DEVELOPING A CONCEPTUAL FRAMEWORK FOR THE REDUCTION OF GREENWASH IN ENVIRONMENTALLY PROACTIVE ORGANISATIONS

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Abstract

In what is essentially a policy-relevant thesis, this study concerns the process of developing a conceptual framework for the reduction of greenwash in the greening of environmentally proactive organisations.

The subject is approached by examining the development of green expressions in a range of business organisations. These are green strategies carried out within, or external to, the organisation. The purpose of this approach was to examine enabling and resisting forces for environmental policy implementation and, in so doing, assist management in the understanding of how green strategies enable or inhibit the development of greenwash in an organisational greening process.

As part of this investigation, a more precise understanding of the term 'greenwash' was facilitated. In this context, four research questions were generated from the literature review to assist in the understanding of organisational greening. The first question investigated the ways in which organisations seek to express a green image. This assisted in more meaningfully circumscribing green expressions in the context of the study. The second research question focused on how organisations are differentiated, based on the extent and type of their green expressions. This gave depth to the issue of green expressions enabling an understanding of which green expressions helped define organisational type with respect to the greening process. The third research question examined the issue of how green processes and actions are supported throughout the organisation by policy and practice. The research data helped to highlight the importance of communication and leadership or knowledge transfer issues. The final research question related green expressions and performance derived from them.

An appropriate method to gain traction over these questions, which were, in turn, expressed as propositions, was to carry out in-depth, semi-structured interviews with two participants from ten different organisations at the strategic level and across a range of market sectors.

The key findings suggested that an organisation's architecture or infrastructure can be a key facilitator or inhibitor of green strategy development. In this context, managers can have a greater incentive to balance internal and external green expressions to avoid a greenwashing charge. Leadership, through greening champions, specifically individuals in very senior positions, has a major influence on the pace of a greening process. Organisational structures and organisational size, in turn, can facilitate or impede communication flow and knowledge transfer on greening issues. Finally, the data suggested that internal green expressions can, over the longer-term, precipitate tangible performance benefits.

Dedication

During the period of this study two very close family members passed away, my mother (Phyllis, or mam) in February 2013 and quite suddenly, my nephew and Godson, Dan (Daniel Mason), just after Christmas 2011. We are a small but very close family and these two events had real influence on me regarding the completion of this work, particularly Dan's death. My heart will always go out to my sister and husband, Carol and Dave and Dan's brother and sister, Sam and Hannah, as well as Dan's fiancée Mary.

To my supportive immediate family, my sons Andrew and Michael and daughter Meghan, also Andrew's wife Monica and Meghan's husband, Stephen, a big thank you – you have all been an inspiration, especially Meghan and Stephen's recent addition to our family, my grandson Jude.

Finally to my wife of over thirty two years, Karen, what can I say - without your patience, support and love not only would this not have been possible, but life in general would be meaningless.

For mam and Dan….

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Naturally the last six years have been a learning process. A learning process for me about corporate environmentalism and trying to make sense and understand better the issues involved and attempt to make some meaningful contribution to the whole debate. Going through such a process over a relatively extensive time period for me also brought about change as a person, about the subject matter and also life in general.

My work colleague Ailsa (Ailsa Irwin) who has been with me for nearly twenty years or perhaps more, through many companies has always been supportive and assisted extensively with the layout and corrected my spelling, punctuation etc. I can't thank her enough for the support given.

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Chapter 1. Introduction

The purpose of the opening chapter is to explain the motivation for carrying out this study and to define the research problem, together with the study aim and objectives. The context, both political and business, is outlined as is the conceptual framework that is used as a study guide. Finally, the structure of the study is discussed at the end of the chapter, guiding the reader through the remainder of the thesis.

1.1 Motivation for this study

The inspiration for this thesis began some years ago when, as a senior manager in the construction products sector, I was faced with a significant challenge to make my organisation competitive in meeting the growing demand for greener products and systems. This business was operating in a market segment of almost perfect competition with numerous options for the potential buyer. Product manufacturers across all industries started to believe that there were significant opportunities for enhancing their business if they could differentiate their product positively with respect to the environment. This also applied to the organisation from a consumer's perspective. A product that could be reused, or a system process that saved energy or raw materials might impress upon the potential consumer that the manufacturing organisation was a responsible corporate citizen and as such, their merchandise was worthy of serious consideration.

It was my belief that many competitors in the construction product market sector were making questionable claims relating to the environmental credentials of their own products and also the "greenness" of their organisation. As most of these organisations had significant resources and operated globally, it was difficult to convince potential customers that my organisation's products and its internal processes had significantly less impact on the environment and therefore our products and systems were a more suitable alternative than the competition.

As a manager, I had a desire to do something about our lack of competitiveness, despite the combined effort of employees and management. While I had my own ideas and thoughts of how to increase competitiveness by "going green," I wanted to underpin

these and really engage with the academic literature on the subject to enable a deeper understanding of the issues concerned. I was eager to investigate and appreciate the feelings of other managers regarding these issues. I had anecdotal evidence from other managers, internally and externally to my own organisation that they found organisational greening processes complicated and difficult to understand.

I was trying to develop my organisation by embarking on a greening process that would result in enhanced performance, however I needed to be able to understand what role different parts of the organisation played in such a greening process. The different functions of an organisation might have different influence and this was of interest to me as a manager.

I considered our organisation to be proactive on environmental issues. By this it is meant that the organisation was environmentally orientated (Banerjee et al., 2003) or carrying out positive environmental activities or practices above and beyond merely complying with regulation.

The rigorous research criteria required of a DBA, together with a focus of making a contribution to management practice, were very significant factors in my decision to take this study to completion.

My inspiration has been to better understand the mechanism that is driving change. Change in culture of the individual but, importantly, change in business culture. To make sense of a phenomenon that has had a personal dramatic effect in business and continues to do so. From a business perspective, there can be no greater influence on strategic corporate decisions in the last fifty years than the issue of environmental impact and corporate sustainability. I have seen this issue from a corporate perspective as moving faster than academic research can cope, with many interesting strands and possibilities for research. I was a participant in this strategic corporate concept and as a researcher in this study, an observer.

1.2 The research problem and study objectives

Moving from a position of involvement as a business manager with an issue that would be worthy of rigorous academic study allowed personal distance from the issue. It was

necessary to view the issue as a potential subject of academic research and follow a recognised scholarly path towards a conclusion. The issue had to be clearly defined into a research problem and the aims and objectives of the work that followed clearly articulated. This section of the chapter addresses these requirements.

1.2.1 *Defining the research problem*

Organisations seemed to move along a greening path, however it appeared to be a complex issue for some managers expending time and energy. There appeared to be a lack of clarity regarding what was implied by a greening process and potential risks associated with overstating the organisation's green credentials. This was the managerial problem that formed the basis of this research. The risk of greenwashing.

Greenwashing in its loosest definition is defined as, *making greater claims than there is evidence to support* (Delmas and Burbano, 2011; Greer and Bruno, 1996; Parguel et al., 2011; Ramus and Montiel, 2005). In the context of this research, *greenwashing* suggests implementing or engaging in less green activities than formally stated by the organisation.

The research problem in this study therefore focused on organisational greening and the associated risk in organisations. It consisted of two issues;

Firstly, the issue of the greening process. Lack of knowledge for managers of what constitutes a greening process was part of the problem. This led to confusion and frustration among managers within organisations, resulting in the risk of the greening process becoming counter-productive.

Secondly, greenwashing can have a significant detrimental effect on corporate performance (Walker and Fan, 2012). Associated risk with a greening process is the development of greenwash. This problem, once exposed, can damage the reputation of organisations, resulting in lower performance.

1.2.2 *Aim and objectives of the study*

By addressing the above research problem, this thesis aims to assist management in organisations by improving their understanding of greening processes, thereby reducing the risk of greenwash development and improving performance.

There were two study objectives that the thesis expected to achieve, thus contributing to management practice.

1. Understanding what constitutes a greening process in organisations. (This objective would address the issue referred to in section 1.1 that managers, from personal experience, were unsure what constituted organisational greening and as a consequence found a greening process difficult to engage with. It would also inform with regard to the second objective below).

2. Understanding the development of greenwash in organisations and its potential effect on performance.

The objectives above, although relatively broad at this stage, were expected to be more clearly defined following the literature review and data collection phases of the study.

1.3 Study background - a political and business context

In this section, a background to the study is presented. Firstly, a political historical perspective is outlined to provide the reader with reasoning relating to the drivers of political change in respect of the environment. This attempts to highlight the key political events that shaped the evolution of environmental regulation (Vogel, 2003). The changing mood of the consumer due to scientific as well as political discourse through media channels (Hahnel et al., 2014), is also discussed.

Secondly, the impact these political changes had on the corporate world is considered. This provides a business context in which the research problem lies. The desire of the consumer to choose 'green' products and the efforts made by organisations to gain competitive advantage by addressing consumer needs is a historical perspective to the evolution of greenwash development.

1.3.1 *Political context of the study*

In the mid to late 1990s as an issue, climate change and the environment was gathering momentum (Jaffe et al., 1999). Prior to this, a World Commission on Environment and Development report (Brundtland, 1987) highlighted a positive outlook for mankind, provided action was taken to reverse the trend of ozone layer depletion caused by greenhouse gas emissions (GHGs). GHGs had been recognised by all major industrialised nations as almost certainly the major cause of global warming. These were the result of the human activities of burning of fossil fuels and deforestation. An additional environmental concern, although not part of the World Commission Report, was the production of goods, from automobiles to foodstuffs and their associated packaging, which excessively used non-recyclable or contaminating ingredients that depleted precious resources or polluted the environment. Although not directly aligned with GHG production, indirectly, an attempt to reduce the use of such raw materials could only benefit the environment.

Nations, including those of Europe, North America and Asia, as well as developing nations in Africa and South America, had come together as part of the *United Nations Framework Convention on Climate Change* (UNFCCC, 1997), adopted in 1997, building on earlier work by the UNFCCC (UNFCCC, 1992) accepted that changes had to be made to reduce GHG emissions. The goal of the UNFCCC was to achieve stabilisation of GHGs at a level that would prevent interference with the climate system (Wigley, et al., 1996). The objective was to reduce pollution by GHG emissions specifically from key industrialised countries and therefore depletion of the ozone layer was attributed to be the cause of a gradual but noticeable increase of the Earth's temperature, leading to very significant undesirable climate changes (Sands, 1992). Agreement was necessary between industrial nations to stabilise and eventually reverse this effect. While much discussion took place between nations under the auspices of the UNFCCC, a binding agreement was necessary (Breidenich, et al., 1998).

The Kyoto Protocol (UN, 1997) set binding targets for thirty seven industrialised nations of the world and the European Community to reduce GHG. It was described by French (1998, p. 239) as, "a radical commitment in protecting the environment for future generations".

The Kyoto Protocol is a linked agreement to the UNFCCC and as such, nations had to commit to change. Ratification of the Kyoto Protocol was, and still is, the commitment phase of each individual nation (UN, 2012). One notable exception to the list of countries who had ratified the Protocol was the United States, at that time the world's largest industrialised nation and responsible for the highest emission levels of GHG (Herzog and Drake, 1996; Lorenzoni, et al., 2006; Weber and Matthews, 2007). It is now widely accepted that China will become the largest emitter of GHG due to its rapid and continual industrial growth (Meng, et al., 2011; Zhang, 2011; Zhang and Zhong Xiang, 2011).

The Kyoto Protocol influenced not only nations but, importantly, citizens of these nations on the issues associated with GHG emissions and their effect on climate change. As nations signed up to make specific commitments in terms of the amount of GHG they would reduce, they had to ensure they drove regulation and practice to meet these targets. Across mature industrialised sectors of a developed economy in these nations, they were under pressure from the time of the adoption of the Kyoto Protocol, on 11th December 1997 to comply. The single biggest offending issue was the generation of GHG by burning of fossil fuels; coal, oil and gas in residential homes, factories and motor cars. (Greene, 2004; Perch-Nielsen, et al., 2010; Weber and Matthews, 2007; Wyman, et al., 2005).

Energy saving was deemed to assist in this process of reducing GHG (Lee et al., 2007) and could be practised by citizen and organisation alike and had the added significant advantage of cost saving to the citizen or organisation. It was an apparent win-win scenario. Regulation of other polluting activities drove reduction in GHG, for example, increasing standards in the construction industry of energy conservation (Henryson, et al., 2000; Laustsen, 2008) and air leakage in buildings (Chirarattananon and Taweekun, 2003; Okamoto, et al., 1995).

Conservation of the Earth's resources, be it mineral, animal or plant, had for many decades been an important issue for some (Gray, 1913; Van Hise, 1910). Ratification of the Kyoto Protocol by most of the industrialised nations provided a mechanism for the reduction of GHG, which would also reduce the harmful effect of climate change (Huggins, 2015; Zannakis, 2015).

Kyoto elevated concern for planet Earth in a very practical way, galvanising the arguments regarding conservation in general, therefore significantly legitimising the efforts of pressure groups (Hovi, et al., 2003; Kolk and Levy, 2001) and concerned individuals who had previously been marginalised. The environment in which humans exist: air, water or land, received a heightened sense of importance and continued media information flow triggered by the Kyoto Protocol created more and more awareness of how irresponsibly humans were treating their planet. Prior to this period, it was only radical pressure groups that drew attention to such issues, often challenged by governments seeking industrialised growth to create more financial wealth for their citizens.

Reducing environmental impact became an objective of governments around the world (Baron, 2003). There has since been a major convergence of pollution control, waste control and energy management in both the home and the workplace.

Governments began to remind their citizens through media campaigns of the need to conserve energy. They developed incentives for fossil fuel reduction, for example, by lowering tax rates on low emission vehicles.

1.3.2 *Business context of the study*

Business in industrialised nations reflected the changes referred to in section 1.3.1 and the term 'green' had and has since become overused, and in some cases, diluted in value depending on the context. Companies in most industrialised nations since Kyoto have been put under market pressure to be 'greener' than the competition (LeVan, 1995). If they were not doing something about it and successfully marketing their green credentials, they lost business to the market perceived greener competitor. They were practising on a non-sustainable basis.

The focus of environmental performance has since shifted from regulatory compliance and efficiency gains, to the marketing potential and profit growth potential of projecting a green image (Esty and Winston, 2009; Linder, 2010). There is a greater demand for greener, more environmentally friendly products by organisations (Hedstrom, et al., 2005) and domestic consumers (World Values Survey V105, 2008). These customers, as citizens of the world, have increasingly become aware of the seriousness of the

planet's position. Attitudes have changed (Kalafatis, et al., 1999; McDaniel and Rylander, 1993; Manaktola and Jauhari, 2007; Prakash, 2002). On the surface, organisations have changed significantly and in business life there has been a groundswell of opinion in this direction, with organisations tapping into this new desire of customers and consumers. In a marketing sense, some are meeting their customers' needs and requirements by presenting their products and services as more environmentally friendly or greener than the competition. Projecting a green image has significant potential benefit (Ottman, 1998).

Business customers and domestic consumers initially appeared to, and in some cases still do, accept without question the positive claims made by manufacturers and suppliers regarding a product, system or service and its greenness or environmental friendliness. There is inherent risk involved in labelling products as green or greener then others (Esty and Winston, 2009; Grant, 2009; Ottman, 1998) and there are pressure groups ready to police and expose those organisations making illegitimate green claims. The environmental activist Greenpeace (stopgreenwash.org) is an example. The potential exists for a charge of greenwashing to be levelled against organisations promoting greener products and services.

Industry has changed in a marketing sense to establish 'first mover advantage' and deliver 'greener' goods and services before the competition. R&D and production departments have been challenged to develop new formulations or adjust production processes, fearful of being left behind as competitive pressure mounted and market shares lost, unless organisations rapidly developed and brought to market a 'greener' option for their customers. (Clark, 2005; Green, et al., 1996; Vandermerwe and Oliff, 1990). Products were launched with questionable claims concerning their 'greenness'. (Baksi and Bose, 2007; Dahl, 2010; Spack, et al., 2012; Titterington et al., 1996). There were few reference points against which to analyse. Frameworks for assessing the environmental impact of a product, system or process were not yet established. Again 'green' sales claims were virtually unchallenged. If the label presented the product in a more environmentally friendly way, it improved its chances of being sold – fitting the mood of the consumer (Bostrom and Klintman, 2008; Pedersen, 2006). The industry was changing, but regulatory systems were traditionally based with a focus on pollution control in the manufacturing process, rather than the raw materials used or the embedded energy in a product, or the energy required to produce or transport the goods

to the point of sale (Kwerel, 1997; Milliman and Prince, 1998; Percival et al., 2009). There was little or no consideration of the supply chain, upstream (towards suppliers) or downstream (towards customers) and the effect on the organisation's environmental footprint. Upstream in the sense of the raw materials used; how green were these in terms of chemical makeup, or production process, or transport based on energy used or GHG emissions. Downstream, there was little environmental consideration given to the function or purpose of the product being produced.

The initial approach to the whole subject area was developed based on a personal dispute with competitors in the late 90s concerning the chemical makeup of respective materials. It was felt they were greenwashing in this respect.

There is a wider debate, however, when environmental downstream analysis of a product or outcome, in the case of a service, is being considered. While upstream, environmental analysis may be considered a more straightforward process based on raw materials, energy conservation (including logistical considerations) and emissions, downstream also looks at impact in an emotional sense of a product or service and how this affects organisational greening. In some respects, the organisation may have greater responsibilities downstream rather than upstream, with respect to a greening process. (Banerjee, 2008; Linnenluecke, et al., 2009; Montiel, 2008; van Marrewijk, 2003; van Marrewijk and Werre, 2003). This statement holds true when subject areas such as corporate social responsibility (CSR) or business ethics are considered to be external to the organisation and classified as predominantly downstream activities, as they are in this study.

Following the initial surge by organisations to make green claims, often falsely, environmental knowledge evolution would eventually question the authenticity of claims made with respect to products and services offered. Across many industries, audit and assurance processes began to be formulated to demonstrate the environmental benefits of products and services. An example of this would be the increasing use of life cycle analysis (LCA) as a tool to look at the overall environmental impact of a particular product or process (Graedel and Allenby, 2010; Heijungs, 2010; Muñoz-Ortiz, 2006). As the term suggests, it is a "cradle to grave" analysis of everything concerned with the product; from raw materials, through processing, transportation to end user location and finally disposal through recycling or otherwise (Fabrycky and

Blanchard, 1991; Guinee, et al., 2002; Rebitzer, et al., 2004). An organisation that manufactured products with a good LCA score appeared automatically to gain a reputation as a 'green' organisation. These approaches to corporate environmentalism or organisational greening appeared shallow, as they have a purely product focus rather than an organisational focus. However this was, in effect, the customer or consumer starting to try to make sense of manufacturer's claims. Also, it was perhaps necessary as part of the selection process, to be able to decide on one product or system above another, based on an evidence based selection process. Organisations began to attract a label of greenwashing if they were deemed in any way to be making false claims regarding their products or practices.

Greenwashing analysis was then in its infancy without a framework structure for proper analysis. There is indeed a place for product or system environmental analysis including the likes of LCA or others methods. It is important, however, that the perspective of a greened sustainable organisation should be attained by the culture and philosophies that the organisation adopts. The wider aspects of organisational greening incorporate private and public sector organisations in equal measure. Conceptual framework should acknowledge this and enable analysis of both.

Organisational greening today entails much more than pollution control and efficiency gains. These issues, while important, and the initial drivers of organisational change fuelled by governmental regulation and profit generation, are now only part of the process. These are the more readily identifiable aspects of greenness for some. There is no doubt that there are other supporting pillars of organisational greening without which an organisation cannot hope to prosper. These additional cornerstones of organisational greening relate to the more human issues of community involvement through CSR and business ethics. Real corporate sustainability is only achievable where a greening process takes all of these pillars or cornerstones into account and therefore takes a holistic approach during the greening process. It is a process, in itself, that is never-ending. For an organisation to recognise that sustainability is achievable through the adoption of a never-ending greening process, then these considerations must be at the heart of corporate belief.

Researchers continue to develop frameworks from which better understanding can take place. There are many dimensions to the practice of organisational greening. It is a

very complex issue and it is important that conceptual frameworks attempt to tackle the complexity of the issues involved and make sense that can add positively to management practice.

1.4 Initial conceptual framework as a study guide

Taking into account the research problem and the political and business management context within which it exists, a conceptualisation of the research problem is presented here as a means of finding a successful solution. There was a limited understanding at the beginning of the study about the literature to consult to develop thesis.

Taking greening activity and greenwash as starting points, an initial high level scanning of academic literature assisted in directing towards the appropriate areas of management research.

It became clear that corporate environmentalism, greenwash, environmental strategy and environmental performance were relevant to the study. However, some or all of these concepts, perhaps more as yet to be identified, could be involved in achieving the aim and objectives of the study. These concepts became a starting point, specifically corporate environmentalism, organisational greening and greenwash. Literature concerning these three areas was consulted to guide the study with the aim and objectives as stated in section 1.2.2.

As such, a tentative rudimentary initial conceptual framework was developed in order to guide the research process. This was beneficial to an inexperienced researcher, as indicated by Miles and Huberman (1994).

The initial conceptual framework was used to help identify other concepts and focus the study programme. It assisted in deciding what would be studied and what would not be studied in order to address the research problem. This is not to be confused with the new conceptual framework produced as the outcome of the thesis.

The initial conceptual framework is shown in Figure 1 below.

The framework elements at this stage concerned a literature review of the subject areas (corporate environmentalism, organisational greening and greenwash performance). Other literature emerged for consultation as the literature review progressed. (Figure 1 below and Chapter 2 – Literature Review provide greater detail).

Following the literature review, research questions were formed relating to gaps found in the literature which, if addressed, would improve understanding of the subject area. The next step was to select an appropriate methodology as a research design and then develop any propositions, if necessary. The methods utilised for any fieldwork were in harmony with the objectives of the study, to deepen our understanding. Once the fieldwork was completed, a discussion of the findings to make sense of these in light of current knowledge took place. Recommendations were then made in the conclusions that this additional knowledge suggested to benefit management practice.

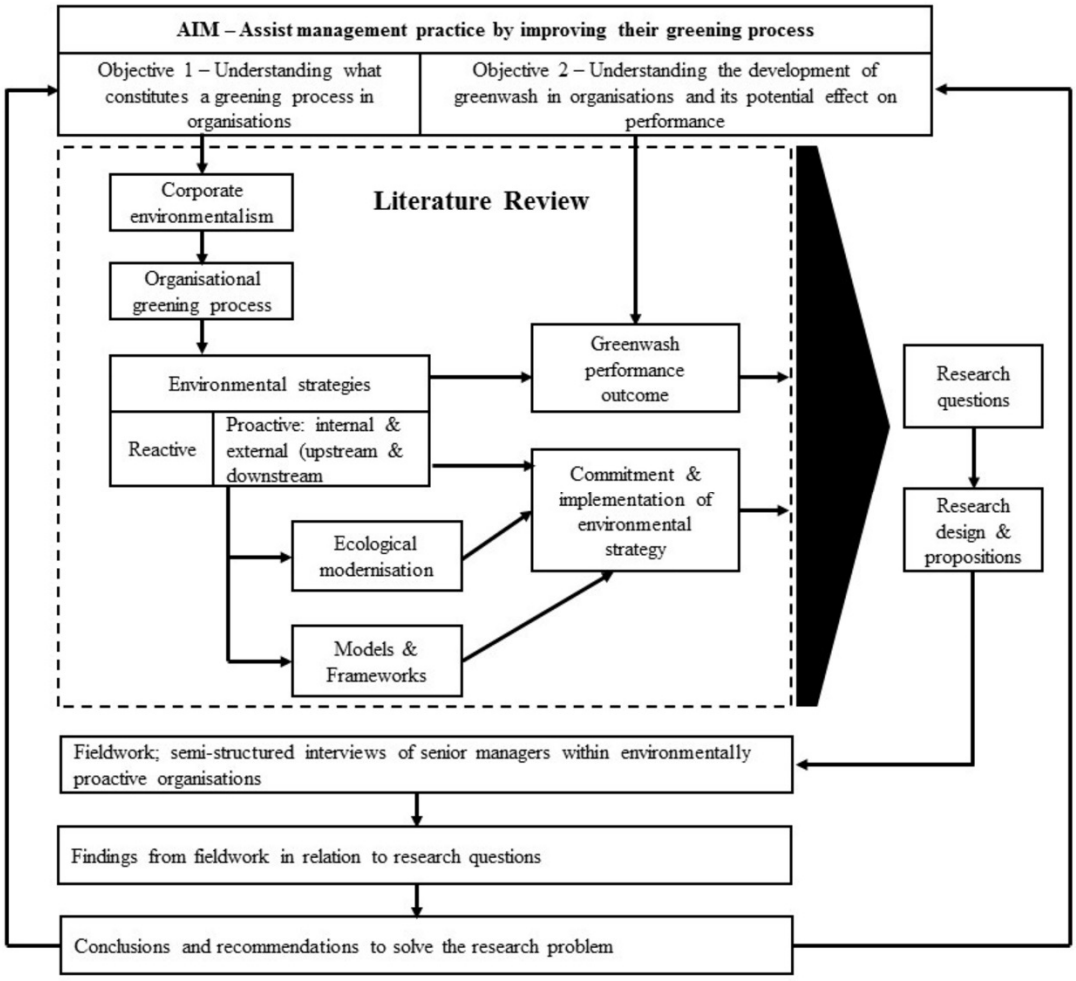


Figure 1. Rudimentary initial conceptual framework linking key concepts in the research

The framework bounds the study by identifying the areas of corporate environmentalism and greenwash development with which the research problem is associated. It also directs the study towards a literature review in the first stage that identifies various environmental strategies, including greening models and frameworks, as well as examining greenwash literature prior to exposing gaps in existing theory or practice knowledge. This guides the study in terms of focusing both the literature review and subsequent development of research question(s).

An understanding of potential environmental strategies that an organisation might adopt is an important part of addressing the research problem. An organisation's environmental orientation is also important. Some organisations have a compliance-only posture. They meet the required regulation in their sector but have no motivation to adopt proactive environmental strategies. Other organisations are highly motivated and committed to achieving corporate sustainability and improved performance outcomes by adopting proactive environmental strategies. These two positions represent both ends of a spectrum in relation to corporate greening.

Organisations at either end of this spectrum are clear in their objectives and appear to have either decided not to embark upon a process of organisational greening beyond compliance with regulation, or have already satisfactorily established greening practices in the view of their stakeholders.

The framework guides discussion on an organisational greening process that assists in determining a reactive or proactive posture. This, in turn, leads to the type of environmental strategies adopted.

