has been forced to make choices in regard to this unavoidable limitation.

Ethical issues relating to confidentiality and permitted access were arranged within SCU’s regulations, managed by the Human Research Ethics Committee. Interviewee confidentiality was considered vital for this research, to provide the best opportunity for collecting rich in-depth data. The interview protocol as developed in section 3.2.8 ensures full ethical probity.

3.4. Chapter summary

This chapter justifies the selection of critical theory methodology and case study method, to demonstrate an application of Foucault’s disciplinary power theory. While case studies demand considerable resources, they offer opportunities to portray vividly how disciplinary power influences environmental sustainability outcomes within a budget process setting. Collecting corroborative data from interviewees, observation, archives, and other documents contribute to supporting the research outcomes by using rigorous research methods to achieve reliability and validity, as indicated in the case protocols. Case study protocols indicate how
prior theory is used to inform the research, case selection, the management of data resources, how data is analysed, and finally, how limitations are mitigated and ethical requirements are managed within the research process.

The next chapter considers the case data, firstly in relation to context and then assembles an analysis in order to address the research questions. Chapter 5 concludes the thesis, and offers interpretations of the research findings.
Chapter 4. Case data – context and a Foucauldian-styled critique

4.1. Introduction

As indicated at the beginning of Chapter One, this thesis aims to investigate what influences sustainability reforms at an individual organisational level, with the focus to be the relationship between budgeting and environmental sustainability. This chapter presents the researcher’s view using Foucault’s ideas in order to offer visibility of influences and disciplinary power structures implicated within the case organisation’s budgetary processes. These influences and structures suggest an understanding of various interactions between the budget process and environmental sustainability, who is involved, and their role in how disciplinary power is exercised to achieve these objectives.

To offer answers to the research questions raised in Chapter Two, inter-related aspects of budgetary processes and environmental strategies are revealed within the case study’s growing organisation. As a provider in New Zealand’s not-for-loss tertiary education sector, Unitec’s chosen environmental sustainability strategies target the organisation’s many stakeholders, exposing struggles relevant to answering the research questions.

This chapter begins by introducing the case organisation, and Unitec’s context in Section 4.2. Section 4.3 identifies traditions and representations of culture and values at Unitec, since these aspects of Unitec contribute significant contextual importance for this research, and support various behaviours across the organisation. Section 4.4 then examines Unitec’s role in pursuing environmental sustainability objectives. The budgeting process and how this is influenced by Unitec’s organisational factors are described in Section 4.5. Section 4.6 then considers the roles of various participants within the budget’s disciplinary power networks. Section 4.7 examines the personal motivational factors of Unitec’s staff in relation to environmental sustainability. Then, Section 4.8 analyses resistance and conflict of implicated struggles within the budget’s power networks since these struggles possibly indicate alternate

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6 Following Unitec’s success at the 2012 NZI National Sustainable Business Network Awards, winning the National Sustainable Business Trailblazer Not For Profit Award category (refer Section 4.6.2), it seemed appropriate to emphasise the fact that while Institutes of Technology do not make profits as such for their government sponsors, they also take great care not to make significant financial losses. Following a protracted period of financial losses during the early and mid 2000s, Unitec’s Council and senior management staff had first-hand experience of an external review by PriceWaterhouseCoopers during 2008, requiring implementation of a detailed plan for making substantial cost savings over the next three years (refer Section 4.2.2).
strategies. Finally, Section 4.9 identifies possible improvements to the budget process, before the chapter is concluded in Section 4.10.

The discussion is informed by Foucauldian themes arising from the case data within a single budgeting cycle. This includes critically reflecting upon instances of: how discipline, within a systems view, might coerce and normalise behaviour; disciplinary power and knowledge; disciplinary technologies; docile bodies; constant permanent surveillance; resistance and struggles; and cultural representations of disciplinary power. The final chapter offers outcomes from case data to answer the research questions.

4.2. Case organisation

The consenting case organisation is Unitec Institute of Technology (Unitec), an education provider in New Zealand’s tertiary sector. Unitec was chosen as the case organisation for this research in part because it had recently released a specific environmental sustainability strategy in conjunction with related project funding and so the observable nature of both its budgetary processes and its environmental sustainability strategy opened up the possibility of providing insights into the relationship of disciplinary power between budgeting and sustainability thinking.

Unitec’s focus is upon delivering applied training and education for employment skills, and research supporting vocational learning and technology transfer. For New Zealand, Unitec has a sizeable footprint; it operates across central and western parts of Auckland region, with over 21,000 students, and 1,150 staff supporting four campuses (www.unitec.ac.nz). Programmes are delivered which complement other providers across the region, while Unitec has a national reputation for certain courses, specifically architecture, performing arts, design and visual arts, construction, and medical imaging. The following gives a précis of Unitec as an entity, and some contextual support for how and why it has developed its current environmental sustainability strategy.

4.2.1. Unitec as an entity

Unitec became a legal entity in November 1975 (Unitec, 2001). It first opened as a technical institute in 1976, then as a polytechnic in 1987, and as an institute of technology in 1994. New Zealand’s tertiary education sector has undergone various transformations over recent

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7 Unitec Annual Report 2011 - Facts and Figures, released September 2012, indicate that students number 21,855 and staff number 1,194 in total.
decades. Transitions during the early 1990s removed the Department of Education’s control over tertiary education institutions (TEIs), and allowed them to become more autonomous (Eppel, 2009). TEIs could thus provide degree level programmes, and were less regulated. Eppel (2009, p.148) adds that the sector faced identity and funding challenges, prompting moves to brand education providers, and that adjusting “to a bulk fund managed by the individual institution was huge”.

The education reforms beginning in 1990 aimed at liberating the education sector, most significantly with polytechnics competing for “students with the universities in a market driven education sector fuelled by the economic ideology introduced by the Labour Governments of the 1980s, and ... subsequent National Governments of the 1990s” (Codling & Meek, 2003, p86). Education reforms within the tertiary sector during the 1990s, following the introduction of the Education Act 1989, were shaped by: considerable demand for more people to improve their employment opportunities, developments in information technology within learning, and competition from international standards (Eppel, 2009). Limited consultation opportunities were available as part of the government-led reforms, which were thought of as “not addressing the issues most concerning the sector” (Eppel, 2009, p.91) such as the need to increase per-student funding for institutions. Also, universities in New Zealand resorted to taking legal actions against the consultation process throughout the 1990s.

As funding challenges increased, and professions in accounting and nursing were upgrading their diploma courses to degrees, Unitec submitted a formal application to become a ‘university of technology’ to the Minister of Education on 12 August 1999 (Unitec, 2000). However, the newly elected Labour government blocked this aspiration in early 2000. According to Codling & Meek (2003), this government was eager to remove itself from previous policies. The prospect of Unitec’s inclusion as a university was also strongly opposed by those already serving as universities. The continued diversification of education contributed to an unforeseen consequence for Unitec.

[T]he hasty introduction of a bill limiting the number of universities in New Zealand to eight (the existing number) ... was never enacted by parliament, but its introduction was enough to derail Unitec’s application for redesignation just two weeks before it was concluded (Codling & Meek, 2003, p.88).
Unitec was therefore unfortunate not to follow a fellow former polytechnic (Auckland Institute of Technology) which became Auckland University of Technology on 1 January 2000. Instead, Unitec was deprived of university status and access to research-based funding, by only a matter of months. However, funding issues continue to afflict the tertiary sector, as Eppel (2009, p.165) confirms:

[Since 2000,] significant increases in government funding for tertiary education had gone to students directly as allowance increase and loan interest write-offs, rather than via the institutions ...

Investment plans, as agreed annually with the recently formed Tertiary Education Commission (TEC), are the current funding mechanism for all tertiary education organisations. These plans outline how TEIs will use their resources to contribute to tertiary sector priorities as stated in the Tertiary Education Strategy; and achievement against each plan is then reported via a Statement of Service Performance (Unitec, 2010b). Government reforms of 2006-2008 removed the previous need for charters and profiles, and installed the new investment plans, which first became effective for the 2008 academic year (Eppel, 2009). Each investment plan specifies both a student activity component and specifics relating to the individual tertiary education organisation. The move to investment arose from the notion of “investing in a plan”, rather than simply receiving government grants under the old system (Eppel, 2009, p. 232). However, Eppel found that TEC decision-making was often at the whim of the government, irrespective of the extent of prior negotiation by sector proponents to the TEC.

Unitec’s Investment Plan 2011-2013 (referred to as the ‘Investment Plan’) indicates strategic planning context, key activity performance management, and funding expectations. The Investment Plan also specifies that Unitec’s Council (hereafter the ‘Council’) is accountable “for education performance of the institution” (Unitec, 2010b, p.32). The Council also ultimately decides upon funding and debt strategies, responsible currently to New Zealand’s Minister of Tertiary Education. The four premises of Unitec’s strategy are: meeting the needs of employers and communities; enhancing the student learning experience; innovation

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8 Unitec’s Council is accountable to the Minister of Tertiary Education and his/her office, and required to regularly report formally and informally by holding open meetings. This includes making available on request minutes, papers, and any other documents (Unitec, 2012a). See Appendix D for functions and duties of Unitec’s Council as established by the Education Act 1989 (“the Act”).
in teaching and learning; and, being an excellent business (Unitec, 2010b). These premises form the subcategories of *Unitec Annual Report 2011 - Facts and Figures*.

Annual education output is measured according to the number of Equivalent Full Time Students (EFTS) taught (Unitec, 2012a), with detailed completion statistics for Student Achievement Component (SAC)\(^9\) funded students, including targeted groups of Maori and Pacifica peoples. Unitec’s 2011 Annual Report indicates that a rise in international full-fee-paying student numbers\(^{10}\) pushed total EFTS up by 133 to 10,637. The value of government grants, however, dropped by $0.1 million from 2010 levels to $75.7 million for 2011, from reduced SAC and adult and community education (ACE) funded EFTS. Unitec’s recent trend has seen full-time student numbers increase. However, SAC funded EFTS indicated “the number of students receiving education has decreased in 2011, possibly reflecting an improving job market” (Unitec, 2012a, p.5). For all TEIs, successful course completion statistics are closely monitored by the TEC. The management of Unitec’s resources and investment plan outcomes is the responsibility of the Chief Executive Officer and Leadership Team. The leadership team’s commitment is to “develop reliable, coherent and empowering policies and procedures, business processes and data management systems that support its strategic planning framework and our staff” (Unitec, 2012a, p.22.) Competing needs for funding allocated to each TEI under TEC control explicitly require the Council, and therefore Unitec’s CEO and Leadership Team, to operate “in a financially responsible manner that ensures the efficient use of resources and maintains the institution’s long-term viability” (Education Act, 1989, s. 181). As Eppel (2009) found, TEC’s enthusiasm for reporting and comparing indicators of key performance (KPI) had possible unintended consequences, such that high success rates may result from high entry and exit standards.

The CEO and Leadership Team may well have nightmares considering priorities for scarce funds, while striving to achieve Council’s financial performance targets required by the Investment Plan (refer Section 4.5.1). Having considered Unitec as an entity, the next section discusses how Unitec has evolved into its current form.

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\(^9\) Unitec is heavily reliant upon public funding, as is most of New Zealand’s education sector. Funding from the New Zealand government is, briefly, in direct relationship to student achievement per domestic EFTS. The programme portfolio comprises 80 percent of SAC for EFTS enrolled at Level 4 or above. The Tertiary Education Commission (TEC) reviews funding allocations annually, and this creates an element of uncertainty for Unitec when considering capital commitments which often extend beyond one year.

\(^{10}\) Of Unitec’s total EFTS for 2010, full-fee-paying international students comprised 14.7 percent, and rose to 16.1 percent for 2011 (Unitec, 2012a). For TEIs, full-fee-paying international students are a prize not to be squandered; they contributed $20.3 million in student fees to Unitec for 2011 (or 15.7 percent, and 13.5 percent for 2010, of total student tuition fee revenues and government grants combined).
4.2.2. Unitec in context

This section reviews key factors that have shaped Unitec as an organisation since its establishment, and provides context for understanding the case organisation’s identity and culture. Initially, Unitec focused upon vocational training, and as it grew, faced ongoing policy changes within the New Zealand education sector, had formally pursued university status, and continues to endure entrenched financial pressures. More recently, these challenges resulted in a change of leadership, and strategic redirection. The following discussion relates details of Unitec’s progression since inception, with the aim of providing context for this research.

Originally located in the Auckland suburb of Mount Albert, Unitec was opened in 1976 as Carrington Technical Institute, and initially enrolled 200 full-time and 300 part-time students. The growing organisation became known as Carrington Polytechnic in 1987 and in 1992 it purchased the neighbouring hospital site. The resulting 55 hectare (135 acre) Wairaka site is bounded at the west by Oakley Creek, at the east by Carrington Road; and had been a working farm to support its prior use as a psychiatric hospital (refer Figure 4.1 below for map). Unitec Institute of Technology was the designation change in 1994, reflecting the mix of university and polytechnic attributes. A second campus was opened in 2001 in West Auckland, and expanded in 2006 with new learning and library facilities. North Auckland provides a third campus, initially opened in 2008, and having recently moved into new open-plan facilities. Other satellite premises also support Unitec’s core Mount Albert operations (Unitec’s website, “Our History”).

Prior to 1990, polytechnics were managed and operated by the Department of Education, with the department employing and controlling the institution’s leaders (Eppel, 2009). Along with polytechnics and colleges being able to offer degrees, central governmental policy changes during the late 1980s meant that all public tertiary institutions received bulk funding according to a formula driven by EFTS, course category, and an indicator for adult literacy quality controls which were referred to as “education substance in the course ... Institutions were allowed to charge a standard tertiary fee set by the government” (Eppel, 2009, p.77).

From 1990, Eppel (2009) adds, polytechnics became self-governing under the Education Act 1989 and were headed by their own council comprising both elected and ministerially appointed members with a CEO holding power to employ all staff. Codling & Meek (2003, p.85) confirm that these moves particularly gave polytechnics “… in sharp contrast to their
Figure 4.1 Unitec's Mt Albert, or Wairaka, campus map
Source: www.unitec.ac.nz, 2012

previously tightly controlled environment [they now had] genuine control over their individual directions and destinies”. Prior to 1992, polytechnics had controlled
apprenticeships, but the Industry Training Act 1992 placed industry-specified skill training of apprentices and trainees into industry control. By late 1999, the change in government indicated a strategic risk specifically in trade-related training resulting from inadequate EFTS-based bulk funding. A persistent issue was that “having lost the automatic right to funding for block off-job courses for trades ..., polytechnics faced increasing financial pressures as their costs rose and the numbers in some classes became economically small” (Eppel, 2009, p.148).

Unitec’s mission was “to be New Zealand’s leading provider of applied higher and further education” (Unitec, 2000, p.5), and in 1999 was eagerly anticipating being able to offer applied education as a university of technology. This ambition was a natural extension of its technical and trades base. From the 1990s, Unitec also was able offer “university-level bachelors, and masters ... qualifications, certified by national qualifications accreditation and quality assurance processes” (Mellalieu, 2011, p.6). The government of the day (1990-1999) enthusiastically encouraged student participation and growth in the tertiary education sector, and decentralised most education planning. Eppel (2009, p.87) confirms that some additional funding to meet increasing student enrolments was provided by government, being offset by cuts elsewhere in education, including student allowances; “the policy was widely interpreted as creating competition for students between institutions”. This pressure to compete meant that funds were increasingly spent on institutional advertising, promotion and branding, rather than collective sector behaviours. As Eppel found of the 1990s: “in this totally market driven situation. There was a rise of ‘brand’. It was the shift from being an educator” (2009, p.147). At the close of the 1990s, President and CEO, Dr Webster (Unitec, 2000, p.13) saw Unitec’s delivery of education as “making our brand of teaching distinctive”.

During 2000, Unitec celebrated its silver jubilee, gained accreditation to offer doctoral degrees in education, and by year end, had 16,254 students enrolled (7,623 EFTS). These milestones were contrasted with the unsuccessful attempt at re-designation as a university. The Council’s views of this outcome are indicated by Chairman John Robb at the time: “the validity and justness of Unitec’s case for becoming a university is overwhelming ... [and]

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11 Reforms to centralised education planning during 1991-1997 included: continuing with the Learning for Life policy, adding a student loan scheme, reducing eligibility for student allowances, and replacing the standard tuition fee paid by students with institutions setting their own fees. The National qualifications Framework, overseen by NZQA, established industry training organisations (ITOs) and a single set of quality and qualification arrangements for apprenticeships and work-based training under the Industry Training Act 1992. Reforms during 1997-2000 introduced additional funding via government subsidies, limited student fee rises, and allowed interest free loans while students were studying. (Eppel, 2009)
opposition mounted against our application ... is testament ... that our application was very meritorious” (Unitec, 2001, p.6). The lack of university status for Unitec was deemed to be an organisational limitation by Unitec, as CEO Dr Webster commented upon in terms of impacts on students, and therefore Unitec’s fee income (Unitec, 2001, p.7):

The ability of many institutions to maintain high quality in their teaching and research, particularly given the impact of fee stabilisation and the lack of adequate compensation through the bulk funding system, now depends to a considerable extent on their access to continued growth in this [international student] area. Word of mouth and a strong track record have done much to underpin our performance in status-conscious overseas markets. However the fact that Unitec, unlike otherwise very similar institutions in Australia and elsewhere, is not yet recognised by Government as a university, continues to cause a significant amount of confusion, and to hold back our export performance.

Also of note during 2000 is Unitec’s significant reduction in liquidity by year end, as indicated by the ratio of current monetary assets to current liabilities. Unitec reported a “short-term liquidation ratio” of 0.49:1 for 1999, decreasing to 0.35:1 for 2000, as a direct result in current indebtedness increasing by $8.6 million to $21.3 million (Unitec, 2001, p.36). Of note was the contributing large increase in Fees in Advance by $7.4 million, not directly commented upon in Unitec’s 2000 Annual Report. The increase in Fees in Advance reported in 2000 can however be linked to the increased international EFTS for the 2001 year. Unitec’s 2001 Annual Report indicated a nine percent growth in total EFTS (to 8,309), with an increase in international students by 45 percent, to 21 percent (at 1,755 EFTS) of the total student population. Despite growth in student numbers at this time, Chairman Robb advised: “bulk funding to tertiary institutions by government proved, as expected, insufficient to keep pace with inflation” (Unitec, 2002, p.3). Also, Eppel (2009, p.148) noted various struggles by institutions in managing the rules of bulk funding, with a polytechnic CEO confirming that additional funds could be raised during the early 1990s by “having a beer” with the Ministry’s staff, and that Ministry staff would later redefine EFTS and claw back some funds.

Unitec reappraised its vision, mission and values during 2001. This was in part from the changes in the role of polytechnics in training trades, and a response to the Industry Training...
Act 1992. Unitec’s Applied Technology Institute (UATI)\textsuperscript{12} responded to the 1992 legislation by launching an apprenticeship training trust in 2001, for providing opportunities for building apprentices to train in their industry. This contributed to a 10 percent increase in UATI EFTS to 940 for 2001 (Unitec, 2002). Unitec achieved full membership to the International Association of Universities, in 2001. The institute also applied to reactivate its application for university status and targeted achievement of university designation in 2001, and again in 2004. Then in 2005, central government formally quashed the re-designation application, despite industry and professional support, and provision of additional evidence to the earlier 1999 application. While financial and institutional pressures were holding the Council’s attention, staff and student interest in environmental responsibility and sustainable development was growing.

During the early 2000s, Unitec’s students and staff became increasingly involved with various environmental sustainability projects and courses.\textsuperscript{13} To facilitate applied research during this period, the Council sought funding from the Government’s Strategic Change Fund within the new TEC framework. Following the informal eco-campus concept for campus development, Unitec had formalised an environmental management policy which was approved in 2003, with principles embedded in the 2003 strategic plan. Meanwhile, the surplus of income over expenditure for 2000 of $2.5 million had reduced to a deficit of $0.3 million for 2001, which the Council attributed to bulk funding inadequacies adding to Unitec’s financial pressures. Unitec’s liquidity situation deteriorated, and the ratio of current monetary assets to current liabilities ranged between 0.04:1 and 0.06:1 for 2001 through to 2003, despite net surpluses for 2002 and 2003 years ($1.3 million and $4.6 million respectively).

\textsuperscript{12} The Unitec Applied Technology Institute (UATI) was established during 2000 as a result of restructuring, and focuses on the provision of vocational technical training in various trade-related programmes, including carpentry, plumbing, automotive and welding. UATI formalised Unitec’s commitment to “high quality, skills-based education within the framework of a university of technology” (quoting CEO Webster, Unitec Annual Report 2000, p.9).

\textsuperscript{13} This involvement included: accreditation of the Diploma in Sustainable Horticulture; national leaders in sustainable practice and policy development in areas of natural sciences (Unitec Annual Report 2004); Environmental Engineering students and staff cleaning beaches and reserves of rubbish, and recycling some of the waste collected; hosting visiting experts, such as Professor Kruger, a world authority on alternative and sustainability energy; creating a centre for teaching and research in sustainable development; receiving $0.2 million grant for hydrogen fuel cell technology research; working collaboratively with the Building Research Association of New Zealand; and developing an “eco-campus concept and our commitment to sustainability fit well with the Waitakere City Eco-City philosophy” (Unitec, 2002, p.6).
Government introduced a new funding model, the Integrated Funding Framework, in 2004 to replace bulk funding. The new model established: maximum limits to which institutions could set student tuition fees without TEC approval, performance-based research funding and a strategic development fund for targeted areas (Eppel, 2009). As a consequence of this changing external environment, Unitec’s strategies during 2004 included the ambition to have strong brand recognition as ‘Unitec New Zealand’, achieve a university designation, and report an environmental responsibility scorecard. Meanwhile, a restructured Unitec returned a $1.7 million net loss for 2004 from reduced international student numbers, and increased expenditures for labour (resulting from restructuring) and legal costs (associated with the bid for university designation). Unitec’s liquidity situation had further deteriorated such that the liquidity ratio was not reported (unlike earlier years), and Current Liabilities had increased to over $39 million by 2004 year end (increasing from $33.6 million for 2003, and $35.7 million for 2002), with the 2005 Annual Report referring more frequently to the need for economic sustainability than previously (Unitec, 2006).

The mid 2000s saw Unitec frequently operating at net losses, and a change in Council Chairman in 2006. A short-term funding injection and tight cost controls boosted Unitec to a net surplus of $2.6 million in 2007. Unitec’s ambition for ‘university of technology’ designation became reliant upon progress of the Education (Establishment of Universities of Technology) Amendment Bill 2006, which was introduced late 2007, but did not reach a second reading. (Subsequent Unitec annual reports no longer refer to the ‘university of technology’ ambition.) International student numbers continued to drop into 2007, adding increasing financial pressures for Unitec.

During 2006, Unitec opened new teaching facilities at Waitakere, and revised its Charter in consultation with its stakeholders. Unitec’s distinctive vision, mission and values were considered by its Council and executive to be aligned to TEC priorities.

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14 Also of note at this time: Current Liabilities for 2005 in the 2006 published accounts total $34 million, but in the 2005 accounts are $43 million, without Unitec nor auditors noting any changes in accounting policies or other explanation in the Unitec Annual Report 2006.
The mission and character statements within Annual Reports from 2004 to 2007 included:

Unitec inspires people to discover and apply their intellectual and creative potential and contribute responsibly to their societies and cultures. ... Unitec is committed to sustainable development, and seeks to apply the principles of sustainability in its teaching and research, and in developing an eco-campus environment that enhances the learning experience (Unitec, 2005, p.2).

This responsibility for society and cultures extended to the natural environment, as indicated by Unitec’s values. The 2006 Charter specifically addressed issues of design for, investment in, and otherwise advancing sustainable practices, both from an environmental and economic sense (Mellahieu, 2011). However, a strategic review released in 2008 indicated contributing factors for Unitec’s inability to deliver sustainable development issues. Mellahieu indicates these contributing factors included: strengthening stakeholder and ineffective government support for ‘green’ issues, offset by Unitec’s financial unsustainability and fractured approach to sustainability issues, and bolstered by isolated but strong support from within Unitec. Subsequent over-riding imperatives further reduced Unitec’s profile for sustainable development, and for Mellahieu, included: the need to restructure; an absence from TEC’s investment funding priorities in the new investment plans which replaced charters from 2008; a change in government late 2008, who realigned education strategies to exclude polytechnics from research addressing environmental change; and the worsening global financial crisis.