Environmental strategies to which an organisation commits follow on from their level of motivation (Shrivastava, 1994). If this level of motivation is compliance-only, then reactive environmental strategies are those most likely adopted. Advanced levels of motivation regarding corporate greening lead organisations to commit to proactive environmental strategies. The initial conceptual framework indicates that this research focuses on organisations as they move along a greening path and tries to understand and inform managers involved in such a process. As well as bounding the study, the initial conceptual framework here outlines the focus areas for the literature review that follows in Chapter 2. Figure 1 above shows the literature areas examined. As the literature

review developed, other important topics emerged and relevant literature was examined accordingly. An example of this was literature concerning ecological environmentalism.

The research problem as described in section 1.2 has two elements; the first concerns the scope of greening activity and understanding what is meant by the term and secondly, the problem of the greening process actually developing greenwash in organisations. It was anticipated that the contribution of this thesis would be to gain a deeper understanding of the greening process and make recommendations for managers to reduce the potential for greenwash development.

The initial conceptual framework highlighted the relationship between corporate commitment to and implementation of a greening process. Environmental commitment concerns the scope and type of greening activity in which the organisation communicates its involvement. Implementation concerns the scope and type of greening activity that actually takes place. As greening activity can take place both internally and externally to the organisation, the initial conceptual framework guides the research process to explore these areas as part of the study. In this initial conceptual framework, external greening activity is split between upstream and downstream in anticipation of different phenomena existing and both areas are worthy of consideration separately.

The initial conceptual framework also draws attention to the concept of organisational performance. At the outset of this research process, organisational performance was perceived to be affected by two different issues. The development of greenwash was one way it might be affected and the other was directly as a result of the implementation of proactive environmental strategy. It was necessary therefore, that the initial conceptual framework reflected the possible effect on performance as a result of these concepts. This was anticipated to be an important potential outcome of the study, as better understanding could inform managerial practice. The initial conceptual framework guided the literature review with respect to key relationships that required explanation including; potential environmental strategies internal and external to the organisation, greenwash development and the effect of these phenomena on organisational performance.

1.5 Approach to addressing the research problem

The research problem identified required an *understanding* of what constitutes organisational greening and *understanding* the development and risk of greenwashing, therefore appreciating the difficulties managers have in managing a greening process.

The literature review provided both a historical and theoretical perspective to these issues and resulted in focussing the problem by identifying individual research questions that would require an appropriate methodology to answer. Chapter 2 – Literature review and Chapter 3 – Research design and methodology provide explanation of the aim and objectives and methodology adopted to complete the study. The approach adopted closely resembled a constructionist type, as defined by Easterby-Smith et al., (2008, p. 93) starting from a position where there is 'no absolute truth' to establish 'how claims and reality become constructed in everyday life'.

1.6 Structure of the thesis

In Figure 2 below, this structure of the thesis is graphically illustrated to guide the reader.

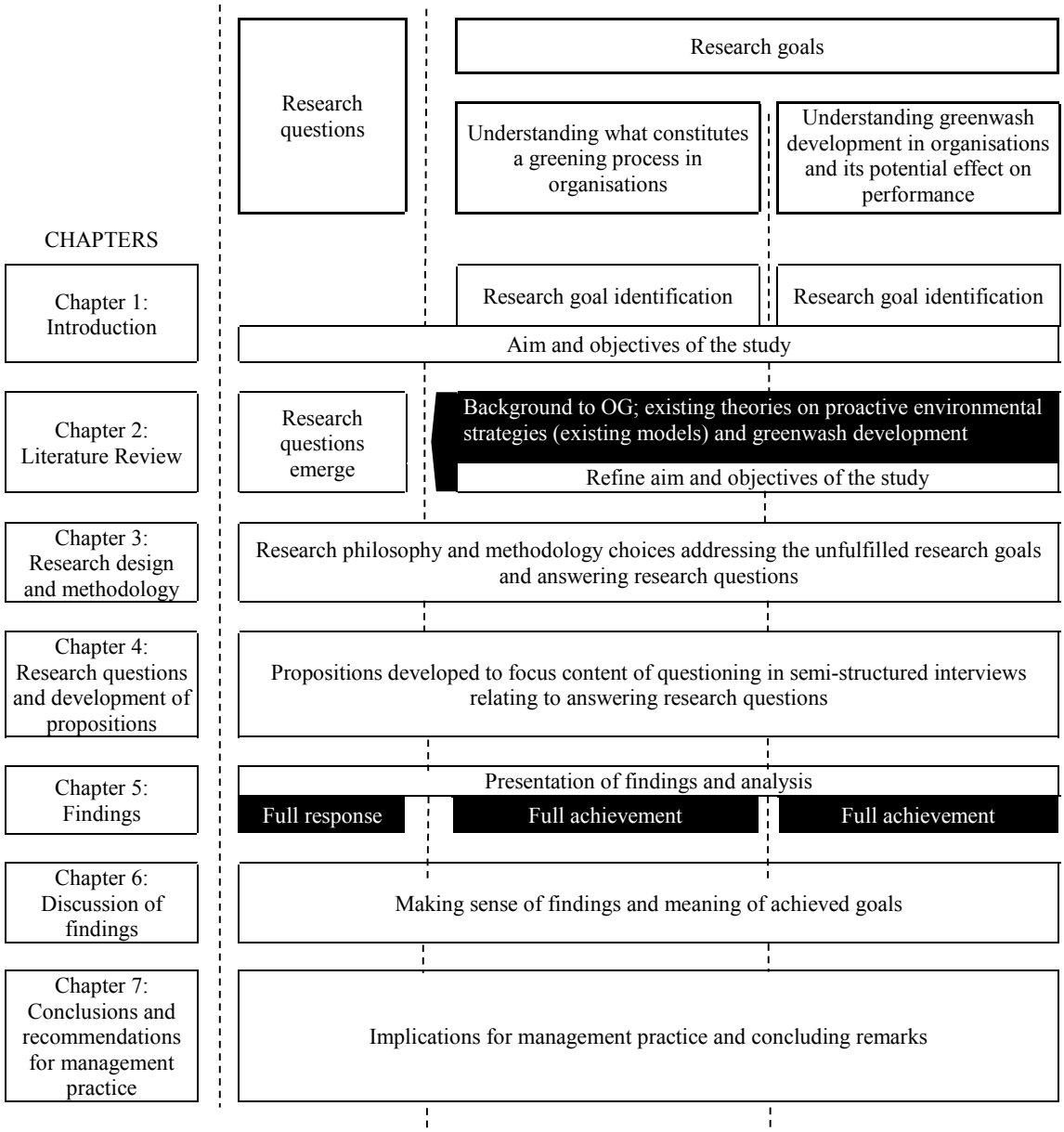


Figure 2. Structure of Thesis

Following this introductory chapter, Chapter 2 examines the relevant literature and is divided into six sections. The literature review is guided by the aforementioned initial conceptual framework discussed in section 1.4.

The first section provides an overview of corporate environmentalism and reviews literature related to the relationship between the political issues associated with climate change and how these have manifested and transformed into drivers of corporate environmentalism. Corporate sustainability and organisational greening are focus areas highlighting how management has adjusted, reflecting the changing paradigm. The second section reviews literature relating to environmental strategies developed and deployed by organisations. Discussion on ecological modernisation and existing

theoretical models and frameworks, in addition to environmental strategy and performance outcome, are reviewed. Section 3 examines literature relating to the development of greenwash. The chapter concludes with a presentation of the research questions in section 6 that emerge from the literature review.

Chapter 3 discusses the research design and methods chosen for the investigation. It explains why semi-structured interviews were chosen as the most appropriate method for data collection and how they allowed an insight into the belief of management within the sample organisations. It discusses the selection process for organisations from which the data would be taken and also the analytical procedures for assessment.

Chapter 4 discusses the development of propositions with a view to answering the research questions. It poses each proposition in turn and the rationale in linking each one to a research question(s).

Chapter 5 presents the findings based on analysis of the collected data and consolidates these into a series of tables. It presents the findings in two stages. Firstly, in the tabulated form of a matrix to demonstrate 'strength of feeling' relating to the each of the posed propositions and secondly, as tables of specific relevant findings from the research.

Chapter 6 discusses the findings with a view to making sense from an inductive interpretation of these.

Chapter 7 concludes the thesis by discussing the implications for management and by making recommendations for better management practice relating to organisational greening, based on the outcome from Chapter 6.

Chapter 2. Literature Review

2.0 Introduction

Following on from the first chapter and guided by the initial conceptual framework, the research proposal and the research objectives already established, this literature review attempts to explore and analyse previous literature relative to the thesis subject area.

After the opening introduction of this chapter, section 2.1 examines the origins of corporate environmentalism through changing management paradigms and includes an overview of corporate sustainability and organisational greening. In line with the specifics of the research problem in the following section (2.2), literature concerning environmental strategy is then examined to assist in understanding existing theory on the type of activities in a greening process. A focus on environmentally proactive strategy literature is taken. This involved an examination of literature concerning both internal and external greening activity therefore taking a 'holistic' approach, as suggested by Asif et al., (2008).

In section 2.3, environmental strategy is developed by discussing at length, greening process models and frameworks and these are classified according to their managerial focus. Relating back to the research problem and study objectives, literature concerning organisational performance as a result of environmental strategy is also discussed.

In section 2.4, a comprehensive review of proactive environmental strategy is developed by examining the important discourse of ecological modernisation (EM), reflecting another aspect of proactive strategy with relevance to an organisational greening debate.

Of emerging importance during the literature review were the concepts of commitment to, and implement of, a greening process. Literature relating to these areas was also examined and commented upon.

To address the second part of the research problem, theory concerning the development of greenwash and performance consequence is examined. This logically follows the above, as exploring literature concerning commitment and implementation of a greening

process should bring the reader to examine the resulting outcome of a differential between these concepts resulting in greenwashing.

The chapter concludes with a definition of the resulting research questions.

2.1 Management paradigm moves towards corporate environmentalism

Understanding the origins of corporate environmentalism by examining the historical motivation for organisations to change was a necessary platform from which to build understanding of more complex issues and how they have evolved. These issues include corporate sustainability and the methods or processes marshalled by the organisation to achieve this organisational greening. A review is given of the relevant literature concerning these issues. In the following subsections, a deeper examination of existing literature is undertaken, including definitions of corporate environmentalism, corporate sustainability and organisational or corporate greening in order to underpin the study platform.

2.1.1 *Corporate environmentalism*

Banerjee et al., (2003, p. 106) suggest that corporate environmentalism has two dimensions; environmental orientation and environmental strategy, leading to a definition of corporate environmentalism as "the recognition of the importance of environmental issues facing the firm and the integration of those issues into the firm's strategic plans." The linkage here between these dimensions and the research problem in the literature is provided by Entine (1995, p. 42) who suggests that "merely emphasising orientation without concern for strategic implementation might lead to a charge of greenwashing." From the existing literature, a historical perspective is discussed to attempt to understand the origins of the drivers of strategic change towards corporate environmentalism.

Industrial development of the last century is widely accepted to be partly responsible for, among other issues; ozone depletion, deforestation, climate change, global warming, air and water pollution. The dominant paradigm of the organisation for most of this period had been based on neoclassical economic theory; that is, to maximise

profit for shareholders. (Brenner and Cochrane, 1991; Key, 1999; Stormer, 2003; Stubbs and Cocklin, 2008).

Friedman (1970) was an advocate of such a philosophy. He argued, in an article for the New York Times Magazine, that organisations should focus almost exclusively on increasing shareholder value by boosting competitiveness and maximising profits. He further argued that the responsibility of corporate executives was to make as much money as possible while conforming to the basic rules of the society.

Industrial societies were primarily focused on the creation of wealth through technological expansion and to a lesser extent, societal or environmental welfare. Post-industrial society (mid 60s - mid 90s) revolved around the *risks* associated with the creation and distribution of wealth (Beck, 1992). The subsequent associated management paradigm necessary was therefore argued to be somewhat different for this era (Shrivastava, 1995). As a result, a corporate shift in focus from shareholder satisfaction to stakeholder satisfaction has, to a large extent, taken place. Some commentators argue that corporate management thinking has changed and a new paradigm has emerged which is sympathetic to, and in line with, corporate societal issues rather than purely profit maximisation. On the other hand, it is also argued that Milton Friedman's views openly expressed forty years ago may not be palatable for current society at large and would project the wrong corporate image today, although still the number one internal focus for some organisations.

Environmentalism and how it relates to business (corporate environmentalism) has emerged as a subject of vital importance in strategic decision making. Banerjee (2002, p. 177) provides a further explanation of corporate environmentalism as "the recognition and integration of environmental concerns into an organisation's decision-making process". The linkage between an organisation and its immediate environment or community reflects the shift from the paradigm focused on shareholder profit to one taking CSR and stakeholder concerns into account. The environment is perceived here as a stakeholder (Phillips and Reichart, 2000; Starik, 1995).

It is clear that the subject area of corporate environmentalism is complex, with multi-layers of determinants (Banerjee, 2001; Shrivastava, 1994) and while there is a general acceptance of the need for a management paradigm shift towards real sustainable

corporate practices for organisation survival, it is often difficult to identify, prioritise and carry out best practice for a particular organisation which can be dependent on organisation, size, industry, orientation and stakeholder pressure (Banerjee, 2001; Carter, et al., 2000; Eiadat, et al., 2008; Gonzalez-Benito, 2005; Klassen and Whybark, 1999).

The extant literature here confirms there is difficulty in developing best practice for a greening process, as it can be different from one organisation to another depending on the stated variables above. There is a research gap here on which this study informs by developing and answering a research question relating to different types of organisations and the most appropriate greening process. Answering a research question around this issue would in part address the first part of the research problem relating to what constitutes a greening process in organisations.

However, despite the obvious flaws in the neoclassical economic based model and irrespective of the increasingly positive corporate environmental rhetoric, it is sometimes difficult to observe whether a real paradigm shift has taken place (Ketola, 2009; Stubbs and Cocklin, 2008). There appears to be an underlying belief that profit maximising is still even today the dominant paradigm, although it is practised in a more covert nature at organisation level to reduce the risk of damaging corporate image. Ketola, (2009, p. 115) writes; "The modern paradigm… still prevails with its stubborn belief in neoclassical economics and its striving for cost-cutting eco/employee efficiency, both of which serve egoistic, management/owner-centred interests". Here Ketola referred to the 3Es being neoclassical economics, eco/employee efficiency and egoism. Of particular interest was this covert agenda of profit maximisation, sometimes under the guise of a societal caring organisation.

These views, expressed by Ketola (2009), were important to this study. They describe a situation where organisations may deliberately attempt to mislead by projecting a green image while maintaining a dominant focus on profit maximisation. This observation fits closely with the generally accepted definition of greenwashing. However Ketola (2009), Stubbs and Cocklin (2008) indicate, as stated above, that identifying whether a paradigm shift has taken place is difficult. It may be the case that organisations' intentions are being misinterpreted here and they give an impression of profit maximisation, as they are familiar with generating profit but unfamiliar with engaging

in a greening process that takes into account social and environmental issues. While Ketola (2009) may be accurate in his suggestions, this view is there to be challenged, as genuinely environmentally proactive organisations (EPOs) might exhibit these tendencies.

While corporate environmentalism therefore refers to a paradigm shift in strategic thinking, it is important to appreciate the purpose of corporate environmentalism. Stakeholders, particularly shareholder and employee stakeholders, must consider the longevity of the organisation and therefore this led the study to consider the corporate sustainability in the following section, 2.1.2.

2.1.2 *Corporate sustainability*

The accepted concept of sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43). Some regard this definition as meaningless, as it is at best vague, "… the concept of sustainability is a wishy-washy compromise to avoid the controversy between the two conflicting worldviews: sustainable development versus sustainable growth" (Ketola, 2009, p. 118).

There is a generally accepted view that corporations not governments will be in the front line in solving the problems created by pollution, carbon emissions and mineral depletion (Egri and Herman, 2000; Thompson et al., 2009). Global warming and climate change are very significant outcomes of these activities. However, corporate sustainability encompasses significantly more than the effects of climate change. It is about issues which affect the sustainability of the organisation, not just the planet (Gibson, 1999; Post et al., 1992). Bansal (2005, p. 458) stated, "Researchers see the natural environment as an important factor in determining organisational outcomes".

Corporate sustainability is influenced by the strength of belief in the notion of the triple bottom line, triple P or 3Ps; people, planet as well as profit (Elkington, 1997). This 3P view of corporate sustainability suggested that an organisation should be measured not only on the amount of profit it generates for shareholders, but also on the positive integration with employees, community (people) and on its impact on the environment (planet). Elkington (1997) supported a view here that an organisation should deliver

positive outcomes for its stakeholders, not just its shareholders. The environment here is considered a stakeholder. The organisation's ability to survive and prosper is intrinsically linked to morality and cannot be divorced from an attempt to take the right decisions for the planet, represented by processes which have low or no impact on climate change, the people, represented by developing strong CSR polices and by achieving fair and reasonable profits. (Etzion, 2007)

Sustainability takes a long term view covering generations in the future as well as the present, so this would imply that corporate sustainability relates to the organisation surviving over time. The natural environment and how it has been impacted by organisational activity is important and of great concern for some (Shrivastava, 1995). The ability of the organisation to survive and achieve a sustainable outlook can largely be dependent on its relationship with the natural environment, the social environment and its ability to grow, while improving its position in respect of their requirements (Aragon-Correa, 1998; Sharma and Starik, 2002).

The literature in this section concerning corporate sustainability has assisted in understanding the purpose of organisations that take the organisational greening path. The study, however, would benefit from understanding how organisational greening relates to corporate sustainability as that is where the specific aim and objectives of this thesis lie. The following section 2.1.3 attempts to bring some clarity to this subject.

2.1.3 *Organisational greening*

Organisational greening is embedding greening processes and actions into the strategic thinking and decision making of the organisation (Banerjee, 2002). In this study, green processes and green actions are referred to as green expressions. Green strategies therefore are effectively green expressions; processes and actions that an organisation or individuals within an organisation undertake, or could embark upon, to improve their environmental profile.

In general terms, all activity within the organisation either has a positive or negative effect on the organisation's sustainability potential. All actions taken by all employees in some way are either a benefit or hindrance to corporate sustainability. All positive non-regulatory driven acts therefore may be regarded as proactive. The identification of

these often small acts (green expressions) is important, as it adds to the environmental profile of the organisation. Eliminating negative acts and focussing on positive acts is a greening process that enhances corporate sustainability. Organisational greening can therefore lead to corporate sustainability. If decision making and resulting activity within the organisation by ALL employees is governed by a desire to do the right thing from an ethical, moral and environmental standpoint, then this is achieving corporate sustainability by embedding greening processes in decision making (Banerjee, 2002). While these are driving forces, if they do not make any linkage with revenue generation, they may be worthless. It is the organisation's ability to combine and integrate these drivers successfully, achieving profit generation as a result of this activity that will enhance corporate sustainability.

From the literature outlined in this section, organisational greening is not only concerned with a response to the political pressures exerted by governments to reduce greenhouse gas emissions, it is deeper than that, as organisations need to find motivation to go beyond regulatory control (planet consideration) by following a path suggested by Elkington (1997) incorporating people-based strategies, profit generation also the 3P approach. Ketola (2009) challenges the motivation of some organisations, almost suggesting that a 3P approach is idealistic and unrealistic in practice, as the overwhelming driving force in most organisations is still deep rooted in profit maximisation and hinting that some are disingenuous in their commitments relative to their practices. This clearly develops a potential for greenwashing (greenwashing literature will be discussed later in this chapter in section 2.4). This suggests there is a difference in their stated (committed) environmental strategic aim and their environmental strategic practice (implementation). An important consideration of the study therefore must be to understand environmental strategies. The following section (2.2) reviews literature in this area.

2.2 Environmental strategies in organisations

In this section of the literature review, a better understanding of environmental strategies to which organisations commit is gained by examination of associated literature.

Initially, reference is made to the influence of stakeholders in shaping environmental policy and therefore environmental strategy within organisations, followed by discussion on the differences that the literature suggests between environmentally reactive and proactive organisations and their strategic approach. This section of the literature review then focuses and provides an examination of the environmental strategies that proactive organisations may adopt, by firstly reviewing the literature on existing models and frameworks that profess to establish corporate environmentalism and then reviewing the important proactive strategy of EM.

Discussion on how environmental strategy relates to performance follows, before the section finishes in 2.2.6, with comment on commitment to and implementation of environmental strategies.

2.2.1 *Stakeholder influence on environmental proactive-ness*

Stakeholders have significant influence on an organisation's development of environmental policy and subsequent strategies that an organisation may follow. Buysse and Verbeke (2003) suggest that broadening the scope of stakeholders leads to increasing levels of environmental strategies. They also suggest in the same article that resourcing is a key factor and increased resource levels are required for higher levels of environmental proactive-ness.

In terms of having direct influence on management decision making and policy generation, however, shareholders as owners have the greatest influence. They can have an important influence on the strategies employed by the management team in developing and meeting the corporate environmental objectives (Henriques and Sadorsky, 1996; Sharma and Vredenburg, 1998; Wagner and Schaltegger, 2004). There are investors willing to invest in organisations with good environmental performance, as they see this as an indicator of potential sustainability of the organisation and suitable for long term investment. They wish to be associated with an organisation that has similar values and beliefs to their own as an individual investor. In part it may also be a moral issue. Furthermore, these investors are more likely to take an interest in the performance of their management team on corporate greening issues.

2.2.2 *Reactive and proactive organisations and resulting environmental strategies*

Organisations may, and do, take a number of different approaches in an attempt to achieve corporate sustainability. Organisations, in respect of their environmental orientation, are divided into reactive and proactive.

As technological advancement and expansion progressed, organisations' concerns for the environment were initially limited to meeting regulatory obligations, generally on pollution, set by governmental bodies – *reactive strategies*. (Aragon-Correa, et al., 2008).

Corporate sustainability, taking the 3Ps approach (Elkington, 1997), is strongly linked to knowing what is 'green' or 'greenness' and organisations integrating this knowledge into their business strategies. If organisations have an objective of future development by taking the people, planet and profit approach, then they are most likely to develop their business strategy from an environmental standpoint – *proactive strategies*. (Miller and Szekely, 1995).

The first part of the research problem in this study concerns lack of understanding of the greening process. It therefore follows as suggested above, that to take the 3P approach employing proactive strategies, managers must know what these are. In the context of this study, managers must appreciate what green expressions are and in practice how they can express these. Knowing what green expressions are (a research question could be beneficial) would aid significantly in our understanding of a greening process, especially if it was taking a holistic view by capturing internal and external greening activities. A research question with this broad perspective of corporate greening was required to ensure a comprehensive understanding of green expressions.

Environmental proactive strategies often used may be placed along a continuum ranging from those that are purely reactive strategies, designed to ensure that regulatory conditions and legal requirements are met, for example, dealing with pollution control in a production process, to more proactive strategies that go beyond merely meeting regulations. Proactive environmental strategies further along this continuum include; non-regulatory pollution and waste prevention measures (voluntary measures), energy conservation practice, product and process innovations that lead to efficiency gains,

reducing energy and waste and environmental leadership strategies where the product or process is viewed from a perspective that, at its core, attempts to reduce impact on the environment (Aragon-Correa, 1998; Buysse and Verbeke, 2003; Hart 1995; Roome, 1992; Sharma, 2000; Sharma and Vredenburg, 1998).

A comparison between reactive and proactive organisations is not limited to their approach to pollution control and efficiency, they may also be contrasted by their approach to the human issues, for example, incorporating CSR policies. Again, reactive organisations tend to do what is required to meet government regulation and little more, however proactive organisations may go well beyond this point, incorporating many voluntary strategies associated with their own staff through human resource initiatives, or externally in connection with community or charitable activity. (Gibson, 1999; Post et al., 1992).

2.2.3 *Existing models and frameworks of corporate greening and sustainability*

Business and its relationship with the natural environment is a very broad subject area with an increasing academic interest and therefore has many possibilities for research. Frameworks, assessment tools, determinants and conceptual models are plentiful, based on the result of previous research. Some of these deal with very specific points of this relationship. Others are wider in their attempt to capture more aspects of the subject.

Table 1 below lists various models, determinants and frameworks (tools) considered in the course of this literature review. These are divided into subsections, depending on the main objective of the model.

	Subsections	References	No. of models, frameworks, tools
Corporate Greening	Greening of organisation (8) Greening the supply chain (2) Production greening (2)	Banerjee, B. (2002) H'Mida, S & Lakhal, S.Y. (2007) Shrivastava, P. & Hart, S. (1992) Schaefer, A. & Harvey, B. (1998) Boiral, O. (2007) Henriques, I. & Sadorsky, P. (1996) Winn, M. & Angell, L. (2000) Hunt, C. & Auster, E. (1990) Roome, N. (1992) Wartick, S. and Cochran, P. (1985) Carroll, A. (1999) Parry, S. (2009)	12
Performance Based	Regulation (5) Product assessment/LCA (1) Competitive advantage (1)	Delmas M. and Blass, D. (2010) Assefa et al., (2007) Castro-Lacouture, D. et al., (2009) Kirchhoff, S. (2000) Rugman, A. & Verbeke, A. (1998) Kang et al., (2005) Christmann, P. and Taylor, G. (2001)	7
EMS	EMS (5)	Christmann, P. (2000), (2004) Castrogiovanni, G. (1991) Zollo, M. et al., (2013) Matthews, D. et al., (2004)	5
CSR	Policy Analysis (1) Integrating (1) CSR performance (1) Influencing (2)	Epstein, M. and Roy, M. (2001) Rivera, J. et al., (2009) Clarkson, M. (1995) Ketola, T. (2009) Hardjono, T. & Van Marrewijk, M. (2001)	5
Sustainability	Performance measurement (2) Transformation (1) Green product development (1) EM Analysis (2) Opportunity (1) Assessment tools (2) Sustainable strategy (1)	Mohan Das Ghandi et al., (2006) Ding, G. (2008) Griffiths, A. & Petrick, J. (2001) Hardjono, T. & de Klein, P. (2004) Hart, S. (1997) Stubbs, W. & Cocklin, C. (2008) van Marrewijk, M. (2003) Barrett, J. & Scott, A. (2001) Pepper, D. (1999) Thomas, V. & Graedel, T. (2003)	10

Table 1. Review of sustainability models and frameworks

The models reviewed in this study were chosen and categorised depending on their relevance and main theme. Some were discounted for this study as they take a very narrow, specific view.

Models that are heavily focused on performance, environmental management systems or CSR have been included, as these issues are directly relevant to the research problem. Models and frameworks have been categorised broadly in relation to the primary subject area covered by each tool, although there are often secondary or additional functions of the tool. The classification system allows these tools to naturally fall into one or more

of the following categories: corporate greening, performance based, environmental management systems, CSR and corporate sustainability. The models of most interest to this study are those that take a broader approach. These are categorised as *corporate greening models* and *corporate sustainability models.* In the following pages, significantly more discussion is based around these categories than *performance based models*, *environmental management system models* and *CSR models.* This is to allow greater discussion on models that focus on the process of greening and sustainability at the heart of the study issue. By taking this approach, the study begins to identify research additional gaps that form the basis of the research questions discussed later in the chapter.

2.2.3.1 *Corporate Greening Models*

These models tend to take a traditional view of corporate environmentalism. Defining 'what is green?' is a complex issue. Different environmental, ecological bodies and stakeholders will place greater emphasis on differing aspects of environmentalism. There are discontinuities between these stakeholders concerning the definition of greenness. Some place greater emphasis on different issues (Miller and Szekely, 1995). Miller and Szekely (1995) also suggested that there is a need for organisations to become greener. They said that by identifying and subsequently integrating the knowledge of 'what is green?' into their business strategies, organisations can become more sustainable. Integration is very much the theme of Banerjee's work, (Banerjee, 1998; 2001; 2002) in respect of green expressions into managerial strategic decision making.

Corporate greening was defined by Shrivastava (1992, p. 10) as an internal change process that infiltrates "the core of business values, products, technologies and systems." This definition focuses heavily on the concept of internal process (employee and production) and pre-manufacture supply chain. Other definitions suggest 'greened' organisations display a greater capability in managing their external relationships, specifically supply chain and stakeholder associations (Hart, 1995; Stead and Stead, 2000). While they deal with stakeholder issues, they are predominantly looking at community and employee relationships. However Roarty (1997), indicated that green organisations have to be green in all aspects of their business. The research gap identified here relates to a definition of 'greening' that is a continuous process post

manufacture also, whereby the outcome from the organisation enables additional environmental benefits further along the supply chain. The Roarty (1997) view is helpful in this research, as it attempts to look at every aspect of an organisation's activity and to map green process. Other green expressions (processes or actions) may be developed, e.g. the organisation may be part of an external association that supports green initiatives at industry or governmental level through environmental knowledge transfer in local corporate networks, or advising government on environmental regulation relating to its industry. Defining corporate greening, however, is difficult as any particular element of a process or outcome that relates positively to any of the accepted broad principals of greening, e.g. pollution control, energy conservation, stakeholder positivism, all constitute a degree of corporate greening.

Models in this group are generally looking at the greening process within an organisation (organisation level category) or in its immediate supply chain. Most models refer to a staged process and different tools identify different stages during the corporate greening process. Referring to section 2.2.2 of this literature review, classification of reactive and proactive strategies is generally used to distinguish between stages of greening (Henriques and Sadorsky, 1999; Hunt and Auster; Roome, 1992; Wartick and Cochran, 1985; 1990; Winn and Angell, 2000). These models are grouped together because they focus on a greening process primarily within the organisation and its immediate environment (supply chain). Models in this group do not deal completely with the deeper issue of sustainability. For this reason, models dealing more extensively with sustainability are categorised separately.

Winn and Angell (2000), identified four stages of corporate greening; deliberate reactive, unrealised, emergent active and deliberate proactive. The main emphasis is on the corporate social performance (CSP) aspects of corporate greening and looks at corporate social performance models. Clarkson (1995) described the work of Carroll (1979) and Wartick and Cochran (1985) in developing the reactive, defensive, accommodative and proactive (RDAP) scale as an important contribution in measuring social aspects of corporate greening. These classifications of corporate greening are split between references to the internal processes within the organisation and the output from 'greened' organisations. These broadly correspond to the earlier work of Auster, (1990); Carroll (1979); Cochran, (1985); Roome, (1992) and Wartick and Hunt.

Aragon-Correa (1998) provided a conceptual classification of organisations' approaches to the natural environment. Of these earlier models, Roome (1992) gave a comprehensive 5-stage process that takes a less ambiguous approach (non-compliance, compliance, compliance plus, commercial and environmental excellence, leading-edge). These terms are more appropriate and reflect a dynamic change in perception from earlier work, again as regulatory and stakeholder pressures increased. Schaefer and Harvey (1998) reviewed the greening model stages work by attempting to apply them to four UK water companies. They found difficulty in applying these models, principally the Hunt and Auster (1990) model, where they used the 5-stage approach with its eleven greenness indicators, split into commitment and implementation sections. This reflects the two major areas of corporate environmental literature (Winn and Angell, 2000), namely commitment and implementation.

In all cases, the position of any organisation with respect to its willingness to embark on a transformation greening process will be strongly linked to motivational factors (Bansal and Roth, 2000, p. 727). These motivational factors are described as, "competitiveness, legitimation and social responsibility". While the core of these arguments are still the bedrock of reasons behind an organisation's green transformation process and there are close similarities in any group of descriptions of reactive and proactive strategies or stages of greening, the academic literature has moved on from merely conceptualising, to empirically based research indicators of corporate greenness (Etzion, 2007; Haden, 2009; Henri and Journeault, 2008; Lee, 2007).

Henri and Journeault (2008) suggest the use of environmental performance indicators (EPIs) as measures of environmental performance. They justify the need for EPIs due to a continued increase in the number of regulatory laws and external reporting necessary and to some degree, a convergence of international measurement standards (ISO) related work. Although there has been limited research into the effectiveness of environmental standards (ISO 14001), there is scepticism relating to the usefulness of this prescriptive method of corporate greening (Boiral, 2007). Meyer and Rowan (1977) remark that conformance to standards dictated by the institutional environment are apparent and superficial. Greening assessment methods are fraught with difficulty. The various attempts at providing governmental environmental assessment of products and systems in the construction industry for example (generally regarded as one of the biggest industry polluters) are controversial at best (LEED in USA and BREEAM in

UK)[1]. However in context of organisation size, industry, country location and ownership type, EPIs can provide more directly comparable data for assessing greenness of different organisations.

Greening the supply chain has become a very significant and important organisational strategy for today's business in many sectors. Cai, et al., (2008) suggested that the institutional environment in which an organisation is located has significant impact as a driver of change. Lakhal and H'Mida (2007) used a comparative approach to establish best practice from which to apply to improve environmental performance practice across industry sectors. On the other hand, Ping and Zhang (2008) indicated that supply chain greening is a matter for all organisations involved in the chain and that there should be a strategic alliance between them and a commitment to sustainability, mirroring the economically derived partnership relationships relating to quality goals. In this study, the holistic view of a supply chain is important, as an organisation's position will generally mean that both downstream customers as well as upstream suppliers are part of this holistic view. What is happening to an organisation's products or services post manufacture from an environmental standpoint will be equally important in any overall sustainability index. Little attention in the extant literature is given to an organisation's environmental relationship with downstream events and the effect on the overall greening process of the organisation, yet this could be significant from a sustainability perspective. There is a research gap here that this study attempts to bridge by formulating a research question or questions related to capturing external downstream (output or post-production) effects on the greening process of the organisation.

Assessing or measuring corporate greening is a complex process while "theoretical conceptualization of corporate environmentalism is also mired in some confusion" (Banerjee, 2002, p. 177). This suggests that the level of corporate greening (environmentalism) is measured by the level of integration of environmental issues in strategic management decision making. Banerjee (2002) refers to an organisation's environmental orientation and environmental strategy focus themes as positions from which to measure integration.

[1] LEED is a US based programme for green building verification
BREAAM is a UK based design assessment method for sustainable buildings

Shrivastava and Hart (1995) were clear that organisational design must change to become more open and foster green issues. They provide a pragmatic approach by looking at changing the traditional 'smokestack' silo based thinking, to developing better internal communications between individuals and departments; designing cross functional teams with environmental core values. The extent to which an organisation has done, or is prepared to do this, will be a greening measure. There is a research gap here that is strongly linked with organisational design and whether greening is enabled or inhibited by different designs. This is a valued contribution, however it is more likely that organisations have established internal open systems for different reasons not associated with fostering environmentalism. These might be designed to gain competitive advantage. This approach would be on the periphery of the issue rather than at the heart of corporate environmentalism, as suggested by Shrivastava and Hart (1995).

2.2.3.2 *Performance based models*

In this group, the models and frameworks relate to issues of regulation, product assessment and LCA. There is a performance related criteria to all of them in the sense that they are often designed to enhance, develop or discover. An economic benefit or competitive advantage is derived from the associated tool. This range of models in the literature is quite specific in terms of regulation, pollution control and associated economic benefit and therefore focusses on financial performance. These models relate more to making a judgement on the assessment of performance and involve in some cases performance indicators.

Delmas and Blass (2010) for example, suggest that assessing environmental performance for some investors is a means of assessing financial performance. Their framework for assessment of environmental performance is designed to assist investors in making choices regarding which organisations to invest in. As indicated, it is a model essentially focussing on financial performance of organisations engaging in environmental strategies. The article relates the concept of good environmental performance with good management of the organisation in the eyes of the potential investor.

Castro-Lacouture et al., (2009) discuss the development of a model that optimises selecting green materials for a LEED based project that gives an optimum outcome (downstream effect) in terms of post-production environmental assessment of completed construction projects. It is proposed that such a model will benefit the environment by improving energy performance (cost benefit) and using greener materials in the process. Organisations utilising this, or similar models, will be creating a green effect or green expression simply by taking this approach and therefore this type of literature has relevance in this study.

Assefa et al., (2007, p. 1462) refer to "two cultures" in describing their "EcoEffect" environmental performance assessment methodology. One relates to a social science approach by assessing what employees think in the form of survey and interview regarding organisational environmental performance. The other relates to a more natural science-based analysis by measuring physical output of emissions, waste disposal and energy conservation. While the latter describes and has an economic assessment slant, the former tries to understand how performance improvement can take place by engaging directly with the people involved. This combination makes some sense, as it goes beyond merely linking performance with profit improvement and takes further steps towards improvement from a people and environment perspective in line with Elkington's 3P approach (Elkington, 1997).

Self-regulation as a means of environmental performance enhancement is described by Christmann and Taylor (2001) in a globalisation context, when foreign direct investment in developing countries by multi-national enterprises transfers advanced environmental technologies into that market. These 'advanced technologies' can range from pollution control measures to CSR activities, all improving the environmental performance and greening of the organisation locally and syncing a greening process with that of the parent organisation.

The environmental performance models and assessment methods analysed have value in this study as they provide a background understanding of how other researchers have approached the issue.

The research problem, however, relates to the development of greenwash and its effect on corporate performance. While greenwash can have an influence economically on an

organisation's performance, there are other factors such as staff morale, external reputation and stakeholder concern which can influence the development of greenwash and therefore require consideration. Having searched the extant literature, there is little guidance regarding the greenwash performance relationship concerning EPOs. Therefore the contribution of this research would benefit by focussing the study on EPOs only.

2.2.3.3 *Environmental management systems models*

There are a number of tools that focus on a more prescriptive approach for managers to deal with their corporate responsibilities towards the environment.

Castrogiovanni (1991, p. 542) in his study, suggests that the environment should have a narrower definition as the term is often "over abstracted." This would enable managers to focus in a specific problematic area of corporate greening with potentially improved outcomes. Matthews et al., (2004, p. 1928) suggest a five element approach to improving decision making within an EMS leading to improved performance. This tool has the benefit of linking the EMS by integration into the existing business strategy, demonstrating relevance of this greening process approach by embedding in the corporate strategy, as suggested by Banerjee (2002). A criticism might be that building the framework of a greening process around existing corporate strategy could lead to compromising the quality of the environmental approach, due to an unwillingness to alter existing corporate strategy. This might lead to a charge of a "bolt-on" approach to addressing environmental issues.

Christmann (2000) in her research, suggested that environmental management systems that focus on strategy designed to stimulate cost reduction and in parallel achieve better environmental protection, do not necessarily take advantage of the existing "resources and capabilities" (p. 663) of the firm. Taking a resource based view can have a significant influence on performance outcome. This EMS approach has relevance because it informs with regard to utilising existing assets and therefore potentially making better or additional use of existing resources. This is a greening approach or expression in itself and should be recognised as such.

As it is a complex subject area, the development of models, assessment tools and frameworks designed to assist the practising manager in better implementing corporate policy is often welcomed. Zollo et al., (2013) more recently focused the debate on the actual process of how organisations move along the path of economic sustainability and the complexity of this process. They confirm lack of research on the greening process "*we are still missing today a significant investment in knowledge and research development on questions related to the processes through which firms actually navigate the multiple change requirements* to *identify, experiment with, and eventually realize more sustainable models of the enterprise*" (p. 242).

EMS tools listed here are generally ones that result in an economic benefit derived from an efficiency gain or cost advantage and therefore could have been considered as a subset of *performance based* models. They are perceived from the manager's standpoint however and are implemented by management within the organisation using a systems approach and are therefore classified as EMS based tools in this study. There is relevance in this study as they generally take a systems approach looking at the whole organisation and therefore they are separately classified here.

2.2.3.4 *CSR models*

CSR is a major subject area of corporate environmentalism. Models in this area relate to the view of corporate environmentalism encompassing social stakeholder aspects of business activity. There are models and frameworks included which analyse different aspects of CSR performance (Clarkson, 1995; Epstein and Roy, 2001) as well as identifying the different stakeholder groups and their relevance to the corporate entity. These models highlighted the importance of stakeholders and their influence in CSR policy designed to improve performance. Clarkson (1995), in developing an analytic tool for evaluating CSP, concluded that organisations manage relations with stakeholders, not society at large and it is important to be aware of specific stakeholder issues, not just societal issues in development of CSR policy.

Epstein and Roy (2001, p. 585) confirm that senior managers are aware of the necessity of CSR strategies as part of a corporate greening process, however they have difficulty in the implementation phases of such strategies. The literature, therefore, confirms the relevance of part of this study's research problem, that managers find it difficult to

implement a greening process. Their framework identifies the drivers of CSP performance and the influence of this performance on the organisation's stakeholders. This provides an integrated approach to routine decision making.

A better framework for CSR policy analysis is derived from one model (Rivera et al., 2009). Another model took a different view, a more holistic approach of CSR (Ketola, 2009). In this instance, the question is set on whether organisations should take a "revolutionary (one leap)" (p. 114) step towards sustainability or an "evolutionary (step-by-step)" (p. 114) approach. An approach based on a five-step process is described with the benefit of being able to measure corporate responsibility level and achieve sustainability most efficiently. Again, there is integration suggested in this model by following a five-step process with regard to environmental, social and economic strategies. These models were of benefit in addressing the process of organisational greening from the CSR perspective and in most cases established the important relationship that stakeholders play in the development of CSR policy.

The European Business Excellence Model (EFQM) referred to by Hardjono and van Marrewijk (2001) points again to an integrated management approach to achieve CSR, among other objectives, in achieving overall corporate sustainability. The EFQM is a series of complementary models and frameworks described on their website as follows; "*the EFQM Excellence Model provides an holistic view of the organisation and it can be used to determine how these different methods fit together and complement each other." (EFQM.org website April 2015)*. This framework has evolved over many years into a comprehensive array of tools to assist organisations in their sustainability objectives. Hardjono and van Marrewijk (2001, p. 223) suggested that organisational growth and improvement was dependent on also taking account of "its social competences, ethical responsibilities and environmental contributions." The ethical element referred to in this contribution adds another dimension in light of the financial crisis of 2007 onwards and changes that have occurred since in the ability of organisations to survive, let alone grow. Other CSR based models listed at this stage in the study were omitted from further consideration as they did not have relevance to the study objectives.

2.2.3.5 *Corporate Sustainability models*

This is the final section in the classification of existing tools relating to corporate environmentalism and its derivatives. Sustainability here is treated as the output of applying "greening practices" throughout the organisation's environment, from internal processes, through supply chain issues and covering external stakeholder consideration. Sustainability may not be achieved unless all these differing strands of corporate greening are addressed. Models dealing with sustainability take this wider overview of the collective greening process. In this classification section, the European Corporate Sustainability Framework (ECSF) is included (Hardjono and De Klein, 2004). There are models other than the ECSF that deal with transformation from non-sustainable to sustainable organisation. Strategies are covered that highlighted the benefits that sustainability offered organisations after transformation. An analytical framework dealing with sustainable consumption in relation to ecological materials and models dealing with sustainability and its relationship with performance are covered. Models relating to ecological modernisation and sustainability are also covered here, as well as an alternative model to EM and sustainability.

There are numerous models included within the ECSF that are purposely designed to assist organisations in moving towards being a more sustainable entity. The scope of models within the ECSF is concerned with corporate economic sustainability and CSR at organisation and societal level, rather than elemental organisation greening practices. These models have a basis that organisations depend on people, without whom they would not exist. They are therefore 'open' systems, allowing communication and other process to take place between people. Survival is the key instinct among people and if people are given a framework that fosters openness, better creativity and innovation will be forthcoming in solving their problems. In the ECSF, a series of different models are joined together to form a more holistic approach. These are Emergent Cyclical Levels of Existence Theory (ECLET), (Graves, 1970), Four Phases Model (Hardjono and De Klein, 2004), Business Balanced Scorecard (Kaplan and Norton, 1996), SqEME Methodology (Van Velzen, et al., 2002) and the EFQM Business Excellence Model. The initial approach of the ECSF was based on quality management and better statistical control of production, leading to efficiency, cost saving and increased levels of customer satisfaction. Industrial leaders were very much behind the ECSF in the sense that the *Club of Rome* recognised in the early 1970s that limitless growth was

unsustainable. More socially-based strategies were necessary if sustainability was to be achieved. The models are proven within some of Europe's major organisations as pilot studies, but not extensively so (Hardjono and de Klein, 2004).

A criticism of ECSF sustainability models might be their applicability to larger organisations only. They were conceived with major corporations in mind. They do not necessarily look at the divergence between corporate policy and 'actual practice' at middle management level within the organisation. Bringing these models together presents some difficulty in understanding what is actually being commented on. The function was to assist organisations develop better environmental practice by taking a phased approach to implementation. Sustainability concepts are sometimes difficult for all levels in an organisation to grasp.

Mohan Das Ghandi, et al., (2006) separately used Michael Porter's five forces framework on business strategy (Porter, 1980) as the basis of a suggested 'four forces model' which links unsustainable development to sustainable development by the factors affecting the greening process, namely; regulatory force, customer force, community force and financial benefit. This framework reflects, in simple terms, the key drivers of a greening process that may lead to sustainable development. As a criticism, there is no weighting or priority given to one force over another, which may prove problematic when considering compliance (reactive forces) over innovative and proactive forces. Compliance should be taken for granted otherwise the organisation concerned is running the risk of not meeting government regulations. Real focus, scrutiny and priority should be in the proactive arena as here, innovative practice is often to be found.

EM is discussed in this part of the section with reference to existing models and frameworks only. In the following section (2.2.4) in-depth discussion is provided on the important strategic approach on EM. Sustainability, from an EM perspective, takes a longer-term and a more strategic view than the neoclassical perspective (Stubbs and Cocklin, 2008).

Gladwin, et al., (1995) commented on EM as moving from internal greening processes, e.g. pollution control, to sustainable outcomes for ecosystems at large. At least the development, it is argued, will be at worst neutral in terms of its effect on the

environment. Stubbs and Cocklin (2008) proposed a sustainability business model (SBM) that has at its centre, development of internal organisational capabilities based on key stakeholders, principally employees. Communication with stakeholders through increased levels of reporting and focuses on the triple bottom line, TBL, (profit, people and planet) as part of reporting structures is important, according to their studies. However Stubbs and Cocklin (2008) have taken a very narrow approach with their two case studies that makes generalisation difficult, despite some interesting concepts developed by the model, specifically with regard to retaining and reinvesting local capital as a necessity to SBM. Pepper (1999, p. 1) contrasted EM sustainability with a more radical 'ideal model' suggested previously by Baker et al., (1997) of sustainable development. They suggested that EM fits well with capitalist ideology (Hajer, 1996) and referred to it as 'green capitalism' (2009, p. 4). They also referred to the EU's Fifth Environmental Action Programme (5EAP). Pepper argued that EM based governmental policy at national or European level has a detrimental effect for sustainability in the smaller countries at the outer edges of the continent. He outlined economic, social/political and nature-orientated policies. This, it is argued, would generate and stimulate local economies.

Other approaches to sustainability assessment are provided by Barrett and Scott (2001); Griffiths and Petrick, (2001); Hart (1997); Thomas and Graedel (2003).

Hart (1997, p. 66) wrote, "Those who think that sustainability is only a matter of pollution control are missing the big picture." The root of the problem, according to Hart, is population growth and rapid economic development. These issues are outside the scope of corporate responsibility. Hart went further to say that only corporations have the resources, global reach, technology and importantly, motivation, to achieve sustainability. This interesting viewpoint decouples governmental involvement in sustainable development, apart from creating the right 'environment' that allows corporations the opportunity to achieve sustainability. Hart took the opportunistic perspective that a goal of achieving sustainability presents corporations with innovative motivation. This is a result of increasing requirement for better environmental performance for existing and new products, technologies, systems and services. Hart indicated that it should be corporations that should lead the way, not by marketing, but by educating the developing world to use new environmentally conscious technologies and products. An organisation's green credentials will be measured by its ability to do

so. Banerjee's work (Banerjee, 2002; Banerjee, et al., 2003) contrasted with this viewpoint, as it advocated that functional strategies based around marketing are ways in which organisations can introduce innovation into environmentalism.

Barrett and Scott (2001) indicated that attaining corporate sustainability means listing and reporting all impacts on the environment. For any organisation, even the most environmentally proactive, it is difficult to be completely aware of all their environmental impacts let alone to the exact extent of any impact. What reference scale should be used to measure impact? Barrett and Scott refined earlier assessment tools based on measuring all impacts and through the methodology, converted to an area of land required to support an organisation in terms of the resources they consume and the waste they generate as a result – *the ecological footprint*. This type of assessment needs to make various assumptions reducing accuracy in measurement. In addition, environmental impacts are difficult to measure.

Thomas and Graedel's (2003) view was that research on corporate sustainability is split into three areas: *Use of materials and energy; land use; and human development*. Their focus was on environmental impact through materials. They related this through an environmental science rather than a corporate approach by looking at material environmental impact over time. This is similar to the work by Ding (2008) in relation to construction materials and assessment tools. This present study will link the product and system environmental impact performance post manufacture with the other aspects of corporate environmentalism, including socially-based CSR and ethical considerations, to provide a more rounded holistic assessment of an organisation's environmental impact.

Griffiths and Petrick (2001), under their suggestion of alternative corporate architectures (*network organisations, virtual organisations and community of practice*), indicated that both large and small organisations offer potential to develop 'green processes' by using their business unit or cluster partners as part of a horizontally linked structure. This view of corporate architecture's influence on corporate environmentalism offers some evidence that being part of an ecosystem is a way for organisations to enhance their green expressions.

While there is an extensive volume of literature on different frameworks and sustainable business models at community, industry and societal level (DesJardins, 2007; Robinson,

2004; Seelos and Mair, 2007), it is widely accepted that understanding of organisation level sustainable business models is weak (Bansal, 2005; Sharma, 2002).

2.2.4 *EM as a proactive strategic approach*

A literature review of the subject area of EM, the belief that environmental problems can be meaningfully addressed with increased innovation and development within a capitalist framework) was undertaken as a study informant. This was, and continues to be, a controversial subject for some commentators. Many articles were reviewed by a variety of researchers, which helped give a background to the whole study. A comprehensive literature review would not be complete without having an appreciation of the argument for or against EM. There are many references throughout this study to articles written by authors who openly support EM. Hence, this study has used their input in these cases to justify or explain a particular point. For some, there is logic embedded in the EM methodology as a means of achieving corporate sustainability.

The strategy of EM as a means of corporate environmental practice is a view argued by a growing number of management theorists (Blowers, 1997; Buttel, 2000; Christoff, 1996; Mol, 2000). Much has been written on EM since the introduction by the German sociologist Joseph Huber (Huber, 1982, 1985). The 'Berlin School' (Berlin Science Centre) is often referred to as the birthplace of EM.

Despite having significant inherent limitations based on the argument that instead of curtailing development that may destroy environmental habitats, centralise logistical issues and increase industrial activity causing additional potential polluting effects (Janicke, 2008; Pataki, 2009; Pepper, 1999), EM purports to focus effort on a technology-based solution to climate change. Problems associated with climate change are, it argues, solvable by an innovative technological approach. However this statement cannot hold true for all problematic issues associated with climate change, e.g. species extinction or mineral depletion and in these cases substitutions cannot always be found as yet by technological intervention. This is a key limitation associated with this theory and many environmentalists also argue that the concept is flawed, as it cannot provide a complete solution to environmental issues.

EM theory recognised the need for interaction between ecology and economy and, as such, became influential in the German ecological debate at that time. Outwith Germany, EM also became interesting to a number of theorists and in some cases different countries developed their own brand of EM. This approach to corporate greening continues to evolve. The US, for one, has adapted the theory to include *national security and blatant consumerism* (Schlosberg and Rinfret, 2008). EM is seen as enabling new technologies to emerge to sustain growth, while at the same time, other innovations will stifle or reduce associated waste and pollution. Detailed planning, visionary forecasting and increasing economic regulation are seen as the instruments of EM to effect change (Hajer, 1996). Environmental regulation is a core driving force that brings about innovative practice and behavioural change. (Schlosberg and Rinfret, 2008). EM as a concept of environmentalism is becoming a dominant discourse and from its European beginnings, is now widely practised in both industrialised and developing nations. EM is a substantial subject area with an extensive literature (Mol, 2006).

Some critics of EM argue that it is not a helpful new managerial paradigm (Pataki 2009; Pepper, 1999). However Pataki (2009, p. 89), does concede that "EM as an environmental strategy and ideology may contribute to real environmental improvement in some ways." It is placed by this study in the realm of the 'new management paradigm' as it is clearly a 'shift' from the neoclassical view of the organisation (Cochrane, 1991; Key, 1999; Stormer, 2003) based on shareholder profit, to the modernist views incorporating stakeholders, not only shareholders, as key contributors to management performance. The environment in this paradigm is seen as a stakeholder. EM theory in this study has relevance as a performance related concept of corporate environmentalism and is justified by the volume of literature that underpins this strand of EM theory (Baker, 2007; Benn, et al., 2006; Christoff, 1996). This literature has a focus on economic growth, the joint key expectant of EM policy. In this study, EM has general relevance as a main exponent or driver of practised corporate environmentalism.

Although predominantly a European-derived concept, the nature of the core content of theory has also made it attractive to US theorists, perhaps as a means of entering fully the corporate environmental action agenda while meeting corporate growth demands (Schlosberg and Rinfret, 2008).

Through EM, difficult political issues such as governmental response to the negative environmental impact of climate change caused by ever increasing economic growth, could be addressed more readily if there was an industrial based market solution (Janicke, 2008). Technology-based solutions to world environmental issues could be found. The limited capacity of the planet to support mankind can, EM argues, be overcome by human ingenuity. Economic growth and sustainable development could simultaneously co-exist. Milanez and Buhrs (2007) highlight the description of Huber's perception of EM as the "institutional restructuring of the industrial system so as to surmount the colonisation of nature by the techno-sphere" (Mol, 1996, p. 313).

EM has recently been elevated to become the grounding for EU environmental policy, driving organisations to innovate their way out of increasing stringent regulatory controls on pollution and therefore EM might today be described as more of a politically-derived concept that has implications for the 'shifted' management paradigm.