During 2008, Unitec embarked upon changing its senior leadership and its financial performance, having made frequent financial losses since 2004. This extended to new appointments of the Chief Executive Officer and Chief Financial Officer, re-establishing core strategies, removing a management layer, and realigning key financial targets and drivers. An extensive consultant’s review of Unitec’s finances was presented during 2008, confirmed by Unitec’s incoming CEO, and found “an embedded cost-price mismatch, where ... revenue consumed by salary costs had risen to 64 percent [and was] fundamentally unsustainable” (Unitec, 2009, p6). A three-year plan was developed to save between $11 million and $18 million in costs. Mellahieu (2011) indicates that the remodelled ‘command-and-control’ management team implemented a leaner organisational structure than previously, and were charged with turning the organisation around. Unitec’s new management team had to consider significant risks during this period, including influences from: the ongoing global financial crisis, potential reductions in international student numbers, the strengthening New
Zealand currency internationally, and increasing domestic unemployment levels. Unitec’s financial situation had been stronger than a few years earlier, with operating surpluses for 2009 of $8.3 million, for 2010 of $8.8 million, and for 2011 of $4.7 million, and strengthening liquidity. Ongoing maintenance of non-purpose-built and heritage buildings indicated some additional health and safety issues, such as inadequate lighting and heating. Strategies are in place for longer term rationalisation of campus operations to the southern end, while developing commercial opportunities at the northern end.

Mellalieu (2011) is sceptical of current tertiary funding changing the minimal investment approach to sustainable development in education taken by TEC. Central government’s current education strategies out to 2015 ignore funding opportunities for sustainable development across all TEIs. When central government funding ceased for a non-tertiary EnviroSchools programme, local government support has arisen in the vacuum.


Unitec’s earlier attempts at pursuing environmental sustainability strategies had stalled (S4). Each fragmented attempt had been scuppered for various reasons, which Mellalieu (2011) suggests are substantially a direct result of sequential central governments not translating policy aims into priority funding for TEIs, nor developing suitable monitoring and controls for sustainable development. Crucially, the impetus continued for Unitec as an organisation to take a stance on environmental sustainability to the point of reaching an important strategic milestone, as discussed in Section 4.4. The range of interviewees sampled was introduced in Chapter Three. Having now introduced Unitec and the interviewees (refer Section 3.2.10), influences of culture and values contributing to environmental sustainability behaviours at Unitec are discussed next.

### 4.3. Culture and values at Unitec

Aspects of culture and values have impacts both informally and formally at Unitec, across traditional and contemporary normalising influences. This section examines: the influence of traditions contributing to behaviour standards supporting environmental sustainability; the
use of space; informal cultural influences on environmental practices; and formal statements from official documents and representations by Unitec’s key office holders.

4.3.1. Traditions supporting environmental sustainability

The guardianship role of environmental sustainability at Unitec (refer Section 4.4) can be put into greater context in association with cultural traditions. Unitec’s commitment to New Zealand’s founding document, the Treaty of Waitangi, is symbolised by the central meeting house or marae at the Mt Albert or Wairaka campus (the ‘Marae’). Traditional aspirations and values encouraged at Unitec are characterised by the influence of the Marae. With its powerfully crafted portcullis and aspect overlooking Wairaka stream, the Marae, Figure 4.2 below, not only captures the attention of a casual visitor to Unitec’s largest campus but also is a focal point for operations across all sites. (The main campus is the focus here, being where Unitec’s principal office holders are based.)

Figure 4.2 'Te Noho Kotahitanga' Marae at Unitec's Mt Albert, or Wairaka, campus

Source: Unitec, 2013, p.15

Te Noho Kotahitanga Marae at Unitec’s Wairaka campus (the ‘Marae’) was officially opened in March 2009, and embodies a place of reverence and friendship, where visitors are

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15 “Unitec’s Te Noho Kotahitanga Marae is unique in New Zealand. It is the first marae for almost a century that has been built incorporating more traditional architectural approaches; structurally it is held up by the carvings. Where possible, traditional techniques have been used [in accordance] with modern building codes ... Unitec’s marae ... is a hub for teaching and learning about [Maori language and culture], a place for ceremonial and celebratory gatherings of worship, kinship and friendship, and a repository of local and historical knowledge.” (Unitec, n.d., Te Noho Kotahitanga Marae)
welcomed and dignitaries greeted within a respectful atmosphere of all of those who have gone before.\(^{16}\) (Prior to the Marae’s opening, large gatherings were held at other on-campus venues, such as the gym, lecture theatres, or other location depending upon the event.) Important gatherings or *hui* are also held at the Marae, giving the opportunity for people to voice their concerns, and more traditionally, for disputing parties to reach a consensus. Such a one-day *hui* was held late 2009 to consolidate a broad sustainability proposal by various academic staff (Mellalieu, 2011).

Each new student intake is welcomed at the Marae, which one student from China says of the experience: “the Māori welcome at orientation was soul-rocking. That was when for the first time I got a hint of the power and hospitality of this culture” (Unitec, 2011b, p.25).\(^{17}\) When inside the Marae, elaborate carvings and weavings (refer Figure 4.3 below) provide a history of those who have gone before.

Values as portrayed within New Zealand’s founding document, the Treaty of Waitangi signed during 1840, are included within Unitec’s partnership goals between all peoples, and specified in the Education Act 1989 (s.181) as a specific duty of its Council. These partnership goals aim to show Unitec’s commitment to enable teaching and learning for all people through advancing Māori components (supported by the Marae), specifically values of:

1) Authority and responsibility – Unitec accepts the principle that Māori have authority over and responsibility for all teaching and learning relating to the Māori dimensions of knowledge;

2) Legitimacy – Unitec believes that each partner has a legitimate right to be here, to speak freely in either language, and to put its resources to use for the benefit of all;

3) Guardianship – Unitec accepts responsibility as a critical guardian of knowledge;

4) Co-operation – Unitec affirms that a spirit of generosity and co-operation will guide all its actions;

\(^{16}\) Traditional construction methods were used for the Marae. It is located within part of the original settlement of the Ngati Awa people, and is now central to Unitec’s Wairaka campus. Construction and carvings inside the Marae represent a stylised traditional history upon upright structural pillars. Back-lighting depicts weaving silhouettes representing ancestors on the back wall, the starting point of the chronology.

\(^{17}\) Protocols while on the Marae are also closely observed by casual visitors during weekly open days or other events such as the Maori New Year celebrations which take place during June each year, a few days prior to the winter solstice.
5) Respect – Unitec values each partner’s heritage and customs, current needs and future aspirations, with all people working together within Unitec. (Unitec, (n.d.) Te Noho Kotahitanga Marae)

Figure 4.3 Images woven into the rear wall of the Marae represent ancestors and others who have been before

Source: Unitec, n.d., Te Noho Kotahitanga Marae

Threading these partnership values as imbued from the Treaty of Waitangi into modern aspirations concurs with Foucault’s disciplinary power ideas, specifically in normalising judgements from the standards established by such value statements. Of particular relevance for this research is the role of guardianship or kaitiakitanga (to be discussed in Section 4.4). The use of space particularly across its largest campus is indicative of Unitec’s environmental culture, as discussed next.
4.3.2. Space

Unitec’s use of space at its largest campus might be illustrated through special ceremonies, the open areas between buildings, changing use of learning spaces, or car parking expectations. A review of practices relating to space provides an appreciation of Unitec’s culture regarding the environment.

In the spirit of guardianship, and to remember any staff or student member who may have died, Unitec has established a ceremonial tree planting process at Wairaka campus. Space has been provided for a special plot where families, colleagues or friends of the deceased can choose to place a plaque and tree, the plot being designated ‘Memory Grove’. Unitec’s Facilities Management Department allocate and manage this space. Also, a ritualised blessing by the Marae’s senior representative is given in the event of any new tree and plaque.

The sense of space across the 55 hectare Wairaka campus is continued into the use of buildings. Campus operations are scattered across the various buildings. Available building spaces might be considered hampered by previous use specifications, as hospital applications are unlike those of lecture theatre and modern learning spaces, as with changes in technology, operating uses, and health and safety requirements. The variable use of buildings across the Wairaka Campus has also led to a (yet to be implemented) strategy to move the entire campus operations to the southern end, and away from the northern end. A revenue stream may then arise from the vacated northern end buildings by outside developers, and “redistributing the teaching and learning ... into a more consolidated form in the southern part of the campus” (D2).

The newly opened Albany campus has adopted the use of open learning spaces, within asphalt, steel and concrete, which “as a campus feel is very different” to Wairaka’s green spaces, according to S4. The new campus uses “massive open plan workshops, and people have shared space, and there’s no dedicated space for particular schools, which we have achieved, but at a heck of ... a drama to achieve” (D2). Implementing change in space utility and “a change in mindsets about ... how we do things” was viewed by D2 as “a small window into how easy or how difficult it is going to be to change the culture of Unitec about how we teach”. Gauging the degree of success to date ranges from: “it’s running very well” (D2) by Directors; to being viewed begrudgingly by Staffers, who have lost their own office space and with it a perceived level of power. This loss of confinement space by the renouncing of
boundaries might be viewed as an increase in disciplinary power by Directors over Staffers. Further, individual Staffers can no longer be identified by a single space, this space now being shared.

An abuse of parking spaces and time is also noteworthy, with regard to Unitec’s responsibilities. For staff and students opting to travel by private means, carparks and bicycle racks are offered across the campuses. During the day, bicycle racks are often empty and carparks full. As commented by D2:

... one of the biggest contributors to us not being environmentally sustainable ... revolves around people coming to Unitec and leaving every day by car. ... If public transport was better, if we had more people living on campus, it would be better. We are trying to achieve that, but it’s going to take time.

Staff walk, cycle, drive, or catch the shuttle to attend various meetings at the large Wairaka Campus.

Change in mindsets of car-owning Aucklanders is an issue for not only Unitec, but also Auckland region’s communities (beyond the scope of this research). Changes in transport-related requirements of Unitec’s staff and students, in D4’s view, could be triggered by Staff recognising pricing pressures:

[If teaching staff] want to use a shoulder time, they may actually have a cheaper [classroom] cost because it is more efficient for us to have teaching spread out over the day ... and it puts less pressure on public transport.

Although Unitec provides free parking for students, its Wairaka Campus is also adjacent to key bus routes. Early-rising, non-Unitec workers also make use of campus parking, catching bus links into their inner city jobs. Students unable then to park at Unitec need to seek alternatives, such as public transport, which as D4 states, is a:

Great outcome from the Auckland City [who manage regional transport] point of view, people using public transport, travelling less in their car, but an undesirable outcome for our students because they don’t have enough car parks.

Use of space at Unitec is illustrated by ceremonies, campus layouts, cultural and learning areas, and parking areas. The influence of Unitec’s corporate culture upon environmental sustainability representations is considered next.
4.3.3. Informal cultural influences upon environmental sustainability practices

Following on from the view of space at Unitec, this section considers informal cultural representations of power. For senior management, influences include: choices made, resistance to power, increasing awareness and credibility, and using a consultative approach.

Foucault noted (refer Section 2.6.7) that representations of power are complex and unstable, arise from multiple interactions, and are both dynamic and motivating. Further, it can be noted that cultural representations of power and knowledge are products of contextual influences. Not only do such representations produce power, but they also contribute to making it fragile, by exposing its limits at a moment in time. The influence of culture across an organisation is therefore dependent upon senior management’s chosen style and structure. Publicity and other representations contribute to identifying with various propositions and increasing their visibility, while exposing limitations. Choosing the degree of priority, level of decision-making, disclosure, or action regarding environmental objectives all contribute to cultural visibility and influence, and establish limits for resistance.

As projects are developed, such as environmental sustainability at Unitec, they are viewed as not being part of normal practice or operation, so not part of ‘business as usual’\(^\text{18}\). As projects progress into normal actions, they increasingly become practiced within normal business (S2). The ‘ecoPortal’ (refer Section 4.6.5) software (subscription and data management) costs had initially been project-based, so required a business case to justify the investment; the expenditure since 2012 forms part of the operating budget, and so is considered to be ‘business as usual’.

From the perspective of ‘business as usual’, anything that is new and not yet perceived as normal practice often experience delays in implementation. With regard to the visibility, and culture of, waste, “It could take a long while ... to change the overall way to which the culture of the organisation operates” (S2). A performance measure added to the 2011 Annual Report, Meeting the Needs of Communities section, indicated 58 percent of staff consider Unitec as being environmentally responsible, compared to 52 percent in 2010, and targeting 62 percent for 2012 (Unitec, 2012a, p.5).

Positive outcomes depend upon the subjects identifying (or otherwise) with representations of power. Of note were assorted comments from some staff members regarding senior

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\(^{18}\) Although ‘business as usual’ is a term with some usage in the scholarly accounting literature (refer Chapter 2), there was no evidence from interviews or documents that Unitec was aware of this.
management’s influence upon culture, such as the office style and choice of the Chief Executive Officer’s car. It was felt that senior leaders were also subject to the power of discourses needed to portray Unitec’s environmental sustainability strategy (ESS, refer Section 4.3.4) with credibility, such as infrequent publicity surrounding the CEO planting trees on World Environment Day\(^{19}\). With regard to encouraging communities of environmental sustainability influence, in S5’s view, Unitec’s senior leaders:

... don’t walk the talk in any obvious way ... they don’t do any independent promotion of sustainability stuff ... It would be great having a little video of [senior managers embracing environmental sustainability, such as by having] people coming in and taking waste paper baskets and giving [the CEO] a cube.

A further suggestion to encourage and motivate acceptance of an aspect of cultural change was recognition that imposing ideas creates resistance. Alternative approaches include a relatively open consultative culture, and in S5’s view:

... at a certain level, Unitec has been quite good I think at allowing quite a lot of discontent to flow around without getting too worried about it. Which means that people are talking about things. [For senior management,] the way to make change wasn’t to come and kind of mandate it, [but] to really talk about it. And listen quite carefully.

Alongside less formal discourses are the formal representations of disciplinary power, discussed next.

4.3.4. Formal values & vision statements supporting environmental sustainability

In parallel with informal power representations, various formal documents illustrate Unitec’s views in pursuing environmental sustainability values, culture and objectives. These include a values statement, an investment plan, and five-year strategic review.

Unitec’s values are outlined in a section “About Us” (www.unitec.ac.nz/aboutus/values), which contains various values statements about Unitec’s history, academic architecture, environmental sustainability, equity and diversity, and the partnership. The section relating to sustainability at Unitec specifies steps taken to embed environmental sustainability across

\(^{19}\) Unitec’s launch on June 5\(^{th}\) 2012 of the initial phase of Wairaka Stream Restoration coincides with World Environment Day. Publicity associated with this occasion was published on Unitec’s website news section.
the organisation, and refers to: the formal co-ordination environmental sustainability strategy document (ESS) linking Unitec’s teaching, research, advocacy, campus operations, within a spirit of guardianship; the seed fund of $100,000 targeted to support specific environmental sustainability projects; and an environmental management system for measurement and control purposes (these steps are discussed in 4.4 below). Again, this indicates standardising behaviours by suggesting various ways for people to get involved with fun events and projects.

Unitec’s Investment Plan 2011-2013 (The Investment Plan) documents planned outcomes and focus areas for the period. While providing a strategic context, the document states that Unitec’s three core roles are to: deliver vocational education for employment skills; undertake applied research that supports vocational learning and technology transfer; and to collaboratively progress foundation learning. The Investment Plan is underpinned by a “secure financial platform achieved through a sustainable surplus after investment” (Unitec, 2010b, p.3). Key targets are established for participation and success rates by differing ethnicities of EFTS, and financial indicators (earnings and cash-related). A critical requirement is for a minimum of three percent return on equity, “final budget approval will occur only if this return is achieved” (Unitec, 2010b, p.47), and the aim is “to deliver a five percent average long term return on equity” (Unitec, 2010b, p.45) thus enabling reinvestment in assets. This tight reinvestment target indicates difficulties in generating a greater return, and/or quantifying returns, such as when business cases might be developed to justify investment in new initiatives seeking additional funding, such as for environmental sustainability. The Investment Plan’s targets for environmental sustainability specify the level of impact for resource utilisation from 2010 through to 2013, being for “progressive improvement in resource consumption off 2010 base” (p.39), with Unitec’s 2010 Annual Report indicating environmental-sustainability-related KPIs for electricity, water and waste utilisations. These indicators were extended in 2011 to include paper usage, and are discussed more fully in 4.4.4 below.

‘Relook. Rethink. Redesign.’ is the opening slogan of Unitec’s 5 Year Strategic Plan for 2011-2015, (n.d.), the ‘Strategic Plan’. This high-level strategic overview document resulted from stakeholder discussions, and reinforces Unitec’s aspirations “to be a world-class, world-scale Institute of Technology that is an agent of economic, social and environmental change” (p.3). However, the Strategic Plan appears to use ‘environment’ in a very broad sense, as applied to the areas of: meeting community needs, enhancing student experiences, innovative
teaching and learning, and ‘excellence’ in business. Unitec’s core philosophy of partnership between peoples is re-defined, and represented by the Marae as being “a place where students, staff and our community come together for shared learning ..., kinship ..., and celebrations” (p.44). The Strategic Plan also restates the five values of: authority and responsibility, legitimacy, guardianship, co-operation, and respect (refer Section 4.3.1). The Strategic Plan mentions ‘environment’ in relation to the business case for sustainable growth. Specifically, a business imperative project to implement a health, safety and environmental strategic plan is set for 2011 (resulting in the ESS released in May 2011); and key shift projects are identified which include implementing a plan by 2014 to reduce Unitec’s environmental footprint and resource consumption.

Non-business influences towards environmental sustainability have also taken effect across the organisation (refer Section 4.4). Resulting initiatives for 2012 include, for D5:

... in teaching, we indicated that 15 percent of all courses must have embedded ... principles of environmental sustainability. ... We took some idealistic conceptualisation of what things could look like away from just individualised aspirations of people, to organisational imperatives.

Unitec also takes a guardianship role with values and other embodiments of culture, as confirmed in the ESS. The first image on the strategy document after the title page is of the Marae and its surrounds, printed across two pages (refer Figure 4.1 above). Of the values stated:

The core value of Environmental Sustainability is simple – making sure that in meeting our needs we don’t reduce the opportunity for future generations to meet theirs.

According to the stated strategy, Unitec aims to uphold a credible position within the community for an environmentally sustainable future, by making smart choices through informed and innovative staff, students, and campus operations. Unitec’s ESS vision (p.7) is “to be an excellent business that is environmentally responsible and an agent for positive environmental change.” A key goal for campus operations includes: “4. Continuously seek to improve sustainability and resilience with respect to all major environment management areas our business impacts – energy, water, waste, procurement, transport and habitat” (Unitec, 2011c, p.31). This then links to Unitec’s Annual Report 2011 - Facts and Figures,
Section A4: Being an excellent business, which indicates actual levels of electricity, water, waste and paper used as measures of enhanced environmental sustainability. The values of these KPIs are not published. However, Unitec’s 5 year strategic plan states that indicators of “being an excellent business [include that an] appropriate resource [to] cost ratio is achieved”. The measurement of resource use to cost ratio therefore might be interpreted as placing financial sustainability ahead of environmental sustainability.

Statements indicating Unitec’s environmental sustainability vision are formalised by a values statement, an investment plan, and a strategic plan for 2011-2015. Other qualitative statements indicating progress to ESS aspirations are indicated within performance statements, and are discussed next.

4.3.5. Performance reports associated with environmental sustainability achievements

Having reviewed the guiding values and visions designed to support ESS progression, qualitative aspects of recent performance reports are also examined to review progress towards achieving Unitec’s expectations. Unitec’s 2010 and 2011 Annual Reports relate evidence of these achievements.

Unitec’s new-look Annual Report 2010 – The Stories portrays a more personable side of Unitec’s culture and values than in previous annual reports, including many examples of applied learning experiences. This 52-page document closes with the slogan, ‘Relook. Rethink. Redesign.’, and introduces the ESS under the heading of “being an excellent business from the roots up” (p.44).20 A staff member, Anna Wheeler, advocates an integrated ESS culture across Unitec, and indicates that in some countries, “thinking about environmental sustainability is just part of the normal business process. That is where we need to be” (Unitec, 2011b, p.44).

Unitec’s Annual Report 2010 – The Numbers, is the other part of the annual report duo. This 67-page document portrays a largely numerical and historical representation of actual versus budget performance outcomes, governance structures, and financial statements for the year,

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20 The four pillars of Unitec’s strategic planning are: meeting the needs of our communities; enhancing the student experience; innovation in teaching and learning; and being an excellent business. Specific indicators of an “excellent business” for Unitec are included in Unitec’s 5 Year Strategic Plan (2011-2015). These are not limited to financial indicators, and include: suitably qualified, developed, and engaged staff; effective resource use; achieving an appropriate resource to cost ratio; and having a positive profile amongst stakeholders. A “key shift project” supporting such business excellence is to “develop and implement [by 2014] an environmental plan reducing Unitec’s environmental footprint and resource consumption”. 

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and has little aspirational content. However, the Stakeholders section (p.5) of the Performance Report provides output measures for the cultural aspiration of: “build and maintain a culture of excellence in teaching and learning”, and then elaborates on steps taken to foster this cultural ambition. The final initiative with regard to culture states the aim of “making all courses more relevant and engaging for students”. In practice, S4 views this as meaning “we need to compete and make money out of education now, it seems to be a priority for it”. However, when funding pressures persisted during the mid 2000s, priorities at Unitec meant that various environmental sustainability programmes were removed from the teaching curricula. The result for various staff working on innovative designs, “which had transformed things like refrigeration in New Zealand ... a lot of them have left, but some of them are still here and have responded really well to [Unitec’s ESS]” (S4).

The governance section of Unitec’s Annual Report 2010 – The Numbers mentions the development of the ESS for rollout during 2011. Resource management achievements highlight various environmental sustainability practices that have been implemented, indicating savings in natural gas and water usage and reductions in waste recycled (discussed further in Section 4.4.4). The Annual Report (Unitec, 2011a, p.20) indicates inclusive aspects of values, vision and culture, such as:

The overall goal of the [Towards Inclusive Excellence] strategy is to employ diversity-conscious management and human resource systems by embedding equity, diversity and inclusion into the culture of the institute, its vision, mission, policies and practices.

Unitec’s Annual Report 2011 - Perspectives on Progress relates anecdotes celebrating progress across three areas: stakeholders; locations, and; raising future potential from consolidating and strengthening various strategic platforms during 2011, including completing the Peoplesoft information management system upgrade, and all course programmes having evaluated their performance and indicated improvements initiated. Personal reflections indicated further traction of ESS, with “people’s willingness to get involved”, and the real challenge “is to send out graduates who know how to make the world more sustainable” (Unitec, 2012b, p.16). The latter section of the 40-page report relates progress towards reduced resource utilisation KPIs for waste and water, the ESS launch with seed funded projects, and sensing a uniting of Unitec’s passion for environmental
sustainability at the launch ceremony held at the Marae. According to a consultant (Unitec, 2012b, p.32), ESS is about:

... realising that it’s a really important part of their business operations ... The opportunity I see is to leverage Unitec’s advantage of being agile, industry focused, and multi-disciplinary to develop an environmental sustainability programme and theme through its research and learning that sets it apart from other organisations.

Unitec’s Annual Report 2011 - Facts and Figures takes a different approach than previously, and introduces the Statement of Service Performance within the framework of both financial and non-financial performance. The report aims to give a perspective on dimensions of education quality, and community wants and needs, *inter alia*. This framework sets sector outcome targets within the Tertiary Education Strategy 2010-2015, including “enhanced environmental sustainability”, but without indicating details of this aspect (Unitec, 2012a, p.4). Otherwise, the ‘Facts and Figures’ volume (Unitec, 2012a) provides assorted statistics related to Unitec’s Annual Report 2011 – Perspectives on Progress (Unitec 2012b).

Of interest is a word count of the phrase ‘environmental sustainability’ as used within the 2010 and 2011 annual reports. The phrase was used four times within the combined 2010 annual reports, and 22 times in the combined 2011 annual reports. The subsequent 2012 annual report used the phrase 16 times, indicating a strong trend. (Any use of the single word ‘sustainability’ or phrase ‘environmental responsibility’ has been ignored for this purpose.) As will be discussed in Chapter 5, this result may be used as a means of linking the external reporting by Unitec to its internal stakeholders’ perspectives of the meanings of environmental sustainability.