Different researchers in EM have established different perspectives of the overall concept, leading to some degree of debate about what EM actually is, or stands for (Pepper, 1999). The early interpretations of EM were based on using technology to drive preventative innovation that will 'fix' environmental problems, including pollution and emissions, driven by corporate R&D departments (Hajer, 1996; Huber, 1982) and this 'process changing' approach would ensure that cost savings were made, while at the same time reducing impact on the environment (win-win). The emergence of governmental interest in EM provided a linkage with wider social parameters and concerns, as this provides a social strand to EM interpretation as well as influencing governmental policy. This interpretation was outlined by Milanez and Buhrs, (2007). Christoff (1996) contrasted EM approaches as "strong" when they are institutionally driven, democratic and broad, and "weak" when they rely too heavily on a technology and economic focus.

Aspects of ecological modernisation will be used to inform this study and it may not be complete without reference to some of the theoretical concepts on which EM is based. While EM has a variety of strands relating to its different aspects and is a controversial concept, there are some core elements of EM that most commentators would accept, e.g. 'preventative pollution control'. Preventing pollution from happening in the first place through increased R&D of the process, as opposed to making provision for control after

pollution has taken place, for some, will seem a more responsible solution for the environment. There could be a significant contribution to this study by reviewing literature on EM, as it would highlight different approaches to corporate sustainability. There are other non-controversial aspects of EM that should gain a consensus acceptance, e.g. more efficient 'green electrical energy' availability, especially in times of rising fuel costs (Janicke, 2008) and the development of technology that will allow increases in yields of disease free crops especially in developing countries. In this case, it is not GM (genetically modified) but research and development that allows better production methods increasing efficiency. This is in contrast to utilisation of additives with controversial side effects. Pro-EM literature describes an outcome that provides a win-win scenario based on 'low environmental impact' and economic gain through technological growth. EM might have more credibility if the key outcome was always a wider societal benefit. EM has significant and obvious drawbacks and inconsistencies as a stand-alone strategic approach to the Banerjee (2002) definition of corporate environmentalism, "the recognition and integration of environmental concerns into an organisation's decision-making process" (Banerjee, 2002, p. 177). These inconsistencies are grounded on the principle that the world cannot indefinitely sustain depletion of its natural resources. Continued unchecked, growth from the standpoint that a solution through technological innovation will be found to offset negative environmental impact, is perhaps optimistic at best. The root causes of environmental destruction are seen to be legitimised and sustained by EM (Christoff, 1996; Gouldson and Murphy, 1997). EM does not fully explore or account for social change, distribution of wealth and the interface between society and the environment (Baker, 2007).

There may be a difference between organisations depending on their downstream output and if it improves overall sustainability. The downstream application of the product, system or service may identify more closely the extent to which the organisation is 'greened'. An example of this might be two organisations equally meeting the latest regulatory controls with similar 'state of the art' proactive environmental strategies, whether informed by EM or not. If one manufactures a life-saving or disease-curing medicine and the other manufactures weapons for the military; there may be a difference in perception by the market as to which is greener and more sustainable.

2.2.5 *Environmental strategy and performance*

The relationship between sustainable business strategies and economic performance is a complex subject area attracting significant research attention since the mid 1980s (Ambec and Lanoie, 2008; Azzone and Bertele, 1994; Chang and Kuo, 2008; Craig and Dibrell, 2006; Darnall, et al., 2008; Hart, 1997; Klassen and Whybark, 1999). To some, the idea of sustainability and corporate growth are conflicting objectives. Sustainable development, for some, has been seen as a contradiction in terms (Robinson, 2004). The prevailing view in the mid 90s was that there was, *"an inherent and fixed trade off: ecology versus the economy"* (Porter and Van der Linde, 1995, p. 120). Some commentators have argued that corporate environmentalism drives efficiency, innovation, technology and quality, leading to competitive advantage and increased profits (Eiadat, et al., 2008; Porter and Van der Linde, 1995; Welford, 1998; Welford and Gouldson, 1993). However this contrasts with the view that corporate growth results in increased usage of scarce resources and increased polluting effects fuelling globalisation, centralisation of logistics, increasing transport movements, pollution and the need for increased waste products containment. The planet has a finite level of natural resources and continued industrial growth will eventually mean that full capacity is reached (Toffler, 1980).

This opposing perspective suggests that real sustainability will only be achievable provided organisations grow profitably and can dedicate increased resources for research and development solutions for energy conservation, waste disposal and pollution control; challenges that otherwise will remain a constant threat to sustainable development (Hardjono and de Klein, 2004).

The external environmental pressures on organisations (regulatory, stakeholder, competitive) coupled with the internal environmental (management reaction, aspiration and initiatives) are influential in the formulation of environmental strategy. Porter and Van der Linde (1995) proposed that properly designed regulation can be a launch pad for innovative environmental strategies developing competitiveness and economic success. Identifying these innovative environmental strategies producing 'green outcomes' or additional green expressions would make a significant contribution to greening strategy. Banerjee et al., (2003) referred to these as business and functional-level strategies; environmental marketing strategies.

2.2.6 *Commitment to and implementation of environmental strategies*

Commitment to and implementation of environmental strategies (green expressions) are identified as the two major areas of organisational greening by Winn and Angell (2000). Understanding organisational commitment to and implementation of a greening process is necessary to attempt to address the greenwash element of the research problem. This is because the basic definition of greenwashing is communicating a level of commitment to environmental strategy and implementing a lower level of environmental strategy. The literature looks at two key areas of organisational greening: commitment through communicated greening activity (driven by motivational factors) and implementation (identified through proactive environmental strategies, green processes and actions, or referred to here as green expressions).

Organisations committed to following a greening path towards corporate sustainability have been motivated in some way to do so. Stakeholders play an important part in the motivation process and, as indicated by Clarkson (1995), organisations manage relationships with their stakeholders, not society in general and as such the chosen greening path can be shaped depending on stakeholder pressure. Financial investment, for example, may only be forthcoming to an organisation from environmentally concerned investors if the organisation has embarked on, or commits to embark on, a greening process.

Commitment is measured by the written or published proactive statements an organisation produces and this includes, but is not limited to, its corporate environmental policy (CEP). Ramus and Montiel (2005, p. 379) make an important contribution to the debate on commitment with the following statement concerning CEPs, "there is little downside to making a public commitment (independent of intent to implement the policy) because there is no mechanism for verification". This suggests that some organisations feel there is no scrutiny of the implementation phase of any public commitments and therefore the pressure to greenwash exists in order to gain competitive advantage.

Implementation of environmental strategies, the actions actually taken by the organisation, are important in this study as they may vary depending on organisation structure, type, size, industry, location or stakeholder preference. These are green expressions internal or external to the organisation that are part of the greening

process. Fostering these expressions improves the greening process. Barriers to implementation of environmental strategies are inhibitors to a greening process and can be different for each organisation. In the literature, a significant conclusion is reached by Ramus and Montiel (2005, p. 408) in relation to implementation of committed environmental strategies, by demonstrating that there are differences in implementation for different types of business and economic benefit or loss governs environmental policy implementation. This is important information for this study, as larger organisations, for example, may have more resources to commit to environmental strategy implementation. This study would benefit by delving deeper into the sample organisations, once chosen, to see what, if any, differences exist in implementation of environmental strategy depending on organisational type. Ramus and Montiel (2005, p. 377) studied "large leading-edge corporations". This study, by looking at both large and small organisations, might make a worthy contribution to this work. Importantly, this would also fit well with meeting the aim and objectives of the study relating to understanding the development of greenwash.

2.3 Organisational structure and environmental strategy

Understanding how organisational structure fosters or prohibits the development of environmental strategy also assists in understanding developing corporate sustainability. Studies have previously shown that the structure of organisations may be prohibitive to developing corporate sustainability. Hunt and Auster (1990) commented that restructuring the organisational plan may be necessary to integrate an environmental program and the restructuring required is dependent on the organisation. Starik and Rands (1995) suggested that best performance from an environmental standpoint is most likely if the organisation's structure is ideally suited to tackle the particular environmental issues presented. Polonsky et al., (1992a) also commented that organisational structure could enhance environmental performance, in their study of Australia's largest organisations.

Delmas and Burbano, (2011, p. 65) in their research relating to environmentally reactive 'brown' companies (companies deliberately greenwashing), suggested a possible link between poor organisational structure and greenwashing, "we can hypothesize that a lack of frequent and close interactions between intra-firm divisions such as marketing and product development can act as an important driver of greenwashing". There is a

research gap here that this study can address by focussing the study on EPOs and informing regarding their organisational structure and the development of greenwashing.

Taking this approach a stage further by forming and answering a research question concerning how EPOs support policy (commitment) and practice (implementation) of greening strategies would not only make a contribution to the literature, but also a part of the research problem relating to understanding the development of greenwash. The support issue of policy and practice is important, as it would allow the examination of the influence of organisational structure on the greening process. Organisational structure entails more than the physical shape of the organisation (size, location, fragmentation, and departmental type). It involves the structures of communication between people within the organisation and their function, the corporate architecture.

Griffiths and Petrick (2001) examined the research gap concerning which corporate architectures better enable organisations to enact green strategies. This research gap was previously identified by Bhat (1996) and Hoffman (2000). Ecologically sustainable organisations and their respective corporate architectures, were identified by Starik (1995) as an area where more research was necessary. As explained earlier in this section, Delmas and Burbano (2011) in part addressed organisational structure and its effect regarding implementing greening strategies, but exclusively on environmentally reactive organisations, not on environmentally proactive companies as this study proposes.

A specific area that the extant literature does not address is the internal communication in EPOs concerning corporate architecture and greenwashing. Formulating a research question as described in this section would guide the study to focus on understanding of support of greening policy and practice within different EPOs and enable understanding of the influence of corporate architecture on the greening process. The following section (2.3.1) discusses existing literature in connection with corporate architecture.

2.3.1 *Corporate architecture as an enabler or inhibitor of environmental strategy*

Corporate architecture (sometimes called infrastructure), referred to as the organisation of people and tasks (Dess, et al., 1995) and its restrictive or beneficial attributes towards

greening an organisation, is of significant importance to this study. Its role in relation to the development of greenwash is perhaps misunderstood, requiring further investigation and is therefore relevant in this research, as current academic literature does not make any tangible links between these two phenomena concerning EPOs.

There is often linkage to corporate architecture of an organisation and its position on the continuum of corporate environmental strategy, for example, lack of specialised (environmental) departments (lack of structural elements) capable of disseminating environmental data throughout the organisation. More often, these organisations are typified by employing reactive environmental strategies that minimally comply with regulation authority requirements. (Hunt and Auster, 1990; Roome, 1992). Griffiths and Petrick (2001, p. 1574) explored "what conditions characterise ecological and humanly sustainable corporations" and also which corporate architectural structures would, "generate and institutionalise" corporate sustainability. Often, a more assertive environmental strategic approach threatens the established practice, procedures and routines operating in organisations for decades under an autocratic form of management. New theories and practices, even innovations, are resisted by a structure that is designed to preserve the status quo. New structures and organisational capabilities are required to enable environmental policy to flourish (Hutchinson, 1996; Maxwell, et al., 1997).

Corporate architecture can be selective in communicating effectively with stakeholders. Traditionally, organisations may concentrate more on the demands of shareholders, boards of directors and senior management to the relative exclusion of others; workers, local community, environment, customers, suppliers, etc. (Hart, 1995; 1997). Treviño and Weaver, (1999) suggested that in the postmodern era, organisations have only added customers to shareholders in their attempt to demonstrate their apparent shift in focus. These organisations have not developed the corporate architecture or structures vital to encourage corporate environmentalism by integrating fully and allowing input from all stakeholders. (Sharma and Vredenburg, 1998).

In large global organisations with multi-national business unit structures, there may be a difference between CEP and actual practice. CEP and statements may appear very proactive, yet in practice there is no real understanding of the corporate position or willingness to effect environmental strategy at business unit level or below. The corporate architecture of the organisation may have an enabling or inhibiting influence.

A further potential effect is the development of greenwashing by the corporate body in the sense that in practice, it does not live up to the environmental policy position of the organisation. This has been addressed in this study by investigating the level of corporate policy divergence in practice.

"*Greenwashing"* was defined by Entine (1995, p. 41) as, "projecting an orientation of corporate environmentalism without strategic implementation in policy and practice."

This study attempts to nuance the term greenwashing in order to clearly identify organisations engaged in its practice and separate these from those EPOs currently labelled as greenwashers but who are making significant effort to develop and implement a CEP. It is important to understand why these EPOs have difficulty in the implementation phase of any CEP, as otherwise, any well-meaning intention of any organisation to adopt a pro-environmental philosophy in an effort to create a sustainable organisation for the benefit of stakeholders and the planet at large, runs the risk of having quite the opposite effect and creating a less sustainable organisation, as the market perceives greenwashing to be.

Corporate architecture has a significant role as an enabler or inhibitor of communication flow within the organisation. Communication flow as a consequence of organisation structure and procedures, including knowledge transfer between departments and individuals, has significant and varied influence levels on implementation. If implementation may be influenced in this way, a review of the literature concerning organisational structure or specifically corporate architecture would be necessary to examine the potential effect on greenwash development, to tie this issue to the aim and objectives of the study enabling better understanding of greenwash development. The following section (2.3.2) takes a deeper approach to these concepts.

2.3.2 *Corporate architecture's role in greenwashing*

The link between poor corporate architecture and its impediment to sustainable development of the organisation has been the subject of academic research (Hunt and Auster, 1990; Polonsky et al., 1992; Sharma and Vredenburg, 1998; Starik and Rands, 1995). This has resulted in describing three different ways in which corporate architecture may impede sustainability. Griffiths and Petrick, (2001) outlined this work by firstly referring to Hunt and Auster (1990), supported by Roome (1992), which

highlighted reactive or compliance-only organisations who do not have a means of collecting and distributing relevant environmental information. There is no department responsible for, or internal communication mechanism enabling environmental knowledge transfer to bring focus to the issue.

The next impediment identified to sustainability due to corporate architecture is the traditional command and control nature of an organisation's management. Often there is a conservative approach by management being unwilling to change structure where the innovation approach necessary for fostering sustainability is seen as a threat to established procedures. Senior managers in these organisations have risen through the command and control structure and tended to resist change in organisational structure. This is the dynamic conservatism within social systems referred to by Schon (1971).

The third impediment identified in the academic literature concerns the reluctance and unwillingness of organisations to recognise and embrace a wider stakeholder view incorporating employees, community and the environment as a whole. These organisations only see directors and shareholders as stakeholders and the very narrow view that this type of corporate architecture allows is restrictive to the sustainability of the organisation. Beder (1997) and Karliner (1997) supported this view.

These studies are relevant in addressing the issue of barriers to achieving sustainability as a result of corporate architecture in reactive organisations. However they do not take the additional step and make a direct link to the accusation of greenwashing with which EPOs have been labelled, as a result of corporate architecture issues. This appears to be a logical next step in the analysis of corporate architecture and sustainability for the key reason already stated, that a label of greenwashing to an organisation may in fact be the ultimate reason why an EPO reduces its potential to achieve sustainability. There is a gap in the literature here and this study may assist management practice by developing and contributing to understanding in this area.

2.4 Greenwash development in organisations

Hsu (2011), in the Los Angeles Times (May, 21st) noted that greenwash was reaching "epidemic proportions". According to TerraChoice, an environmental marketing firm, global green-based advertising grew almost 300% between 2006 and 2009. In their report published in 2009 which analysed the environmental claims concerning 2000

plus products in US and Canadian "big box" retailers, 98% committed a greenwashing sin (TerraChoice, 2009). At the same time, sales of green products and services were escalating from $230 billion to a projected level of $845 billion by 2015 (Delmas and Burbano, 2011).

Understanding why organisations engage in greenwashing is very important in addressing the research problem. The traditional view of greenwashing in organisations, or more accurately, greenwash development within organisations, is that it is a direct measure of the differential between CEP commitment and implementation. Current definitions of greenwash include that of Entine (1995) above and that shown in the 11th edition of the Concise Oxford English Dictionary (p. 625), "Greenwashing is disinformation disseminated by an organisation so as to present an environmentally responsible public image." Also referenced by Ramus and Montiel (2005).

Greenwash has also been described as "selective disclosure" of positive environmental information as opposed to "full disclosure" of an organisation's environmental or social performance, including negative aspects deliberately developing a more positive green image (Lyon and Maxwell 2011, p. 9). Selective disclosure is referred to by Lyon and Montgomery, (2015, p. 236) as "perhaps the most widely studied form of greenwash".

Traditional greenwash literature has concentrated on the disclosure of environmental information. As greenwash concerns grow, new studies broaden the debate. Bowen (2014) moved the debate from the narrower definitions of greenwash and suggested that greenwashing is more than just disclosure of environmental information, or that it benefitted 'brown' firms. She indicated that it can also be associated with symbolism and changes that an organisation makes can be deliberately symbolic. Lyon and Montgomery (2015) agreed that symbolism extends to "image advertising" and visual imagery as emerging forms of greenwashing. An example of this is 'green logo', product labelling without any independent third party verification.

The domain of greenwashing is evolving in the academic literature. Recent instances of organisations intentionally mis-reporting their environmental or social performance have multiplied, making the subject of increasing interest within academic circles and necessary to identify the causes for better management practice. The causes for deliberate greenwashing by organisations continue to be of interest in the literature.

However research is required to identify additional "varieties of greenwashing" (Lyon and Montgomery, 2015) and what organisations other than companies develop greenwash (Bowen, 2014). Formulating research questions to identify differences in policy (commitment) and practice (implementation) in different organisational types would benefit our understanding of greenwash contributing to recent literature.

It is a commonly held view that organisations that are labelled as greenwashing are knowingly exaggerating their commitment to corporate greening, relative to their actual implementation of strategic policies in order to present a more acceptable environmental perspective to stakeholders. This type of activity, they believe, will endear them to customers relative to competitors generating greater profit and appease other stakeholders, including shareholders and employees as well as the local community. Organisations engaging in this traditional view of greenwashing may see some short term benefits, as stakeholders initially accept or take for granted or 'as read' the organisation's position with regard to environmental commitment.

The danger with greenwashing comes as organisations are found to have little substance to, or evidence of, their implementation of CEP. This can create a backlash of antipathy towards the organisation. Organisations tarnished by greenwashing claims may see customers desert them in favour of competitors, thus reducing profits, losing the support of other stakeholders including shareholders, employees and community and putting the organisation in a less sustainable position than when they started embarking on a proactive CEP. This questions the quality of the CEP developed. The literature identifies a research gap here in relation to the effect greenwash has on policy makers (Lyon and Montgomery, 2015) and how they might adjust CEP accordingly.

By its traditional definition, greenwashing can only apply to organisations with a strong proactive posture on the environment evidenced by stated commitment. There is evidence of more and more organisations taking a proactive environmental posture for the reasons stated above (Azzone and Bertele, 1994; Bansal and Roth, 2000; Elkington, 1994; Gonzalez-Benito and Gonzalez-Benito, 2005; Hibbitt and Kamp-Roelands, 2002; Kim and Lyon, 2014; Lyon and Montgomery, 2015; Polonsky et al., 1992).

Committing to a greener corporate strategy can lead to increased returns and, in some cases, there is evidence of a proactive environmental posture being seen necessary as a

market qualifier. Without such, market entry may be impossible (Esty and Geradin, 1997). There is, therefore, significant pressure on organisations to make proactive environmental commitments (Hays, et al., 1996). The willingness to do this is fuelled by the fact that there is no regulatory or legal framework relating to environmental statements (Maltby, 1997) similar to financial reporting, for example. In some cases, or countries, there are trade descriptions regulations, however these have relied on third party reporting for breaches and subsequently are rarely prosecuted. Commitment statements are therefore easy to make, however they do not require a genuine shift in strategic approach, or a fundamental desire to achieve corporate sustainability. Implementation of CEP can be difficult to measure, even against a set of communicated targets. The CEP and the implementation results have more often been communicated by the organisation itself rather than by independent audit. This has fostered scepticism by commentators that may have been directed at genuinely committed EPOs. It is often difficult to differentiate, however easy to generalise.

The negative term greenwashing could be levelled against organisations that do not have a fundamental desire or genuine commitment to achieve corporate sustainability, yet attempt to convince stakeholders to a position that perceives the organisation as having such desire.

As the debate widens to capture more varieties of greenwashing in organisations moving from the traditional narrow focus, it challenges the current accepted definitions of greenwashing based around the disclosure literature. An example of this concerns the existing definition of greenwashing which at best, is not comprehensive enough at differentiating between organisations with genuine commitment towards achieving increasing assurance of sustainability for the organisation and those that are not striving towards implementation of any CEP commitments and have not placed environmentalism at the core of the organisation, a key requirement of corporate environmentalism (Banerjee, 2002).

2.4.1 *Nuancing greenwashing*

Any attempt at redefining greenwashing needs to take into account the above traditional view and eliminate from this view those organisations who are genuine in their attempts to implement CEP. As previously stated, economic sustainability of the organisation

needs to be at the core of decision making and this is evidenced by what organisations 'do' (implementation) rather than what they say they 'will do' or are 'doing' (commitment). The latter is relatively straightforward to devise and sometimes easy to communicate, within or outside the organisation. However, implementation of CEP can be difficult. There are numerous reasons why this is the case including, but not limited to; badly written CEP which is vague and ambiguous, poorly communicated CEP internally, even when effective externally and lack of resource, human or financial, to effect implementation. Another key reason for difficulty with the implementation of CEP statements concerns problems with measuring the effectiveness of implementation against pre-determined targets, or as in the case of badly written CEP, no specific goals or targets against which to measure (Lynes and Andrachuk, 2008). Difficulty with implementation, however, may not necessarily mean that the organisation is greenwashing, as it may have environmentalism at its core and consideration is given during each decision making process. Increasing difficulty with implementation increases the risk of labelling as organisational greenwashing and, therefore, decreasing the potential for organisational sustainability, if assumed that greenwashing organisations are unsustainable.

As emerging literature attempts to broaden understanding of greenwash by identifying and explaining more types, there are opportunities for this research to add to this literature. The research gap here is that there are more varieties to be found, as explained by Lyon and Montgomery (2015, p. 237) "the literature is not yet mature enough for us to feel confident that all varieties of greenwash have been identified." As discussed, the literature focusses on disclosure of environmental performance by the organisation concerned. However the emergence of social media in recent years with instantaneous reporting of alleged corporate greenwashing from within the organisation by whistle blowers and externally by other interested parties (pressure groups) has increased the risk of greenwashing exposure. Technology has enabled exposure with evidence available often as captured on camera (mobile phone) to support these claims. Lyon and Montgomery (2015) suggest that this in future could curtail the deliberate practice of greenwashing. Lyon and Montgomery (2013) in their work related to greenwash and social media found that organisations with high levels of corporate social irresponsibility are likely to be retweeted above average levels. Such exposure types they refer to as "tweetjacking".

While the discovery and reporting of greenwashing through exposure as above, or disclosure by analysis of corporate documents by scholars and activists is increasing, there is little knowledge regarding whether greenwashing is being developed or practised more or less as time moves on (Lyon and Montgomery, 2015).

Disengaging or decoupling strategies employed by managers to present a different more positive external image relative to the internal reality are a form of greenwashing in an environmental context that only appears to reduce the potential for greenwash development (Wijen, 2014).

The increasing exposure as referred to above through social media, however, is likely to have an effect on recoupling greenwashing organisations eager to re-engage to avoid greenwashing charges and reputation erosion and align their committed strategies with equal implementation levels. Recoupling can be driven by emerging information technology (Bromley and Powell, 2012).

2.4.2 *Greenwashing and Performance*

In the extant literature there is extensive discussion on the negative aspects of greenwashing and its effect on corporate performance, specifically in relation to the reputation of an organisation engaging in such practice (Greer and Bruno, 1999; Laufer, 2003; Parguel et al., 2011). Greenwashing organisations, according to the traditional definitions of the term, deliberately mislead consumers regarding their green credentials by making unsubstantiated claims of green activities going on within, or external to, the organisation in which they engage.

This can result in some undesirable effects on the organisations concerned. Crane (2000, p. 277), refers to a "green backlash" by consumers against offending organisations who promote green products and services which do not live up to scrutiny of their environmental benefit claims. This not only damages reputation, but translates this effect into lost revenue and profits and, in the most extreme cases, potential firm closure. Greenwash has also had negative impact on consumers making them feel confused by CSR claims (Parguel et al., 2011).

This study has an objective to understand how greenwashing relates to corporate performance and therefore the effects of greenwashing in this context require examination. As the literature review has focused the study on EPOs only, there is a research gap in the literature concerning these organisations and greenwashing9 and how it affects their performance.

Greenwashing, even in the most recent literature, is still focused on the deliberate and deceptive acts of greenwashing (Hsu, 2011; Kim and Lyon, 2014; Lyon and Montgomery, 2015). This study should therefore make a contribution by examining organisations who are unintentionally greenwashing and enable managers to avoid the negative performance effect of its development. This was an under-researched area as the extant research literature focus is on reactive or brown organisations in terms of greenwash development.

Formulating and addressing all research questions to focus on EPOs would enhance the study and assist in understanding the development of greenwashing in organisations and in part meet the objectives of the study.

2.5 Definition of research questions

This literature review has attempted to identify research gaps in the published academic literature relating to understanding the corporate greening process and the development of greenwash. Recommendations for improving the process of progressing an organisation through corporate greening would benefit managers, saving time, capital and help keep frustration within the workforce low.

A number of models, frameworks and assessment methods have been reviewed. Furthermore, the perspective taken by the researchers and how their work was underpinned by previous research, provided significant insight that was beneficial to gaining an understanding.

The reading selected focused on specific areas which influence corporate greening. The background to the subject was covered by attempting to understand strategies employed by management, whether reactive or proactive, in respect of corporate environmentalism. Literature associated with environmental strategy and resulting

organisation performance was reviewed, as indeed was EM, in an attempt to capture all sides of the argument from which a new framework could emerge to assist in understanding corporate greening.

Green expressions, internally or externally, are relevant in providing the organisation with a green image. From small acts of internal efficiency to external community involvement, these were green expressions that defined, to some degree, the greening of the organisation. Knowledge limitation, or gaps in academic literature that form the basis of research questions for the study, were highlighted earlier in this chapter.

The first clear outcome of the literature examination concerns focussing the study on EPOs. This is because the extant literature, in terms of greenwashing activity, has a focus on "deliberate" greenwashing organisations, usually environmentally reactive organisations. This study is more concerned with organisations who are proactive, or attempting to be proactive, however may exhibit greenwashing tendencies (for example slow implementation of policy; resource limitation; poor internal and external communication) during their transformation. They need to be identified and examined. The organisations for sample selection and this process are discussed in the next chapter, *Chapter 3 - Research design and methodology,* and will clarify the criteria for the selection of EPOs only for the study.