The guardianship role of the Marae, Unitec’s use of space, and informal cultural influences give valuable contextual support to formal statements of environmental sustainability culture and values. ESS implementation support networks and beliefs about environmental sustainability by various staff are examined next.

### 4.4. Environmental sustainability in practice at Unitec

After various hesitating efforts to develop an organisation-wide strategy for environmental sustainability, Unitec recently achieved a milestone of significance. During May 2011, Unitec released $100,000 in seed funding across a range of projects. The funding was
released in tandem with the launch of a dedicated ESS document (refer Section 4.4.2). This section reviews aspects of environmental sustainability, specifically: the roles and networks supporting environmental sustainability practices; ESS implementation; the meaning of environmental sustainability for interviewees; and staff practices at work.

4.4.1. Roles and networks supporting ESS practice

Unitec’s strategy recognises that environmental sustainability is relevant across “all areas of its business” (Unitec, 2011c, p.7), the major activity areas being: Teaching, Research, Advocacy, and Campus operations. With Unitec’s guardianship culture or Kaitiakitanga for the future, these five areas form the anagram ‘TRACK’ (refer Figure 4.4 below), with each component having ESS strategies for positive action. Teaching goals for ESS broadly aim to resource and support a ‘greened’ curriculum which promotes aspects across all teaching programmes. Research goals are to add value to stakeholders through integrating opportunities with real-world data and collaborative partnerships. Advocacy goals are to communicate internally and externally instances of positive change, thus empowering further community action. Campus operations measure and control Unitec’s internal metabolism, where Facilities Management aim to reduce the environmental footprint by closely managing energy, water, waste, some procurement, transport and habitat.

The ESS launch formally bound the organisation together across its operating units to some degree, and was not achieved in Unitec’s earlier attempts at pursuing environmental sustainability objectives. For D5, the ESS needs collaborative effort to succeed:

It’s about having an understanding about how different people view environmental sustainability through different lenses. It’s about saying to people: ‘actually, we could be working together on a number of these things’. If we use the campus as an experiment, we could use the things that Facilities Management do in terms of their purchasing, or be it in terms of their measuring power consumption in buildings for students as part of projects. Those links weren’t made previously – simple links. But if you don’t converse with one another, and don’t understand one another’s worlds, then it doesn’t happen.
Figure 4.4 'Getting on TRACK for sustainability' - Unitec's Environmental Sustainability Strategy aims to embed environmental sustainability across Teaching, Research, Advocacy and Campus operations, embraced within the spirit of Kaitiakitanga


Along with the launch of the ESS were a strategy committee, ESS action plans, and working groups established for each of Teaching, Research, Advocacy and Campus operational areas. The strategy committee meets monthly from May to November, and takes a guardianship role to encourage participation to further embed environmental sustainability within Unitec’s operations. Not only do these committee members act as ESS champions, but they are communication conduits for each of their respective departments. The Environmental Sustainability Manager chairs the committee and reports to the Health, Safety and Environment Manager, who in turn reports to the Director of Organisational Development (who is not the executive sponsor of the ESS, with formal reporting lines indicated in Figure 4.5 below). However, this multi-linked communication chain could distort outcomes for ESS due to delays and/or misinterpretations (and is commented on further in Sections 4.5.2 and 4.8).

The operational working groups have the role of advising sub-groups and communicating with the Environmental Sustainability Manager and the strategy committee. The working groups meet monthly from May to November to review the implementation of ESS action plans, and the seed fund projects. (Having attended various meetings, the researcher found
that few of the members were present and some meetings were cancelled due to members’ other commitments.) Responsibility for implementation of the ESS falls heavily upon the Environmental Sustainability Manager, who appears to have little support given the extent of competing organisational funding priorities (refer Section 4.5.1).

**Figure 4.5 Reporting lines of the Environmental Sustainability Manager**

Source: Adapted from *Office of the Chief Executive & Direct Reports, Unitec (updated 11.1.13)*

Environmental sustainability action plans developed are in line with the strategy document, with some committee assistance to support initiatives and communication processes. However, co-ordinating resources for implementing ESS practices fall largely upon the Environmental Sustainability Manager’s role. The implementation of Unitec’s ESS is discussed next.

**4.4.2. Environmental sustainability strategy implementation**

The launch of the ESS, the release of the $100,000 seed funding, and making an appointment of the new role of Environmental Sustainability Manager all occurred during 2011. This co-ordinated approach is part of the broad implementation which needed such visible support from senior management. As S5 comments, “Unitec was slow to pick it [environmental sustainability] up ... our CEO was disinterested, that he picked it up because he had to pick it
up, because it was going on elsewhere”. Also S4 comments, “Unitec had a wonderful opportunity in 2004, 2005 to actually be a leader in sustainability, but chose to shut down a lot of the iconic programmes ... and the staff found themselves without a job”.

Unitec’s 36 page downloadable ESS online e-book document includes colourful images (mostly in green), predominantly from across Wairaka campus, and includes the Marae (refer Section 4.3.1). The core value of environmental sustainability is stated as: “making sure that in meeting our needs we don’t reduce the opportunity for future generations to meet theirs” (Unitec, 2011c, p.3). This definition is not dissimilar from that of the Brundtland Report, 1987 (refer Section 2.2.3). Unitec is also quick to show that the four dimensions of sustainability are incorporated into their values, by including in the strategy document (Unitec, 2011c): culture, with the Marae as a flagship project; economic aspirations of an “excellent business”; using the word “environment” extensively; and by social aspects within “greening our curriculum”. However, the emphasis appears to be on ‘environmental sustainability’, given the strategy document’s title, values, and vision. Unitec’s vision is, primarily, “to be an excellent business that is environmentally responsible, and [secondly] an agent for positive environmental change” (Unitec, 2011c, p.7). (The sequence of visions is particularly pertinent for this research.)

To achieve this vision, the ESS broadly states that Unitec:

- as a tertiary educator, wishes to exceed Australasian industry benchmarks for environmental performance;

- takes a stakeholder approach to enhance community credibility;

- provides an innovative microcosm for staff and students to practice and advocate environmental sustainability choices; and,

- The above-mentioned are each sustained through a nurturing spirit of guardianship embedded within Teaching, Research, Advocacy, and Campus operations (TRACK, refer Figure 4.4 above). The main goals are then outlined for each TRACK component; an invitation to become involved; and the ESS closing with website direction to detailed action plans.
Earlier attempts at implementing various environmental strategies were initiated by various teaching areas but rolling out action plans had floundered for lack of resources (S4). “When you say, let’s do it, they [academics] all look to say well, I haven’t got time. Who’s going to do this? So, that had been going around in circles” (S6).

Of Unitec’s current position with environmental sustainability, S4 comments:

... another opportunity to put a stake in the ground, ‘are we really serious and do we want to be a leader in environmental education and values?’ I think not just education, but values. There’s quite a difference between running a course on it, and being seen as holding environment as a core value. And they’ve [senior leadership] had that opportunity again, and I don’t think they’ve risen to it.

The next sections review recent environmental sustainability activities at the Unitec workplace. The meaning of environmental sustainability for the interviewees is discussed next.

4.4.3. Environmental sustainability meanings

With initially holding an environmental sustainability hui in 2009, developing the ESS during 2010, and beginning to implement those strategies during 2011, environmental sustainability influences upon peoples’ culture and behaviours at Unitec are apparent. S6 states: “we’re only scratching the surface but we are already actually making huge inroads. And environmental sustainability is becoming part of the culture quite fast.” However, practices by staff while away from Unitec are also relevant in ascertaining guiding influences, such as from expectations and experiences at home.

At a conference held mid 2011, which showcased various activities, initiatives and strategies practiced across Unitec, staff had the option of participating in an environmental sustainability workshop. The conference allowed staff to see aspects of Unitec’s practices with which they may not have been involved from within their own departments. One exercise was for each staff member to stand at a point on a line, located on a continuum depending upon how they felt about their recycling and other resource use choices. Staff had experienced various community environmental sustainability practices while at home, and particularly “for those that live in Waitakere, there was a huge difference of what they could do at home [versus] what was available to them at work” (S6). From the conference, “this was a huge revelation” (S6) for Unitec’s environmental sustainability applications, that the
same work-based choices were not available for staff as those at home. Staff values with regard to environmental sustainability were therefore found to have exceeded what Unitec had practiced to date.

To provide further insight into the meaning of environmental sustainability, the interviewees were asked what the concept meant to them personally. Interviewee comments are presented in Table 4.1 below, by category, and according to word frequency (see Figure 4.6 below), developed from this research.

![Figure 4.6  Top 40 word frequency of what 'environmental sustainability' means to interviewees](image)

Note: size of font indicates frequency of occurrence. Source: developed from this research

A detailed frequency table is also included in Appendix F. This frequency table indicates strong use of certain words, with some refinement of the Top 40 in Figure 4.6, to combine root words. The interviewee’s actual phrases are indicated in Table 4.1 below. Before taking some meaning from the interviewees’ comments it is worth noting that the distribution of words used was quite wide. From the wide distribution, it may be concluded that Unitec employees are not blindly following the ‘corporate line’ with associated ‘managerial speak’, but instead are using their own words to give meaning to the issues associated with the ESS.
<table>
<thead>
<tr>
<th>Need for things</th>
<th>Reduce and recycle</th>
<th>Life and future generations</th>
<th>Morals and beliefs</th>
</tr>
</thead>
<tbody>
<tr>
<td>“it’s about peoples’ need, about finding fun, creative ways to get people to, not even change their behaviour, but do things in a different way that works for them and everything else” (S2)</td>
<td>“the emphasis on carbon distracts from the real issue which is reduce pollution and reduce energy consumption ... by the way, [these steps] would reduce the carbon footprint” (S3)</td>
<td>“us being able to leave the planet for future generations ... to be able to live in the planet, and be able to experience what we have experienced” (S6)</td>
<td>“making the right decisions with the resources that you have” (D5)</td>
</tr>
<tr>
<td>“as children ... the sea became our food basket, but we didn’t know at that stage ... if you got more than you needed then it was up to you to share it” (D1)</td>
<td>“I’m thinking more of recycling ... it has got to come back from being a money-making thing [by] making sure that things get passed on, so they can be reused” (S7)</td>
<td>“the environment is what gives us life, anything that damages that, anything that compromises that, will actually compromise ourselves and future generations” (S4)</td>
<td>“I see it as quite a vague notion because sustainability as a term is widely used and is kind of an ‘apple pie’-like statement, that no one’s going to disagree with the need to be sustainable” (D3)</td>
</tr>
<tr>
<td>“I don’t tend to think about the environment so much as I think about wastage, and things that we could be doing better” (D3)</td>
<td>as humans, “we’ve just disconnected ourselves from that reality of what gives us life” (S4)</td>
<td>“they should be a given, and they should be easy and not onerous” (D2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“the heart of it is a different tension in life ... how do I personally stop needing it?” (S5)</td>
<td>“becoming increasingly important” (S1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>“it’s not a short-term fad ... it’s part of being a good steward if the earth, a good steward of what God’s given us” (D4)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.1 What 'environmental sustainability' means to interviewees, grouped into common themes (some overlapping) by word frequencies

Source: developed from this research

The frequent mention of and importance given to “needs”, “reduce”, “recycle”, “life”, “future”, “generations”, and the implication of “waste” is at the core of how beliefs about environmental sustainability influence everyday personal and tangible choices for interviewees. Also of note was that “sustainability” was not dominant, whereas the interviewees indicated a strong connection with peoples’ behaviours as shown by the use of “I”, “us”, “you”, “they” and “we”. Of note is the relative importance of words that dominate: “you”, “making”, “reduce”, and “things” are all tangible, and not esoteric. They focus on physicality and reduction thereof.
The above quotes from S4, D4 and D5 convey a strong moral sense, and raise the question as to how such a sense might influence the relationship between environmental sustainability and the budget process at Unitec. The quotes indicating morals and beliefs specifically underscore decisions about resource use, and stewardship, both dominant aspects of accounting discourse. These quotes go beyond recognising needs and immediate choices presented to people, and indicate driving influences of knowledge and beliefs, for change to occur. How these views about ESS might be communicated and practiced at Unitec is considered next.

4.4.4. Environmental sustainability practices at work

A core curiosity for this research is how environmental sustainability might be practiced at Unitec, such as with regard to waste and resource use in order to better understand the relationship between budgeting and environmental sustainability issues. As S4 indicates, “I think [environmental sustainability] should be a core underlying principle, and focus for all education”. As D1 observes:

In terms of Unitec ... we’ve had sustainability committees and all that, but we haven’t had anything concrete [until recently]. It’s all very well to write it all up, but do we practice it?

An example of recent practice indicates a change associated with waste. Staff had first-hand experience of a reduction of their allocation and increased responsibilities. Previously across all campuses, standard rubbish bins used by staff were routinely emptied by the cleaners. These bins were removed completely, and small desk-top cubes with coloured waste wheelie bins were introduced. The 10cm cube requires staff themselves to empty their rubbish into appropriate colour-coded recycling or waste bins. “Little things like getting rid of polystyrene cups and taking staff rubbish bins off them ... have been quite big changes in terms of people’s day-to-day workplace” (S2).

Staff expectations are indicated by comments about the bin change: “It came down to that personal, this is going to affect me ... How’s this going to work? Who’s going to empty it? You do. Oh, no! I won’t empty rubbish! ... It comes to the basic, egotistical things” (S6); “They’ve taken away our rubbish bins and replaced them with these little boxes! ... those are the sort of things that are fairly obvious ... and do give a message” (S1); “just by doing that alone, some people hate it, but what happens is that you create awareness, and change
behaviour through that” (D5); “it’s a pain in the arse ... you apparently are allowed to express your opinion here” (D2); “we participate in Unitec’s recycling scheme ... outside you will find the appropriate bins for the appropriate things” (D3); “some people surreptitiously have claimed a rubbish tin back, but ... I haven’t seen much evidence of that” (S5).

Monitored resource use indicates close management of recycled waste, natural gas, and water usages. Unitec’s *Annual Report 2010 – The Numbers* confirms a reduction in recycled waste of approximately 27 tonnes from the previous year (moving from 0.013 Tonnes per EFTS for 2009, to 0.010 Tonnes per EFTS for 2010). An impact from personally reducing waste has already been recognised: “... there has been a reduction in tonnes of paper that we’ve been using ... an immediate impact” (D5). However, further reductions in waste since the personal rubbish bin change of later 2011 continue, at 25 tonnes less than 2010’s level of 413 tonnes. Waste disposal cost savings are a positive consequence for Unitec. Generally, staff appear aware of environmental-sustainability-related KPIs included in the Annual Report, and their influence upon other projects, such as virtualising network servers by using the ‘cloud’ type service technologies, going beyond cost savings and service provision (S2). It might be argued that the local environment benefits by organisations using ‘cloud’ technologies, as fewer resources, including physical structures, are required locally to maintain and manage service functionality. Instead, outsourcing ‘cloud’ computing management across multiple organisations’ data handling offers many advantages, such as economies of scale, and access to quality software ”without the sustainability difficulties” of boutique infrastructure (Qiu *et al*, 2010, p.2). The authors also indicate cost disadvantages associated with security and synchronisation of large-scale applications.

Natural gas usage is predominantly for heating over winter periods when ambient temperatures drop. Building management systems (BMS) were installed and fully operational by later 2009, which allow heating and ventilation control of teaching areas according to the classroom booking system. When rooms are not booked over a certain time period, the heating is not supplied. The resultant drop in gas usage from 0.45 GJ/m² in 2009 (a mild winter) to 0.42 in 2010 (a longer colder winter) was an improvement, but further savings were expected (Unitec, 2011a, p.12).

Total water usage remained largely unchanged from 2009 to 2010, at 105 cubic metres each year. However, in relation to the growth in EFTS of approximately three percent over the same period, a comparable saving in water used of three percent per EFTS was also achieved.
Facilities Management not only manage the BMS but also influence the maintenance policy at Unitec. For example, if there was a water leak, the condition of the water pipe is also thoroughly investigated. According to S3,

There were a lot of pipes that looked like a sieve, and if we patched them up in one place, they would leak somewhere else. I don’t remember the figure exactly, but after two years, water consumption reduced by about 30 percent, which was huge!

Environmental sustainability practices are also apparent in Unitec’s use of resources beyond energy and water. A significant resource usage is found in paper and photocopying/printing. Consequently, various committees at Unitec, according to D3,

... are responsible for large amounts of paper. ... This year [2011], we have moved towards conducting our meetings with trying to go paperless, [with] our basic agenda papers printed in short form, and all of the supporting material available electronically and then projected onto a screen. ... We are trying to be more frugal in terms of our resource use.

S1 confirms that budgeted funds have been allocated to e-learning, including experiments managed by the learning development unit regarding students using mobile telephones, iPods and iPads, or additional use of Unitec’s intranet sites (Moodle or Blackboard):

The amount of copy paper we use in some departments is quite large, and the usual proposal to try and reduce it is to make people try to use e-learning more, or use Moodle or Blackboard more. ... the students then have to go to the computer and print it out or download it at home and print it out. You haven’t really saved any paper. All you’ve done is transferred the cost onto the student, which is good from [Unitec’s] cost point of view.

According to S2, Unitec’s senior leadership team reinforces the importance of the ESS messages. For example, Unitec’s 2011 Annual Report includes environmental-sustainability-related KPIs for measuring progress towards the ESS goals, as being part of an excellent business. Four environmental-sustainability-related KPIs were presented, for: electricity, water and paper usage, and tonnes of waste disposed of; and each were monitored for 2011 are compared to estimates for 2010. 2011’s untested (and unpublished) targets were established during later 2011. Co-ordination of key resources which are monitored as environmental-sustainability-related KPIs by management have contributed to reductions
between 2010 and 2011 years, in both water used by approximately four percent, and landfill waste produced by approximately six percent. However, even with senior leadership support, various implementation limitations became evident. In the view of S6, limitations arose in developing standard practices,

... because it’s now a corporate programme, there will be constraints. We can’t go as far as we want to, because we need to account for money, we need to be balanced ...

The significance of ESS funding is relevant for this research, as the ESS is just one of many struggling stakeholder demands for scarce funding resources. Unitec’s resource-reduction behaviours may indicate the dominance of environmental sustainability over budgetary controls.

Organisational-wide less formal contextual influences for environmental sustainability include (sections 4.2 to 4.3.3):

- senior management’s business focus when budgeting for the use of limited funds;
- partnership values, cultural and guardianship representations of the Marae;
- Unitec’s (ab)use of learning and car parking spaces particularly at Wairaka campus;
- the use of shared staff spaces at Waitakere and Albany campuses differs from the conventional dedicated staff spaces at Wairaka campus;
- senior management’s choice of style and structure used in publicity representations;
- implementation delays of initiatives indicate resistance to changing “business as usual”;
- senior management rarely displaying alignment to environmentally sustainable projects;
- Unitec’s often recognised for a relatively open consultative culture; and
- Staff/student practices at home (section 4.4.3).

More formal aspects influencing environmental sustainability at Unitec include (section 4.3.4):

- values statements, including the aim to embed environmental sustainability across Unitec, specifically supported by the ESS, seed fund, and environmental management system;
- Investment Plan 2011-2013, indicating key targets such as 5 percent ROI long-term;
- Annual Reports, introducing the new environmental sustainability strategy in 2010;
- 5 Year Strategic Plan 2011-2015, includes a plan by 2014 to reduce Unitec’s footprint;
- a mandate for teaching to include 15 percent of all courses to embed principles of ES;
- launching $100,000 of seed funding for various environmental sustainability projects; and
- releasing its ESS in May 2011, which may be placing financial sustainability ahead of environmental sustainability.

Figure 4.7 Summary of formal and informal aspects influencing environmental sustainability at Unitec

Source: developed from this research
The research has now found various contributing factors influential in guiding and directing behaviours of budget setters relating to environmental sustainability. These influences can be categorised as formal (as presented in Unitec’s published documents) and less formal, such as values and cultural beliefs. A summary of these key influence elements is presented in Figure 4.7 above.

Having now recognised various influences of environmental sustainability, examined both the context of Unitec’s values and culture supporting ESS, the early stages of the ESS implementation, and staff practices and expectations, the next section considers Unitec’s budgeting processes.

4.5. Budgetary control systems

From its May 2011 inception as a recognised strategy, the ESS and related organisational behaviours have had an impact upon Unitec’s values, as discussed above. However, environmental sustainability initiatives struggle to be funded alongside core operations. Financial support for any initiatives depends upon potential budgeted surplus funds generated from the core business, and any potential surplus only becomes evident nearer the completion of the budget process. The budget process during a single cycle for the new 2012 calendar year is considered next, followed by an explanation of funding support processes for new initiatives, such as ESS.

4.5.1. ‘Business as usual’ budget process

The operating expenditure budget process identifies the revenue, cost, and profit targets by responsibility area for 2012. The detailed budget procedure indicates required staffing and operating surplus targets, gross revenue, costing of resources, consolidating the outcome, reviewing, and then making changes to meet the targeted overall operating surplus. Formulating the 2012 operating expenditure budget is broadly represented by Figure 4.8 below.

The operating expenditure budget process is controlled through disciplines, involving time (the budget period) and space (the freedom limits to achieve certain targets as set by the Council). The budgetary cycle for the 2012 year formally began with the CEO, heads of each faculty and directorate and supporting management accountants meeting during June 2011. The meeting confirms two specific deliverables expected by the Council: first, the staffing
budget percentage of revenue (currently just under 60 percent, and trending downwards); and second, the percentage of revenue surplus remaining after all expenses (currently three percent, available to reinvest), which is “not profit, because tertiary institutions do not make profit” (D5).

Figure 4.8 Unitec’s 2012 operating budget formulation process

Source: developed from this research
After determining staffing and operating surplus targets, a consultative approach is taken to calculate revenues, in accordance with possible fee cap increases and enrolment targets. Core student fee revenue and government SAC funding is calculated from estimating domestic EFTS per programme. Also, funding from full-fee paying international students is estimated, and any government initiatives, research and other funds are incorporated. Then revenue can be clarified, having reaching NZD 132 million for 2009 and NZD 138 million for 2010 (Unitec, 2011a).

The next phase commences during August, when managers responsible for cost centres prepare cost budgets, with the support of management accountants. As S5 notes, the consequence of reducing staff costs means an increase in the number of students to staff ratio, and is a continuing trend of the “constantly sinking lid on resources per student”. Within teaching, initial recommendations are made by all interested members of each department, and from there it was “very much like a ‘black box’ ... and the consultation stopped ... many of the staff feel side-lined. They feel that they are the recipients of management decisions, rather than the participants” (S4). There are also “perennial arguments about how much goes to central services and how much is left to [teaching] departments” (S5). Resourcing budget outcomes may require challenging according to course staffing requirements, as S5 illustrates: “one year you’ll be paying 48 percent of your total funds into central services, and then the next year, you’ll find that they put you onto 57 percent”. However, “expected net costs in a department determine the split” between Unitec’s central services versus teaching (D4). Outcome driven factors especially influence cost burdens for directorates (central services) or teaching faculties, such as “strategic projects, pressure points, changes to business” (D4).

Once consolidated, this bottom-up compilation traditionally exceeds the funds available, so a top-down percentage cut across all cost centres follows (D4). “The normal process [is] to look at the current business first, so we first look at what is currently in the budget that we also expended on last year, so business as usual” (D5). Any initiatives not within normal business are only funded from available surpluses. For any new initiatives such as ESS, prioritising additional projects is “in relation to the four key areas ...: meeting the needs of the community, enhancing the student experience, innovation and learning, and being an excellent business” (D5). Numerous budget iterations occur to ensure the best mix is made of targeted staffing and surpluses to achieve as many priority projects as possible. The December 2011 Council meeting is the final deadline for 2012 budget approval.
Should the budget surplus threshold not be reached, questions of what constitutes current business and what is new business are critical to that which remains or is dropped from the final budget. The often open consultative culture within Unitec is replicated at a senior level within the budget process, and “it’s certainly debated very strongly and very heavily by the Deans and by all of the ... directorate” (D1). Within D3’s faculty:

Two or three times a year, we have staff meetings where we look at what we are doing, what new initiatives we are doing, what improvements we are trying to make, what specific projects, anything that is outside of business as usual. [W]e will discuss how much we want to take on in a ... given timeframe. So that will [initially] be set by the staff of this unit.