The literature and its lacunae suggested the following research questions.

Research Question 1

The first research question addresses issues concerned with what constitutes greening activity, or green expressions, in EPOs. In the introduction section of this chapter, the literature suggests that a "holistic" view of corporate environmentalism (Asif et al., 2008) examining internal and external greening activity should be taken to ensure a comprehensive approach. This is further supported in the literature and outlined in this chapter in section 2.2.3.1 by Roarty (1997), suggesting that corporate greening is a continuous process, including post manufacture, whereby the outcome of the organisation enables additional environmental benefits. Very few studies have taken into consideration the effect of external involvement, specifically post manufacture, or as referred to in this study, the downstream effect. In order to enable a more comprehensive understanding of what constitutes greening activity, both internal and external green expressions should be examined. This leads to the following research question:

What are the ways in which EPOs express a green image?

Asking this question allows the study to extend beyond internal only or internal plus upstream (supply chain) approach in a search for greening activity. It allows the study to include downstream or outcome of the organisation in a quest for complete understanding of what is happening to create a green image. Again, this question also concentrates on EPOs, now the focus of the study.

This question is also directly relevant to the first research objective outlined in Chapter 1, section 1.2.2, as it is designed to deepen understanding of the greening process by capturing the wide scope of green expressions possible in a greening process, by extending the research to include upstream, internal and downstream activities of the organisation.

Research Question 2

The next research question attempts to inform with regard to the type of EPOs and which green expressions are most effective depending on their characteristics. A research gap highlighted in this literature review was outlined in section 2.1.1 concerning the difficulty that EPOs have in developing best practice of a greening process as the optimum way forward. This process can change from one organisation to another, depending on organisation type. Different EPOs may engage a different set or combination of greening activities, or green expressions, for their optimum greening process. EPOs may be differentiated by their selection of these green expressions. They may have an extensive number of activities or fewer, so the extent of green expressions may also inform the study. Also, establishing which green expressions have greater relevance, or improve a greening process over others, allows differentiation of organisations on this basis. This leads to the following research question:

How are EPOs differentiated, based on the type of their green expressions?

Importantly, this research question is also very relevant in assisting in developing understanding of the greening process, as outlined in Chapter 1, section 1.2.2, addressing the first objective of the study.

Research Question 3

The next research question is based on the research gap identified in section 2.3 of this chapter and relates to policy (commitment) and practice (implementation) of environmental strategies, or in the context of this study, green expressions in EPOs. This literature review has confirmed that the accepted academic definition of greenwashing is the difference between the commitment to and implementation of environmental strategies, or again in the context of this study, green expressions. This leads to the next research question:

How are green expressions supported by policy and practice in different EPOs?

This question also assists in focussing the study by asking about the supporting of green expressions in different EPOs. Here, the intention is to examine different organisational types, for example a public limited company (PLC) and a Small/Medium Enterprise (SME), in an attempt to deepen the understanding of greenwash development. This question also brings a focus to the issue of greenwash in EPOs. The extant greenwashing literature is overwhelmingly concerned with organisations that are not proactive but are deliberately greenwashing. Posing this question allows the study to understand the unintentional development of greenwash, providing that the study sample organisations chosen have a clear environmental proactive orientation.

This research question also attempts to provide understanding as outlined in section 2.3 and again at the end of section 2.3.2 and relates to the issue of organisational structure, more specifically corporate architecture and the development of greenwash in different EPOs. The existing literature does not address this issue.

Understanding greenwash development in organisations was a stated aim and objective in Chapter 1, section 1.2.2 of this study.

Research Question 4

A final research question was developed to address the research gap outlined in section 2.4.1 of this chapter and relates to greenwash development and performance consequence in EPOs. The final research question is stated as:

How do green expressions relate to performance in different EPOs?

Greenwash performance consequence has limited discussion in the academic literature and is absent from a perspective of EPOs, yet this is an important issue for this study, as it clearly assists in addressing the aim of the study outlined in Chapter 1, section 1.2.2 by attempting to deepen our understanding of how performance in different EPOs can be influenced by greenwashing. Asking this question allows study of different organisations' attempts to examine performance outcomes dependent on organisation type.

The research questions developed both from a review of the literature and following the initial conceptual framework of the thesis by refining the stated aim and objectives, as stated in section 2.5, form the basis of the fieldwork phase of the work.

The research questions are presented in Table 2 below in a logical sequence and given associated numbers for reference throughout the later stages of the thesis.

Number	*Research Question*
Research Question 1	What are the ways in which EPOs express a green image?
Research Question 2	How are EPOs differentiated, based on the type of their green expressions?
Research Question 3	How are green expressions supported by policy and practice in different EPOs?
Research Question 4	How do green expressions relate to performance in different EPOs?

Table 2. Research questions

2.6 Summary

Guided by the study's initial conceptual framework, this chapter began by exploring the academic literature related to corporate environmentalism. This led to a consideration of the longevity of organisations from a shareholder and employee stakeholder perspective and a review of literature concerning corporate sustainability.

The position of organisational greening was then reviewed prior to a focus on literature concerning the environmental strategies that organisations might pursue as part of their greening process. This involved a review of literature concerning EMas that approach to achieving corporate sustainability is an important discourse put forward by many scholars. The relationship between environmental strategy and performance was then highlighted as was the commitment and implementation of environmental strategy literature.

Organisational structure's influence on environmental strategy was then reviewed and this led to consideration of the wider area of corporate architecture and its influence on environmental strategy and greenwashing. The subject of corporate greenwashing was reviewed in more detail including its relationship with performance. It was a specific objective of this thesis to improve our understanding of this relationship.

The influence of the literature review was related back to the study aim and objectives.

Having reviewed the extant literature in which the study aim and objectives were located, any gaps in understanding that the literature suggested were drawn together and defined in section 2.6 to form four study research questions and the associated reasoning was discussed.

An appropriate research design and methodology was necessary to carry out the fieldwork and gain traction over the derived research questions and this is discussed at length in the next chapter, Chapter 3 – Research design and methodology.

Chapter 3. Research design and methodology

3.0 Introduction

In this chapter, the research design and the appropriate methodology employed to carry out the study is examined. There were a number of different research methods available for consideration and it was necessary that the most appropriate were chosen to meet the aim and objectives of the study.

This chapter presents chronologically, the steps taken in considering and justifying the methods used to gain traction over the research questions.

Following this introduction, the chapter in section 3.1 focuses on the research design by firstly clarifying the philosophical basis of the research and the epistemic assumptions that underpin the study. It then discusses the suitability of a multiple case approach, including its reliability and validity in meeting the research aim and objective.

Section 3.2 reviews the two major approaches for academic research; the 'quantitative approach' and the 'qualitative approach'. The specific research methods used for data collection and their validity of the qualitative approach taken for this study using a semi-structured interview method are then discussed. This section focuses on the background reasoning and justification for taking such an approach. Literature supporting the approach taken is clearly identified.

The next section (3.3) deals with the important criteria of sample selection. This concerns the method and process used to identify and justify the particular EPOs that participated in the study.

Section 3.4 discusses the data collection and data analysis methods utilised in this study. The generation of transcribed data is discussed and the methods used to analyse data in this form are examined and justified.

A pilot study was used as a means of testing the approach and feasibility of the methodology used in this research. Section 3.5 reviews the pilot study and the influence on the full study as a result of information gathered.

The chapter is brought to a close and summarised in section 3.6.

3.1 Research design

The research design concerns the organising of research activities, including data collection and data analysis, in ways that are most appropriate to meet the research aim and objectives (Easterby-Smith et al., 2008). Of the three epistemological positions that underpin academic research (positivist, relativist and social constructionist), a social constructionist design was adopted. This enabled a case method (multi-case) design, based on using the semi-structured interview as the method of data collection. These methods are discussed in the rest of this section and in-depth throughout this chapter.

3.1.1 *Epistemic assumptions*

The philosophical approach taken to carry out this research was based on the phenomenological tradition of social science research. The purpose was to try to find out about the actual experience of people, the interviewees. It was therefore necessary to carry out research that was based on being an 'observer as a participant' of the phenomena taking place (Gold, 1958). The interviews were undertaken on a one-to-one basis. Although primarily observing the accounts given by the interviewees, participation took place in the data collection process and also during discussion with the interviewees. The data was only forthcoming subject to the questions asked. Interaction took place regarding the subject matter (interviewees' beliefs) during the data collection (interview) process. An attempt was made to capture data concerning this phenomenon that was evidence to support or challenge a set of propositions (theoretical framework) important in addressing and answering the related research questions.

In-depth knowledge was gained during the interview process relating to organisations, regarding the feeling and belief of the managers of these organisations in terms of the research problem. This related to the corporate greening of the organisation. The benefit of this direct approach was that it was a first-hand account given directly from the interviewee whose beliefs formed the basis of the study. The opportunity to ask additional questions to clarify or confirm a point existed. The opportunity to probe deeper to uncover interesting facts and beliefs existed, however this 'participating'

approach also ran the risk of interfering with the data during collection, or leading the interviewee towards an answer. These risks were dealt with by allowing the interviewee to speak freely without interruption and presenting no visible signs of agreement or disagreement with any answer given and reassuring the interviewee that the interest was in their belief only, concerning the discussion topic.

The thesis title at that stage did not reveal to the interviewee the purpose of the study, nor did it shed light on the research questions that had to be answered. This retained independence of the evidence to support or challenge any derived propositions. Every possible effort was made to limit influence on the data that could have led to a misinterpretation of the facts surrounding the observed phenomena. The facts that emerged, or were observed, were linked closely to the truthfulness of the responses in the interview process.

3.1.2 *Multiple case study design – reliability and validity*

Miles and Huberman (1994) indicated that qualitative research has a wide range of "case" types, from individuals, to organisations, to cultures. There may be selection criteria with the "case" sample, as in this case, selecting middle and senior managers within each case considered. Also, this was a multiple case study, as there were ten organisations as part of the research and two individuals per organisation, making one data set comprising twenty interviews generated. The ontology basis for this case study approach does not follow constructionist discipline exactly, as the research design is based on more than a single case (ten in this study) and multiple case studies are generally based on either a relativist or positivist epistemology (Easterby-Smith et al., 2008). However rather than doing a single case study, it was felt that this study with multiple cases would strengthen the accuracy of findings (Yin, 1991) and therefore the validity of those findings, by looking at a range of different cases where individuals were both shaped or influenced by their social "out of work" and organisational environment. Both internal and external organisational influences existed. The main criticisms of cases made by more positive researchers are that they generate extensive amount of data, allowing researchers to interpret in a variety of ways to suit their argument and they may lack the academic rigour of more positivist designs. This study however, followed Yin (2002), who suggested that before any data collection, the study should have a clear design covering the research problem, the research questions and

any propositions made, together with a clear means of interpreting the data using logic carefully to draw comparisons, then case studies will contain the same degree of validity and rigour as natural scientific or more positivist designs.

By adopting a multi-case approach, it would be possible to compare and contrast findings between cases to assist with the objectives of the study concerning differences between EPOs and their greening process, development of greenwash and subsequent performance. A multiple case approach would be a more reliable and valid method for this, in preference to a single case approach with no other cases to compare against. In relation to theory building, by comparing two or more cases there is more likelihood of establishing whether a theory will be valid or not (Eisenhardt, 1989; Yin, 1991).

Criticism of the multi-case study approach can be that the researcher is less interested in the context of the case than he might be in a single case and more interested in comparison between other cases (Dyer and Wilkins, 1991). In addition, comparative studies may mean a more specific focus at the outset, thereby losing the openness at the research outset, often necessary in qualitative research (Bryman and Bell, 2003). In this study, these issues were addressed because the sample EPOs had differences between them, for example; organisational type, market segment, country location and size. This meant that the context of each organisation could be quite different. This was taken into consideration and time was taken during the interview process to attempt to understand the particular organisation. It was stressed to the interviewee, the importance of the answers to these questions being related directly to their own organisation.

In answer to the criticism of multiple case studies and restricting openness, this study retained openness with relatively broad research objectives at the outset, followed by research questions and propositions that retained breadth to allow the interviewee plenty of latitude to discuss topics in-depth.

This research study would benefit by taking this multiple case study comparative approach. It would allow understanding to be gained through in-depth interviewing, with the opportunity to question and probe interesting relevant issues to the research aim and comparisons to be made between cases, establishing differences and similarities between different organisations.

3.1.3 *Ethical approach to this research*

The approach taken from an ethical standpoint in this research followed the codes and practices as suggested by Bell and Bryman (2007) around a set of ten key principals. The first seven of these relate to protecting of the participants and the research subject and the last three concern achieving accuracy and lack of bias in the research results (Easterby-Smith et al., 2008).

i. *Ensure no harm comes to the participant* – the participants in this research were all interviewed within their own organisational setting under their organisations' rules for employee protection.

ii. *Respecting the dignity of research participants* – a courteous although enquiring exchange was the tone of the researcher, respecting the participants' viewpoint and recording it accurately.

iii. *Ensuring a fully informed consent of research participants* – all participants in this research were written to by the researcher prior to accepting to participate. The aim and purpose of the research and method of the data collection was explained giving time for the potential participant to withdraw before the interview began.

iv. *Protecting the privacy of research subjects* - the full transcripts were only used for this research on the basis that they would not be used for other studies without approaching the participants for their further consent. The printed transcripts are not submitted as part of this thesis.

v. *Ensuring the confidentiality of research* data – data was particular to this research and as in (iv) above it would not be released without the participants' consent.

vi. *Protecting the anonymity of individuals or organisations* – specific names of individuals or organisations were not directly related to any specific data gathered and published in the thesis.

vii. *Avoiding deception about the nature or aims of the research* – as in (iii) above, the aim of the research was clearly outlined as was the method of collecting data prior to the participant agreeing to take part. It was explained to each participant that they had the right to alter or withdraw any statement made if they wished to do so at any time.

viii. *Declaration of affiliations, funding sources and conflicts of interests* - these issues were also dealt with in the written outline of aim and purpose of research to the participants. It was explained that this study was for the purpose of educational research resulting in a thesis by the researcher.

ix. *Honesty and transparency in communicating about the research* – the researcher at all times communicated the same consistent message regarding the research concerning objectives and purpose. The methods chosen were transparent and open to scrutiny.

x. *Avoiding of any misleading or false reporting of research findings* – the findings were based on the interpretation and sense-making of the collected data.

3.2 Research methods

To attempt to answer the research questions developed in Chapter 2, an appropriate set of methods were required as part of the research design to gain traction over these research questions. This section presents the background selection and justification of methods employed.

3.2.1 *Quantitative and qualitative academic research frameworks*

Academic research is mainly based on two different research frameworks: a quantitative based approach and a qualitative based approach. There may be ambiguity however, between the distinction of both and clarification of the method adopted is often necessary (Bryman and Bell, 2003).

Easterby-Smith et al., (2008, p. 82, 83) suggest an important distinction between the two methods, as qualitative is concerned with "collecting data that is mainly in the form of words" and quantitative "involves data which is either in the form of, or can be expressed as, numbers."

This research was exploratory by nature and most academic literature suggested a qualitative research methodology would be the best approach. (Bryman and Bell, 2003; Cooper and Schindler, 2001; Saunders et al., 2003).

A qualitative research approach would allow face-to-face interviews revealing in-depth data. This is a particular strength of this approach, according to scholars such as Bryman and Bell (2003); Hakim (1987) and Yin (2002). For the research problem to be addressed properly, an in-depth understanding of what was happening in the organisation was required, clearly necessitating in-depth interviewing of knowledgeable participants. A qualitative methodology, based on in-depth interviewing, appeared the

most appropriate approach. Importantly, this approach would fit with the philosophical underpinning referred to in section 3.2 for a social constructionist based study.

The weakness of the quantitative approach, as far as this study was concerned, would be that: 1) it would require a drastically increased sample size, and 2) there would no opportunity to explore deeper meaning, or get to the nub of issues by probing knowledgeable people, using a quantitative survey sample approach for example. Furthermore, according to Easterby-Smith (2008, p. 71), quantitative methods can be "inflexible" and "artificial" and "are not very effective in understanding processes or the significance that people attach to actions". This research problem is largely based on understanding a greening process and the study has to explore the significance that people attach to actions. A quantitative methodology, according to the literature, would not be effective in this respect. The potential drawbacks of taking a qualitative approach, while relevant for other studies, did not apply here. Easterby-Smith (2008) outlines these as slow to execute and generating "subjective" opinions. There were no specific time deadlines on data collection and analysis, it was beneficial to plan to collect the data in an unhurried structured way. The subjectivity of participants' opinions was dealt with in the interview process by taking the time to probe further and attempting to be clear with the interviewee regarding meaning of a response before moving on.

Another important reason for taking a qualitative approach design related to the type of research questions. To answer the research questions, access to sample organisations was necessary at a senior level allowing a discussion with senior management. A qualitative study was a very appropriate approach involving participant discussion.

This approach was preferential, as extensive experience had been gained over many years of meeting senior managers, thus there was confidence in gaining access to them and having a relevant discussion. The quality of the study would hopefully benefit by selecting methods completely appropriate for the task in hand according to the literature and in addition, by selecting methods utilising the most personal experience.

3.2.2 *Data collection method – semi-structured interviews*

A qualitative approach for gathering information embedded within managers' beliefs enabled the use of one-to-one semi-structured interviews. This, in turn, developed a flexible and responsive interaction between both the interviewer and interviewee, as Sykes observed (1991, p. 8, cited in Healey and Rawlinson, 1994, p. 132). This was deemed to be the most appropriate option of qualitative research, sitting face-to-face and discussing in a semi-structured way with the interviewee.

Other methods considered included structured and unstructured interviews. With structured interviews, there would have been much less opportunity to probe or discuss further interesting points relative to the study and with unstructured interviews, not enough guiding framework to keep the interview relevant and address the proposition questioning. Jones (1985) indicated that most researchers enter the interview with some key questions that need answered, however these can change as the interview progresses, as interesting areas are uncovered. That was the anticipated possibility in this research and therefore this view underpinned the selection of semi-structured interviews as the method of data collection. Using this method was much more involved than the interview meeting itself.

The approach taken in gaining access and organising to meet with any particular respondent followed closely that of Spender (1989), where a three step process is described; firstly gaining access by specifically asking for the manager targeted as the interviewee by making a telephone call, this increases the chance of speaking directly with the person. The next step was to explain the legitimacy of the research, referring to the academic institution with which the researcher was associated. Also, it was important to explain the confidential and non-commercial nature of the research. The third step was to generate a relaxed feel to the research by using phrases such as "I am looking into…" or, "I have an interest in…" The approach of this research continued to follow the path that Spender (1989) describes in terms of the interview being "focused" or "semi-structured," as it allows for fairly open unstructured discussion, together with general agreement with the interviewee regarding the context of the issue.

The initial telephone call was important in determining suitability for participant selection. During this pre-interview telephone conversation, the level of knowledge was

assessed, experience of such issues relating to the research problem and appropriateness of the potential participant as suitable candidate for interview. Although an informal discussion, it was an extremely efficient tool for selecting a knowledgeable individual for interview. An interview being described as a "purposeful" discussion between one or more people (Kahn and Cannell, 1959).

Inappropriate candidates were rejected due to lack of knowledge or experience at this stage. The approach was then taken, however, to question the rejected candidate regarding a more knowledgeable person in such issues within the organisation and could he be 'put through' to them during the same call. This approach was successful on three occasions and a more appropriate individual was selected for interview.

Each interview was focused in a variety of ways at the start; firstly during introduction by explanation of the nature and worthiness of the research, then by ensuring on meeting managers with strategic responsibilities and finally by all interviews taking place at the workplace of the interviewee. This reflected the organisational position or role of the interviewee, again following the recommendations of Spender (1989).

Bryman and Bell (2003, p. 348) suggested that "an interview guide" can be used in semi-structured interviews. In the case of this study, this was a list of questions which were quite general, however allowed the interviewee a good deal of latitude in how to reply. The questions were used to start a topic discussion related to each proposition. These data collecting questions opened the topic of interest to the research issue in question and were used to start a conversation with the interviewee along a path that could be further developed by probing. The semi-structured nature of questioning prompted additional discussion in interesting areas. Bryman and Bell (2003, p. 343) suggest that the nature of the semi-structured interview allows flexibility and that the emphasis must be on how the interviewee "frames and understands issues and events". This condition was relevant in this study. Leidner (1993) supports this approach in her work concerning interviews with McDonald's employees, describing the interviews as involving a "degree of structure" but insists that the interviewees should also be "allowed room to pursue topics of particular interest to the workers" (1993, p. 238).

It was necessary to collect the views of management with respect to environmental or greening issues by looking at the organisation from different perspectives. Consequently, internal and external views, as well as the organisation's position within

the supply chain and what effect the external activity of other organisations reflected on the organisation's environmental footprint, were important. Previous research carried out by Powney and Watts (1987) and built on by Robson (2002), highlighted certain types of interviews. These are split between informant interviews and respondent interviews. The difference between both has been highlighted in academic literature as *informant,* being where the interviewee is not directed by the interviewer and is therefore free to guide the interview by their own perceptions. On the other hand, a *respondent* interview is where the interviewer (researcher) has some control and directs the interview based on a series of questions. (Easterby-Smith, et al., 2008; Ghauri and Gronhaug, 2002; Healey and Rawlison, 1993; Robson, 2002; Saunders, et al., 2003). The interviews conducted in this study followed the respondent style.

This research was based on an interpretive approach, in the sense that it accepted as true, the observed fact or response given by the individual (Bryman and Bell, 2003). As the research was based on one-to-one interviews, there was a direct approach to collecting the data. There was direct access to the belief of managers as one-to-one contact between the researcher and interviewee existed. Even in a relativist approach, where direct access was not possible or taken and truth is sought by taking a number of different perspectives, often by triangulation, truth can still be validated but only on the grounds of probability. (Easterby-Smith, et al., 2008).

This qualitative based research study was centred on EPOs. To make sense or rationale of the subject objectives, it was clear that a deep insight would be required of management's thoughts and beliefs. Obtaining a sufficient number of organisations and interviewees was important in order to ensure that the study would produce meaningful outcomes and findings from the different organisations. It was important to access the deeper beliefs of individuals. The aim of this type of interviewing was not only to understand their beliefs, but also why they held them (King 2004). This would require access to and time given by the individual interviewee that was appropriate to ensure a meaningful discussion took place. It was important, as Mayo (1949) suggests, that time was taken to listen to what the interviewee wanted to say regarding their beliefs, without influencing them towards a particular viewpoint. Therefore, the interviews tended to be quite lengthy, running to many pages of transcribed text, in most cases between 20 to 30 pages of discussion and taking between one, to one and a half hours duration to complete the interview.

The interviews were based on a series of semi-structured open questions. It was important to determine the level of structure required for the interview. Jones (1985) indicated that the best outcomes are those based on a level of knowledge by the researcher regarding the topic. She also indicated that there should be key issues or topics with related questions around which the interview takes place and these questions could alter, or be adapted, or added to as discoveries of rich relevant information occurs during the discussion. This research followed these principles. There needed to be enough time allocated by both the interviewer and interviewee to ensure that issues could be discussed in-depth by the interviewee if they wished to do so, as this often exposed their real feelings in a series of sentences adding to the richness of the data being collected. It was also important that the interviewer had enough time to establish or formulate the question in a way that enabled understanding by the interviewee of what was being asked. The question also reflected an issue closely related to a particular proposition (research propositions in this study are presented in Chapter 4) and the interviewer took more time to ensure that the interviewee was ready to answer by going over the issue and in some cases, rephrasing the question to help the interviewee formulate a more meaningful answer. This provided a fairly relaxed interview environment with much open discussion between both. Previous research indicates that semi-structured interviews are beneficial when there is complexity involved in the questions and they are open-ended, as was the case in this research and also where the chronological order of questions may need to be altered or it is beneficial to do, as was the sometimes the case. (Easterby-Smith, et al., 2008; Healey, 1991; Jankowicz, 2000).

It was also rarely the case that there were short answers to the question. Once formulation of an answer was made by the interviewee, it was generally a quite specific response that was made.

These semi-structured interviews provided a platform for deeper responses and the unearthing of other related data that in some cases threw light on other related issues not originally part of the data collection questioning or associated hypotheses. This was felt to be beneficial to the richness of data collection and subsequent interviews certainly benefitted, as it became apparent to the interviewer that questioning in this manner often resulted in unexpected but significant beliefs being discovered. Generally, therefore, during subsequent interviews, time was given to allow the interviewee to naturally explain these inner beliefs with some additional questioning based on the disclosed

information of previous interviews. There was a natural progression in interviewing, sometimes as a result of better technique by the interviewer, thereby discovering more interesting information.

From the outset of this study, as the core of enquiry centred on the feelings and beliefs of management, qualitative methods of research and analysis were clearly the most appropriate methodology for making a meaningful contribution for this type of study. A qualitative approach using semi-structured interviews had been used extensively for similar studies, successfully ensuring clear findings were established, for example by Humphries and Brown (2008) in their CSR research.

As this study was dealing with issues that were related not only to business management, but importantly as to how the person within the organisation was influenced by society at large, it was clear that only by interviewing, could these complex inter-relationships be explored in this context. Survey or other non-interactive techniques would not have allowed exploration of interviewees' beliefs and would therefore be unsuitable for this type of data collection (Grix, 2001).

The semi-structured interview is a very powerful method if structured correctly and striking the right balance of control to keep relevance of responses and also, importantly, the freedom of expression of interviewee within the control parameters. Control was ensured by making notes in margins of further possible relevant questions, asking these if necessary to bring the interviewee back to the point of the original question.

Different ways of probing were employed in this study that helped the interviewees with their answers, or further questioning when the interviewer found a rich seam of potential benefit to the study. The techniques used in this study reflected those outlined by Easterby-Smith, et al., (2008). The techniques described relate to keeping the interviewee relevant with their answers by repeating the initial question – a basic probe; asking further related questions after a key question to explore deeper after an incomplete answer, "Why do you feel that way?" - an exploratory probe; probes used to extract specific information, "What kind of...?"- a focused probe; remaining silent or pausing after the interviewee responds hesitantly or incompletely to a question. This is a very powerful means of forcing the interviewee to elaborate or extend their answer in a more meaningful way – a silent probe - drawing out an answer from the interviewee

by repeating the last few words and waiting for a further related response. A degree of prompting was used by giving suggestions to the interviewee. Prompting technique was exercised with a degree of caution, as it could potentially lead the interviewee towards distorting answers (Bryman and Bell, 2003). During questioning, if an open question had been asked and a relevant response was not forthcoming, an additional or supplementary question was often asked in a way that approached from a different angle. This was a technique suggested by Torrington (1991) to probe by rephrasing the question. Reflection was a helpful tool when an issue was probed (Saunders, et al., 2003) and again this technique was used in this study to go over a point with the interviewee by paraphrasing their words encouraging them to "reflect" on their response.