In some areas, there appears to be an unbalanced flow of information, and a delicate balance of specialist skills is expected of senior management. However, in D2’s view, “some power [should be] taken out of the senior leadership team [as] they look after their own individual faculties and organisations”. Such criticism indicates the difficulties in developing new initiatives at a senior level, and the importance of politics at the executive level.

Within the tertiary education sector, Unitec’s funding sources are not as extensive as those for universities (refer Sections 4.2.1 and 4.2.2). The potential surplus funds arising through the budget process, therefore, have to be carefully managed. Any new initiatives, of which ESS is one, therefore compete with established core activities for a share of funding. The final decision for what is to be included in the operating budget is made by a “committee of ten executives of Unitec, with the executive deans and executive directors, with the Chief Executive, alongside the Director of Finance, and the [management accountants]” (D5). The essentially political prioritising of activities by the committee seeks to balance the needs of many worthy causes, including managing resources for new government initiatives required to be launched, to achieve some degree of balance and order. As with any socially developed process, power relations are omnipresent, and depend upon the motives and resistance by key committee members. Members lobbying for new initiatives therefore need to be well informed, provide justifications in terms of budgetary benefits for undertaking new initiatives, and be able to gain the support of key committee members. New initiatives struggling for budget funding and therefore falling outside current business criteria, such as the new ESS, are potential casualties of the budget process, and are discussed next.
4.5.2. New initiatives budget process and business cases

Budgeted funding for initiatives is presented as either operating expenditure or capital expenditure. This distinction is significant for new initiatives, such as resourcing of ESS, and requirements to implement strategic investments.

Operating expenditure relates to maintaining and operating the recurring activities, such as promoting events, “fixing a light bulb here and there” (S3), mitigating health and safety hazards, and deferred maintenance by Facilities Management “for the high risk category” (S3). Capital expenditure is identified by project, such as the Marae’s new dining room, with each project having a business case justification.

In an attempt to build a more robust operating expenditure budget process, the 2012 budget iterations resulting from the formal bottom-up raw data collection process, and subsequent top-down pruning, then subsequently moulded by a third view. As D4 indicates of conceptualising outcomes beyond a single budget period:

This year, we’ve done what I call a side-ways one as well, which is looking at longitudinal change across the budgets, with the aim that we’re actually starting to get a really good picture as to where the growth pressures are within the budgets as well.

Some consider that the finance department is myopic, particularly within the budgeting process; as S6 observes, the finance department holds a “quite siloed [view, by] not considering how that is going to save money over here [in another department]”. Despite project initiators and sponsors presenting proactive and rigorous discussions and justifications within reporting hierarchies, ESS initiatives failed to secure funding in the 2012 budget round. As D1 suggests, the budget set for 2012 is in response to “the whole picture, the big picture. Some people don’t like looking at the big picture”.

For the current budget cycle, basic ESS operational costs partly came under the Health, Safety and Environment (HS&E) budget for office-related items, such as printing, memberships, and employee-related costs for the Environmental Sustainability Manager; these costs were only a small portion of the HS&E budget for 2012. The HS&E operating budget also holds a “substantial amount” (S6) for professional services. Such services allow for audits on high-risk health and safety hazards mostly relating to the nature of the buildings at Wairaka campus, such as audits for asbestos, air quality, and roof access. HS&E’s
professional services budget also includes environmental consultants, according to priorities determined by a “basic risk management” (S6) process.

Justification is required for each new ESS initiative taking longer than 12 months to become established in core operations. For the 2012 budget, items on a concise list of ESS initiatives were prioritised, and then reviewed by senior leadership and the Council. Eventually, numerous initiatives, and none of the ESS initiatives were included in the 2012 budget. However, proving sufficient benefit in each case may suggest some subsequent funding support could become available for ESS initiatives, should funding opportunities arise, as S2 confirms:

... the level of discretionary expenditure was so low that [Council] hadn’t approved a lot of the initiates [not just for ESS]. So what happens now is that anything is on a case-by-case basis [and requires] a huge amount of time [as] there needs to be a formal reporting system base for everything going forward.

As the 2012 year progressed, subsequent discretionary spend became available, being sufficient for two ESS projects to secure funding. These ESS projects had been developed previously, and were to: further meter electricity use; and, install software automatically switching down student computer stations (S2).

In addition to the time required to prepare and (re)submit business cases for each project, a lack of certainty exists for ESS initiatives going forward. “We’re planning a year ahead, because we’ve got a busy schedule of events and things, based on that income” (S2). In putting the new ESS budget process into practice, as with non-ESS initiatives having managers unfamiliar with Unitec’s procedures, the budget submission process was not clear. The ESS reporting hierarchy was also being refined at the time, to assist in promoting the strategy.

ESS initiatives are struggling in regard to becoming part of ‘business as usual’, by not receiving formal ‘current business’ funding. In S2’s view of the budget challenges for ESS projects,

I would like to see that we made some level of commitment to [funding of ESS activities as] business as usual, in the core budget. Because it’s fine having a role, but if there’s no budget [for promotional funding] at all actually allocated to any of it, it does make it very difficult.
The minimal resourcing of ESS is also indicated by the impact on the teaching faculty. According to S4:

[T]he TRACK thing ... looks all very participatory and transparent. But when you look at the resourcing of that, to make it work effectively, people are having to fit that on top of teaching load, marking, moderation, home stresses ... I don’t believe it’s actually making the difference that it could. The earlier recommendation was that if Unitec’s serious about [ESS], to allocate one person in each department, with a time allocation, to be a change agent.

The considerable effort required in submitting capital expenditure business cases can become time-consuming. Each business case relating to environmental issues is required to be approved initially by the Director of the relevant area. For ESS this process is further complicated as often environmental initiatives deal with Facilities Management, so require approval of both the Director of Facilities and the CFO (the CFO also manages Unitec’s facilities). Once approved at this level, and if the project’s budgeted spend exceeds $50,000, it then goes to the Investment Project Committee (IPC), five members of senior management who vet each project for things such as business case, budget, objectives and outcome. Potential benefits in cost reduction, revenue generation, or other benefits attributable to Unitec or its students are also reviewed. After IPC approval, the project is presented to senior management and the Council for final approval. The network of approvals is referred to by Unitec’s CEO as a ‘matrix of management approach’.

Unitec’s capital expenditure budget formulation process for 2012 is indicated in Figure 4.9 below. Revisions to the priority list occur regularly, depending upon when each business case meets the approval process.

For matters of urgency, such as meeting statutory requirements, a health and safety discretionary fund is available to implement any necessary justified remedial actions. However, environmental sustainability issues endure an inherent lack of regulatory imperative or political expectation of central government21.

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21 During November 2012, New Zealand’s government announced a retreat from an earlier commitment to the Kyoto Protocol, for reducing contributions to global greenhouse gas emissions. Less than one-seventh of all countries have agreed to renew their commitment to the next phase of the Kyoto Protocol, effective from 2013. United States and Canada are also taking an alternative “convention track” to the debated effectiveness of the latest Kyoto Protocol phase (Quilliam, 2012).
Figure 4.9 Unitec's capital expenditure budget formulation process

Source: developed from this research

According to S6, unlike health and safety, environmental sustainability at Unitec is viewed by some Directors,

... from a financial point of view [it] is a nice to have. And if we don’t have enough funds, that will be one of the areas where we cut back. Which surprised me, because the payback of saving electricity ... financially, is absolutely huge. ... If we do it, the government will then repay [in subsidies] us half of that back. ... [T]he finance department, they’ve made a little way in understanding it [ESS]. They haven’t made the enormous leap. ... [W]hat is the price of proactivity?
Alongside all other programmes competing for scarce funds, environmental sustainability at Unitec is also dependent upon less formal, communication tools. “[P]roving the validity and the value of [ESS], and the feedback we’re getting so far is really good” (S2). The roles and who are involved in pursuing ESS initiatives within the budget process are considered next.

4.6. Roles within the budget process

Environmental struggles as expressed formally by the budget process indicate various disciplinary power roles, initially involving the annual operating budget and associated areas of accounting. Unitec’s operating budget is the focus of this section, as any resulting surplus directly influences how ESS initiatives may be financially supported for the 2012 year. In conjunction with Unitec’s operating budget are formal roles involving environmental sustainability values, purchasing policies, and technologies used by facility management. Further, such roles illustrate Unitec’s culture and values, and extent of the disciplinary power of the Council, senior management, and other stakeholders. These formal roles are discussed next, and then informal roles associated with influence over environmental sustainability behaviours within the budget process are also considered.

4.6.1. Accounting-related roles in the annual operating budget

This section commences by discussing formal characteristics of Unitec’s operating budget planning role, and then considers associated accounting budget-related roles in controlling, co-ordinating, motivating and evaluating phases. From the struggles of ESS initiatives to gain 2012 budget funding, the disciplinary power of accounting had a formal and visible role. Accounting protocols determine the extent of any budget surplus, a key target of Unitec’s operating budget. The final 2012 budget surplus was insufficient to support the new ESS initiatives, thus formal funding demands were deferred to the next budget round, should sufficient funds become available at that stage.
At the planning phase, the reality of the budgetary role is a result of activity networks involving budget setters, management accountants, Staffers, Directors, and the Council in exercising disciplinary power through accounting numbers. When comparing individual budgets, as S1 describes,

... previous numbers gives you something that you can use to challenge ... some are screwed down really tightly, and others where there is obviously a bit of padding ... [or] they will budget for things in the off-chance ... A change of a head of department in one case has made it easier to take it out. The new person hasn’t had time to prepare their defences.

The process of deciding which initiatives are included in the final budget is taken by the ten executives, after Directors present their respective parts (refer Figure 4.6). Presenting of the initiatives depends upon preparatory support from both Directors and Staffers, thus allowing Directors to exhibit disciplinary power and knowledge. As D5 puts it, “I also have to take all of the budgetary considerations to the budget committees as we go through the process every year.” Ranking of demands for budgetary considerations is necessary as budgets are inherently constrained by limited funds, and Unitec’s experience is that budgetary requests for funds typically exceed funds expected to be available from revenue and other funding sources. Determining ranks requires adequate preparation by decision makers for recognising institution-wide significance, and ESS initiatives are ultimately ranked alongside core functions, across all of Unitec’s operating facets. Any anticipated new initiatives perceived for ESS will therefore struggle when compared to practices entrenched in current business. Prioritising initiatives is not an easy task, as D1 indicates:

We sit down sometimes and have to rank a hundred and fifty projects. Now, what you think might be an important one ... we all realised you had to look right across the institute.

The 2012 plan outcome for ESS, after various discussions between the management accountant and environment-related managers, arose in a protracted fashion (S2). There were initial face-to-face discussions between these parties during August, then a progress report during September, and without further discussion, the final outcome was confirmed in December. The approved ESS budget covered the full operating costs within the HS & E budget, and $5,000 for ESS initiatives. Communication from the accounting roles to ESS responsibility managers appears to occur mostly during data gathering phases. Also, the
responsibility managers may have had little enthusiasm for the 2012 budget outcome, so did not pursue the management accountant more vigorously. However, having the management accountant on side could have improved allocations for the responsibility area.

The annual operating budget’s role in planning to achieve Unitec’s objectives is linked with other accounting-based roles. These accounting-related roles influence: controlling, co-ordinating, motivating, and evaluating steps across Unitec, effected through not just the operating budget’s planning phase but also within financial reports and capital budgets. Unitec’s budget-constrained control style is evident from student staff ratio targets by faculty (S1). Faculty targets are established for each budget round, to increase the likelihood that the consolidated result will achieve the planned outcomes. Comparisons of actual versus budget outcomes by month, such as monitoring labour and revenue results by faculty, contribute to explicit internal and external control communications. Then gaps become visible and can be measured, and responsibility assigned (S1). Risks and opportunities can also be indicated, and suitable remedial action taken on a timely basis. The resulting information contributes to financial accounting reports, including the Annual Report, to formally communicate to Unitec’s external stakeholders.

Alongside the planning and controlling functions of the operating budget is co-ordinating of resources, and accounting roles are implicated, such as involving management of cash funds, for reducing risk and reducing costs of debt servicing. Co-ordinating of resources ensures sufficient funds are available to meet operational outgoings, such as staff salaries or energy costs. Close monitoring of budgeted expectations assists in minimising any risk of overdraft exposure or may indicate short-term investment opportunities for any surplus funds on hand. For Unitec, funding is “a long-term process that we have with governments – with governments plural – over time” (D4). Unitec’s recent annual reports indicate a consistently low working capital ratio, resulting from relatively stable and predictable revenue and expense streams: 0.26:1 at end of 2009, 0.22:1 for 2010 year end (below target of 0.28:1), and achieved 0.28:1 at 2011 year end. Further, statements of cash flows indicate yearend cash equivalents of $4.8 million for 2009; $2.4 million for 2010; and $3.9 million for 2011 (Unitec, 2011a and 2012a). However, for Unitec, this indicates that repayment of short-term debt is from next year’s expected revenues.

The relationship with funding also extends to resourcing capital projects, being prioritised according to business case, but not necessarily initiated. Unitec’s recent capital expenditures
are indicated in Table 4.2 below. Unitec’s notes to the statement of cash flows for 2011 indicate that capital projects for property, plant and equipment had been deferred as a direct result of reduced EFTS revenue from domestic students. However, consolidated total income for 2011 is at $142.076 million, only $1.539 million behind budget; and total EFTS achieved 10,637 for 2011, ahead of budget by 54. Deferring a significant portion of capital projects from initial commitments for 2011 relating to property, plant and equipment also reduced loan and debt servicing requirements, resulting in approximately $0.5 million interest cost below budget (Unitec, 2012a). The deferral of capital commitments and consequent savings were significant contributors to improving closing cash equivalents by $1.4 million over budget for 2011, resulting in a positive change in the working capital ratio.

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Table 4.2 Unitec's capital expenditures (NZD millions)

Source: Unitec’s annual reports

Management strategies indicated by co-ordinating and accounting for funds also extend to staff, in an effort to improve the working capital ratio further. Staffing related current liabilities, the indicator for debts expected to be repaid within 12 months of year end, include employee entitlements for accrued salaries and wages due, and sick, long service, retirement, and annual leave payments. The current portion of employee entitlement provisions had been growing over the last three years from $5.570 million in 2009, to $6.194 million in 2010 (budgeted at $4.527 million), and $7.225 million in 2011 (budgeted at $6.553 million). The increase has been discussed by accountants with department managers, and is driven by “paying staff more, and employing more staff” (D4). Managing cash to meet these entitlements as they fall due is critical for Unitec, especially when cash resources have historically been less than $4 million at year end, as indicated by recent annual reports. Commenting on major budget variances for 2010, the Annual Report noted that “Employee entitlements have again increased and this will be an area for management focus in 2011 especially in the academic leave area” (Unitec, 2011a, p.63), the comment repeated in the
2011 major budget variance commentary. A significant risk for Unitec could eventuate should the unlikely situation arise that an abnormal level of leave entitlements would need to be paid out to staff from inadequate cash resources. Sources of loan funding may then be needed, whereas tight control of working capital would help to avoid this possible need.

Evaluating achievement against budget targets or other benchmarks then reinforces strategic effectiveness against monitored activities, and identifies where management need to focus efforts to reduce risks. Accounting measures related to annual operating and capital budgets are explicitly relevant, such as reducing risk of cash shortages indicated by improving working capital ratios and improving cash reserves by delaying funding requirements for projects.

The Council’s role is to formally sign off the final budget pack presented by the CEO and the CFO in time for the 2012 year. Crucially, the significant roles of the annual operating and capital budgets are to: present a consolidated plan to achieve the Council’s targets; offer controls in how those targets can be achieved, co-ordinate resources and indicate issues before they arise; provide motivation to those involved; and, also evaluate the extent of under- or over-achievement of targets. The budget pack thus represents an output from the work of the accounting staff and others which is all-encompassing of Unitec’s future directions. Within those directions can be observed Unitec’s actions with regard to environmental sustainability, hence the role of environmental sustainability values is explored next.

4.6.2. The role of environmental sustainability values

Environmental sustainability values are held in high regard at Unitec, prompting the organisation to become the “first New Zealand signatory of the UN Commitment to Sustainable Practices of Higher Education Institutions” (Gifford, 2012, p.16). The practice of these values has contributed to Unitec winning the NZI National Sustainable Business Network award for the Trailblazer Not-for-Profit category, 2012 (Unitec, 2013). The award recognises Unitec’s collective practices toward reductions in waste, water and energy use, and extending environmental sustainability further into coursework content. Since Unitec won the award, S2 notes that staff are proud of their efforts, there has been better ESS meeting attendance, and most importantly, Unitec’s efforts have received validation. Environmental sustainability had also been recognised within Unitec, by receiving the Chief
Executive’s 2012 award for excellent service, with a $3,500 prize, which “cemented success about making a difference” (S2).

The role of environmental sustainability for Unitec (refer Section 4.3.4) includes statements indicating cultural and value attributes that promote positive change. Various activities indicate avenues for such change. Practices that showcase community and business collaborations supporting environmental sustainability at Unitec include recycling, waste reduction, vertical compacting of compost, eco-horticulture practice, and flagship projects such as the Marae and architectural design education. During 2013, Unitec’s staff who contributed to its environmental sustainability efforts received further recognition, by being awarded over $15,000 from Auckland Council for establishing better recycling systems for Unitec’s Student Village at Wairaka campus (Unitec’s website). Although the quantum of this award was relatively minor, it did provide external recognition to Unitec’s environmental sustainability activities. According to S6, these influence behaviours by:

... practic[ing] what we preach [and] from the campus point of view is to get our [carbon] footprint down. ... [For] the students that come here, they're actually faced with physical things that can be done. ... It’s the compactor, the gardens, all those things. I think that if people see them, they can say this is doable even on a small scale.

Positive outcomes suggested by S6 include the seed funding that has provided considerable publicity about what Unitec stands for, “as being business friendly and community oriented”. Additionally, S6 drew attention to Unitec’s open consultative environment, where:

... if you have an idea the opportunity is there, one way or another, to get it out there, and if people jump on it then it’s off. ... [B]ut the opportunity is there.

There is strong evidence of Unitec’s values being emphatically in support of environmental sustainability. As an education provider, Unitec views itself as a leader in providing students with tools to influence their workplaces. Steps taken to green the campuses demonstrate how ideas might be practiced. Other initiatives and promoted activities include: reviewing and surveying strategic transport and car parking across campuses towards creating a transport plan; publicising and collaborating with public transport options; bicycle rack design competition; restorative work and tree planting along Wairaka stream; solar powered pedestrian crossing lights; progressively replacing fluorescent with light emitting diode
(LED) light fittings; and adopting “a high green star rating for new or refurbished buildings” (although without full financial commitment) to green star accreditation (Unitec, 2012d, p.5). Alongside the educational role of ESS at Unitec are two non-teaching functions, considered next, where ESS influences in purchasing policies and facilities management are analysed in terms of disciplinary power.

4.6.3. The role of purchasing policies

Having confirmed strong support for environmental values, other environmental sustainability practices are now investigated, the first being within procurement. Unitec’s requests for proposal (RFPs) and requests for information (RFIs) policies formally embed environmental sustainability needs within its supply chain. These policies are discussed below in relation to the purchasing of drinking cups and photocopiers.

Potential vendors and current vendors are posed with environmental sustainability questions on each RFP and RFI since these questions are standard in every Unitec RFP (D4). Vendors are evaluated according to their documented responses to various questions, as S7 indicates,

What is their waste management policy? Depending on the category of course, how do they get rid of waste? How do they recycle? All of those sort of questions.

The selection process uses weightings to evaluate competing suppliers for a particular situation. Weighting factors are used across tenders, procurement, and any business case. Weightings vary between tenders, and are “considered by each tender panel before setting” (D4), with environmental aspects consistently a key consideration. When suppliers have responded to RFPs, S7 relates the tendering process:

They will all get the same requirements to quote upon: give us your service levels, your environmental actions, your policy, dah, dah, dah, recycling, everything else. Then they get graded by a group of [Unitec] people [who] score the answers against all of those suppliers ... There’s a winner, a loser, and there’s those in the middle, ... depending on the weight that’s given to different parts and sections, within the document. [In] some cases price might be 50 percent, and other times 20 percent and service levels 50 percent. [E]ach category ... has different requirements from the business point of view. ... [T]he environmental angle, the waste management, ... and recyclability is all part of one of the sections, so it gets scored within that..
Prior to 2011, Unitec consumed approximately 100,000 polystyrene drinking cups annually, provided for staff and student use. During 2011, staff decided to reduce non-recyclable waste by no longer providing polystyrene cups. This measure, posited S1, “resulted in a shortage of cups initially, [as] there was nothing to replace them [with]. That sort of thing tends to impact on people”. The supply options were: plastic throw-away cups at 10 cents each; recyclable cardboard at 50 cents each; or does everyone provide their own? According to S7:

We just got rid of them, and you can go down to the Warehouse [discount retailer] and buy yourself a $1.69 one, or else we supply them. And that [crockery] lasts a long time. ... Oh, I wash it occasionally!

Tenders submitted by potential vendors for the supply of cups have weighting factors attributed to both environmental sustainability credentials and price; and, according to D4, Unitec stipulates that both criteria each have a 35 percent weighting. For this research, this finding indicates that the tender panel places equal importance for financial aspects (cost) and environmental sustainability (including reduced waste).

From supplier responses, plans are formulated for Unitec to actively minimise waste or reduce energy use, such as when purchasing photocopy machines. As S7 comments of the bigger vendors,

... they're well aware that they’ve got to be environmentally conscious, a good corporate citizen. And we’ve got a new supplier for our photocopying machines, about 80 to 90 percent is totally recyclable, of the whole machine. ... And that to me is doing the right thing.

Tensions between ESS and accounting are evident when considering purchasing evaluations. Purchase cost versus benefit or savings (for example in replacing photocopier technology), can be assessed for relative importance in the weights accorded for tender evaluations. For example, lowest price could be given greater importance than vendor environmental sustainability profile or bid impact. Aspects of a machine’s useful life, related maintenance profile, and end-of-life disposal considerations are relevant in deciding on replacing copy machines. Outlays to acquire new technology, including perceived ‘green’ alternatives, tend to be higher priced than new machines having older technologies. Further, the more newly available photocopier technology has predicted long-term (20-year) motor use and ozone-free
copy production. S7 adds that the choice must also consider cost: “our budgets keep getting
shrunk by the governments, year in year out, so it’s a balance.”

According to S7, Unitec takes its role as being “seen as a responsible corporate citizen”
seriously, for example, replacing old photocopy technology with fully recyclable machine.
However, S7 indicates limits to the exercise of this power:

    We’re not a big enough marketplace, as New Zealand, nor are we as an institution
within New Zealand, to wave a big stick and say: if you want to do business with us,
you’ve got to meet this criteri[um]. We can ask for it, or when is it happening, or
make suggestions, but we can’t demand it.

As part of this study’s data triangulation, an interesting aspect has arisen with regard to
replacement photocopiers. Even though the above evidence indicates that Unitec’s staff feel
some gratification for ‘doing the right thing’, the tender process for photocopier machine
purchases has subsequently provided an alternative insight into Unitec’s environmental
sustainability rhetoric versus budget reality. When the researcher had been attempting to
discover the actual weighting factors used by Unitec for evaluating tenders for photocopiers,
D4 confirms: “this was an all of government process and we do not have that level of
transparency”.

Therefore, despite some staff contending that Unitec evaluates tenders for photocopiers, this
had not in fact occurred. Staff’s enthusiasm and eagerness to favourably show Unitec’s
environmental sustainability activities to the researcher is an example of a halo effect that
surrounds at least some of Unitec’s approach to environmental sustainability. Further, this
overt enthusiasm indicates two critical factors when interpreting case data: interview
evidence may be inaccurate; and interviewees are convinced of the worth of environmental
sustainability.

The photocopier example therefore provides inconclusive evidence of whether budget
controls dominate over Unitec’s ESS-related priorities. Unitec’s purchase of cups provided a
different insight, with equal weightings given to environmental and cost attributes in the
tender evaluation process. Unitec’s supply chain policies and procedures support, where
possible, its economically and environmentally sustainable choices. Whilst there is clear
evidence of strong intent within Unitec to make purchasing choices informed by its ESS,
there is also evidence that ESS considerations are subordinate to matters of cost and
cashflow. A further indication of environmental sustainability choice is within facilities management, as is discussed next.

4.6.4. The role of facilities management and technology

Unitec aims to practice effective resource management through a building management system (BMS, briefly introduced in Section 4.4.4), currently across three\(^{22}\) of its buildings. The BMS is controlled by Facilities Management staff, where the environments within certain teaching spaces are managed according to the room booking system. Heating and ventilation operation is therefore limited according to need. Discussions are in the early stages of a possible collaboration with an outside organisation to extend Unitec’s BMS further to other buildings (S3).

With regard to lighting in his location, D3 advises that, “we do our best to turn the lights off and stuff like that. Apart from that, it’s pretty much all centrally programmed”. With desired improvements to lighting systems, a payback period of approximately five years or less is the major hurdle for extending the BMS. As S3 confirms, heating unused space is mitigated as the system switches itself off if space is not booked for over two hours during any teaching day. Of the influence of the energy usage results already indicated (refer Section 4.4.4), D5 comments,

> Even such things as measuring [electricity] consumption in buildings has had a dramatic impact. We want to have more building management systems in place. All new buildings will be considered in context of what are we putting in there to conserve water, to conserve electricity, etcetera.

Whilst progress has been made improving environmental sustainability through facilities management, it is apparent that significantly more can be achieved. According to D3, Unitec’s older IT infrastructure is not “as good as it could be in terms of facilitating distance meetings and video conferencing, and removing the need for individuals to physically drive

\(^{22}\) The number of buildings currently controlled by the building management system (BMS) is a relatively small number in relation to the total number of buildings at the Mt Albert campus (see Figure 4.1). The BMS controls some of the largest buildings at the southern end of the campus, currently three in total, being numbers: 180, 182 and 183. These three buildings had been chosen, according to S3, as they were “the most cost effective i.e. [for] potential savings ... the budget was only enough for these three”. According to Unitec’s Annual Report 2010 – The Numbers, loan finance assisted with the BMS installation work to control heating and ventilation plant, with 2010 being the first full year of operation.
between campuses to attend meetings”. From D3’s view, the lack of “investment in our physical infrastructure holds us back from being able to be as green.”

Unitec’s policies for new buildings have recently been reviewed to incorporate high standards for environmental sustainability, along with BMS functionality. As D4 advises, “any new building process that we do needs to have a design principle that says: we will achieve a green star level of at least five, if not higher.” Therefore, any costs associated with adopting a specific environmental sustainability rating policy are comprised in the initial design and supporting business case presented to the Council. D5 adds: “there will be some star [rating], depending on what we can afford.” This comment concurs with rating indicators supporting ESS in 4.6.2, and purchasing policies in 4.6.3, all indicating that investment decisions are strongly guided by available funding.

Further, learning from having already presented a ‘green star’ building project has influenced standard capital expenditure budget procedures. Learning that emerged from the dining hall extension to the Marae during 2012, included various ‘green star’ initiatives subsequently incorporated into capital expenditure procedures. Policy and procedure standards for this project influenced procurement, design, and project management processes, by including (Unitec, 2012d, p.5):

- Recycled certified concrete, and green star rated steel reinforcing
- Natural ventilation with control systems for ventilation louvers
- Double glazing
- Bicycle racks
- Rain water harvesting using interconnecting BMS control alarms
- Recycling area and kitchen waste management
- Green issues have been considered in all aspects of fit out materials and hardware, e.g. tap hardware, lighting, light control systems
- Construction and site waste procedures in the building contract documents, and
- Reuse of excavated volcanic rock.
The roles of procurement policies and Facilities Management provide insights into values and standards practiced, and consequences of environmental sustainability at Unitec. Such formal policies and procedures extend into capital and operating expenditure decisions linking ESS directly to influence budget setters. The evidence indicates that formal policies and procedures for ‘green star’ building projects are constrained by limited funding. A further role is that of informal influences which affect behaviours relating to environmental sustainability choices as are considered next.

4.6.5. Informal roles which influence environmental sustainability behaviours

Exploring various limits indicated by formal power mechanisms and points of conflict for implementing ESS initiatives reveals, not unexpectedly, that informal roles also influence behaviours. When referring to the Treaty of Waitangi, at the core of Unitec’s values, D1 asks: “What does it mean in terms of practice, what does it mean in terms of action, what does it mean in terms of you personally?” It is suggested that these questions apply equally to environmental sustainability principles that influence behaviours, aside from formal policies and procedures at Unitec.

In applying the influences of learning experiences to individuals and groups, D1 posits:

... it can come into your space, and you use what you know from there, and you implement it in your space for whatever you are doing. [T]hen it becomes put into practice. It’s not just stuck up there being lovely and framed and beautiful, and you look at it. [Unitec] provides the environment like that, and I don’t tell you to change. You go in there, and you understand it, and then for some reason, you change, but you change for the right reasons. You don’t change, of course, for the sake of change.

Opportunities to participate in environmental sustainability practices are communicated across Unitec’s website and intranet (using a dedicated online access or ‘ecoPortal’), notice boards, Facebook, and other mediums, as well as in teaching situations. Unitec’s online ‘ecoPortal’ was established alongside the ESS launch, to actively engage with staff, students and communities to “help Unitec reduce its environmental footprint” (Unitec, 2011e). For example, Unitec’s About Us, Values reference information indicates fun ways to get involved (refer Section 4.3.4). Also, community events and club networks invite other choices for potential participants.
The publicity surrounding the launch of the Environmental Fund where winners of seed funding were announced, just prior to Unitec’s announcing its ESS, caused considerable interest. As S2 comments on the number of hits to the then new website,

... when you look at the stats, on interest, there was that spike when we did the fund.
... That commitment from the leadership team to make that level of investment really pumped up the interest in the strategy, and just the whole sustainability [concept] at Unitec.

Volunteers can participate as eco-reps, or kaitiaki (guardians), who are staff and students who contribute to a more environmentally sustainable behaviour across campuses by assisting with events and implementing programmes supporting ESS. An on-line notice-board encourages eco-reps to be involved with environmental sustainability events and ideas. Eco-reps are also involved with producing environmental sustainability course content, and monitoring water leaks, and anyone can suggest or vote for ‘green’ ideas (Unitec, 2012d). Communication across over 150 eco-reps is contributing to an increased awareness throughout Unitec’s operations, as indicated by the increasing number of staff who consider Unitec as environmentally responsible (refer Section 4.3.3).

Informal aspects of environmental sustainability at Unitec offer participants opportunities to make a difference, through the use of case studies, and visibility. Participants might be showcased within Unitec’s Advance magazine, which profiles various research activities by staff and students, or feature on Unitec’s website’s news and events. D3 observes “we’re doing a better job at praising and recognising success”. Unitec’s staff and student researchers are engaged in various areas of environmental sustainability, currently including issues of: neighbourhood air; Auckland’s urban forest – where is it?; Unitec online arboretum database; development of a wood density independent function for electromagnetic measure of timber properties; and investigation into the use of coral rock as a road construction material in the Pacific Islands (Unitec, 2012d). Whilst these matters evidence possibilities for involvement of Unitec staff in environmental sustainability actions, this research also sought to identify how the those voluntary and less formal matters were related to Unitec’s view of sustainability across dimensions in addition to environmental sustainability.

Within their roles at work, staff are in turn exposed to various cultural, economic, and social dimensions of sustainability. The cultural dimension of sustainability was included in the ESS in a number of ways, for example: the Marae’s new dining hall under construction.
during 2012 incorporated as many ‘green star’ initiatives as possible (Section 4.6.4). A recent survey indicated that 68 percent of staff and 67 percent of students considered Unitec to have an ‘environmentally responsible’ culture (Unitec, 2013, p.32). Environmental issues are indicated in waste reduction and minimising resource initiatives, implicating economic constraints by the extent of deferred maintenance implementations (Unitec, 2013, p.32 and Section 4.4.4). Socially-focused aspects of ESS recognition included: winning a national award for the 2012 National Sustainable Business Network Trailblazer Not for Profit Award; and recognising the environmental sustainability team’s efforts by awarding them the 2012 Chief Executive’s Award (and $3,500 prize, Section 4.6.2). These properties of ESS’s influence are indicative that environmental sustainability values are becoming increasingly embedded across Unitec.

From demonstrating environmental sustainability through case studies and learning experiences, such knowledge suggests opportunities for behaviour change. Recognising and celebrating success of research inputs into the body of knowledge is also acknowledged by Unitec. As part of a formal and co-ordinated approach to Unitec’s strategies, such as ESS, standard policies and procedures would be expected to be aligned with key stakeholder objectives and reward systems (refer Sections 2.3.4.1, 2.4.2, and Jazayeri & Hopper, 1999). The influence of employee objectives of staff upon environmental sustainability is discussed next.

### 4.7. Alignment of employees’ objectives and environmental sustainability

Having considered various formal and informal roles influential upon environmental sustainability outcomes within the budget process, this section examines the influence of Unitec’s ESS narrations as extended into employee (as individual work-related) objectives of interviewees. Directors and Staffers introduced in Chapter Three indicate a minimal alignment of Unitec’s ESS and individual employees’ job requirements.

An organisation’s management control systems are considered most powerful when aligning formal aspects which direct behaviour, such as goals, strategies, and an individual’s performance standards and rewards, and informal aspects which guide behaviours, such as through shared beliefs and values (refer Section 2.3.2). Norris & O’Dwyer (2004, p.181) found that degrees of control “incongruence” may contribute to the dominance of one aspect
over the other, such as when “a strong culture of social concern pervaded” over employees’ prior experiences. Aspects of behaviour drivers include managing an employee’s objectives.

From experiences and research across a range of clients, Cheese, Thomas & Craig (2008, p.1) found that the “will of people to achieve an organization’s goals is a productive resource like no other”, and the ability to channel such talent requires it to be “handled strategically [as it is] too important to be assigned to specialist functions”. The authors also found that “engaging talent in creating value ... is now a critical organizational capability ... especially those in ... sectors where employees’ valuable knowledge and skills are the primary source of competitive advantage” (2008, p.6). Tools available for organisations to manage talent include position descriptions and employee objectives. Hence, aligning the new ESS to employee objectives provides greater congruence towards Unitec achieving its goals. As Drucker (1988, p.50) illustrates of the modern knowledge economy:

... specialists are tool makers. They can tell us what tool to use to hammer upholstery nails into a chair. We [as executive managers] need to decide whether we should be upholstering a chair at all.

A common theme amongst both Staffers and Directors is that environmental sustainability is not specifically mentioned in employee objectives or position descriptions, except for the recent new Environmental Sustainability Manager role. Also, ESS is referred to indirectly in various contexts, such as “... any other task that you should from time to time [be] asked to do” (S5). Prior to the ESS launch, “we knew what we wanted, but we didn’t know how to get to where we wanted to go” (D1), and this sense of inertia is also presented in position descriptions and employee objectives. As S5 indicates, if courses have been run well without student complaints escalating to the programme director, and there is evidence of willingness to participate towards achieving outcomes, then performance is not formally reviewed. Possible examples of ESS-related position description inclusions indicated by the interviewees were: “stewardship of resources” (D4); reducing resource consumption through cost reduction (S1, S3). Also, the evidence gathered did not indicate that position descriptions were altered to reflect the new ESS. This lack of evidence suggests that either a disconnect exists between the official corporate direction and individual employees’ roles, directions, work goals and targets or that position descriptions for continuing staff are irrelevant when significant strategic change is implemented.
Overall, there was an apparent disconnect of ESS within teaching, with “not one bit of training in our department, on anything to do with the environmental strategy” (S4). A suggestion was for teaching Heads of Departments to communicate the new ESS in staff meetings, and to include a workshop on how to incorporate the concepts into teaching.

When asked whether Unitec’s environmental sustainability objectives were a facilitator or impediment to achieving employee objectives, responses included:

- “it looks nice in the prospectus ... but they all play around the edges” (D2);
- tending towards “‘nice to have’ in the sense that we’ve got other priorities which is getting a teacher in front of a class” (S1);
- “They’re huge actually! ... They set the pathway for you. And certainly, when you apply for a bit of money for them, they’re saying: ‘there it is, there it is, there it is’” (S5);
- ESS being “a potential ally ... because it give[s] something around which people can congregate” (D3);
- “it might be a bit of a challenge to do things differently to begin with. But once they become the norm, it’s that changing of culture, and mindsets” (S6);
- “they’re a good reminder of what we should be aiming at when talking to people” (S7); and
- referring to resources, “to rethink how they [people going through courses] actually treat these things” (D4).

This evidence again positions budget needs over those of ESS, as S1 indicates of Unitec’s core teaching focus.

Surveying behaviours within the budgeting process, the budget was viewed by some interviewees as reinforcing environmental sustainability programmes. This was evidenced by the introduction of the $100,000 seed funding, and progress towards communicating positive outcomes before investing further (S6). Conversely, the more common view, as S3 indicated, was “you want to do something but you can’t because you don’t have the budget. Or you have to go to Plan B because Plan A is too expensive.” This is another indicator that budget
funding is dominating ESS initiatives, and that individual employee objectives, whilst being consistent with Unitec’s values and goals, are being frustrated.

A common theme arose from interviewees regarding motives for pursuing environmental sustainability strategies and behaviours, such as adopting small desktop rubbish cubes, transport choice, or by using alternatives to polystyrene cups. This was succinctly described by D5 as “the emotional drivers of making sure something works ... it’s the right thing to do ... and I don’t fail”. The question of financial reward did not appear to substantially influence these actions. As observed by D5, academics are inclined to be “analytical, critical people.” Specifically, academics “appreciate things, and they understand the connections between things” (D5). Some interviewees indicated that some staff had a disinterest in participating in decision making, arising from political discontent about Unitec’s chosen priorities (D2), and a dissatisfaction regarding motives of senior decision makers (S4).

A central theme arose across the views sampled that environmental sustainability is “about changing behaviour of people” (D5), as is also indicated by Unitec’s slogan ‘Relook, Rethink, Redesign’. However, ESS-related objectives appear yet to be formally incorporated into Staffers’ and Directors’ individual position descriptions and employee objectives, and this is further evidence that ESS lacks importance for Unitec as an organisation. Formal position description narratives would contribute further to a constant support for ESS even in the face of potential constraint or delay due to restricted funding. The lack of alignment between employee objectives and ESS reinforces the conflict between ESS and accounting regime decision making, with the accounting regime holding stronger disciplinary power. Other points of resistance also were found to occur within the budget process, and are discussed next.

4.8. **Resistance and conflicts for ESS surrounding the budget process**

Having reflected on how employee objectives and the poor alignment of position descriptions and ESS might partly inform conflicts surrounding budgeting for ESS, other points of disruption also became evident. Subordinated or disregarded possibilities ultimately excluded from Unitec’s 2012 operating budget, were initiatives that were not placed within expenditure categories of ‘business as usual’. As already indicated in Section 4.5.2, ESS innovations were formally incorporated within the current budget round but did not receive funding within the budget approved by Council, so requiring a case-by-case approval process if those
innovations were to be funded for implementation in the current financial year. This section attempts to consider hidden environmental struggles and hidden conflicts as evidenced within Unitec’s budget process, or as D2 suggests, “it’s a problem of giving everyone a say”.

Various aspects of where environmental sustainability conflicted with ‘business as usual’ were commented on by the interviewees. Exploring these aspects indicates the range of resistance to practicing ‘business as usual’, and therefore opportunities for Unitec’s ESS to gain further traction, depending on one’s perspective. These conflicts include: the importance of waste, investment in branding of current business, committee time, communication, carbon-related pressures, consultant influences, cost pressures, budget style, down-stream effects, and consumer demands. Other hidden conflicts may also exist, and therefore be further explored, but findings and interpretations arising below provide critical insights for this research.

There are those from within Unitec’s communities who shun ESS imperatives for whatever reason and who may be impervious to informal messages about things like waste mitigation. Reasons for rejecting environmental sustainability values might become evident from exploring behaviours of communities existing outside of Unitec. For ESS ideals, broader community behaviours about waste are useful for focusing Unitec’s potential advocacy role to encourage change. For example, a regional council controls commercial waste management with minimal recycling incentives, as S7 observes:

Auckland Council need to have a look at their own back yard, with [those] who create [considerable] waste and don’t have to do anything. They just ship it off to the dump.

The wider pool of regional society influences environmental behaviours to which staff and students can relate, ignore, or fully practice, but exist independently of Unitec. As S6 confirms of environmental sustainability behaviours within Unitec, “there are a lot of people within the organisation who are already on board ... [and environmental sustainability] is part of their culture”. At a 2011 conference (refer Section 4.4.3), staff had an opportunity to experience unfamiliar aspects of what Unitec has to offer; environmental sustainability was voted one of the two best stands, and where further funding could easily have been used for posters, eco-rep t-shirts, or props for participants to take home, to further strategically increase Unitec’s environmental sustainability profile (S2). This may provide evidence of latent interest amongst Unitec staff, but aside from formal budget funding decisions, this research has uncovered evidence of conflicts and resistance arising in branding perceptions,
committee members’ time, responsibilities, priorities, use of consultants, funding constraints, the business perspective, and the role of technology. Each of these matters is discussed in this section.

A highly visible area of conflict is in professionalism of branding or marketing of current business versus new initiatives. Unitec is recognised locally, nationally, and internationally as a brand, and takes pride in developing partnerships with industry and community organisations, while progressing “towards a more focused research culture that really makes an impact” (Unitec, 2012 b). During 2012, various marketable achievements included: Unitec’s students prepared entries for, and in March 2013 reached the national finals of, Microsoft’s Imagine Cup with their computer game about saving the world from environmental catastrophe, and raising various environmental sustainability issues; winning the National Sustainable Business Trailblazer Not For Profit Award; “students have also won design awards, film awards and our Department of Performing and Screen Arts was voted one of the top 10 in the world” (Unitec, 2013, p.15). Unitec’s brand name as a provider in these areas is well-established and marketed with various promotional resources such as glossy brochures, on-line information packs, and other course introduction materials. As environmental sustainability is becoming more embedded into Unitec’s business practices since 2012, ESS branding is “moving towards more professionalism” (S2), such as using banner symbols on bins and tablecloths, to provide identity. The level of branding investment for environmental sustainability was commented upon by S2:

> Because quite a lot of areas of Unitec are really quite strongly branded, when you’ve got an area that’s not so well branded, it does make it a little bit more challenging, because you lose that professionalism when you’re coming across.

Consequently, available resources are reused and volunteers assist as much as possible. A core group of passionate TRACK committee members are also invaluable in supporting ESS initiatives, but have considerable time constraints beyond their direct responsibilities. This provides a clear indication of ESS having lower organisational priority, while supported by higher personal priority from those volunteers. Time is allocated to committee members to attend ESS meetings, and research committee members have previously had a research allocation; however, any work relating to ESS by non-researchers currently is by arrangement with managers or out of personal time (S2). The research committee members’ allocation was significant, in that those committee members were entitled to paid time to actively do
research, not just to attend meetings. In contrast, recognition or visibility of ESS committee participation is minimal, other than by names of emailed minute recipients. As S4 comments: “the number of times meetings are changed or cancelled because nobody can turn up is indicative of the resourcing that’s gone into actually push this thing forward”. This is further evidence of ESS struggles for sufficient, even voluntary, promotional resources. Since 2012, certain meeting frequencies have been reduced, to increase resources for implementation (S2).

Conflicts had arisen around the lines of responsibility for environmental management. In S2’s view, consolidating formal lines of reporting and implementing a separate management system is expected to alleviate delays previously experienced within an unconfirmed reporting hierarchy. Environmental management sits with Health and Safety, within the Organisational Development Directorate as part of Campus operations (refer Section 4.4.1). However, the key sponsor of ESS at Unitec is not part of the Organisational Development Directorate, and sits within the Teaching arm of TRACK. When a capital expenditure proposal (in the form of a business case) is prepared by environmental management for an energy project implementing ESS, approvals flow through from the area involved, via Health and Safety, then to all directors or deans in charge of those areas. Considerable time was expended within the ‘matrix of management’ approach, discussed in Section 4.5.2. Communication through revised reporting hierarchies, confirms S2, has reduced time delays. S2 adds that the simple act of asking questions and monitoring activity assists in indicating clear priorities and increasing focus for environmental sustainability committees. Others suggested that areas of delegated expertise and specialist responsibilities are ignored, subjugated to priorities of more immediate need from higher up the hierarchy. As D2 indicates, a sense of non-participation was echoed by responses provided in a recent staff engagement survey, of investing sufficient time and effort toward encouraging change, such as prioritising timely reviews of strategic proposals. Issues about the lack of valuable innovation were also surveyed, with results made available to staff. The staff surveyed tended to be unsatisfied with change and innovation levels driven by senior leaders, and only “about 28 percent of academic staff [did] voice a favourable opinion of leadership, and change and innovation at Unitec” (S5).

There is still this conflict that they have about do they advance the cause of their own faculty, or is it Unitec as a whole? They are still mired in these silos, and they don’t want to talk to each other, and they don’t want to share space. (D2)
Results from staff surveys had been presented to all campuses, and followed up by departments, with change occurring (S2). An aspect of management responsibilities where senior management were specifically directing change, which was noted during the interviews, was with regard to a zero carbon footprint. When strategising for environmental sustainability, the CEO’s initial aspiration to reach a future zero carbon position was resisted, as it was considered to be beyond the scope of current measurement data, and therefore a premature goal for Unitec (D5). Unitec has only recently started to measure its position as regards carbon indicators, and “once we know where we are, we can move in that direction” (D5). S3 also considers that a focus on carbon obscures the core need to “reduce pollution and reduce energy consumption”. Instead, the current ESS sets out achievable standards, which aim towards Unitec reducing resource consumption and waste generation over time. The issue for Unitec, therefore, is to consider its current status in detail, in order to further enable its aspiration for ESS change. Such consideration raises questions as to who in Unitec will conduct the required data gathering and analysis; consequential questions arise for the budgeting of these activities.

The use of consultants is considered by some managers to be invaluable, and it is of budgetary significance (as a potential resource) across the organisation. For the ESS specifically, “it needed professional people to get the grounding that we wanted” (S6). For reasons of professionalism, timelines, and managing risk, the use of lower cost ‘in-house’ specialists has been resisted. Instead, the use of external consultant services is the preferred alternative. As D2 confirms,

... if there’s an issue, if there’s any liability coming out of the outcomes, I can go back to them and say ‘look at the mess you got us into’. Try doing that with someone in Building ... It’s not going to work. There’s no comeback.

Costs are influenced by staffing and procurement decisions. Resourcing environmental sustainability responsibilities increases staffing costs. From the small quantum of available funds, any change to established expenditure regimes, such as for staffing within current financial constraints would be incremental only (D4). Also, deferred maintenance is a priority for any funding surpluses, but must be achieved in a planned and cost-effective fashion (S3). Or as S5 suggests, what is important is to be “really thinking about what you buy on the basis of how long it’s going to last”.

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Of a single budget cycle’s myopic perspective, in S4’s analysis:

... so fit that into a spreadsheet, and that’s actually where I think our accounting and our whole economic paradigm is flawed, because we don’t build in true costs. We look at prices, we look at inflows and outflows over a short period of time. But not real costs which often aren’t the cost that appear on the Balance Sheet, but appear in other places further down-stream.

The above quote’s use of accounting terminology appears a little disjointed, and should instead specify the Balance Sheet’s unexpired ‘value’, rather than ‘cost’. However, S4’s use of accounting terminology in order to attack the budgetary process and its outcomes is indicative of S4’s (non-accountant) perception of the power of accounting. For S4, value is indicated by “a return on investment ... for humanity and our communities” of sustainable environments over the long term. The issue for accounting, before determining “how a value may be determined?” is to consider “what is to be measured?” Qualitative guidance for “what is to be measured?” across various entities is provided from identifying “‘control’ as the principal means of determining which entities should be reported as a single unit in consolidated financial statements” (Mirza, Holt & Knorr, 2011, p.15). Recent Exposure Draft (ED) discussion considers that a reporting “entity controls another entity when it has the power to direct the activities of that other entity to generate benefits (or limit losses to) itself”\(^23\). From accounting’s concept of reporting entity, an entity such as Unitec would therefore not incorporate upstream or downstream environmental impacts into its financial reporting. These activities can be distinguished from Unitec’s own economic activities, and go beyond its control to generate benefits or limit any loss.