In summary, probing questions were used to explore responses that were relevant and of significance to this study (Saunders, et al., 2003). They generally were worded like open questions, however were targeted or focused to extract deeper meaning or belief from the interviewee.

3.2.3 *Method of recording interview data*

During the pre-interview participant assessment telephone call, it was explained to the prospective participant of the intention to sound record the interview with the participant's consent. From the sound recording, transcripts of the interview would then be used as the basis for data analysis of the interviewees' responses. All interviewees accepted this method of data recording. It was explained that they could ask for the recording to be stopped at any point if they were not comfortable with the content of the discussion at that time. As suggested by Easterby-Smith et al., (2008), this was to allow the interviewee to be sure that there was an accurate record of the discussion that took place and also that they could exercise a halt to sound recording issues of a sensitive or confidential nature, therefore relieving anxiety on behalf of the interviewee. The interviews were transcribed verbatim from the sound recordings and analysed together with notes made at the time.

Again, as suggested by Easterby-Smith et al., (2008), the collection of the data by sound recording ensured there was an unbiased version of the interview that could be used in the data analysis process and re-listening was possible to capture something that may

have been missed. If there was ambiguity regarding meaning, again this re-listening method was employed to check accuracy of interview transcription.

From a practical point of view, the use of a tape recorder enabled the interviewer to focus on the interviewee's response and prepare any probing questions without having long pauses while extensive writing was taken place and disrupting interview flow.

3.3 Sample selection based on a multiple case study

This section provides explanation of the background to and importance of the selection of organisations for sampling from which to carry out this study. Organisations had to be selected that would be able to provide answers to the study's research questions, based on an understanding of the greening process of EPOs and the development of greenwash and any performance consequence.

This section addresses the selection process by firstly reviewing the differences between environmentally reactive and proactive organisations, as defined in the academic literature and then focusing attention on EPOs only, the type relevant in this thesis. The EPOs subsequently chosen and the criteria for their selection is then discussed. This is followed in section 3.3.5 where background information regarding corporate commitment to environmental strategy through published media is discussed, before closing the section by explaining how this issue relates to the selected organisations in this study, in section 3.3.6.

3.3.1 *Proactive and reactive organisations*

The position taken and assumption made in the selection of organisations for analysis, was that organisations that are perceived to be environmentally proactive are, in general, more open to external scrutiny or analysis of their activity and processes than reactive organisations. These organisations generally take a 3Ps approach to strategy development. This, as defined earlier, entails taking consideration of the triple bottom line, or 3Ps; people, planet as well as profit. (Elkington, 1997). They go beyond meeting regulatory requirements and are seeking ways of improving their environmental profile. As referred to previously, there is a wide continuum between organisations that are strongly reactive and organisations that are strongly proactive, with many shades of

green in between. Equally, it could be argued that not all organisations that are strongly reactive are uncaring, relating to the organisation's performance in relation to the environment. However, it was at the proactive end of the continuum that analysis has taken place. This was because organisations in this position were already employing strategies and therefore green expressions of some kind already existed. Management would have experience of trying to implement a greening process and their knowledge gained formed the basis of this research. In EPOs, the moral drivers were most likely to be in place and as a result, these organisations were more frustrated if there were a lack of green outcomes, resulting in a reduction in the level of sustainability being achieved; a corporate objective of such organisations. These organisations would benefit more from this research, by understanding why organisations with a proactive environmental approach are often tarnished or subjected to a charge of greenwashing. Also EPOs, by definition, tend to be more environmentally active and see value in the smallest green activity. Interviewing the management of these organisations should expect to provide a better expectation of identifying the scope of greening activity. This was directly related to the research problem. The environmental will of the organisation's management was important and although, as previously stated, this was difficult to judge conclusively, evidence was available through the reputation and perception of the organisation through media channels, website commitments and in some cases environmental awards received at local, national or international level. The organisations selected for interview were generally recognised as leaders in their segment, sector or industry as 'green' organisations.

EPOs, however, have a natural tendency to be actively looking for new green ideas, often in an unstructured way. They are more likely to discover new green strategies that they can implement at a local or organisational level (Sharma and Vredenburg, 1998). Individuals within the organisation are more likely to be encouraged to bring forward suggestions and ideas specifically relating to improving the organisation's environmental footprint (Hart, 1995). These can be specifically related to that organisation, or sometimes generalised to that industry or similar organisations.

They are constantly working on green strategies and, as such, in discoverable mode more often than reactive organisations. This may make them a natural collector of green ideas, or observer of others espousing green strategic activity that they then adapt within their own organisations (Sharma and Vredenburg, 1998). In addition, they are more likely to engage with like-minded organisations and be party to joining

associations with similar aspirations regarding corporate greening. This type of openness and interaction increases the knowledge of the organisation concerned on green issues and how they relate to management strategy and therefore the likelihood of new forms of green strategy adapted and distilled down to a local organisation level.

Environmentally conscious organisations may be positively driven in a strategic green direction, however not exactly sure why they are. They have a feeling it is the right thing to do, yet often not sure where to focus to achieve their goal. Regulatory target achievement is straightforward for such organisations, however more complex issues such as CSR are more difficult to implement successfully. It is also often the case that they are more open to, and receptive of, new information (Aragon-Correa and Sharma, 2003). This information is increasing in volume relating to green issues and greening strategies. EPOs tend to try to embrace this complex information often unsuccessfully. This can be an awesome task and sometimes leads to confusion as to which green path or strategic approach to take. The analogy can be drawn with medical information given in the media regarding what is good for the health of the individual. It is often conflicting and sometimes controversial, leading to confusion. This is a rich area for constructive management research to make sense of and understand better the natural process that takes place in such organisations. Their goal of better environmental performance needs to be documented to improve managerial practice and making the transition for organisations from reactive to proactive on environmental issues more efficient, less time-consuming and presumably less costly. This may encourage more organisations to be part of the paradigm shift towards environmental proactivity as a means for developing corporate sustainability.

In contrast, what this study defines as reactive-only organisations, are not participants in this study. They are often more shareholder focused, taking a more neoclassical view of the reason for organisational existence. They often only minimally comply with environmental regulation (Aragon-Correa and Sharma, 2003). Corporate greening is not seen as an activity that would substantially add to the profitability of these organisations. They, as a result, are less complex in their motivational factors for any environmental activity (Bansal and Roth, 2000). It is often strictly limited to minimal compliance to ensure the organisation meets its legal regulatory obligations. Often, such organisations operate a more command and control approach to management of the organisation (Winn and Angell, 2000). These organisations do not see the environment as their responsibility. They are categorised in the Winn and Angell (2000, p. 1129)

model as 'Deliberate Reactive'. There is less openness and also less opportunity therefore, for stakeholder activity or influence, except for shareholder pressure, usually geared towards productivity leading to profitability. The employees and local community have less influence on the organisation in predominantly reactive organisations and therefore, there is little opportunity nor encouragement of new ideas in relation to protecting the environment.

The nature of most communication is often one way, top down, within the organisation. There is less complexity of communication when contrasted with EPOs. In that case, both top down and bottom up communication takes place. More time is spent listening to the views of different levels within the organisation and management is often struggling to incorporate the views of all.

3.3.2 *EPOs and their common characteristics*

This study has taken place with what is defined here as EPOs only. This is because the research problem was centred in organisations that go beyond minimum regulatory requirements and have a higher level of commitment to greening processes. EPOs in this study are defined as organisations that adopt, or are attempting to adopt, proactive environmental strategies. These organisations take other driving forces into account apart from government regulations (Fischer and Schot, 1993). Buysse and Verbeke, (2003, p. 453) suggested that this strategic approach of "going beyond what is required by government regulation could be viewed as a means to improve a company's alignment with the growing environmental concerns and expectations of its stakeholders". They took the view that environmentally proactive firms listened and reacted in their strategic approach to meet other stakeholder expectations and environmental concerns, in addition to government regulations. This view was shared in part, at least in the literature (Garrod, 1997; Gladwin, 1993; Steadman et al., 1995). In this study, all participating organisations demonstrated this type of commitment.

It was specifically of interest as to how this level of commitment translates into implementation of green strategies. An organisation's proactive-ness is a measure of commitment and, in theory, is a measure of implementation of corporate greening strategies. However, it is unclear how increased levels of commitment are associated with levels of implementation in practice and what other factors influence or hinder better implementation outcomes.

It is also the case that EPOs are more likely to be influenced by the greening strategies of other organisations in their total supply chain (Zhu and Sarkis, 2007). These may be in their specific supply chain upstream or downstream, or operating in their industry. Interview questioning was designed to attempt to capture and identify any influences on the organisation from these or other sources.

Stakeholder pressure is an important issue for most organisations in relation to environmental policy (Charter, 1992; Clarkson, 1995; Sarkis et al., 2010). It is not just a case of being more sensitive to stakeholder concerns that influences environmentally conscious organisations. These organisations are predisposed to better interaction with stakeholders. Proactivity on environmental issues is linked with increasing complexity regarding motivational factors (Bansal and Roth, 2000).

3.3.3 *Number and variety of participant organisations*

The selection of participant organisations was crucial to attempt to answer the study research questions. In this study, qualitative research was carried out on ten organisations with each organisation generating two interviews. This provided qualitative data based on twenty interviews. The likelihood of more openness and better transparency of EPOs was an influence also in the selection process. Obtaining accurate data was paramount to the whole study, to ensure that findings were reliable and underpinned with sufficient supportive data.

Qualitative research was carried out over a relatively broad cross section of industries. Organisation size ranged from SMEs to public listed companies. Organisations were not limited to one particular country, but were European or US based. A balance between organisation size, location, industry type and number of interviews was such to provide enough variety for generalisation of findings and conclusions, as discussed later in the study in Chapter 7. In each organisation, employees with sound knowledge of the organisation were interviewed. These tended to be senior or middle managers or in smaller organisations, owners and directors.

The ten organisations chosen were selected from a variety of industries, market segments and countries. The objective was not to limit information from a few particular industries or market segments, as this would perhaps influence environmental performance and skew the evidence. If organisations had been selected all within the

same market segment, their environmental pressures regulatory, stakeholder or otherwise, would perhaps have been similar, perhaps influencing their reaction to these in a similar way. The purpose of the research was to try to capture different proactive responses to environmental pressures and therefore analysing different market segments or organisations operating in different industries would address this. Organisation size and the environmental strategic approach taken by an SME, relative to a PLC for example, could be quite different, even though both were on a proactive environmental footing.

In smaller organisations, ownership generally plays a more direct role in the implementation green strategy process and again, analysis of the effectiveness of this with larger organisations where ownership or senior management can be distant from implementation, was important to the study.

The above considerations were taken into account before finalising and agreeing access with the participant organisations. Other equally worthy organisations could have been selected, however access proved difficult and therefore it took some time to establish the final list.

3.3.4 *Specific criteria for selection of participant organisations*

The previous section (3.3.3), outlined from the academic literature, common characteristics of EPOs, however there is no prescriptive selection criteria in the existing literature based on previous studies. For this reason, the selection base for this study had to develop criteria clearly demonstrating proactive-ness (voluntarily going beyond meeting environmental regulation) and candidate organisations had to meet this criteria to be eligible for selection as participant organisations.

As there are many dimensions by which an organisation could be categorised as environmentally proactive, the selection process had to be based on relevant proactive aspects of participating organisations. Theoretically, any demonstration of going beyond merely meeting regulation in an environmental sense could be the basis of a legitimate claim to be proactive. This study focused on identifying organisations that could demonstrate environmental proactivity in at least three key categories from a group of seven categories, each of which had relevance in this study.

The seven categories relevant to this study were:

independent external assessment; internal evidence of a CEP; verifiable evidence of eco product output (downstream); externally verifiable evidence of CSR activity; evidence of an ethics policy; internal evidence of CSR activity; supply chain greening evidence.

In Table 3, a Final Organisation Sample List is given reflecting the position of the organisations selected with respect to this criteria. A participant organisation had to be actively engaged in at least three categories of the possible seven and together with a positive response (knowledge of own organisational environmental issues) in a pre-interview telephone discussion with two potential interviewees, the organisation was chosen. The organisation was then classified in this study as environmentally proactive, an EPO.

Company	External Assessment	Internal CEP - Verifiable	External Downstream Evidence - Verifiable	CSR External-Verifiable (including press release)	Internal/External CSR - Verifiable	Internal CSR - Verifiable	External - Verifiable	Pre-Interview telephone discussion
	Env Accreditations	Env Policy	Eco Products	CSR/Fundraising	Ethics Policy	HR	Supply Chain/Other	Meet proactive definition
Company D	ISO 14001	Policy "not simply to comply with legislation but to attain higher standards through the adoption of recognised good practice and visible leadership"	Promote the use of sustainable materials (Web)	C2C cycle challenge in aid of the Willow Burn Hospice charity	Anti-corruption	Member of Construction Industry Training Board to facilitate accredited training. Annual intake of apprentices from local college. (web)	Policy to source from environmental suppliers (Web)	Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company DH		Basic document developed extensively in 2012. Use sustainable products, undertake energy audits, efficient logistics and travel	Purpose of the company is to reduce paper usage and waste	Involved with Young Enterprise, Mental Health Charity, fundraising for Yorkhill Sick Children's Hospital	In development		Listed on Business Enterprise website as example; also in local Chamber of Commerce	Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company G	US Green Building Council Platinum Member (highest of 4 levels) LEED accreditation	Sustainable statement and clear environmental stance visible, including Eco Blog for customers (Web)	Offer recycled, energy efficient materials, light reflective membranes, solar products	Offer Wellness programmes, fitness areas, health club reimbursement	Employee Value Proposition committed to integrity and values	'Co-Oportunity' programme providing paid practial experience to college students (Web)	Sponsor of Certified Green Distributor Programme offering tools and education for	Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company K	Multiple awards for sustainability and green practice, BREEAM.	Policy to have all facilities running on renewable energy by 2020	Products which minimise carbon emissions and energy usage	Community Trust supporting local initiatives/ fundraising. Clean up of local countryside. Give & Gain Day spending time in the local community. Donation of materials to Cross Cause in Romania & Eastern Europe. Sponsor for Irish Hospice Foundation (Web)	Code of Conduct covering amongst others; ethics, equal opportunities, anti bribery & corruption	Graduate recruitment and development programme	Code of Conduct /sustainability guidelines for key suppliers and contractors to ensure compliance with Group Sustainability Policy.	Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company MC		Recycling and energy saving scheme, Cycle Sheme	Student output; Industry Knowledge Hubs	Premises are a shared resource for the community	Equality & Diversity, Disability & Age Policy			Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company PL	ISO 14001	Waste reduction, recycling, minimising packaging, efficient logistics (Web)	Offer products with Environmental benefits and environmental materials (Web)	Men's Health Survival of the Fittest Team raised money for The Multiple Sclerosis Trust. Runners in Race for Life supporting Cancer Research (Web)	Discussing externally with consultant	Policy to train and retain young recruits. (Web)		Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company SS		Not obvious - plan on developing one in near future	Policy to source more environmental products	Support local charities	Promote openness, inclusivity and respect		Encourage reduced packaging	Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company S	LEED Accreditation	Young company - not yet formulated	Renewable energy		Ethics & Equality Policy			Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company T	Shell Sustainability INDEX Top 100 globally	Extensive corporate document covering internal, external, upstream and downstream issues	Use environmental materials	Own in-house policy for a better future - Blue Dimension™. Comply with Global Reporting Initiative. Support Save the Children, Star for Life and more.	Equal Opportunities and Fair Practice Policy. Anti Bribery & Corruption Policy	Student programme, Graduate programme, mentoring, skills development	Work with suppliers to increase efficiency, reduce waste	Open to scrutiny; Knowledgeable people, green issues; clear 3P
Company N	ISO 14001	Environmental policy	Offer products with Environmental benefits and environmental materials (Web)	Offer fitness/ health club reimbursement; annual charitable donations, e.g. World Wildflife Fund, Médecins Sans Frontières	Ethics, equality, anti-bribery & corruption		Code of Conduct/sustainability guidelines	Open to scrutiny; Knowledgeable people, green issues; clear 3P

Table 3. Final organisation sample list and selection category results

Telephone call pre-interview to establish if meets academic literature definitions of openness, perhaps high moral and 3P, Elkington (1997) Bansal & Roth (2000), Sharma & Vredenburg (1993)

The final ten organisations who met the criteria described above are shown in Table 3 and the organisation's assessment in each of the categories is also presented.

The organisations that subsequently were selected to participate in this study are also listed in Table 4 below. All of the organisations selected exceed the minimum criteria set and are clearly able to demonstrate environmental proactive-ness.

Organisation	Country	Number of Interviews	Industry Type	Organisation Type/Size
Company N	Scotland	2	Industrial/Service	SME < 200 employees
Company T	Germany /Poland	2	Industrial/Service	Large multi-national > 1000 employees PLC
Company PL	England	2	Industrial/Fabrication	SME < 30 employees
Company SS	Ireland	2	Construction Servicing	SME < 30 employees
Company MC	Scotland	2	Education	Tertiary further education > 250 employees
Company D	England	2	Construction/Contracting	Specialist contracting > 100 employees
Company K	Ireland	2	Construction Product Manufacturing	Large multi-national > 1000 employees
Company DH	Scotland	2	Electronic Technology IT	SME < 30 employees
Company S	California, USA	2	Renewable Energy Photovoltaics	Specialist high tech > 100 employees
Company G	USA	2	Construction Product Manufacturing	Large market leader >1000 employees

Table 4. Organisations selected for the study

3.3.5 *Analysis and measurement of corporate commitment to environmental strategies through published data*

Analysis of the proactive elements of CEP publications and using these as a proxy for proactive corporate environmental strategy commitment is a legitimate means of establishing how genuine the organisation may be in its intention to plan for a greener organisation.

The analysis, specifically of corporate data, would include proactive elements only, of published environmental reports, if available. In this research study, only the most recent environmental report was used, as this was in place at the time of the semi-structured in-depth interviews of the corporation's employees.

In some cases, there was little information available through systematic published environmental reporting. This is not a legal requirement in any of the countries from where organisations participating in the research came. It was also assumed that the availability of an environmental report did not necessarily constitute a strongly motivated organisation committed to organisational greening. Additional information gathered from such publications as marketing literature and internal training objectives documentation relating to the environment would also be assessed in order to have a holistic view of CEP commitment. The internal training data would also be taken as part of the organisation's implementation phase of environmental policy. Third party verification of organisation commitment was used in some cases to assess corporate commitment to a greening process. This was often in the form of meeting certain criteria of 'green' rankings by relevant bodies in government or even the media (Shell Sustainability Index, 2011). Press reports or releases concerning the organisation were analysed as part of this verification process. If an organisation was listed by a third party organisation focussing on environmental issues, the listing criteria was assessed and the fit with the objectives of this study were explained and clarified.

Both commitment to, and implementation of, an organisation's environmental policy and strategy could be analysed in this way. Equally, the organisation's published literature, including websites, were analysed and reported on. Corporate communications therefore played an important role in building a profile of the organisation's commitment and also, albeit to a lesser extent, its implementation of environmental corporate policy. Only verifiable third party information was used to show or record implementation. The organisation's association membership was analysed to help understand external influence to the greening process. For most EPOs, there were often a variety of links to environmental groups, or awards sometimes conferred upon the organisation. It was important to understand the links the organisation had with these associations and also comment on the worthiness of the associated links. It was important, where possible, to distinguish between links that were present, demonstrating real value in terms of a greening process and links that emphasised a willingness to collect a green 'badge' or 'logo'. This can sometimes be a symptom of genuine greenwashing, whereby the organisation concerned actively pursues easily obtainable associations with organisations from a purely marketing perspective, to enhance the perception of associated members as genuinely environmentally proactive. In this research, therefore, it was important to investigate

the linkage between the organisation and any associated green organisations and report on the value of these organisations. The criteria for assessment, as well as any effort the organisation was required to make to achieve the required standard for associated membership of the organisation, were important. As far as possible, association memberships of green organisations obtainable through payable fees were discounted, as these were felt to be easily obtainable subject to the willingness or capability of an organisation to pay the associated cost. These were often again more likely to engender a charge of greenwashing. It was important, however, to differentiate again with organisations that are non-profit only, but providing useful criteria for benchmarking or assessing the greening process within organisations. In these cases, as well as organisations having to meet strict criteria for compliance, the green organisation often requires fees to ensure that it can support a rigorous assessment program.

3.3.6 *Justification of selected organisations' environmental proactivity*

Further background information is given here concerning the participant organisations' environmental proactivity and suitability for selection.

The most significant part of the selection process was determining the credentials and justifying organisations' selection on their environmental proactive behaviour. At the time of selection of participant organisations, there were increasing numbers of registers and associated lists pertaining to sustainable organisations. An example of this is the Shell Sustainability Index which purports to rank organisations with respect to their corporate greening profile. One organisation, Company T, was selected on the basis of being included on such a list. There has also been a tendency to bestow various environmental awards on local, national and international organisations that, in the view of the relevant decision makers, have achieved a level of environmental proactive-ness. Another two organisations, Company DH and Company PL were selected on this basis. Company DH's selection related heavily to an award for innovation in environmental efficiency and significant local media coverage was available to support the organisation's claims. Company PL, an SME, had achieved various accolades in their industry trade press relating to environmental proactivity, specifically in relation to efficiency through innovation and community involvement. Technological green innovation and community involvement were also the main reasons for the selection of Company K, a multi-national organisation very much focused on greening strategies in

their reduction of ozone depleting chemicals, combined with significant strides to reduce transport movements, while being a leading example of how to positively impact the local community.

Environmental pressure groups such as Greenpeace and Friends of the Earth are active in exposing organisations that flaunt environmental regulation and good practice, but also commend the environmental approach taken by others; again listing on websites, for example. Another method used for organisation selection has been to witness proactivity or by secondary verification. At least one organisation was referred to in this way. The organisation was selected in this case, as a result of an innovative green technology article which identified the chosen organisation as a leader in this field. The organisation, Company S, was very open and as willing participants, allowed access to their headquarters, based in Silicon Valley, California where interviews took place.

Knowledge regarding selection was generally collected from initially researching organisation websites to review the organisation's position on all environmental issues. This was a positive way to get a closer perspective of organisation activity, in some cases reviewing case histories and third party verifications. This process also gave an insight into the stated commitment of the organisation regarding environmental matters.

Organisations were selected based on justification or identifiable activity from different sources and not all from the same source. This gave a less restricting framework from which to select for environmental proactivity, as it was assumed that these would be heavily focused on meeting environmental pollution targets and therefore the profile of such organisations and associated interviewing would produce results that would be skewed towards meeting environmental regulatory obligations.

There are few established benchmarks in assessing corporate environmental proactivity. International standards on environmental assessment ISO 14001 are useful instruments, however in some cases flawed, as they are mainly a prescriptive approach. The organisations selected as part of this research were not chosen as a result of meeting a particular norm or standard related to changing processes within the organisation, similar to meeting emission regulations. They were fundamentally chosen on the basis that from within the organisation, there was a real willingness to take a broader view on environmentalism. Generally, they realised there was a role that the organisation had to

play concerning CSR. They also were selected for having a policy on business ethics. These areas of corporate greening are not always easily identifiable, or necessary elements for obtaining certification of being an environmentally responsible or proactive organisation.

In conclusion, the organisations chosen for inclusion in this study were already considered to be proactive by definition of their corporate greening activity beyond minimum regulatory requirements. Between them, they covered a variety of different industries and market sectors. They had differences in organisational structure and organisation size which reflects differences, in some cases, in the communication element of corporate architecture. They were not all selected from the same list, source or reference body and this encouraged a more holistic analysis of corporate greening activity to be observed. In respect of this group of organisations selected for interview, it was possible to detect and map greening activity that was small scale, but important and evidence of real belief within the organisation.

3.4 Collection of data and data analysis

This section describes the approach taken in collecting the data during the interview and the subsequent methods used to prepare and analyse this data in line with the philosophy of the study.

Easterby-Smith, et al., (2008, p. 172) remark that the methods chosen for data analysis "are consistent with the philosophical and methodological assumptions made in the research design that underpin the study" and further remark that "if the researcher is working from a socialist constructionist perspective, then he or she will attempt, as much as possible, not to draw a distinction between the collection of data and its analysis and interpretation". The methods used, therefore, needed to be appropriate and in harmony with the research design, which attempted to capture the actual experience and belief of senior managers through an in-depth interview process that allowed a certain amount of latitude to the interviewee to recount their experience. They would be steered to keep to relevant areas of interest relating to the research questions. The methods of analysis had to be consistent with this philosophy.

Following the social constructionist philosophy, the data was collected and word for word transcribed and then analysed. There was little distinction between these two phases of the study. Interpretation would also be by keeping methodical and philosophical assumptions made in the research design and different to a more positivist approach.

This research study was based on a theoretical framework that related to a set of pre-determined propositions. The following chapter, Chapter 4, discusses the development of these propositions from the study research questions.

Based on these propositions, an inductive approach to data analysis was more appropriate. It was based on a social constructionist approach to research. Meaning was interpreted from the data and analysed against propositions based on a theoretical framework. There was also some degree of meaning deduced from the data by the approach taken during the interviews. This occurred in the sense that in-depth description was often given by the interviewees.

3.4.1 *Method of data collection – sound recording of interviews*

The interview was the data collecting phase of the study and each interview was sound recorded with the participant's consent.

The approach taken during the interview was;

To firstly listen to the interviewees as intently as possible. The analysis started right at this point (Miles and Huberman, 1994). The first contact for each interview made an impression that was duly noted. Further notes were made on the question guide sheet next to the question being asked and topic explored, highlighting the reaction or any other interesting visual response of the interviewee. These were useful in the later stages of analysis. The sound recording would capture the verbal response in terms of voice inflection or surprise, for example, but would not capture any visual response, hence the necessity to note this as described.

3.4.2 *Transcription – preparation for analysis*

Post interview, it was necessary to transfer the sound recording into text (transcription). The interviews were taken from the taped sound recordings and transcribed into a printed account in preparation for analysis.

After transcribing each interview, the specific notes from that same interview were added into the transcribed document at the point in the interview that the note was made.

Interviews were transcribed soon after they took place (usually within one day). This enabled reading and first review of the data relatively close to the interview date, ensuring that observations regarding the interviewee's mannerism or reaction to a particular question were still relatively fresh and noted on the sheet of guiding topic questioning. This was beneficial and often assisted the data coding process that followed later in the analysis. Taking this approach allowed a familiarisation of the data collected (Easterby-Smith, et al., 2008). The transcribed interviews were then re-read to ensure that the intended meaning was derived.

The first reading after being transcribed was, as Glaser (1978) suggested, a reminder of the purpose of the study and whose point of view was being analysed. As the interview data was quite complex, taking this approach as suggested, ensured that the genuine opinion of the interviewee was the data collected.

3.4.3 *Data analysis methods*

In this study, the data generated was in the form of transcripts of verbatim accounts between interviewer and interviewee and several methods were therefore possible for analysis of these transcripts.