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\(^23\) A discussion document was published during 2010 by the International Accounting Standards Board (IASB), for a “Conceptual Framework for Financial Reporting – the Reporting Entity”. The Exposure Draft (ED) defined “reporting entity” as having key features: the conducting of economic activities; the ability to distinguish those economic activities from other entities and from the surrounding economic environment, and; the potential usefulness to stakeholders of financial information relating to the economic activities. Mirza, Holt & Knorr (2011) point out that “reporting entity” may therefore relate to a portion of a legal entity, because of distinctive economic activities.
Accounting perspectives can conflict with creatively prioritising funding allocations. ‘Human factors’ are also relevant in managing behaviours and stimulating communities, such as with incorporating creative design into building developments; however, the perceived strategic need to create an exhilarating environment conducive to learning has apparently conflicted directly within Unitec’s limited funding. According to D2:

The typical accounting mindset – columns and pluses and minuses. At the bottom, it should all add to a zero or something. ... [But] there are grey areas, and you need to be flexible.

Technological developments might temporarily improve the environmental situation, such as opportunities for reducing travel by innovative communication, waste reduction or recycling. However, as S5 suggests, long-term influence is needed of “not so much a personal consciousness, but a group consciousness or a global consciousness” to alleviate environmental struggles. The significance of S5’s hopefulness in overcoming short-term accounting and organisational imperatives is the recognition that environmental damage is “actually hurting you” at a personal level; that human positive action can make a difference over the long term. Further, S5 posits, of the role of technology as a stop-gap measure,

... if we just rely on technology to solve our problems, ... and we find that there is a miracle fix, and we can get back to glorious consumerism again. But it will hit us again, we might put it off for twenty or thirty years, and the next time it will come back, it will be even bigger.

Table 4.3 below provides a summary of these various hidden conflicts and aspects of resistance, as indicated by the research data. Recognising and critically reflecting on these conflicts may offer further innovative modes for Unitec to promote ESS messages.

Resistance and conflicts confront and challenge the core of Unitec’s budget-constrained style for 2012. Resistance to Unitec’s stance for environmental sustainability may arise from external communities, in-house specialists, and the pressure of premature announcements. Conflicts and constraints for environmental struggles arise from limited resources, marketing pressures, responsibilities and delegated authority, budgeted funding, and the business imperative. Unitec’s rhetoric of policies and procedures already implemented suggest environmental sustainability is becoming increasingly embedded into core operating expenditure and capital expenditure decisions observed in teaching, procurement, facilities
management and new building design criteria. The level of rhetoric however is not aligned with reality of environmental sustainability actions, as the range of hidden conflicts and assorted struggles indicate.

<table>
<thead>
<tr>
<th>Aspect of Conflict</th>
<th>Nature of Conflict regarding ESS at Unitec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of waste</td>
<td>Indicates opportunities to provide advocacy role to business community as well as at the home, to challenge waste creation</td>
</tr>
<tr>
<td>Investment in branding of current business</td>
<td>Promotional spend levels reinforce struggles for new initiatives to be accepted, and to balance power of strongly branded areas of ‘business as usual’</td>
</tr>
<tr>
<td>Committee time</td>
<td>Minimal time allowances for staff to participate actively in ESS initiatives outside of core responsibilities, implies participation is unimportant</td>
</tr>
<tr>
<td>Communication</td>
<td>Formal hierarchical communication currently inhibits innovation, while informal forums allow open asking of questions and raising of awareness across the organisation</td>
</tr>
<tr>
<td>Carbon-related pressures</td>
<td>Premature strategising in the absence of data can distort core focus of learning and measuring progress towards consumption reduction</td>
</tr>
<tr>
<td>Consultant influences</td>
<td>Useful for professionalism, timeliness and risk management, but outcomes may be directed towards self-interest</td>
</tr>
<tr>
<td>Cost pressures</td>
<td>Recruiting Environmental Sustainability Manager adversely affects costs</td>
</tr>
<tr>
<td>Budget style</td>
<td>Budget-constrained style of running services down, such as deferred maintenance, can only be short-term</td>
</tr>
<tr>
<td>Down-stream effects</td>
<td>Economic paradigm of single entity-budgeting ignores non-financial assets such as investing in air, water, or future generations, and within Unitec, this realisation reduces motivation for ESS change</td>
</tr>
<tr>
<td>Consumer demands</td>
<td>Technology might temporarily reduce demands on resources, but underlying consumer demand may only be curbed by a group consciousness for environmental sustainability</td>
</tr>
</tbody>
</table>

**Table 4.3 Hidden conflicts with Unitec's ESS**

Source: developed from this research

Aside from various points of resistance prompted by the budget process, the foregoing sections indicate various contributing influences towards the ESS effectiveness, specifically: the budget process, roles within the budgeting process which apply various policies and procedures; the informal roles; aspects of resistance and conflict; and other factors. These assorted influences could be described as pillars supportive, or otherwise, of but potentially underpinning the success of the ESS outcomes. These pillars be summarised into Figure 4.10 below.
Figure 4.10 Five pillars supporting the 2012 budget process and environmental sustainability ideals at Unitec

Source: developed from this research

Other areas were identified which suggested improved resource use within the budget process, and of these, areas offering possible budget process improvements are considered next.

4.9. Possible improvements to the budget process

From 2008 to 2010, Unitec’s prospect of almost needing to secure crown intervention to mute the impact of rising costs of staff and insufficient reinvestment changed to producing subsequent multiple financial surpluses. Some Unitec staff considered the turnaround to be largely attributable to the senior executives being “financially savvy in each of those units” (D5). Improvements in focus were also suggested by the interviewees.
Unitec’s normal budget process starts with current levels of expenditure, but without the transparency across the organisation in detail of what constitutes ‘business as usual’. As D5 suggests, certain areas could be points of focus in each budget review:

The executives do have the leadership and management freedom to interrogate components of their environments, or units within their report; to interrogate as to what happens there and change behaviour as we go along. But at a macro-organisational level, we don’t. ... I think there is another layer to this. I think we can zero-base budget certain components.

The considerable time spent in achieving the 2012 budget outcome (approximately six months, and delayed target confirmations) suggests where the focus ought to be (D4):

A top-down process that says: this is the pot of money that is available; that these are the things that we want to top-slice – sustainability, [capital expenditures], those sort of things; and then this is what is left for the rest of activity. And then ... sending pricing signals to people ... to make more sensible choices.

The bottom-up constraints on directorates (central services) were eased for the 2013 budget process. Top-slicing of the ‘pot of money’ refers to high-level targets set by the leadership team in conjunction with the Council, “for budgets across each directorate and faculty, and these then allocated resources within their departments with much more flexibility” (D4). Establishing funding for top level priorities sets limits on the rest of the organisation. At a top level, it also contributes towards more closely managing resources by project, as D4 indicates:

If we choose to say increase the sustainability fund from $100,000 to say $250,000 ... that is going to have a flow-on impact and ... they need to budget accordingly.
Increasing funding allocations to an area implicates releasing resourcing from other areas. For example, staff assigned to an ESS project might need to be backfilled, and resources allocated to closely match actual requirements for non-ESS activities within those other cost centres. This may in turn indicate that resources are inadequate to allow such backfilling. As S4 posits of current resources for ESS action plans:

[W]here are our values and priorities? ... Clearly, [Unitec] is not resourcing this at the grass roots level ... pick some lecturers or students randomly, and say: ‘there’s this environmental strategy – how’s it going in the classroom, how’s it going in your research, how’s it going in your job preparation?’ And they’ll probably go, ‘What?’

ESS resourcing and planning issues are also apparent across Unitec’s non-teaching departments. Necessary annual preparations are sometimes required, to be completed before the new calendar year, such as when sponsorship commitments were required before the December 2011 budget presentation to the Council. Sponsorship commitments indicate that the budget setter must proactively manage timely information communication, to minimise the risk of adverse consequences for Unitec. Communication issues surrounding the budget process were also indicated in Section 4.5.1, to the extent that staff no longer felt involved. These same staff could potentially suggest improvements across Unitec for various common activities, if their contributions were recognised further. Such recognition may be in the form of communicating or reinforcing action from feedback points arising in the staff surveys, which may in turn encourage staff behavioural change. Budgetary communication processes appeared therefore not to encourage potential innovations arising from across departments or faculties.

Along with establishing priorities as suggested above as a ‘top-slice’ are risk assessments according to life cycle issues. The outcome of such risk assessments may contribute to reducing the funding of innovative strategies, such as ESS. For situations of deferred maintenance, the approach uses a life cycle philosophy to minimise the risk of serious interruptions. Using a main water supply example, “this pipe is seventy years old, and the life span is sixty years, and that we are ‘due’ for a burst. We want to eliminate [the risk], so take a proactive approach rather than a reactive approach” (S3). Thus, facilities maintenance priorities are managed according to a risk assessment and available funding, and as “there’s not sufficient money to do everything, we need to prioritise” (S3). As an alternative, Unitec
has an opportunity for synergies to be further explored so as to possibly reduce costs, such as for insurance and audit.

From the research data, improvements to the budgetary control process have been indicated. As evidenced by Unitec’s financial turnaround from possible outside intervention, further control improvements might arise from behaviour changes, by: allowing managers the freedoms to progressively and closely interrogate or zero-base budget components; senior management specifying targets for key activities early in the budget process, thus reducing cycle time and rework; budgetary communication processes being improved so as to encourage innovation between departments or faculties; exploring synergies from proactive life cycle risk assessments; and above all, prioritising and co-ordinating sufficient resources to progressively implement key strategies across the organisation.

4.10. Chapter summary

The case data analysis has been grounded by Foucault’s disciplinary power theory, applied to contributing aspects of Unitec’s values and culture, and influences of environmental sustainability behaviours throughout the budget process. Since receiving national recognition for its cohesive environmental sustainability efforts at the November 2012 Sustainability Business Network, and other, awards, ESS appears to be progressing towards being ‘business as usual’. ESS-related investment is increasingly justified through resource-saving and waste-reduction initiatives, for beneficial outcomes to be measured in Unitec’s annual report KPIs. A late boost from released discretionary funds attracted a ready ESS investment application for 2012. A further hint of optimism arises from the steps taken to formally embed principles of environmental sustainability into 15 percent of course content during 2012. The case data reveals Unitec as being enthused and purposeful to give priority to ESS, but the details indicate struggles to justify budget allocations and to be allowed to routinely enter budgetary processes. Presently, it can be concluded that budgetary processes are dominant over Unitec’s environmental sustainability values and objectives.

The next and final chapter presents a view of the research findings in answering the central curiosity of this research: “Does sustainability thinking influence the budget process? If so, in what ways? And is this a two-way relationship?”
Chapter 5. Conclusions and implications

“Discipline is a political anatomy of detail. ... For the disciplined man, as for the true believer, no detail is unimportant, but not so much for the meaning that it conceals within it as for the hold it provides for the power that wishes to seize it.” Source: Foucault, 1995, pp. 139-140.

5.1. Introduction and research questions

The aim of this thesis is to investigate what influences sustainability reforms at an individual organisational level, with the focus to be the relationship between budgeting and environmental sustainability. The core focus is to better understand how budget processes are influenced by or themselves influence environmental sustainability objectives, who is involved, and their role in how disciplinary power is exercised to achieve these objectives.

As discussed in Chapter Two, questions and findings addressed by this research will not be generalisable to other organisations or situations, being particular only to this study of influences, roles, time, and spaces at Unitec (the case organisation). Nevertheless, this research is worthwhile for its contributions to critical theorizing about how and why fledgling environmental sustainability ideals address the power of the annual budget machine. Staff at Unitec were sufficiently energised by their values and beliefs to pursue an organisation-wide environmental strategy released in 2011, which struggled to gain initial budgetary support for many deserving initiatives. However, as changes to the annual budget ‘business as usual’ reality (Bebbington & Gray, 2001) continue, environmental sustainability values and beliefs question and challenge such reality, while ESS becomes increasingly significant for Unitec.

The resulting case study offers an explanation of the budget process and of how disciplinary power evident from various roles interrelates between Staffers and Directors whilst pursuing environmental sustainability objectives. Chapter Two indicated that budgets provide considerable formal financial influence over environmental sustainability, which was also found to be the case in this study. However, other influences were found to mitigate this effect to some extent, with evidence of some resistance to budgetary power, discussed further in Sections 5.3 through to 5.6. The shared passion and enthusiasm by key people, who, by not giving up, contributed by thinking and acting creatively to reduce the gap between budget reality and ESS rhetoric.
The research questions specified in Section 2.5.2 and below in Section 5.1.1 focus upon the most recent budget cycle, within Unitec’s context and recent past. These questions also linked to the methodology and method used. The use of a qualitative application of Foucauldian critical theory methodology, by critically reflecting on how power is used, was justified in Section 3.1.6 and specified again in 5.1.2 below. Such a suitable study was developed using the case study method, specified in Section 3.2.2 and 5.1.2 below.

The research questions and methodology supporting the case study method grounded the research process, and aided in providing valuable insights into disciplinary power relationships between the people sampled. This final chapter discusses outcomes from the research findings, critically reflects on possible conclusions, and considers various implications for theory, policy, practice and the accounting profession.

5.1.1. Research questions

The core curiosity and foundation question of this investigation is:

*Does sustainability thinking influence the budget process? If so, in what ways? And is this a two-way relationship?*

With an intention to better understand how power and knowledge influence the relationship between sustainability thinking and budgeting, three major questions were developed. Foucault’s ideas were considered useful to address these research questions. These questions are:

1) Is there a two-way relationship between sustainability thinking and the budgeting process, and in what ways?

2) In what ways do the budget setters and sustainability managers mobilise power and knowledge to advance their relative agendas?

3) Is the use of power and knowledge by these individuals influenced by narrations in their organisation’s current context?

Development of these research questions also implicated various underlying questions. These sub-questions were: what are budget setters’ views about environmental sustainability; how do values and culture influence environmental sustainability objectives; what are budget setters’ views about how in/formal the budget process is, and what roles do people take
within this process; how are individuals’ goals determined, and do Unitec’s environmental sustainability objectives impede or facilitate these goals; are there instances where the budget has reinforced or detracted from environmental sustainability programmes; what are Unitec’s key success factors, and how has the budget either reinforced or detracted from environmental sustainability programmes?

The case study addressed all of these questions, together with reflecting upon contextual support of Unitec’s culture and values developed over the recent past. Summaries of these outcomes are presented in Sections 5.2 through to 5.6 as conclusions.

5.1.2. Methodology and method applied

A critically reflective methodology was used along with the case study method. This qualitative approach was felt to best offer an explanation where context indicates that people are questioning, resisting or struggling against a ‘business as usual’ dominant profit motive (Laughlin, 1995, 2004; Bebbington & Gray, 2001). Exposing the dynamics within social conditions by critically reflecting upon identification of who dominates, points of resistance, and what roles are taken within a Foucauldian disciplinary power view, gives this research theoretical support (Neuman, 2006). Specifically, the case study of Unitec attempts to explore aspects of budgetary power while interacting with environmental sustainability issues.

In developing rigorous research, data analysis used triangulation of interviews, observations and documents (Laughlin, 2004). Various formal narratives support this research, and include: investment statements; strategy documents; budgetary controls; routine accounting reports; published articles; external images portrayed by brands and website; annual reports; and internal documents such as position descriptions, policies, procedures, meetings’ associated business papers, and performance reviews.

To improve reliability of outcomes, data was assembled onto a single database for the case study; and to improve internal validity, resulting themes were developed from matching patterns across pieces of data, including transcripts reviewed by interviewees (Yin, 1994). These themes contributed to the researcher understanding aspects of disciplinary power, and offered possible answers to the research questions indicated in Section 5.1.1. Next, the contribution of this research is stated, and then conclusions regarding each of the research issues are outlined.
5.2. Research contribution

The conclusions indicated by this research contribute to the literature by critically investigating empirical evidence of how budgetary controls interact with environmental sustainability objectives. As discussed in Chapter Two, a budget setter’s actions can be influenced contextually (Bhimani, 1999), such as developed from an organisation’s values, culture and beliefs, when making decisions. However, the errors observed in Unitec’s environmental sustainability implementation result in ESS appearing to be an ‘add-on’ and something which is nice to do if funded from savings elsewhere. In the context of the 2012 budget cycle, ESS did not yet form part of Unitec’s core business, and does not yet pervade the norms of the organisation’s financial culture. Therefore, an important contribution is the need for sustainability (or corporate social responsibility) to be integrated into core business strategy, rather than comprise a separate portfolio, and form a critical part of any sustainable business.

Power struggles from accounting controls indicate the budget setter’s significant role in limiting innovations for progressive change (Baxter & Chua, 2000). The dominance of budgetary priorities was found by this research to significantly limit environmental sustainability strategy implementation in a not-for-profit situation, especially when funding is constrained. Critically reflecting on these power struggles provides further understanding of contributing influences and roles. Further, Unitec’s motivators for staff behaviours indicating enthusiasm and purposefulness contribute to prioritising ESS. However, when details surrounding not-for-profit funding are unearthed, it is revealed that ESS is challenged during budgetary power struggles. To gain more urgency, and therefore funding, ESS must quantify the value or payback of its contribution in accounting terms. Further, as Lodhia, et al. (2012) argue, internal legitimacy may offer an explanation as to why public sector organisations undertake environmental reporting. The budget process within those organisations uses internal legitimacy reasons to justify funding environmental sustainability regimes and the external reporting of that documents progress. However, in organisations where the mechanism identified by Lodhia, et al, 2012 may be weak, in addition to the challenges of quantifying environmental sustainability contributions in accounting terms these organisations also face the challenge of converting internal legitimacy into recognition that environmental sustainability activities should not be segregated from other activities required for the survival of the organisation. That recognition needs to be part of the core budget process for the entire organisation’s sustainability.
A second contribution is suggested, arising from some evidence of a two-way relationship between the role and disciplinary power of accounting in the budgeting process, on one side, and a fledgling ESS on the other. The conclusions (refer Section 5.6) indicate a strong case that (a) ESS rhetoric is disconnected from, and at conflict with, funding realities of budgetary controls established for the 2012 calendar year; (b) the meaning of accounting numbers has overwhelmed the ESS intent; and (c) funding appears to be an after-thought with current under-prioritising of environmental sustainability continuing. Evidence from non-accounting formal narratives, specifically the fact that there was not any updating of position descriptions or the objectives set for individual staff for ESS goals, also indicates that ESS rhetoric has exceeded its practice at Unitec. However, aside from ESS not gaining direct funding from the 2012 budget process perhaps attributable to its lack of strategic importance, evidence of various financial impacts of ESS implementation also exists. Indirect financial impacts indicate some embedding of ESS into ‘business as usual’ practices as discussed in Section 4.6. This research confirms what creative people at Unitec have achieved with regard to energy, waste, and water indicators, and that Unitec’s ESS culture is contributing some changes to accounting processes even if not being successful in receiving direct budget funding. However, further quantifiable benefits need to be identified if ESS is to become better recognised in accounting terms. Pursuing aspects of environmental sustainability in teaching, research, and advocacy roles further may indicate a potential for increasing student numbers, and therefore funding opportunities.

The research findings which follow offer conclusions, arising from analysing the case data relating to preparation of Unitec’s 2012 budget, to address each research question developed in Section 2.5.2.
5.3. Is there a two-way relationship between sustainability thinking and the budgeting process, and in what ways?

“The power in the hierarchized surveillance of the disciplines is not possessed as a thing, or transferred as a property; it functions like a piece of machinery. And although it is true that its pyramidal organization gives it a ‘head’, it is the apparatus as a whole that produces ‘power’ and distributes individuals in this permanent and continuous field.”

(Source: Foucault, 1995, p.177).

Reflecting upon influences between sustainability thinking and the 2012 budget process indicates that underlying disciplinary power mechanisms exist, which coerce and normalise judgements. These mechanisms may well have arisen historically, and provide valuable contextual insights for explaining how Unitec’s culture and value attributes contribute towards managing time, space and other resources. Evidence of these influences arose from interview transcriptions, observations and published documents, and when triangulated, resulted in identifying both formal and informal control mechanisms (Sections 4.2 and 4.3).

Contextual influences can be considered by degree of in/formality, discussed in Section 2.3.2, and impact on group members where: informal controls offer guidance for behaviours, and formal controls direct behaviours (Norris & O’Dwyer, 2004). First, it is useful to address what interviewees understand of environmental sustainability in practice.

5.3.1. How do budget setters view and practice environmental sustainability?

Interviewees were asked for their views of the meaning of environmental sustainability (Section 4.4.3). They tended to indicate the importance of future resource needs for life, and to do things in different ways by making the ‘right’ decisions, such as in reducing waste. This role of stewardship or guardianship also links directly with Unitec’s underlying values and cultural standards (Section 4.3), such as traditions displayed at the Wairaka Marae.

In an effort by management to enhance Unitec’s environmental image, legitimacy-generating activities and issues of environmental visibility were found in reporting practices aimed at both internal and external stakeholders. The use of the phrase “environmental sustainability” in the 2011 and 2012 annual reports has increased (refer Section 4.3.5), and is considered as a legitimising and motivational agent (Lodhia, et al, 2012). However, Unitec’s recognition of environmental sustainability is not consistent, such as describing its award winners as “the sustainability team” (Unitec, 2013, pp.32, 33), so missing the word ‘environmental’ from the
ascribed phrase. Such inconsistency could be dismissed as an artefact of ‘publicity jargon’ but further inconsistencies as to the meaning of environmental sustainability were found and may be indicative of Unitec seeking to influence stakeholder interests across various dimensions of sustainability.

A further inconsistency regarding what Unitec means when it refers to ‘sustainability’ is apparent when considering Unitec’s ESS curriculum ambition since staff refer to that ambition as relating to environmental sustainability (refer Section 4.3.4) whilst Unitec’s 2012 Annual Report (Unitec, 2013) diffuses the ambition by dropping ‘environmental’ in its references to the curriculum ambition of reaching 15% content related to environmental sustainability. Similarly, the 2012 Annual Report refers to “full sustainability reporting in the future” (Unitec, 2013, p. 32) in reference to implementing an online Environmental Management System and seeking ISO14001 accreditation in 2013; and in the same paragraph: “... towards full sustainability reporting in the future” (Unitec, 2013, p.32) – perhaps all four dimensions of sustainability are contemplated by this ambition?

These inconsistencies could leave external stakeholders wondering if Unitec is confused as to which of the four dimensions of sustainability are the targets of Unitec. Nevertheless, the evidence from this research is that internal stakeholders have a clear focus on environmental sustainability and whilst there is a strong trend of using “environmental sustainability” within Unitec’s 2011 and 2012 Annual Reports, some of the more recent literature (Lodhia et al, 2012) indicates that environmental reporting may be driven by a need to influence internal stakeholders. Thus, by Unitec wrapping all sustainability dimensions together, a wider array of stakeholder engagement may be targeted and coerced than if they were to be solely attributed to environmental sustainability legitimacy. Having now considered aspects of communication practices to stakeholders, other practices and policies are also indicative of budget setters’ relationships with Unitec’s environmental sustainability regimes and are discussed next.

Various practices and policies indicate the existence of a two-way relationship between the budget process, in apparent time and space resources, and environmental sustainability. A strong environmental sustainability culture was evident across Unitec’s organisation, as indicated by ready adoption of supply chain, waste, and resource-usage-reduction initiatives discussed in Sections 4.4 and 4.6.
Despite the creativity and passion of Unitec’s culture and values attributes, evidence indicates ESS imperatives are relegated behind those of ‘business as usual’ reality; that is, in practice, environmental sustainability is subordinated to matters of cost and cashflow. Whilst benefits are not clearly stated in accounting terms through business plans or other supporting data, funding allocations for ESS initiatives do not appear likely to eventuate under the present budgeting regime. Having now addressed the views of budget setters and their targeted practices of environmental sustainability, the next section reflects upon the various contextual influences which are implicated.

5.3.2. In/formal contextual influences

During 2011, Unitec formally released an Environmental Sustainability Strategy (ESS) together with $100,000 of seed funding to sponsor projects and recruited an Environmental Sustainability Manager. However, considerable dedication by staff and students and resource funding is required to support ESS projects to achieve Unitec’s ESS vision (p.5) “to be an excellent business that is environmentally responsible and an agent for positive environmental change”. It is apparent that the stated goals of the ESS have outstripped available funding allocated in the 2012 budget.

The data analysis found that both Unitec’s formal and informal contextual factors were relevant in supporting the formal budgeting process. While formal contextual influences directed budget setters towards certain goals as specified by strategies, various informal guiding behaviours were also identified (Sections 4.3.3 and 4.3.4).

The formal influences found to be most strongly impacting on budget setter behaviours, are the directive for key targets of progressively reducing staffing costs, and targeting an operating surplus, both as a percentage of revenue. Both targets are formalised by the Council pre-specifying the 2012 budget expectations such that staff costs were targeted to be less than 60 percent of revenue and a 2012 surplus was to be 3 percent of revenue. Within the remaining operating spend, considerable opportunity to pursue innovations might be expected but only over the longer term, that is, not in 2012. However, the tone set by the final consolidated budget review during December 2011, with finances struggling to meet key targets, amounted to support for only those operating expenses classified as ‘business as usual’. This meant that only current business in relation to the prior year (2010) was to be funded for 2012. Not only did the new ESS initiatives fail to secure funding for 2012, but so
did many other initiatives. Hence Unitec’s budgetary process outcomes left Unitec with stated strategies for change without the wherewithal to implement those strategies.

The conclusion from critically reflecting on the evidence suggests that Unitec places short-term economic goals ahead of sustainability goals. Contextually for the 2012 year, while informal culture and values hold a strong position for decision makers, Unitec’s use of short-term 12-month budget targets indicate an even stronger focus. Although Unitec takes an advocacy role “as an agent for positive environmental change” for the ESS vision, this would appear to be over-ridden by an unsustainable business model’s need (Gray, 2006) to be an “excellent business” without the stated priority for ESS being allowed to redirect funds from the routine and established business of Unitec. That is, the rhetoric of Unitec’s ESS has not forced a fundamental re-balance of priorities as expressed both in the budget preparations/negotiations or the budget outcomes.

5.4. In what ways do the budget setters and environmental sustainability managers mobilise power and knowledge to advance their relative agendas?

“It is easy to understand how the power of the norm functions within a system of formal equality, since within a homogeneity that is the rule, the norm introduces, as a useful imperative and as a result of measurement, all the shading of individual differences.”

(Source: Foucault, 1995, p.184)

The 2012 annual budget ‘signed-off’ by Unitec’s Board represents a system of formal accounting order, in the context of the contemporary political and economic truth. Such accounting systems systematically, subtly, and constantly apply budgetary ‘truth’ in arranging priorities and asserting tactics (Section 2.6.8). Power exercised in pursuit of this single truth uses normalising or standardising devices, such as through embedding culture or values useful for coercing individuals’ actions (Section 2.6.2).

Various mechanisms are found to contribute towards achieving environmental sustainability objectives, gathered from interview responses and observations. These are grouped as follows: (1) reflecting on the degree of integrating organisational culture and values; (2)

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24 There was no challenge or dispute presented to Unitec’s budgetary outcome but its status as ‘truth’ needs to be acknowledged as an artefact of the inputs and processes of the budget-setters’ work; with sustainability projects’ subservience to this ‘truth’ it can be conjectured that if the status of this ‘truth’ were to be challenged, there could be an alteration to the status of sustainability projects within Unitec.
senior management commitment; (3) resource availability; (4) the roles where disciplinary power resides; and (5) inhibitors to budget process change.

5.4.1. Integrating environmental sustainability culture and values into planning processes

Unitec’s budget setters view the budget process as being formally controlled within timetables, with strict overall targets for staffing cost and operating surplus. However, there seems to be few links connecting ESS and budget plans for 2012, either during budget consultations, or longitudinally. Unitec’s open consultative culture is recognised by interviewees, for example, by confirming that Unitec generally tolerates a healthy level of debate without concern. Consultation beyond the initial budget stages, however, was not evident in some departments, to the extent that the budget process is considered restrictive and exclusive. It is apparent that ESS culture and values are overwhelmed by the reality of the budget process which in turn is characterised by: its specialised terminology; access to selective data sets; closed-door meetings and submissions; and, an absence of a need to account to those who do not participate in the inner circle of power and influence.

There are myopic perspective issues surrounding a single budget cycle’s 12 month period. A longer-term view of effects beyond Unitec’s financial control appears to be ignored. Similarly, the act of quantifying outcomes may adversely affect qualitative functionality, such as with customer service and ESS implementation.

Earlier attempts at developing environmental sustainability ideals at Unitec had faltered, largely due to a lack of unity. The most recent ESS document attempts to link Unitec’s operating areas of teaching, research, advocacy and campus operations, and it is overseen by a strategy committee providing a spirit of kaitiakitanga or guardianship. Representatives from each area contribute time via committee and project work to achieve key action plans. However, little recognition is evident for the voluntary work provided.

The success of ESS depends on collaboration between Unitec’s departments. Some optimism is evident from the progress made by various projects during 2011 and 2012 in promoting environmental sustainability across Unitec, as indicated by chosen practices (refer Section 4.4) and roles within the budget process (refer Section 4.6). These actions taken to further embed ESS initiatives into system routines and standard practices appear to integrate environmental sustainability into Unitec’s core culture and values. This contributes to those
practices becoming standardised, and therefore are more likely to become part of ‘business as usual’. ESS implementation is currently in its early stages and it is appropriate to invoke images of a fledgling struggling against the tried-and-proven, legitimised and fully resourced budgetary machine.

5.4.2. **Senior management commitment to environmental sustainability issues**

Senior management’s support to promote environmental sustainability issues could be improved, according to some observers. Promoting senior management’s active commitment could reduce resistance to Unitec’s ESS objectives. Encouraging communities of ESS influence could be promoted further by the senior executives, for example, presenting a video of the CEO participating in a new waste reduction initiative. The CEO’s style of office, reception area furnishings, and choice of car are visible aspects of power, which could be used to further promote Unitec’s ESS ideals. However, the CEO’s support during a 2012 tree-planting event along Wairaka Stream (with images published on Unitec’s website) indicates some commitment from the senior managers.

Any future aspirations of a zero carbon position for Unitec would need full support from all Staffers, Directors, organisational culture, and practiced values. An initial step for a zero carbon goal is understanding consumption through implementing suitable measures. Senior managers could consider these links and normalise appropriate behaviours through setting achievable standards, thus corroborating Unitec’s statements about carbon footprint over an extended period. However, the contribution of this research is to identify the constraint on these types of symbolic or rhetorical devices when a budgetary process firmly entrenches ‘business as usual’ (Bebbington & Gray, 2001) in the less visible but ultimately most powerful of organisational routines.

5.4.3. **Resources**

Evidence of budget resources support includes formal roles and responsibilities, the ‘business as usual’ budget outcome, and Unitec’s advocacy role. During 2011, an appointment to the role of Environmental Sustainability Manager was made. However, this single person’s role in relation to Unitec’s operating footprint is considered myopic. Considerable efforts from volunteers, committee members, and other latent interest from staff and students contribute to ongoing support for ESS across the organisation, despite other strong branding imperatives.
evident across the organisation. Realignment of senior management roles during late 2011 assisted in co-ordinating ESS responsibilities and reports.

The 2011 launch of $100,000 seed funding to support various environmental sustainability projects has been strongly promoted by Unitec, and is aimed at achieving positive outcomes. These projects are expected to strengthen both Unitec’s ESS and advocacy role, and there is strong evidence that Unitec has been proactive in drawing attention to its environmental sustainability projects as part of its branding.

However, the final 2012 budget round did not support new initiatives, but continued with ‘business as usual’. The challenge therefore for ESS is to become embedded within not just short-term ‘business as usual’, but more importantly, aligned with Unitec’s core strategy which operates their business in a way which is consistent with their long-term cultural, social, economic, as well as environmental, goals of sustainability. This concept can be aligned to Foucault’s normalising technologies (Section 2.6.3). Evidence of current standards in ESS include: the use of the classroom booking system (albeit across only some buildings at Wairaka campus), which offers close management of energy resources; purchasing policies within the provision of office equipment and consumables; advocacy for sustainable architecture, community gardens and composting; and a change for staff to increasingly be responsible when creating waste. These recent standards are integrated with Unitec’s core operations, and indicate that despite being an independent strategy, the ESS has been useful for its contributions to the business case for a more sustainable approach to resource use.

5.4.4. Roles of accounting, facilities management and procurement policies

Accounting’s ritualised role, in formally indicating the budget targets, and representing actual versus budget performance outcomes, examines achievement of budgetary standards by responsibility area. Crucially, the 2012 budget ‘truth’ was inadequate to further support new initiatives, such as for ESS. Accounting control systems can be instrumental in interrogating and further challenging ‘business as usual’ budget assumptions, such as by senior managers introducing zero-base budgeting across some key expenditure lines. This may include, for

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25 One may speculate that strong branding and marketing spin within the competitive tertiary education industry is being driven by central government’s funding regimes, forcing not-for-profits to become increasingly innovative at sourcing funds, and targeting the international student market. Nevertheless, the role of accounting has overwhelmed environmental sustainability as an important reform that has genuine stakeholder support and (at least rhetorical) organisational support.
example, challenging staff travel and conference costs, and improving levels of customer service.

In relation to preparing business cases, a project need is identified, such as investing in new assets, system technologies, or within teaching and learning. Once the need is identified and prioritised, the detailed considerations ought to consider and include environmental sustainability principles. However, there is a gap in developing business cases, in that environmental sustainability sensitivities are not consistently considered across all projects. Further, templates and processes could be developed to fully embed ESS details into business cases with, with support available from Unitec’s accounting and other functions.

Unitec has adopted policies within Facilities Management to closely manage energy consumption at various buildings, together with energy matters being considered in procurement decisions. Each new capital and operational business case decision involving Facilities Management and procurement links ESS directly to influence and coerce budget setters, where possible. For example, case studies provide rich research data on advocacy of the building management system. Some staff consider further collaborations with outside organisations to be a valid extension of Unitec’s building management system, when internal funding is lacking. As observed, underinvestment in Unitec’s facilities for old building stock presents funding challenges over the shorter term, but appropriate spending can be a sound investment, from both a financial point of view and from an environmental point of view. There are also possible collaboration opportunities between tertiary libraries for costly high-end research database resources, where currently more time-consuming methods are used.

The roles of accounting, facilities management, and procurement regimes all practise truths in the exercise of disciplinary power. The standardised principles, practices, and hierarchies of these roles are implicated within the policies set across Unitec. Further, outcomes are made visible when measured and compared to the budget, thereby reinforcing the disciplinary power of those roles and truths or standards. This observation invites analysis of potential impacts arising from changes to the budget process as is considered next.

5.4.5. Changes to the budget process

Interviewees recognise various budget process constraints inhibiting change from ‘business as usual’, thus detracting from improving environmental sustainability at Unitec. Other than for insufficient funding, criticisms of the current budget process include: staff feeling as
though they are the recipients of management decisions, rather than the participants; on-going arguments regarding equitable distribution of funding between teaching and non-teaching functions; one year only funding creates inefficient ‘use it or lose it’ expenditures; and, with the final 2012 budget approved by Council only very late in the 2011 year, there was a lack of certainty in terms of being able to plan ahead.

Unitec’s annual staff engagement survey indicates the need for operational change away from ‘business as usual’, to further improve environmental sustainability, a shared value of both staff and senior management. These prompts have been taken to stimulate an alternate incremental 2012 budget approach, alongside the bottom-up and top-down compilations, to also review longitudinal change across annual budgets. From this initiative, the next budget round is intended to more strongly indicate pricing signals, to inspire budget setters to opt for resources at less costly off-peak times. Opportunities to fund other activities, such as environmental sustainability, then become more achievable. The environmental sustainability strategy focuses away from ‘business as usual’ and instead toward changing the way Unitec does things.

To conclude, mobilising of power to support Unitec’s formal budget process is all-pervasive, through the continuance of ‘business as usual’ (and therefore predominantly economic) long-term unsustainable business model (refer Section 2.2.2). However, the influence of ESS is less financially entrenched. When aligned with senior management’s promoted and practiced behaviours, ESS contributes to normalising disciplinary power of environmental sustainability, and linking Unitec’s teaching, research, advocacy, campus operations, and guardianship for future communities. From this observation it is imputed that the potential transformative power of the ESS is currently mendicant to budgetary processes that essentially exclude ESS from the inner core of Unitec. Whilst such a conclusion may appear oppressive to supporters of environmental sustainability, it also holds out hope to the same supporters that progress is achievable through budgetary process change. As a result, there is significance in understanding what factors influence budget setters in their use of power and knowledge.
5.5. Is the use of power and knowledge by these individuals influenced by narrations in their organisation's current context?

“The chronicle of a man, the account of his life, his historiography, written as he lived out his life formed part of the rituals of his power. The disciplinary methods reversed this relation, lowered the threshold of describable individuality and made of this description a means of control and a method of domination.” (Source: Foucault, 1995, p.191, of the examination).

The third research curiosity considers how budget setters and environmental sustainability managers might be influenced by Unitec’s narrations. Such in/formal narratives are instrumental for orienting the focus of Staffers and Directors when pursuing environmental sustainability objectives. Unitec’s formal narratives supporting its environmental sustainability are indicated in Section 5.1.2. Unitec’s informal narrations include: internal discussions (oral, email and memos), culture and values practices, or forum representations by esteemed colleagues to stakeholder communities. Co-ordinating these narratives can influence, or provide pressure for, change.

5.5.1. Benefits of co-ordinated narrations

Foucault (1980) supports the belief that power requires narratives, or discourses, to become established, consolidated, or implemented. Unitec’s assorted narratives comprise the interchangeable devices, Foucault’s *le dispositif*, to co-ordinate and condition the dynamics of the knowledge situation. Anecdotal support for ESS comes from Unitec’s 2011 Annual Report Perspectives on Progress.

Benefits of co-ordinating narratives with the strategy launch of Unitec’s environmental sustainability have contributed to quickly gaining traction with some behaviour change, including numerous eco-reps who voluntarily spread the word. Various benefits arose when Unitec’s leaders committed to the strategy launch. The launch of the ESS created significant interest on the part of both staff and students. However, the heightened interest levels of internal stakeholders to date appear insufficient to effect significant and on-going resource changes, and therefore, currently do not indicate the influence of “coercive isomorphism” (Lodhia, *et al*, 2012). Further, the continuing interest and enthusiasm as demonstrated by internal stakeholders indicates a culture inclusive of environmental sustainability principles, even if these principles are not yet able to be supported by budget resourcing norms.
A weakness for Unitec and the release of the 2011 ESS arose when some narratives do not currently link together, so opportunities to further contribute towards achieving environmental sustainability objectives are missed. Opportunities to gain additional momentum for environmental sustainability might be developed by linking ESS with position descriptions of Staffers and Directors not directly working in environmental sustainability roles. A common finding is that position descriptions for both Staffers and Directors do not refer to ESS and so Unitec employees are left to deduce how ESS relates to their duties such that they must rely on an omnibus duty such as “... any other task that you should from time to time be asked to do” in order to legitimise their involvement in ESS-related duties in various contexts. Interviewees commented upon strategic ideals but lacked processes for implementation; this underscores a sense of inertia that is reflected in unchanged position descriptions and individuals’ personal work objectives. The presence of that inertia draws attention to the need that strategic support for ESS initiatives should be aligned with, not only budget resources, but also appropriate skills and reward systems; this is considered next.

5.5.2. Management skills and reward systems

The management of operating risks is given high regard at Unitec. Staffers and Directors indicate that some budgeted funds are earmarked solely to manage unforeseen risks, such as for professional services audits which may identify high-risk health and safety hazards mostly relating to the nature of the buildings at Wairaka campus. These audits cover asbestos, air quality, and roof access issues. The Health, Safety and Environment Department’s (HS&E) professional services budget also includes environmental consultants, according to priorities determined by a risk management process. Management of risk therefore requires some degree of qualitative freedom and responsibility within the quantitative constraints of the annual budget.

Management are also instrumental in ensuring appropriate processes and procedures are adhered to, such as those relating to presentation of business cases in funding applications. To assist with launching new initiatives and programmes, it is suggested that standard current process documentation be readily available from Unitec’s intranet, and that an induction program on this process be provided to new managers. An additional improvement would be that the management accountants should regularly advise their respective department heads of any changes in budget-related processes or procedures relating to funding requirements. The likelihood, however, is that the power behind accounting is unlikely to be fully
ameliorated by efforts to improve the flow of information about management processes; nevertheless, attention towards financial rewards may be a useful companion strategy that could assist.

Incremental financial rewards targeting and motivating behaviours towards achieving ESS are not apparent from the data collected. Unitec tends to attract academics, who are often analytical critical people, and naturally inclined to be environmentally sensitive. It is therefore up to Unitec’s management to effectively manage staff energies. Further, passion for environmental sustainability is evident by staff ensuring the ‘right thing’ occurs, with the formal release of Unitec’s ESS. However, to ensure that the ESS will not fail requires further embedding of practices and processes, along with sufficient funding.

To conclude the issue of narrations as influencing budget setters and environmental sustainability managers, within the context of their individual roles, there seems to be some flexibility in the ability to use power and knowledge to achieve environmental sustainability objectives. This flexibility is largely attributable to an individual’s sense and degree of emotional drive and energy. Recent updates to formal narratives provide focus and direction, and co-ordinating these has given an initial huge step forward for Unitec’s ESS aspirations. To maintain a comparable rate of momentum, it would be useful to co-ordinate position descriptions, develop co-ordinated practices and decision-making processes to consistently include environmental sustainability details, and allocate budget funding for dedicated ESS branding.

The outcomes from the three issues canvassed in Sections 5.3, 5.4 and 5.5 suggest conclusions for the core research question, addressed next.

5.6. Does sustainability thinking influence the budget process? If so, in what ways? And is this a two-way relationship?

“‘Truth’ is linked in a circular relation with systems of power which produce and sustain it, and to effects of power which it induces and which extend it.” (Source: Foucault, 1980, p.133)

Conclusions arising from the sub-questions can now be combined to present views to address the core research question. In this frame, considering Unitec’s key success factors are also of relevance in relation to how the current budget process might help or hinder environmental
sustainability programmes. Three key outcomes from the research as commented on further below, are: (1) ESS rhetoric is disconnected from budget reality; (2) accounting for the disconnect; and, (3) the status quo of under-funding environmental sustainability is a current reality but may change.

5.6.1. ESS rhetoric is disconnected from the budget reality

The rhetoric evident from the 2011 ESS initiatives indicate a disconnect with the reality of the 2012 budget process. This disconnect is largely created by the ESS narratives’ failure to gain support through the operating budget, and instead being regarded as ostracised initiatives, and falling victim to the funding limits of any potential budget surplus. Essentially, ESS initiatives were relegated to a fight over the ‘scraps’ after routine activities had been provided with funding.

The budget process can be seen to hinder, rather than help, the achievement of environmental sustainability initiatives for various reasons. As identified by interviewees, these reasons include: (1) a lack of certainty; (2) a short time horizon; (3) a paucity of slack funds available for investment; (4) competing priorities for funding where the ESS priorities are seen as being less pressing than ‘business as usual’; (5) initiatives for environmental sustainability are seen as a nice modern topic where that modernity is felt to imply some temporal nature which will not be on-going. The interviewees reveal, therefore, that the longevity of Unitec’s ESS may well be interpreted as impaired.

The budget process treatment of ESS initiatives prompted the question of whether environmental sustainability is a short-term fad. The overwhelming evidence from interviewees and Unitec’s documentary sources indicate that environmental sustainability is generally recognised as being a good steward of the earth and thus it is not a short-term fad but it is part of Unitec’s core culture and values.

The above evidence is indicative of the struggles during the early stages of the ESS implementation to gain funding. Also of note for proponents of new initiatives is that, for 2012, departmental budgets were not required to be justified from a conceptually and pragmatically challenging zero base (Lindblom, 1959), but instead are increments of usual business. In reality, ‘business as usual’ activities continue to receive budgetary support while new initiatives struggle to gain funding, even when considerable effort has been invested into developing the ESS rhetoric.
5.6.2. Accounting for the disconnect

While the section above considers the lack of 2012 budgetary support for the ESS implementation and its proponents, this section reflects on the actions of ESS budget setters and their accounting influence, specifically in understanding the power of the annual budget.

This research has found that Unitec’s executive, and senior and lower level managers, each had roles in the budget setting process, in planning, controlling, co-ordinating, motivating or evaluating (refer Section 4.6.1). Funding was found during 2011 for both the position of Environmental Sustainability Manager, and $100,000 seed funding. However, it was apparent that management were unable to divert funding from ‘business as usual’ activities into the ESS initiatives in time for the 2012 budget round. When decisions were made to create the new Environmental Sustainability Manager position, the budget setters did not also establish future resourcing for ESS implementation needs. The evidence of this absence proves the reality of power of accounting over that of ESS rhetoric. The disconnect can be understood in retrospect, as a strategy for ESS funding did not exist.

By implication, it is argued that the budget setters, through their inability to successfully direct funds into the new ESS initiatives, strategically reinforced the power of ‘business as usual’. It could also be said that budget setters used the disciplinary power of the budget process to keep ESS initiatives outside ‘business as usual’, and beyond the standard practices or ‘truths’ within the budget norm. Factors contributing to the continued under-prioritising of ESS funding are discussed next.

5.6.3. Under-prioritising of environmental sustainability

The research shows the reality of under-prioritising of environmental sustainability at Unitec. Formal factors indicating this conclusion include: individual position descriptions and personal objectives of the Human Resource systems have not changed since the ESS was established; and budget funding of ESS appears to be an after-thought. With not updating position descriptions and personal work objectives, thus indicating that Human Resources systems seem unaware of the wider implications of the ESS, Unitec appears not to ensure that corporate systems support its broader strategic initiatives. However, informal aspects indicate strong support for ESS at Unitec, which include: a strong environmental sustainability culture; and core values aligned with the Treaty of Waitangi, which contribute to a sustained sense of guardianship.
Unitec’s consultative culture is also reflected as a key to its success factors. Recognising success and collaboratively engaging with communities are significant for Unitec’s advocacy role. This was evidenced by various matters including publicising internal success stories of waste and energy reduction management, and recycling initiatives as well as promoting certain values which contribute to winning awards, such as NZI National Sustainable Business Network award for the Trailblazer Not-for-Profit category, 2012 (Unitec, 2013). From Unitec’s applied approach to education, and by targeting specific external funds, positive results in specialist areas such as landscape architecture (for living roof spaces) and education have been recognised. Unitec’s website publishes news items and research outcomes presented in the Advance magazine, both contributing to establishing and building recognition of activities and innovations. In developing Unitec’s research culture, praising and recognising success have contributed to reinforcing the desired behaviours. Even though environmental sustainability initiatives struggle to be resourced outside of ‘business as usual’, its practices are becoming more visible, and therefore environmental sustainability is increasingly being accepted and progressively standardised.

Many issues confront tertiary education providers, both positively and negatively. For Unitec, budgetary constraints are offset by expertise in various areas, including monitoring and controlling of living roof spaces, or being able to provide space and personnel for projects. Focusing upon environmental strategies within the framework of plans set out by investment statements and other documents will help define and co-ordinate priorities. Disciplinary power of such a framework can set the path for ESS to become standardised policy and practice. Environmental sustainability policies and practices could then progressively become part of routine operations, such as within procurement, to the point where projects or activities no longer require specific support needs to achieve strategic goals.

Progressively developing and practicing ESS principles appear embedded within part of Unitec’s culture and values, when financially justifiable. Unitec’s adoption of many green-star ideals in implementing purchasing policies and projects indicate application of environmental sustainability standards, across both operating expenditure and capital expenditure projects, such as the Marae dining hall. Similarly, print procurement policies have been adopted as a standard evaluation tool.
The future for ESS participation at Unitec therefore appears more optimistic than for the 2012 year, given strong values and cultural support, despite the conflicts and struggles between rhetoric and budget reality. However, successful and credible environmentally sustainable options for stakeholder communities are arguably when advocated and delivered by financially sustainable organisations (Gray, 2006). Over the long-term for Unitec, therefore, environmental sustainability has a subordinated two-way relationship with financial sustainability, whilst contributing to viable options for, and validating, Unitec’s future. Unitec’s guardianship role in influencing decision-makers regarding innovations, regional development, and progress, will be key for its success across teaching, research, advocacy and campus operations. Underlying cultural and value attributes of both Staffer and Director roles are instrumental in further developing and delivering, or resisting, these aspirations.

Various strong and creative people working together at Unitec have struggled to achieve official support for investing in the ESS. As indicated above in Sections 5.3.1 and 5.4.1, there is a sense of optimism in that environmental sustainability is becoming further embedded within Unitec’s culture and value norms, both formally and informally, and therefore implicating financial planning processes. This suggests that by not giving up, and thinking creatively, the gap between budgetary reality and the ESS rhetoric may be shrinking. For ESS, the challenge continues to find further ways to reduce this gap, and to justify in accounting terms why resources need to be invested in more effective ways to further ease Unitec’s unsustainability, and to deliver its ambitions toward carbon neutrality.