The approach taken was to use an analytical strategy suitable for this type of qualitative research, also one that gave the best opportunity of answering the research questions. There were well defined research questions and objectives, with clear propositions. The number and type of organisations had been identified to gain access before the outset of research. These reasons aligned well with suggested qualitative research analysis for

this type of work, based upon analysis of natural language (Easterby-Smith et al., 2008; Saunders et al., 2003). The existing literature and derived theory, as well as the pilot project findings, helped shape the data collection questions, referred to in this study as topic questions, which again related closely to the research questions.

Of the alternative methods to analyse natural language data, there was an element of *narrative* analysis used. This was when a near story telling account answer was given by the interviewee, with quite rich description of events or beliefs. The interviewee was probed and encouraged to proceed, as the content was relevant to the study and preserved the context of the data. Tsoukas and Hatch (1997) related to this as an appropriate method of analysis in such circumstances. This naturally occurred in a small number of interviews where the interviewee elaborated along a path of interest.

It was of vital importance to maintain an "objective stance" during the analytic process, as described by Strauss and Corbin (1998, p. 43) while at the same time being sensitive to the issues of the participant interviewees in the study.

The data analysis process followed Miles and Huberman (1994), by utilising a three-stage approach: *Stage 1*, *data reduction; Stage 2, data display (presentation of findings); Stage 3, conclusion drawing and verification.*

The first stage, *data reduction,* is covered in this chapter in the following section (3.4.4). The second stage, *data display (presentation of findings),* is covered by the Findings chapter, Chapter 5 and the third stage, *conclusion drawing and verification* is covered by the Discussion chapter, Chapter 6.

3.4.4 *Data reduction – Stage 1*

Reducing the data entailed the process of selecting words or breaking down phrases from the interviewee transcripts and field notes (sometimes referred to as coding). New or different meaning was explored within the broken down phrase or words. It allowed a review of what had been said from different angles and perspectives to derive further meaning. It brought together any field notes and observations made at the time of the interviews that were relevant from the transcripts of the recorded interviews.

Extensive reading and re-reading of transcripts took place. A thematic approach was taken to the interview transcripts by grouping and linking broad subjects or topics, looking for detail, vivid stories in the interview responses and making relevant connections, as suggested in the literature (Boyatzis, 1998; Guest et al., 2011; Strauss and Corbin, 1998).

Coding allowed labelling of elements of meaning to the information gained in the interview process (Miles and Huberman, 1994). This allowed the data to be categorised. Qualitative content analysis was used to search for topics and categories. Patterns in the data were identified by trying to link and organise topics.

The data analysis was carried out in two phases in this study. The first phase established 'strength of feeling' of managers concerning certain topics related to propositions developed from the research questions. The results of this were recorded in a reduced data matrix. Empirical analysis of this matrix is presented in Chapter 5 - Findings. The second phase was a further analysis based on the thematic approach described above.

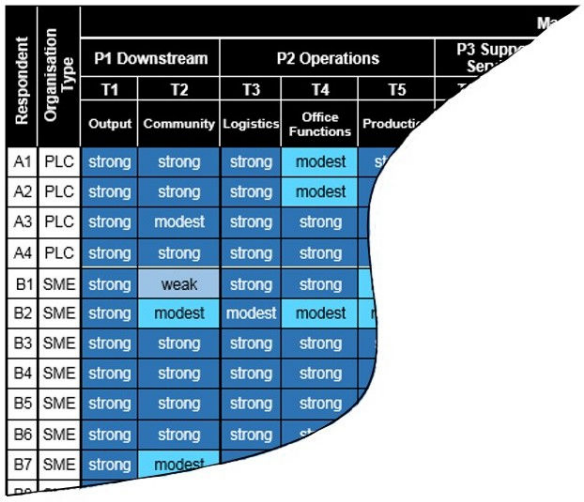
In this study, coding rules had to be developed and applied to work with the data in a structured way for both phases.

Coding rules for 'strength of feeling' – 1st phase of coding (recorded in reduced data matrix)

As this study looked at research related to strength of feeling of individuals, the initial coding allocated a concept to the interviewee's response based on a simple "strong", "modest" or "weak" categorisation. The strength of feeling was interpreted, based on a classification process.

The criteria for recording the interviewees 'strength of feeling' to a topic question is outlined. The labels of 'weak', 'modest' and 'strong' were used accordingly. A reduced data matrix was developed to graphically record the strength of feeling of interviewees relating to each topic.

An excerpt from the reduced data matrix is shown below. The full reduced data matrix is presented in the Findings, Chapter 5, section 5.1 of the thesis.



Respondent	Organisation Type	P1 Downstream		P2 Operations			P3 Supp Ser
		T1	T2	T3	T4	T5	
		Output	Community	Logistics	Office Functions	Producti	
A1	PLC	strong	strong	strong	modest	st	
A2	PLC	strong	strong	strong	modest		
A3	PLC	strong	modest	strong	strong		
A4	PLC	strong	strong	strong	strong		
B1	SME	strong	weak	strong	strong		
B2	SME	strong	modest	modest	modest		
B3	SME	strong	strong	strong	strong		
B4	SME	strong	strong	strong	strong		
B5	SME	strong	strong	strong	strong		
B6	SME	strong	strong	strong			
B7	SME	strong	modest				

Figure 3. Reduced data matrix indicating 'strength of feeling' of respondents relative to propositions and associated topic questioning.

The reduced data matrix allowed the strength of feeling of managers regarding topics to be analysed empirically stating the percentages of managers that believed strongly, modestly or weakly concerning a particular topic. Comparisons could then be made regarding strength of feeling of managers between topics and type of organisations. Chapter 5 – Findings presents these results.

Definitions of the respective classifications are given below;

Weak Recording of a 'weak' response in the coding was made when a typical negative response included words or phrases such as; "*No", "That's not how I see it", "Definitely not", "That's not the case here,"*

Modest A 'modest' response was recorded in the reduced data matrix when it was clear during reading of the interviewee transcripts that there was understanding of the topic in question and that the interviewee had formulated a response that correlated positively with the question being asked concerning the subject matter. The extent or level to which the interviewee agreed was important in determining whether any particular response would be recorded as 'modest'. The interviewee *somewhat* agreed in some cases to the best of their perhaps limited knowledge. They may have *thought,* or *expected,* or suspected the issue or topic to be the case.

Typical responses in this category included but were not limited to; *"Yes I do agree to some extent", "I think that is the case", "I suppose so", "I think so."* Words that signified a 'modest' response included "some", "suppose", "possibly", "maybe", "think", "often" .

Strong Typical responses that led to a 'strong' classification included, but were not limited to; *"that is definitely the case", "I feel strongly", "there is no doubt", "I believe."* In these cases, it was very clear early in the questioning process about the strength of feeling that the interviewee had towards the topic question and how positive they were in agreement with the issue being explored. There was little doubt that the 'strong' classification was justified and that this indeed was the feeling of the interviewee.

There were again obvious *trigger* or signifier words such as "definitely", "absolutely" and "strongly" that clearly supported the topic.

The interviewee, in all cases where a 'strong' classification was coded, was in almost total agreement with the topic question.

As questions were mostly open, it was only by analysis of the transcripts that both the openness of the questions and the subsequent confirmation of a particular position by the interviewee could be appreciated. The coded confirmation of the position of the interviewee generally only emerged during the transcribed answer. Therefore, it was generally the case that not all of the discussion on a particular topic was coded. Coding was limited to clear classification being possible along the lines described above.

In order to ensure the classification was correct, re-reading the interviewee's response was always necessary prior to assigning a particular classification. Conflicts, or potential conflicts concerned with coding decisions were generally dealt with in this way. A conflict arose in the same transcribed passage if there was a different answer to the same topic question. This was resolved by searching for the fullest extent of possible meaning of each piece of text in the same passage and logically attempting to understand how the different answers unfolded from the perspective of the interviewee.

It was important to ensure that the potential for misinterpretation, naturally present in any coding process, did not lead to incorrect labelling of data, for example, selecting a

'modest' classification for interviewee topic response when the real feeling of the participant was 'weak' or 'strong' relative to the topic proposition. For this reason, coding was a very detailed process and only when the feeling of the interviewee was being captured correctly, did the selection process take place. This part of the process is referred to the first pass in coding the data to establish strength of feeling on each topic.

3.4.5 *Coding process for 2nd phase of data reduction*

Further data reduction took place to attempt to interpret the range of potential meaning from the interviewees' perspective.

In this study, this is referred to as the second phase of coding; deeper than stage one, the 'strength of feeling' coding referred to earlier in this section. This was a deeper analysis of the data.

Again, as indicated by Strauss and Corbin (1998, p. 109), merely adding an identifiable name to the selected categories does not necessarily convey deeper understanding and further deeper analysis was required, "microanalysis".

The coding process continued throughout the study and as hierarchical themes developed in terms of importance, new codes were added. Lincoln and Guba (1985) indicated that coding may take place later in the study and new codes added as new meaning emerges as additional data is collected. New meaning also emerged in this study when returning to previously coded work and this was taken into account and recoded. A similar and important part of this study again referred to by Lincoln and Guba (1985, p. 333) related to "bridging". This process occurred later in the analysis cycle in this research as new relationships developed between units of a given category. These relationships were unforeseen at the outset of the research, however emerged as the analysis process intensified and new meaning was extracted from the data.

Strauss and Corbin (1998, p. 105) suggested that "In conceptualizing we are abstracting. Data are broken down into discrete incidents, ideas, events, and acts and are given a name that stands for these". The context was extremely important when grouping together words or phrases that could have different meaning. These methods were then used as a means of classifying the data. The data was classified into different categories derived from the analytical framework. This was based on the study propositions that related closely to the research questions (Saunders, et al., 2003). These categories, due

to their close relationship to the propositions, were therefore part of a coherent set and meaningful in relation to the data and also each other. This met the suggested approach that Dey (1993, pp. 96-97) described, concerning an internal and an external aspect to each category derived.

The concepts that developed from the language of the interviewees were those that the data suggested. Major categories began to develop after analysis of interview transcripts. It was some time after interviewing and examining all the data before the most relevant categorisation for this study emerged. The following categories were arrived at by this method:

Communication	internal and external
Education	management and staff
Organisational Structure	facilitating or impeding
People	champions or reactors
Performance	financial and environmental

The new conceptual framework that developed was based on discussion surrounding these issues. The data reduction process, following closely that suggested by Miles and Huberman (1994), had brought out the key issues surrounding corporate greening process and these were the main categories that emerged naturally through the coding process.

In Chapter 6 – Discussion, the above categories are discussed and integrated with the first pass of coding 'strength of feeling' findings from Chapter 5.

An example of the data reduction process of a transcribed interview for this study is shown in Appendix A which gives the first pass in coding result, together with result of further analysis on the same page.

Here, the transcribed words were broken down while searching for meaning and understanding in the data. Referring to this process, a system was used of taking the full text of the transcribed interview, then placing in a table that sectionalised the interview into various columns, as shown in Table 5.

An excerpt from this interview is shown below in Table 5. This was used as the main data analysis sheet.

Proposition 1	Discussion Topic, (data collecting questions and answers)	Strength of Feeling	Concepts	Memos/Researcher's Thoughts
Discussion Topic	**Personal belief regarding downstream being part of an organisation's greening process.**	**1st Pass**		
Topic Question T1	***In your opinion and I'm only interested in your opinion, how important is it that companies or organisations should contribute positively to the environment with the products and systems they manufacture?***			Informed interviewee of background to research etc.
Respondent	It's very important. First of all, if you take it from an a energy conservation point of view, the vast majority of energy that is used is a finite material, it's not going to last forever, so we need to be using it wisely and using it, in my view, only for essential purposes. I think the day has gone when we should be burning oil. I really believe oil should be used for the very essential requirements and beyond that we should be using sustainable materials.	Strong	**Energy conservation** **Sustainability** **No fossil fuels** **Smart**	Essential – absolute necessity, cannot be any other way, vital, without which there could be a catastrophe, must be done, immediate Wisely, smart, clever, sly? Intellect , could be efficient, cost saving

Table 5. Excerpt extracted from coded transcript

A data analysis sheet was implemented for each of the twenty interviews conducted and these covered all questions asked (for brevity only one interviewee's answer to the first topic question (T1) and part of the data analysis showing concepts initially derived, as well as resulting notes made is shown). This system was used to deconstruct all transcripts into manageable coded chunks of data, thereby allowing a systematic approach, keeping in mind the quantity of data generated and abstracting further meaning right next to the data. This was important to unearth deeper meaning and the breadth and depth of interviewees' answers were explored by picking out key points that the data suggested. The extent of possible meaning was noted this in the right column, recorded as 'memos'.

The findings and discussion concerning sense-making of these are presented in Chapter 5 and Chapter 6 respectively.

3.4.6 *Display of coded data – Stage 2*

Miles and Huberman (1994) suggested a variety of ways of displaying data to convey and derive real meaning by using matrices, charts and other graphical means to recognise emergent patterns in the data. This research followed this approach and after coding of each interview, the initial coded information was entered into a reduced data matrix linking interviewee by strength of feeling to each topic associated with each proposition. The strength of feeling was both displayed in a descriptive sense and also visually using a colour coding in the reduced data matrix. Miles and Huberman (1994, p. 239) also indicated that "by displaying your reduced data in a systematic way has immense consequences for your understanding". Graphical representation of reduced data significantly improved the initial grasp of what was being suggested by the data.

The colour coding drew attention to emerging patterns that subsequently brought different layers of meaning to the research. This, in turn, led to a search for further meaning by the grouping of different responses. Again, as evident in this research, according to Miles and Huberman (1994), a hierarchical structure was being generated in the coding and categorisation and this assisted in the generation of a response to each research question.

Understanding was derived through the coding process by reflecting on the possible meaning, further to deeper analysis of the words spoken by the interviewees using the coding rules described earlier. It was the meaning that was important, as the same word can be used to describe quite different meaning in certain circumstances depending in which context used (Bliss et al., 1983).

3.4.7 *Verification method - Stage 3*

Verification or conclusion-drawing is a process that begins at the start of the data collection process (Miles and Huberman, 1994). As such and during the course of this study, there was continual review regarding meaning or what the significance was of patterns or regularities. Deriving meaning from the early interviews (including the pilot) had some relevance, however essentially amounted to a case study of one and this held meaning, at that time, only for that particular case. However as the research progressed, more and more interviews began to bring clarity to the whole study. Final

conclusions were made only once all data had been collected and coded through data reduction and displayed, allowing conclusions to be drawn on the full complement of interviews.

Without the drawing of effective conclusions, the study would be merely a record of individuals answering a series of questions. Real meaning was gained by transforming the data piece-by-piece and relating it to a set of conclusions of potential benefit to management practice in the future. Equally, data was synthesised to a point where collectively, it had suggested additional meaning or was potentially theory building. Findings were extracted from the data and from this derived meaning. This was the objective of this study and as such, verification was important.

3.5 Pilot and method development

The pilot study was effective in rehearsing and refining the method and allowing the findings with clear relevance to emerge from analysis of the interviewing process. The pilot was designed to allow the opportunity to practice the technique of asking topic questions related to the developed propositions. During the pilot process and following a review thereafter, the method was reviewed to highlight any flaws that would need elimination before finalising the approach to the main study.

The pilot interviews were carried out on four senior managers from different departments of the same organisation, but employees of the same business unit in two different countries, England and Germany. The organisation was a large multi-national plc operating in the industrial manufacturing sector.

3.5.1 *Findings from the pilot study*

In this section, the general findings from the pilot are discussed, followed by two emerging issues that the interview questioning exposed which were directly relevant to the thesis; corporate architecture in a greening process and greenwash development. Discussion on these issues with pilot interviewees would help refine the method questioning in the main study. The section closes by reflecting on lessons from the pilot study and how any changes were incorporated into the main study.

The findings from the pilot were important, verified and well supported. Verification of the findings was made by triangulation between interviewees, as the interviews discovered the same phenomena happening in different countries. In context, (small business unit) the pilot study research worked well and delivered supported findings and conclusions, however this was still a relatively small sample from which to demonstrate reliability. While reliability of these results could be verified for that particular business unit, in the pilot, it could not be demonstrated that the same holds for any other part of the organisation or that any generalisation was possible. The interpretation of belief and practice was based on the aggregate of answers given to questions asked relating to each proposition. It was important therefore, that the questions were directly related to the specific proposition being discussed and that probing was practised to reveal interesting strands of discussion. The findings from the pilot highlighted some interesting points relating to the study objectives;

- There was strong belief that certain downstream activity should be part of the organisation's environmental profile. Products and systems development more than community related activity.
- There was strong belief that certain operations (logistics, office functions, production) should be part of the organisation's environmental footprint.
- There was little belief that support services (administration, marketing, sales and technical) should be part of the organisation's environmental footprint.
- There was some belief that upstream activity should be part of the organisation's environmental footprint. Suppliers' activity has significant bearing; association membership does not.
- There was some belief that the organisation engages in activity downstream to improve its environmental footprint. This is related to the products and systems it manufactures and not by involvement with external community activity.
- There was little belief that the organisation improves its environmental footprint through operations, apart from meeting its regulatory or statutory duties.
- There was little belief that support services improve the organisation's environmental footprint.

- There was some belief that upstream activity improves the organisation's environmental footprint.

There were significant meanings that could be drawn from these findings, as there was evidence to support this from the interviews. Three additional key findings were interpreted due to the strength of feeling.

CSR, represented by questions relating to community and HR issues, has a less significant role in practice than might have been assumed.

Small, office-based activity relating to energy conservation and wastage is believed by all to be a very important aspect of the organisation, improving its environmental footprint.

Management has a key role to play to advise on and support policy aimed at the organisation improving its environmental footprint.

The above pilot findings highlighted some key issues of management's struggle with corporate environmentalism. In some respects 'going green' was not a natural fit, sometimes even in the most environmentally conscious organisations. The surprising aspects of this small study of one part of a multi-national organisation were that;

- CSR issues were less important in the belief of employees regarding organisations in general and in their own organisation than corporate commitment indicated.

- Managers did not believe that job function played a significant role in greening the organisation and improving its environmental footprint.

In relation to the lack of importance of CSR as a belief of managers' interviews, this may be as a result of ambiguous definitions and constructs that may prevent managers from identifying CSR and CS goals for their organisations (Montiel, 2008). This view is supported in the literature as some organisations, despite the extensive focus on environmentalism, often remain confused regarding CSR and CS (Bansal, 2005; Carroll, 1999). During the pilot study, this was evident with all interviewees'. In order to address this issue in the main study, the same clear definitions for CSR and CS were given to each of the interviewees prior to a topic relevant discussion. From this pilot experience, an awareness emerged that interviewees may not be as familiar with the key components of corporate environmentalism and a clear definition of each should be

given to the interviewee prior to discussion regarding these components in the main study.

3.5.2 *Organisational structure relevance from the pilot study*

One of the main concerns of the pilot study was to establish if the theoretical framework, based on posing a set of propositions and associated questions, would reveal answers to the research questions.

During the pilot interview discussions, the issue of organisational structure appeared to play an important role, more specifically, corporate architecture (organisation of tasks and people and their respective communication). From these answers, a better understanding would be gained relating to the role of corporate architecture in a greening process. Although the pilot study dealt with only one business unit in the same organisation, there was a difference in corporate architecture between England and Germany. The two profit centres, roughly equal in size and resource, had quite different views regarding the CEP of the organisation and how to implement it effectively. Conclusions were drawn based on how the corporate architecture related to this particular unit and interviewees' responses were analysed to gather additional evidence to enrich understanding. The pilot drew out differences in commitment to environmental communication and education as an important factor.

The implications of this for the full study were that questioning would have a focus in this area. Additional supplementary and probing questions were prepared as a result of the pilot, to attempt to gain deeper insight and better understanding in the main study of this phenomena.

To summarise, the pilot allowed the process of gathering information on corporate architecture and environmental influence by questioning and reflecting, based on using the theoretical framework, to be tested. The full study allowed comparison and contrast between different corporate architectures and their influence on a greening process.

Through refining the interview questions set in the pilot study, the full study would collect relevant and meaningful information concerning this key influence on corporate

greening. The method used in the pilot encouraged the interviewees to elaborate, namely, probing through additional questions.

Although the pilot study was based on a single business unit, the interviewees' responses established if there was a wide degree of divergence of importance in the opinion of interviewees, relating to corporate architecture and the ability of the organisation to diffuse policy throughout. The relevance in the full study was that there was an indication from the pilot of the likelihood that a single interview per organisation would be enough to get an accurate perspective on the relevance of corporate architecture, or whether additional interviews and/or other data collection methods would be required.

3.5.3 *Greenwash views from the pilot study*

Findings from the pilot project suggested that the generation of *greenwash* within the organisation is in part due to confusion regarding CEP and commitment by organisations. This is a result of poor communication and education relating to CEP specifically CSR, throughout the organisation. Corporate architecture will have an impact on the implementation of CEP throughout the organisation, as identified in the literature (Griffiths and Petrick, 2001). This implies a link between the generation of greenwash and corporate architecture. The existing literature on greenwash is based on deliberate misrepresentation of proactive environmental strategy. (Laufer, 2003; Lyon and Maxwell, 2007; Ramus and Montiel, 2005).

In the pilot study, managers' perception of their role having weak influence on the organisation's environmental footprint could also be due to lack of understanding in the subject area of what corporate greening entails, what the organisation's environmental policy is and what the best means of implementation might be. Again, there is a link here with corporate architecture potentially being a barrier to corporate greening. Organisation environmental policy commitment, while being impressive in the organisation in the pilot study in terms a published CEP in practice, did not correlate well in terms of implementation.

These findings, in context, only relate to a small section of the overall organisation in terms of one of its business units and could not be generalised throughout the organisation without further research.

Reliability of findings would have been enhanced with more detailed analysis of the transcripts. This was a necessity in the main study and discussed as part of the research plan in section 3.1.2.

Analysis of the pilot CEP, corporate website and printed literature was, in part, the way of establishing corporate commitment. In addition, understanding corporate commitment was also possible from the pilot interviewees' responses to topic questions associated with propositions P1-P4. These and answers to propositions P5-P8 focused on the belief of employees in relation to their own organisation and implementation of committed strategies, which revealed a lower level of implementation than commitment, implying the organisation was experiencing a degree of greenwash. Managers gave plausible reasons why this might be the case in the pilot and this corresponded with the study objectives.

Greenwash is the central concern of this study and a greater understanding of its development is key to this research. It appeared that the term was perhaps too broad and had become disjointed from the real meaning associated originally with organisations that attempted to profit from the 'green revolution'. In the main study, a strict definition would be provided based on the academic literature.

Understanding communication flows, or lack thereof, which enabled greenwash development in greater detail would help eventually in its elimination. With the possibility and likelihood of greater environmental reporting in future, either by conscience, or by industry, or perhaps governmental regulation, the importance of reducing perfunctory greenwash has become more pronounced.

3.5.4 *Lessons from the pilot study*

From the pilot study, apart from the above potential linkage between greenwash development and corporate architecture, which received more specific probing in the main study, there were two other key issues concerning method that would add to the quality of the main study. These related in general to the practical approach taken

during the interview process. It was evident during the pilot interviews that there were excessive periods of irrelevance. On reflection, it was felt that this was caused by poor planning of questions and supplementary questions or follow-on questions. In some cases the interviewee was allowed to digress in the pilot study due to lack of relevant questions on hand. This was corrected for the main study by analysing transcripts from the pilot and attempting to develop a series of open ended questions that were linked and relevant to each other. In practice, this would have the effect of keeping the interview on a path that was relevant to the main research, however would also keep conversation flowing logically. While not wishing to detract from the relaxed, open nature of the pilot interviews, it was important in a finite period of time to achieve more relevance. This approach significantly benefitted in terms of improving data quality. Secondly, by having a relevant set of follow on questions, it was possible to explore deeper through layers of more relevant material. The pilot interviews had identified some rich areas of relevance, however during the pilot, they were not delved into in a structured or ordered way. In the main study, questioning felt more natural as the follow on questions were at hand. This led to hopefully deeper and richer answers and it was noticed that the interviewees not only were better guided into an area of relevance to the research, but also resulted in real feeling from the interviewee, leading to better quality data and understanding overall.

In summary, the pilot interview questions in particular supplementary questions, perhaps as a result of inexperienced questioning technique, required more focus. In some cases, questioning drifted into irrelevance to the subject when the transcripts are analysed. In conclusion, there were three ways in the full study that this was resolved;

I. Additional probing questions were developed for corporate architecture relating to barriers to a greening process and subsequent greenwash development.

II. More focused question planning. The interview questions were better organised (linked together) to allow easier categorisation in the analysis process.

III. Questions in the full study drilled down further in a specific area of interest to unearth real feeling among managers about specific relevant issues prohibiting corporate greening.

Further research will be necessary to understand the underlying attitudes within organisations to corporate greening and possibilities for change, if corporate architecture could be developed positively.

3.6 Summary

This chapter began by discussing the research design and the underlying philosophical epistemic assumptions based on a social constructionist approach to conducting research. The research incorporated a case method (multi-case) design, based on using the semi-structured interview as the method of data collection.

Section 3.2 in the chapter justified the qualitative research design and methods selected relative to alternative methods and a quantitative methodology. Section 3.3 focused on the sample selection of participant organisations and the justification of these. In section 3.4, the data analysis methods are discussed including the three stage method adopted for this work. A pilot study to test the effectiveness of the method and the influence the pilot findings had on the main study were then discussed in the last section 3.5.

Following the research design and methodology that this chapter discussed, another step before the field work was to develop propositions (statements made concerning managers' beliefs regarding greening activity) from which to develop relevant questioning.

The development of the propositions is discussed in the following chapter in relation to the study research questions (Chapter 4 – Research questions and development of propositions) and is given a separate chapter in this thesis. This highlights the importance of the propositions in the context of the overall thesis. These chapters are organised in this way to present the reader with the philosophical underpinning and method selection prior to selection of associated questioning.

Chapter 4. Research questions and development of propositions

4.0 Introduction

The review of the literature in Chapter 2 demonstrated that researchers have reflected on the development of organisations, from their initial relationship with environmental issues, through to the emergence of sustainability as a core organisational objective. Certain elements of the process or outcome of organisational greening, however, remained unclear. Answering the research questions derived from the literature review would attempt to deepen our understanding of the process and the development of greenwash in EPOs.

Following the research questions derived from the literature review in Chapter 2 and subsequently developing a suitable methodology to carry out the research in Chapter 3, this chapter discusses the development of propositions which were statements made concerning managers' beliefs on greening activity. It explains the alignment of these propositions with the research questions and study objectives and specifically, how each proposition related to interview topic questioning.