Changing power relations, such as those surrounding the possible future for ESS within a budget’s regime of truth, is also considered by Foucault (refer Section 2.6). He proposed that the power of truth operates at a point in time. Further that “the problem is not changing people’s consciousness – or what’s in their heads – but the political, economic, institutional regime of the production of truth” (Foucault, 1980, p.133). The dynamics of a budget’s truth (the targeted surplus for the particular timeframe and all of its implicated assumptions and decisions) therefore result from the chosen course of political energies across a range of strategic aspirations, designed to direct the docile useful troupes within Unitec’s organisation as the targets of disciplinary power. The 2012 budget imperative of ‘business as usual’ had in truth decided against funding environmental sustainability, with Unitec defaulting instead to continue operating unsustainably across its functional areas, including waste, transport, energy, food systems and building design. The two sets of goals, for ESS and ‘business as usual’, cannot therefore co-exist until ESS is normalised as routine rather than as new and
innovative; that is, ESS will need to give up its project-oriented and pioneering nature so as to be ‘usual’. However, the case evidence suggests that ESS activities attract valuable publicity for Unitec, and are therefore moving towards being included within the ‘business as usual’ truth. The struggles and conflicts imposed by the 2012 budget’s system of order designed to achieve prescribed targets do not go away, but re-emerge, such as the struggles to date of Unitec’s environmental sustainability ideals. The effects of change indicated by on-going ESS struggles have implications for theory, and are considered next.

5.7. Implications for policy and practice and accounting profession

Unitec’s ESS will provide a platform from which to become ‘business as usual’, for environmental sustainability to better talk in the language of the budget. How this might subsequently transform Unitec’s behaviours will largely depend upon further budgetary support, with supportive values indicating the potential for change. Further aligning of rhetoric with reality would include: providing ESS with a voice at all stages of the budgeting cycle; updating position descriptions and personal objectives across the organisation to specifically include ESS-related outcomes; increasing environmental sustainability-related weightings attributable to capital expenditure business cases; and, other wide-ranging organisational reforms where ESS is lifted into legitimacy equivalent to other major functions. The language of environmental sustainability has had to transform to that of the budget process and financial justifications, to become able to quantify and substantiate.

Also, the heightened profile of ESS potentially implicates a demotion of a part of Unitec’s current ‘business as usual’ activities, as constrained by limited funding. Project proponents across all areas of Unitec would need to adequately sponsor their respective activities to maintain ‘business as usual’. This paradox provides a further example of how disciplinary power struggles within the budgetary control system invisibly continue to control, produce conflicts and resistance, and provide ruptures and transformations.

From the struggles indicated by the case findings, Unitec has demonstrated that with care, passion, thought, and creativity, environmental sustainability initiatives can partly redress the power of accounting. There are lessons for others in that creativity. Implications for policies, practice, and the accounting profession are indicated by the research, and could be applied to either the public or private sectors. The case study reviewed a single budgetary cycle, with Unitec rolling out a co-ordinated ESS. Certain environmental-sustainability-related KPIs for
indicating energy use and waste reductions against targets were included in Unitec’s Annual Reports, thus implicating cost savings. However, formal policy guidance becomes increasingly effective when combined with voluntary compliance, combined into “smart regulations” (Herzig, et al, 2012, p.309).

Unitec’s policy of having individual responsibility for disposing of rubbish took the waste reduction to a different level and can be viewed as an example of a smart regulation. By removing individual standard rubbish bins routinely emptied by cleaning staff, and introducing a 10cm desk-top cube, staff became formally regulated in terms of the volume of rubbish generated (which incidentally was also visible to their peers). The voluntary aspect was that staff could swap their new rubbish cubes for the old-style bins, but they were still required to dispose of the contents into the appropriate centrally-located bins (for recyclables, paper, or general refuse). Practices within the BMS as applied to switching off lights and computers when study areas were not booked was another example of a policy providing economic benefits. The BMS policy was not applied to all current lecture areas as the cost of implementation was considerable for some locations. Any new building project, however, has as many energy-reduction features as possible designed into the structure, within the funding constraints.

Co-ordinated campus-wide policies and practices, such as for waste reduction and sharing ideas for resource use, allow outcomes to be measured against targets and may be formally recognised as environmental-sustainability-related KPIs. Transparent outcomes supported by information from pilot practices may further support initiatives for policy rollouts across Unitec’s departments of teaching, research, advocacy, or campus operations and provide further leverage for stewardship or capacity building opportunities. Such evolution may indicate significant collaborative steps towards Unitec’s possible carbon reduction aspirations. Once significant data about policy implementation is gathered, sharing ideas across activities and professions may support further innovative collaborations, and possibly reduce the cost of reactive compliance.

For the accounting profession, this study indicates the need for internal accounting to be more aware and responsive to the challenges of non-accounting strategic change in organisations. Accountants are at the focal point in the disconnect between Unitec’s ESS and its current budgetary practices, yet they have not been heard voicing an opinion on this. Such silence
cannot be good for the profession, but may indicate where power is strategically aligned at Unitec.

5.8. Limitations

The case study focused upon a single budgetary cycle for a single organisation. Restricting the scope to a single site investigation of influences between the recently rolled out ESS and the budgetary controls within the 2012 cycle limited the research to a management accounting discipline. The research focus was therefore unable to address insights from possible alternative disciplines, such as from economic, financial accounting, human resource, information systems, marketing, policy, or strategic management bases. The impact upon non-ESS initiatives were also not monitored, nor the progression and consequence of Unitec’s ‘business as usual’ activities over time. Application of or implications for the beyond-budgeting principles (Appendix B) have also not been explored.

Findings from the New Zealand not-for-profit tertiary sector may be of limited application to other sectors and economic times or circumstances. Specifically, limits to government funding and targeted initiatives may have been particularly restrictive even within parts of the tertiary sector during the 2011-2012 period when considered over recent years, or when compared with similar initiatives developed and implemented within an alternative industry sector.

Experiences of the interviewees represented a range of interests across various stakeholder groups. However, having only 12 interviewees drawn from Unitec’s staff may have not revealed as much data as may have been drawn from a larger sample. Also, the selection of potential interviewees may have been flawed, as permission had to be obtained from Unitec to initially gain access to possible participants.

From a Foucauldian perspective, the research findings are suggestive of likely findings in other budgeting organisations, and at different times. However, using Foucauldian theorising is unlikely to produce generalisable outcomes (Kearins & Hooper, 2002), discussed in Section 3.3. Also, ideas surrounding the exercise of disciplinary power as represented by the budget process of one organisation might not be identified in the same way in other situations, in that each organisation’s culture, values, and context are unique.
This research explores the influences upon Unitec’s decision makers, and not other stakeholders. Various external factors, other than those covered by Section 4.2, are outside the scope of this study. This research has been limited to an in-depth case study of a single organisation whereas the full extent of external factors such as New Zealand environmental laws and regulations, environmental research and associated domains of and community influences, have not been covered by the study. While these decision makers would be expected to be mindful of other stakeholders, such as students, this research did not attempt test for any gaps between decision-makers’ views of Unitec’s stakeholders and the stakeholders’ actual views. The research consequently has not included data regarding the opinions and behaviours of students. And this could be considered to be a limitation.

A qualitative in-depth case study approach is considered useful for providing valuable data to critically reflect, from a Foucauldian perspective, upon various influences, and to address the questions for this research. While various limitations to any research exist, they also suggest opportunities for further research, as indicated below.

5.9. Implications for further research

The case-based research outcomes considered above suggest further possible investigations arising from alterations to the chosen methodology deployed here. For example, future research could consider: moving away from critical theory methodology, perhaps by adding further industry-wide perspectives; providing quantitative analysis from which to generalise the findings; or, adding a longitudinal study over say five years post ESS implementation.

Other qualitative methodologies, such as by taking a view drawn from stakeholder (Freeman, 1984; Schilling, 2000) or emancipation (Jacobs, 2011) or feminist (Waring, 1988) views, may provide further insights when considering funding priorities and related controls. Theoretical discussions about power relationships offer many opportunities with which to develop the research. Alternative theoretical perspectives may provide further insights (Jacobs, 2011). Organisational change theory, or an interpretive approach may suggest other avenues of investigation. Another perspective might be through Foucault’s governmentality ideas.

Budgeting process issues were indicated around the possible use of zero-based budgeting or approach to budgeting, tempered for complexity issues (Lindblom, 1959), and their relevance to ESS. These issues indicate further research avenues such as: would/could different budgetary models (beyond the incremental approach of Unitec) have been more supportive of
ESS as an organisational innovation?; would alternatives be capable of redressing the power that the incremental budgetary system seems to confer on the budget setters?; and, could the principles of Beyond Budgeting apply for ESS within a not-for-profit environment?

This case study’s core organisation operated within the not-for-profit sector; similar research could be replicated to other sectors. Further opportunities may include investigating influences through a comparative study across multiple organisations, with each at different stages of the organisational life-cycle. A future study might compare an organisation at an early adoption stage with one in a similar situation but having had a longer experience with environmental sustainability strategies. Conducting surveys and quantitative analysis may also provide further insights, which could then allow generalisations to be made.

Insights available from various stakeholders, such as customers/clients, also provide alternatives for future research. An example might be to enquire as to how stakeholders influence a gap between organisational rhetoric and reality. Such insights might prove particularly helpful in assessing the potential linkage between impression management and environmental sustainability initiatives where an organisational imperative of impressing stakeholders (Lodhia, et al, 2012) might be more immediate than the reality of environmental change. Examples of various levels and mechanisms for managing or appropriation of environmental issues, or ‘institutional appropriation’, were identified in Larrinaga-Gonzalez & Bebbington, 2001.

The current study may provide the foundation for a sequential annual review as to how the strategy might be developed over a number of years to allow for social change or changing stakeholder influences. Unitec’s success at various events could also suggest key turning points for strategy reviews. Perhaps a strategic management review rather than a financial budget focus may also offer further insights. Such a review might avoid a budget’s myopic constraints, and could be useful in exploring environmental sustainability imperatives and stakeholder thinking of a longer-term nature. Studies could benefit from considering how corporate systems inter-relate to environmental sustainability initiatives. Also, the analysis from this management accounting-based research may be transferrable or mirrored across other corporate functions, such as human resource management, information technology, engineering, or auditing.

Further research might also consider organisational strategies that would integrate sustainability thinking with accounting. Examples of such research could include the effects
of: placing an accounting representative within each project team whenever any new environmental sustainability initiative is first considered; aligning environmental-sustainability-related KPIs of budget setters with funded environmental sustainability projects; rotating accounting staff through environmental sustainability project teams; publicising environmental sustainability project outcomes in accounting terms, with regular updates across each project’s life; or considering non-work-related environmental activities of accountants, and how this might influence their work-based practices.

5.10. A final thought

This case research shows an organisation’s passion and purpose in giving priority through its strategy document for environmental sustainability. However, the details demonstrate struggles with the power of accounting when a select methodology for budgeting of limited funds takes predominance. These struggles challenge sustainability thinking and advocacy to prove organisational environmental sustainability achievements in accounting terms, and to thus become increasingly embedded within the budget process. Unless the power of internal accounting processes is harnessed for the benefit of environmental sustainability, organisations and those within them (including the accountants) are doomed to environmental unsustainability.
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Appendix A – Key Terms

The core intent of key terms is indicated below:

**Budget process or budgetary control process** covers the systems used to direct responsibility and monitor performance, in accordance with the organisation’s culture and values. The process incorporates formal and informal links and behaviours characterised within planning, organising, leading and controlling an organisation’s resources through explicit quantitative objectives, such as short-term profit or growth targets and reward mechanisms.

**Critical accounting** includes social philosophies affecting and evaluating both accounting theory and practice, challenging obstacles for change (Tinker, 2005).

**Critical theorising** uses critical social science (CSS) philosophies. CSS is a “critical process of inquiry that goes beyond surface illusions to uncover the real structures in the material world in order to help people change conditions and build a better world for themselves” (emphasis in original) (Neuman, 2000, p.76).

**Disciplinary technologies** indicate how Foucault rationalised normalising (or standardising) regimes which became institutionalised in order to exercise power. These regimes replaced the sovereign power of monarch or church, and affected groups and individuals (Kearins, 1996).

**Environmental responsibility** includes taking steps to reduce resource waste, recycle, use energy efficiently, encourage community pride in the physical environment, and promote healthy living (HNZC, 2009).

**Environmental sustainability** is aligned to that of the Brundtland Report with the ambition for sustainability as meeting the needs of the present world without compromising the ability of future generations to meet their own needs (refer Section 2.2.3). Interviewees’ definitions go beyond recognising needs and immediate choices presented to people, and indicate driving influences of knowledge and beliefs, for change to occur (refer Section 4.4.3).

**Environmental struggle** indicates the challenges to achieve environmental responsibility objectives, while balanced with the need to create value or profit (refer Section 2.2.1).
Foucauldian refers to the ideas of the twentieth century French critic and philosopher Michel Foucault, some of which he revised as his philosophies progressed.

Management control systems (MCS) include budgetary control processes, designed to aid decision making.

Power relations is a term used by Foucault, to indicate that power between people does not exist in isolation, but that power requires relationships between individuals or groups to exist (Foucault, 1980).

Stakeholders embrace the group of interested parties of an organisation who include employees, customers, suppliers, shareholders, investors, governments, communities and neighbours, consumers, and the ecological environment.
Appendix B – BBRT principles

Extract from de Waal (2005):

BBRT Principles removed due to copyright restrictions. The published article is available at DOI (Permanent URL): 10.1108/13683040510602885 or SCU Database (login required).
Dear Potential Research Participant,

This is an invitation for you to participate in a research project into the influences of the relationship between the financial budget process and environmental sustainability at Unitec. This research is being conducted for my Doctor of Business Administration degree with Southern Cross University, Lismore, NSW, Australia. Your employer has allowed me to ask you directly for your anonymous confidential involvement, subject to your written approval.

You will receive both a soft copy and hard copy of this invitation. An Information Sheet is attached, briefly indicating what the research is about, what your potential involvement will be, researcher responsibilities, potential participant responsibilities, contact details and other information.

If you decide to participate in the interview process, could you please advise your approval by completing the attached Consent Form, and emailing or posting it (in the attached envelope) to the researcher by Friday, 30 September 2011. (The consent form can be completed electronically, by double-clicking on the appropriate check box.) The interviews are intended to be conducted later in 2011, with transcriptions available to be reviewed and accuracy confirmed by you as soon as possible thereafter.

The research is qualitative in nature, and not intended to cause harm in any way. As an important part of this research, your potential involvement will be held in the strictest of confidence although there are no envisaged risks to participants.

If you have any further questions, please contact the researcher and/or supervisor by email.

Yours faithfully,

Mrs Wendy Taylor, Doctoral Candidate
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8 September 2011

Southern Cross University
Business School

INFORMATION SHEET

TOPIC: Environmental struggles: technologies to control budget setters

Introduction: This information sheet is for you to retain, and is to introduce you to my research project. My name is Wendy Taylor, and my topic is: Environmental struggles: technologies to control budget setters. This research forms part of my Doctor of Business Administration degree with Southern Cross University. Your employer has allowed me to invite your participation in the data gathering phase of my research. This invitation is open to any manager who has budgetary involvement, and includes those without a direct accounting function.

What is the research? This research seeks open, honest and confidential responses to identify themes arising from influences, beliefs and values affecting the budget processes at Unitec. The context relates to the most recent budget cycle, and how this impacts upon decision-making relating to Unitec’s environmental responsibility and sustainability objectives.

What is involved? For you, with your involvement in budgetary matters, this research will be in the form of an interview. You will be asked semi-structured questions focusing upon the following categories within the most recent budgetary cycle: planning, controlling, co-ordinating, motivating, and evaluating. It is intended there will be a minimum of one interview per selected staff member, with an option for follow-up if requested by the staff member after a transcript of the initial interview is provided to him/her.

My researcher responsibilities to participants: Participant privacy and confidentiality will be protected. Your participation, if forthcoming, will be held in the highest of confidences, with any identification of responses remaining anonymous. Ideally, I would like to tape record (only after participant approval) interviews and take notes, in order to produce an accurate transcript. Interviews would be held at the most convenient workplace location and time for both participant and Unitec. Interview transcripts will be provided to each participant in a timely manner, for review by the participant, with the option to follow-up if desired. Again, any responses would be held in complete confidence and their storage will be maintained under conditions mandated by the Ethics Approval, details of which are noted below.

Your participant responsibilities for this research: Participants are sought to provide open and honest responses to the semi-structured interview questions. The questions at the initial interview broadly cover your view of the following:

Introduction and background
Overview of the budgeting process at Unitec
Involvement within the budget process (planning, organising, co-ordination, motivation, evaluation)
Sustainability and your objectives
Any other points

Participation remains voluntary, and may be revoked at any time throughout the research process. Should participants choose to withdraw, they should inform the researcher of their intentions as soon as possible. The initial interview is estimated to take 30-60 minutes.

**Research publications:** The outcomes of this research are to be included in a thesis, in the form of evidential indicators of trends or reflections. Also, outcomes may be published in a peer-reviewed journal and presented at conferences. All documentation and records for University research must be retained and stored safely in a secure location for 7 years from date of publication.

**Participant’s Consent:** Potential participants are asked to complete, sign and return the attached consent form. (A consent form and return self-addressed envelope are attached.) After the consent form is received, the researcher will make direct contact with participants to arrange an interview meeting.

**Further Inquiries and Contact Details:** Participants can make further enquiries at any time to:
Researcher: Wendy Taylor, Doctoral Candidate (based in Auckland, NZ)
Email: w.taylor.14@scu.edu.au
Supervisor: Dr Mark Christensen, Associate Dean, International
Email: mchriste@scu.edu.au

**Feedback:** The published thesis will be held at the SCU Library at some later stage. Unitec will be provided with a copy of the research findings, which is expected to be available to participants. Subject to consent of the organisation, participants interviewed will be provided also with an executive summary of the findings. Contact details from signed consent forms will be used for this feedback.

**University approval:** This research has been approved by the Human Research Ethics Committee at Southern Cross University. The approval number is ECN-11-052 (dated 15 March 2011).

**Concerns or complaints:** If any participant has at any time concerns regarding ethical conduct of this research or the researcher, he/she should write to:
- The Ethics Complaints Officer
  Southern Cross University
  PO Box 157
  Lismore NSW 2480
  AUSTRALIA
  Email: ethics.lismore@scu.edu.au

All information is confidential and will be handled as soon as possible.
8 September 2011

CONSENT FORM

Reminder: you should return the Consent Form to the researcher, but keep the Information Sheet for your records

Title of research project:
Environmental struggles: technologies to control budget setters

Name of researcher: Wendy Taylor

Name of Supervisor (if applicable): Dr Mark Christensen

(Contact details of the researcher and the supervisor are contained in the information sheet about this research)

NOTE: This consent form will remain with the Southern Cross University researcher for their records.

Tick the box that applies, sign and date and give to the researcher

I agree to take part in the Southern Cross University research project specified above. Yes ☐ No ☐

I have been provided with information at my level of comprehension about the purpose, methods, demands, risks, inconveniences and possible outcomes of this research, including any likelihood and form of publication of results. Yes ☐ No ☐

I agree to be interviewed by the researcher Yes ☐ No ☐

I agree to allow the interview to be audio-taped and notes to be taken Yes ☐ No ☐

I agree to make myself available for further interview if required Yes ☐ No ☐

I agree to complete questionnaires asking me semi-structured questions about my involvement with the most recent budget cycle at Unitec. Yes ☐ No ☐

I understand that my participation is voluntary Yes ☐ No ☐

I understand that I can choose not to participate in part or all of this research at any time, without negative consequence to me Yes ☐ No ☐
I understand that any information that may identify me, will be de-identified at the time of analysis of any data. Therefore, any information that I have provided cannot be linked to me (Privacy Act 1988 Cth) 

Yes □  No □

I understand that neither my name nor any identifying information will be disclosed or published 

Yes □  No □

I understand that all information gathered in this research is confidential. It will be kept securely and confidentially for 7 years at the University 

Yes □  No □

I am aware that I can contact the supervisor or researcher at any time with any queries 

Yes □  No □

I understand that the ethical aspects of this research have been approved by the SCU Human Research Ethics Committee 

Yes □  No □

If I have concerns about the ethical conduct of this research, I understand that I can contact the SCU Ethics Complaints Officer 

Yes □  No □

Participant name:

Participant signature:

Date:

☐ Please tick this box and provide your email address or mail address (confidential) below if you wish to receive a summary of the results:

Email:

________________________________________________________________

Mailing address:

________________________________________________________________
Appendix D – Interview questions

SEMI-STRUCTURED QUESTIONNAIRE

TOPIC: Environmental struggles: technologies to control budget setters

Participant Code: 
Date, time, location: 
Confirm consent form still valid? Yes / No

A semi-structured questionnaire will be used at the initial interview. Broadly, questions will be considered in the following headings, in the context of the most recent budget cycle:

• Introduction and background
  o Your role currently and previously (including pre-Unitec)
  o Views about environmental sustainability
  o Contribution towards Unitec’s sustainability objectives
  o Influences of Unitec’s sustainability objectives (incl. values, culture)

• Overview of the budget process at Unitec
  o How formal is the process?
  o Who is involved, and in what capacity (formally, informally)?
  o What is your role in the budget process?
  o What are your feelings about the budgetary process?
  o What changes would you make if you could?

• Involvement within the budgeting process
  o Role in influencing upon / by environmental sustainability objectives in each phase of:
    ▪ Planning
    ▪ Controlling
    ▪ Co-ordinating
    ▪ Motivating
    ▪ Evaluating

• Sustainability and your objectives
  o How are your goals at Unitec determined?
  o How is the level of achievement of these goals measured?
  o Are Unitec’s sustainability objectives an impediment or facilitator to achieve your goals?
  o Instances where the budget has reinforced or detracted from sustainability programmes / activities?
  o What changes would you make if you could?

• Any other points (people to be spoken to, other supporting documents, any other matters we should have discussed?)

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Appendix E – Unitec’s Council duties

Functions and duties of Unitec’s Council are established by the Education Act 1989 ("the Act"). Section 180 states functions and responsibilities require the Council (Unitec, 2012a, p.18):

a) “to appoint a chief executive in accordance with the State Sector Act 1988, and to monitor and evaluate his or her performance;

b) to prepare and submit a proposed plan if the institution is seeking funding under a funding mechanism that provides for funding via plans;

c) if the institution has a plan:
   i) to ensure that the institution is managed in accordance with that plan; and
   ii) to determine policies to implement that plan;

d) to determine, subject to the State Sector Act 1988, the policies of the institution in relation to the management of its affairs;

e) to undertake planning relating to the institution’s long-term strategic direction.”

Section 181 of the Act specifies the Council’s duties (Unitec, 2012a, p.18), which are:

a) “to strive to ensure that the institution attains the highest standards of excellence in education, training and research;

b) to acknowledge the principles of the Treaty of Waitangi;

c) to encourage the greatest possible participation by the communities served by the institution so as to maximise the educational potential of all members of those communities with particular emphasis on groups in those communities that are under-represented among the students of the institution;

d) to ensure that the institution does not discriminate unfairly against any person;

e) to ensure that the institution operates in a financially responsible manner that ensures the efficient use of resources and maintains the institution’s long-term viability;

f) to ensure that proper standards of integrity, conduct and concern for: the public interest; and the wellbeing of students attending the institution are maintained.”
Appendix F – ‘Environmental sustainability’ word frequency table

The table below is an analysis of the word frequencies of what “environmental sustainability” means to all 12 interviewees (refer Section 4.4.3). This is an extract of the frequency table for words occurring more than once, and ignores frequently used prepositions (“of” and “to”) and determiners (such as “the”, “that”, “a”). The total word count is 315, with 103 words occurring just once.

For the purposes of this table, various root words are combined to help focusing upon core intent, these being (in alphabetical order): “compromise” (with “compromises”), “experience” (with “experienced”), “get” (with “got”), “I” (with “I’m”), “life” (with “live”), “need” (with “needing” and “needed”), “recycling” (with “reused”), “sustainable” (with “sustainability”), “things” (with “thing”), “think” (with “thinking”), and “way” (with “ways”).

<table>
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<th>Frequency (Count)</th>
<th>Word</th>
<th>Frequency (Count)</th>
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