Research is often focused on corporate processes and activities, both internal and external, in relation to production, pollution and emissions, economic benefit and CSR issues. From the Asif et al., (2008) definition of a holistic approach to examination of greening activity, external as well as internal examination should also be scrutinised, as it attempts to understand the context within which the product, system or service was designed and also the influence of supply chain upstream on a greening process. Post production issues, including product application, or service outcome of the organisation (referred to as downstream in this study) may be important in developing the organisation's environmental profile and green credentials, in the opinion of their employees and other stakeholders. These, combined with other external issues such as association membership and community involvement, assist in developing the holistic approach, where external as well as internal factors are taken into account in assessing corporate environmentalism.

This concept of additional factors being used to assess organisational greening was of particular interest. This focus also allowed another dimension of organisation greenness

to be taken into account, assisting in meeting the stated objectives of the study concerning the scope of greening activity. It provided a means to differentiate between organisations that might otherwise have been ranked equally in terms of their green credentials. Research in this area also assisted in an analysis of organisations' external influences, given the focus on output, post manufacturing processes and the product's relationship with the environment.

This thesis argues that a better understanding of the evolutionary nature of greening and development of greenwash within EPOs would be assisted by examining the different functions and departments of these organisations more closely. In order to take a holistic approach, suggested by Asif et al., (2008), this study deconstructs the organisation down into its component parts, examining greening activity internally and externally. Internally, through the disciplines of operations (production, logistics and warehousing) and support services (administration, sales, marketing and technical) and externally through both upstream (supply chain and external association) and downstream (product output and community involvement).

Organisations are developed, shaped and driven principally by management. It was important to examine management beliefs about what was important and what was actually happening. This provided a lens through which to view greening activity, capturing and relating the different approaches that take place in a range of different EPOs.

The chapter, in the first section, discusses each research question in turn and how it relates to the study objectives. The second section provides background to the development of propositions to assist in addressing the research questions.

Eight propositions are made in section 4.3. Propositions 1-4 relate to managers' beliefs of the scope of greening activity within the different internal and external parts of the organisation and identify with organisational greening commitment. Propositions 5-8 cover managers' beliefs regarding implementation of greening activity in the same parts of their own organisation.

In section 4.4, the relationship of all eight propositions to the research questions and study objectives are explained, discussed and graphically presented.

The final section discusses the topic questioning relating to each proposition that was used to form the semi-structured interview guide.

4.1 Research questions and study objectives

The research questions in this study focused on green expressions of the organisation. These were defined in Chapter 2, section 2.1.3 as processes and actions that an organisation or individuals within an organisation undertake, or could embark upon, to improve their environmental profile.

The study attempted to capture a spectrum of opinion as to what constitutes environmental activity. This can be a contentious or subjective issue, however, the assumption of this research is that the greening process should start at the heart of the organisation, based on a platform of personal beliefs of the management. It was therefore deemed important to understand managers' beliefs and explore their opinions as much as possible. The methodology used to do this was based on interviewing managers in EPOs and analysing the resulting transcribed interviews. A full explanation of and reasoning behind the specific methods adopted was given earlier in the thesis in Chapter 3.

A starting point to address the first study objective, as outlined in Chapter 2, section 2.5, was to explore the breadth of green expressions that were happening in some cases naturally, however were not necessarily recognised as part of a greening process. The literature review did not appear to reveal a greening framework that captured the full range of an organisation's possible green expressions. The holistic approach of organisational greening, suggested by Asif et al., (2008) was broader in scope than the extant literature by including external as well as internal greening activities of the organisation.

It was important to understand the evolution of a green image for organisations based on the beliefs of managers regarding green expressions. The initial research question that required answering therefore, was the following:

Research Question 1 *What are the ways in which EPOs express a green image?*

This was a broad question designed to capture the scope of organisational greening activities. To answer this question required examination of internal and external

greening activity. This approach helped to trace green activity both internally, within the organisations' different departments and functions, as well as externally, within the community and in the supply chain in which the organisation is located, both upstream and downstream. Discussion here related to downstream activity and the importance of green output from organisations, in the opinion of managers.

Green expressions, as discussed earlier, could vary from organisation to organisation. This is because organisations select or practice a particular 'green expression' and relate it to the greening process of that organisation.

From the literature review in Chapter 2, there was uncertainty regarding how organisations drive a greening process and why some are more successful than others. The study, therefore, attempted to understand which green expressions delivered a more sustainable outcome. This addressed the second part of the first study objective, outlined in Chapter 2, section 2.5, concerning the "type" of green expressions that EPOs might practice. Different EPOs might engage a different set of green expressions in their greening process development. Green expressions chosen might differentiate EPOs depending on size, organisational structure, location or stakeholder influence. It would deepen our understanding if there was linkage between green expressions adopted and these characteristics of EPOs. Analysing the different ways in which organisations project a green image would enable better understanding of the route taken by these organisations and their approach to organisational greening. This led to the second research question.

Research Question 2 *How are EPOs differentiated, based on the type of their green expressions?*

Research question 2 is vital in the sense that there must be some mechanism for knowing what relatively is more successful in achieving the goal of sustainability, given organisational size, structure, location (including community), market or industry. This study would make a contribution to the process of organisational greening research by better understanding what is relevant and what is irrelevant.

It was important to understand the level of support within the organisation for greening activity. Only in this way could the environment in which the greening process was taking place be commented upon. The literature review indicated that examination of policy and practice relating to greening activity would be an indication of the existence

of greenwashing. An understanding of the development of greenwashing was the first part of the second objective of this study. Understanding management opinion about resources necessary, or indeed available, to facilitate organisational greening was helpful in determining what was beneficial and what was not. Without an adequate support framework to implement greening practice, greenwashing might be inevitable. Asking the following research question therefore, would further enhance such an understanding:

Research Question 3 *How are green expressions supported by policy and practice in different EPOs?*

This question anticipated insight into the support structure available to management to deliver increasingly sustainable organisations. As previously, this question strongly related to the process of corporate greening and identifies commitment and implementation as the cornerstones without which such a process is impossible: policy relating to commitment and practice relating to implementation.

As discussed in Chapter 2, there is an extant body of research literature concerned with organisation performance and corporate greening. There is very limited literature, however, that examines the performance outcomes of EPOs engaging in greenwashing. The final research question attempts a deeper understanding of how greenwashing affects organisational performance. Differences in the development of policy relating to, and practice of, green expressions leads to greenwashing.

This question addresses the second part of the second objective outlined in section 1.2.2.

The associated and final research question concerning this relationship therefore is as follows:

Research Question 4 *How do green expressions relate to performance in different EPOs?*

Answering this question will offer insights into the rationale for the whole process of greening. According to the EM perspective, unless there are strong performance related arguments, there is little point to a greening process. A better understanding of which particular greening activity leads to enhanced organisation performance is a desirable outcome of this study.

4.2 Developing propositions from the research questions

The research questions chosen as the basis of this study were necessary to provide a deeper understanding of green expressions that were the constituents of an organisational greening process and how these were supported and related to performance in different EPO types.

In order to examine the formation, type and interaction of green expressions, a set of propositions were developed.

Propositions in this study would be concerned with the beliefs of the management as a means of examining greening expressions in different parts and functions of the organisation through its internal and external relationships. These propositions were developed to delve into the greening process in key component parts of EPOs and are based on the research questions outlined previously.

Although organisational greening is influenced by industry, market and even governmental policy through regulation, as well as external sources including stakeholders, greening is unambiguously directed by the internal management team in each organisation. For this reason, senior managers embedded within EPOs were targeted participants for interview.

As discussed in the introduction to this Chapter 4, key component areas of organisational activity likely to be affected by greening and organisational locus, were identified covering the scope of the study:

- positioning within the supply chain relating to downstream activity (the effect of products and system outcomes including community impact)
- internal operations of the organisation (including production and logistics)
- support services within the organisation (including administration, sales, marketing and technical)
- positioning within the supply chain relative to upstream activity (the effect of suppliers, external relationships through association)

It was important to collect data that was relevant to each of these component elements. The propositions developed were statements regarding what managers believed EPOs

should commit to (commitment), as well as their belief of what was implemented in practice (implementation) within their own organisation. These propositions therefore covered scope of greening activities. A series of topics for interview discussion were generated for each proposition and these were explored by the method of semi-structured interview questioning.

4.3 Propositions

This section is split into two distinct parts, each containing four propositions. The first four propositions relate to managers' beliefs regarding an organisation's range of green expressions to commit to, (propositions 1-4). Each of these first four propositions examines greening expressions in a different part of the organisation, both internal and external. These are referred to in this study as *the commitment propositions*. The second part (propositions 5-8) relate to the individual's beliefs regarding implementation of greening expressions within their own organisation. These propositions are referred to in this study as *the implementation propositions*. The propositions were split into two sets of four, enabling managers' beliefs concerning commitment to green expressions (propositions 1-4) relative to managers' beliefs concerning implementation of green expressions to be compared. This was intended to enable discussion on the potential development of greenwash in EPOs and in line with the research objectives.

4.3.1 *The commitment propositions*

The commitment propositions are presented below;

Proposition 1 *Managers believe that downstream (relating to product or service output or community involvement) should be part of an EPO's greening process.*

This proposition related to downstream activity, which relates to output from the processing or production phase and events that took place after the product or service has been manufactured and sold. It was an attempt to test for post-production environmental relevance. It also covered any engagement that a proactive organisation had with the external community.

Proposition 1 looked at the personal belief of managers concerning events that occur outside a proactive organisation, but which were influenced by the product or service delivered by that organisation. For example, should the products and services supplied by the organisation have any reflection on its greening process? Community issues would be explored here, as they generally happened externally to the organisation and mostly as a result of organisational reputation, or perception downstream. From this proposition, the study would benefit by gaining understanding of the greening expressions to which managers believed organisations should commit.

Proposition 2 *Managers believe that operations should be part of an EPO's greening process.*

In this case, operations were described as logistics (including transportation), daily office routines and production issues. Logistics and production, as part of operations, have fundamental roles to play in connection with environmental issues and were recognised as obvious in their association with greening the organisation. Daily office tasks were defined as normal administration procedures, generally related to office work, including paper recycling, electronic mail and in-office energy conservation.

Proposition 3 *Managers believe that support services should be part of an EPO's greening process.*

Support services here are described as the departments and functions of administration, sales, marketing and technical services. These were generally non-productive, but their relevance and importance in this study was due to the fact that significant numbers of employees are often based in these departments and their job functions may have a bearing on the environmental standing of an organisation. Their organisation's commitment was also discussed. Managers' belief concerning the green expressions to which organisations should commit, was examined by this proposition.

Proposition 4 *Managers believe that upstream (suppliers and association membership) should be part of an EPO's greening process.*

Upstream refers primarily to suppliers and their role in influencing or determining the greening of the proactive organisation they supply. The greening of supply chains is already a focus of academic research. In this study, however, it was the relevance of

supply chains (as believed by managers) in the organisation's greening process that was of interest. Within this proposition, discussion took place with managers regarding the influence or otherwise of association membership on EPOs.

Association membership was defined here as external relationships that the proactive organisation had, which allowed for beneficial exchange of information on industry, government regulations, or market conditions. The relevance here was in connection with exchange of information that would benefit a greening process. EPOs may be members of associations for a variety of reasons. The study would benefit if there was evidence that associations advised or assisted in the greening process. Examples of such associations might be; chambers of commerce, trade associations, or government advisory committees. Managers' belief regarding the upstream green expressions to which organisations should commit would be examined by this proposition.

4.3.2 *The implementation propositions*

Proposition 5 through to proposition 8 made statements corresponding with proposition 1 through 4. These statements concerned managers' beliefs about actual practice (implementation of greening expressions) within their own organisation. This allowed the study to compare the beliefs of managers concerning which green expressions EPOs should commit to and what was actually happening in their own organisations. Discrepancies between these sets of beliefs pointed to barriers to corporate greening and the potential for greenwash development in EPOs.

Proposition 5 *Managers believe that downstream (relating to product or service output or community involvement) is part of their organisation's greening process.*

This proposition was designed to explore managers' experience and beliefs relative to their own organisation concerning external downstream implementation of greening expressions. Managers were questioned and probed to recount their belief of how their product or service affected the environment. They were also questioned to give examples of community involvement in which their organisation was engaged.

Proposition 6 *Managers believe that operations are part of their organisation's greening process.*

Operations covered the internal organisational processes of production, logistics and warehousing. Managers were invited to explain how their organisation worked in practice, relative to these operational functions, concerning a greening process. Questioning on these topics extracted information regarding initiatives undertaken by the organisation and associated problems with implementation.

Proposition 7 *Managers believe that support services are part of their organisation's greening process.*

This proposition covered the belief of managers with regard to how the departments and job functions in their organisation associated with administration, sales, marketing and technical support services, affected the greening process, in practice. Stories were told by managers concerning the interaction of these departments with one another and also with their suppliers and customers. The actual practices affecting the greening process were discussed in depth by the managers.

Proposition 8 *Managers believe that upstream (suppliers and association membership) is part of their organisation's greening process.*

The final proposition related to managers' belief regarding their own organisation and its involvement with suppliers and external associations in terms of a greening process. Discussion topics and questioning was related to actual experience of supplier relationships and knowledge of steps taken, or problems relating to their organisation's greening process.

This final proposition also provoked discussion concerning the interviewee's organisation's contact with external associations. This benefitted the study by highlighting any positive or negative aspects of external association networking in relation to the organisation's greening process.

4.4 Relating propositions to the research questions and study objectives

In this section, an explanation is given of how the study objectives related to the research questions and how these, in turn, related to the propositions used as a basis for interview question development.

There were two distinct objectives of the study, as described in section 1.2.1. Section 4.4.1 addresses the first objective, relating it to the appropriate research questions and study propositions and section 4.4.2 addresses the second research objective, relating it to the appropriate research questions and developed propositions.

4.4.1 *Relating the research problem and first study objective to the research questions and propositions*

In Figure 4 below, a graphical explanation is presented. This links the first part of the research problem regarding managers' lack of knowledge of the greening process to the first study objective, regarding understanding of what constitutes a greening process in EPOs. This objective is related to research questions R1 and R2 and propositions P1-P4.

The literature review in part addressed this issue, however the research questions that emerged suggested that a greater understanding of the type of greening activities (green expressions) that enable a greening process was necessary to address part one of the research problem completely. Therefore, while the literature review covered extensive research on different models, frameworks and proactive environmental greening strategies such as EM, the research implemented focused on managers' beliefs regarding greening activity (green expressions) that enabled a greening process and would deepen our understanding of the issue and meet the first research objective.

The literature review narrowed the research to focus on EPOs only. The literature review also led the research study to consider green expressions, all greening activity that is fundamental to a greening process, to enrich our understanding of a greening process. The data collection phase of the study would focus on the holistic approach suggested by Asif et al., (2008) and considered external as well as internal green expressions relative to the sample organisations. The data collection phase would go

further by deconstructing the scope of greening expressions from internal and external consideration down into component parts of these examined areas, to get a 'fine grained' understanding of green expressions that enabled a greening process. This was achieved by breaking down external greening activity into both downstream (considering product/service/community involvement) and upstream (considering suppliers and association membership) as well as deconstructing internal consideration into departmental/organisational functions; (operations: production/ logistics/warehousing and support services: administration/sales/marketing/technical).

The four research questions developed from the literature review required to be aligned with the eight propositions.

Research question 1 was directly related to the types of greening activity (green expressions) concerning EPOs. It was necessary to examine all areas relative to the organisation (internal and external) and the deconstructed parts of these areas looking for greening activity.

Figure 4 on the following page relates the relevant proposition to the relevant area of interest concerning EPOs and greening activity. These specific propositions P1, P2, P3 and P4 relate directly to downstream, operations, support services and upstream respectively. This approach addresses the type of green expressions in these areas and discussion with managers using questioning based on these propositions was anticipated to provide answers to research question 1.

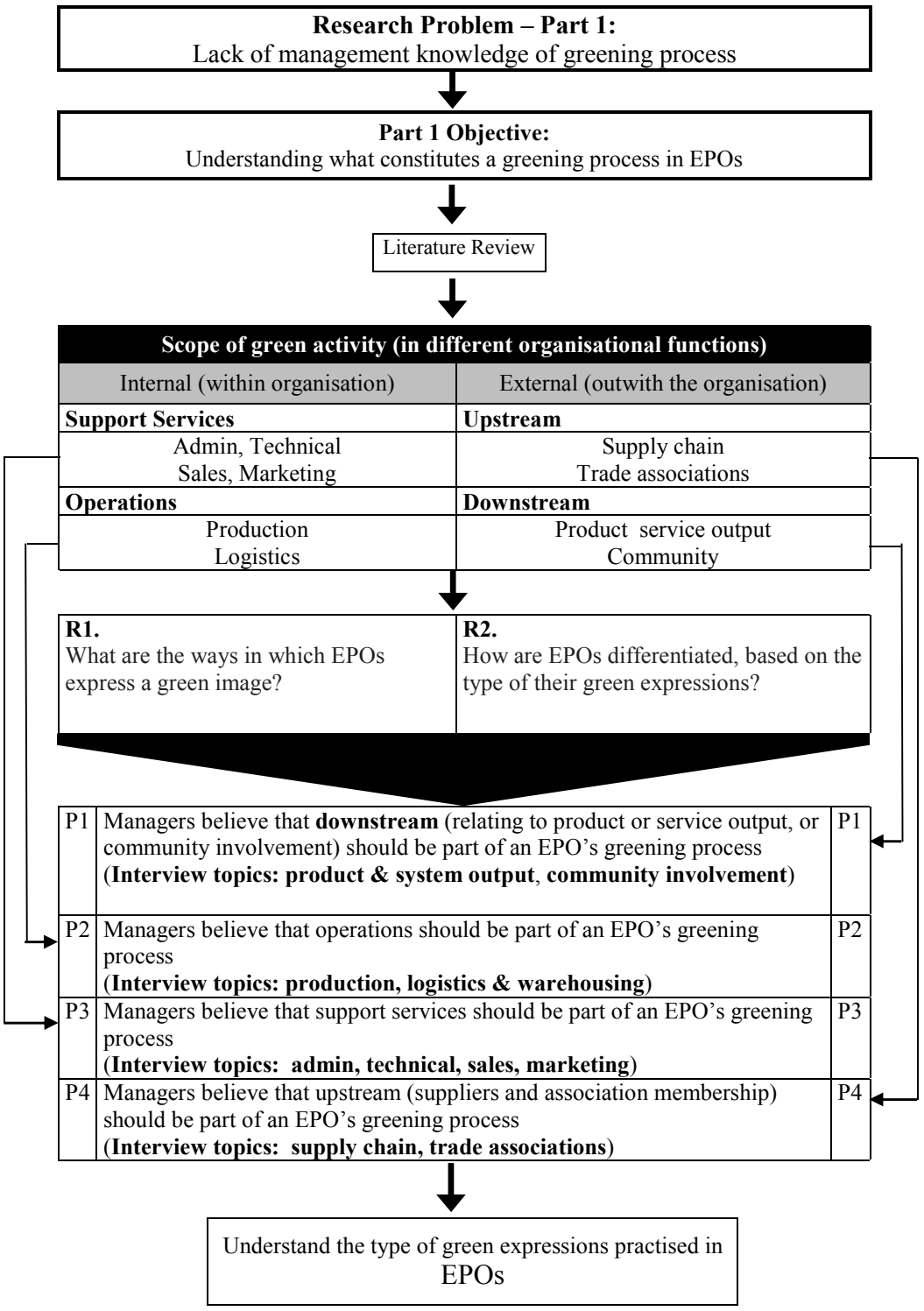


Figure 4 – Organisational scope of green activity

Research question 2 was directly related to the type of green expressions that one proactive organisation might employ relative to another proactive organisation. For example, a PLC might engage a different set of green expressions in a greening process than an SME. Furthermore, there may be similarities in one area (deconstructed areas) of an SME proactive organisation relative to a PLC but differences in another. It

followed therefore that EPOs might be differentiated by the type of green expressions they adopt as part of their greening process. Carefully constructed probing during the interviews related to the specific propositions P1, P2, P3, and P4 was anticipated to reveal these differences and provide an answer to research question 2.

4.4.2. *Relating the greenwash objective of the study to research questions and propositions*

In Figure 5 below, another graphical explanation is presented. This is intended to provide the linkage between the second part of the research problem regarding the development of greenwash and resulting performance consequence in organisations and the research questions and propositions.

As discussed in section 4.4.1, the literature review refined the focus of the study to concentrate on EPOs only.

Research questions 3 and 4 focused on the development of greenwash and performance consequence respectively in EPOs. The literature suggested clearly (Winn and Angell, 2000) that greenwash was developed when commitment and implementation of greening strategies were misaligned.

The belief of managers concerning EPOs' commitment to greening activities (green expressions) was intended to be established in this study by topics and associated questioning relating to propositions P1, P2, P3, and P4. Analysis of corporate data from their organisations used in the selection process of participating organisations, was also used to give a clear picture of commitment. Commitment is a proxy for policy (Winn and Angell, 2000).

Questioning relating to propositions, P5, P6, P7 and P8 focused specifically on what managers believed actually happened within their organisation regarding implementation of greening activity (green expressions). Implementation is a proxy for practice (Winn and Angell, 2000). Therefore, comparing results of interview questioning relating to propositions 1-4 with propositions 5-8, would enable an answer to research question 3 to be formulated. This in turn related to the research objective 2, as it would inform regarding greenwash development in organisations.

The approach to answering research question 4 followed from discussion and questioning with managers during interview relating to propositions 5-8 and their responses concerning performance consequence.

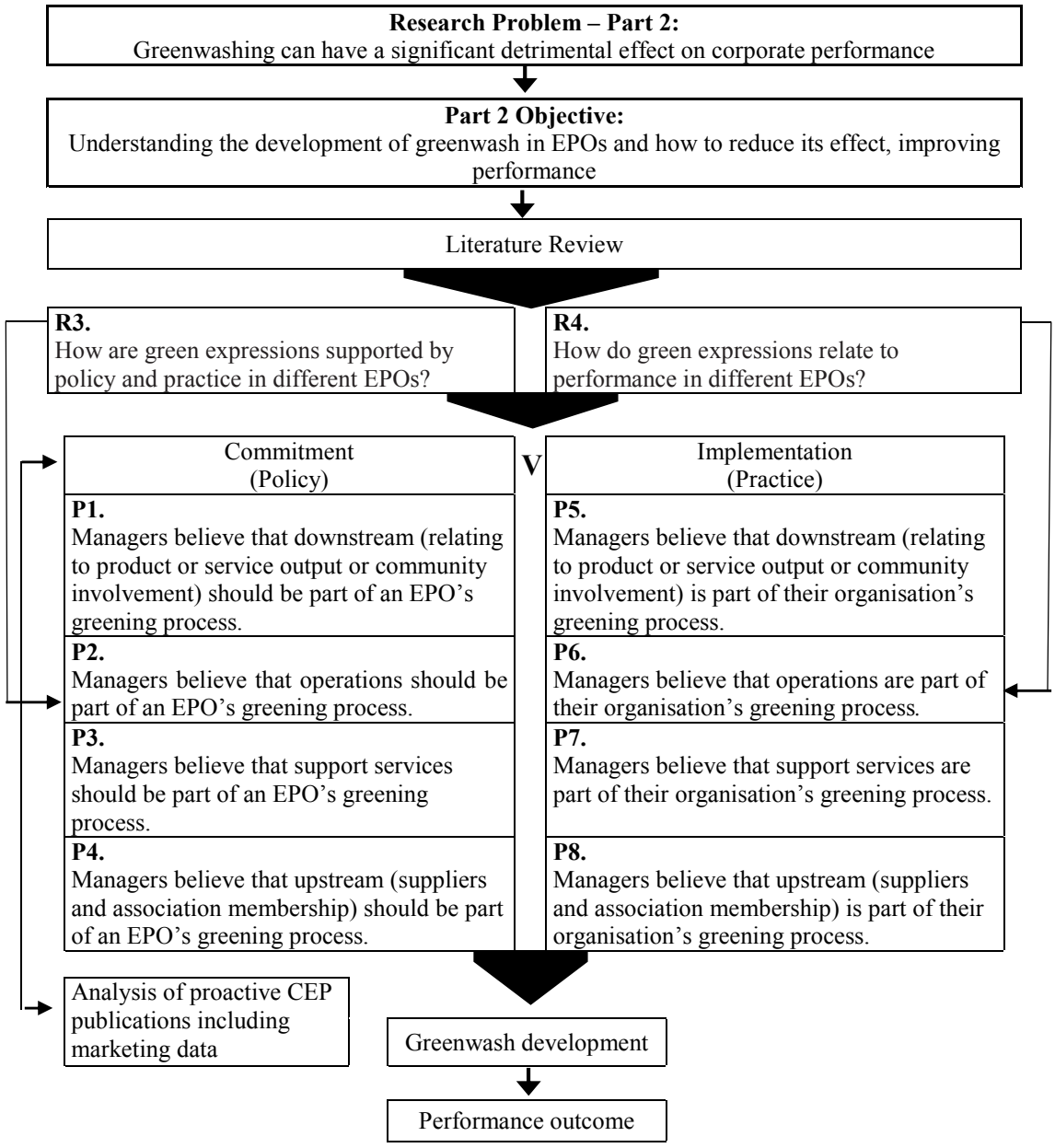


Figure 5. Greenwash development and corporate performance

4.5 Topics and questioning associated with propositions

Table 6, in the following pages, details topics and questions explored with interviewees and their relationship to the propositions developed in section 4.3.

For each proposition, opening questions directly relating to the proposition were developed. This assisted in presenting the discussion topic to the interviewee.

These opening questions are referred to as topic questions (see Table 6). Each proposition generated a minimum of two and a maximum of four topic questions. These questions were used to begin the discussion. Further questioning relating and relevant to the topic ensued, depending on answers given by the interviewee. Probing was used where an interesting response led to a deeper insight into the particular individual's thinking or belief relating to the topic.

While the proposition-related questions as listed in Table 6 explore a topic, interview transcripts also showed instances of significant additional explanation of the question or topic, apart from the questions listed. This helped to ensure that the question was understood by the interviewee and they were asked to confirm this. This was not deemed to be detrimental to integrating actual belief, nor did it influence the type of response for coding purposes, however was merely necessary to ensure that a timely relevant response was made and the subject matter being responded to was in the forefront of the interviewee's mind at the time of answering.

There was an occasional question that was partially irrelevant to the interviewee in the form it appears in Table 6. This was very occasional and required readjusting the question to gain an adequate, relevant response. An example of this would be asking a production-orientated question to an interviewee based in a non-production organisation. In such a case, more emphasis was placed on operational processes and the part of the organisation that produced, not necessarily products or goods, but internally 'worked on' a service that had value to the customer.

Ref	***Proposition***	***Topic reference***	***Topics for interview Main issues to be addressed regarding managers' beliefs and EPOs***	***Examples of questioning used during interviews.***
P1	*Managers believe that downstream (relating to product or service output or community involvement) should be part of an EPO's greening process.*	T1	What do managers believe regarding output and its part in a proactive organisation's greening process?	How important is it that an organisation should contribute positively to the environment with the products and systems it manufactures? What do you mean? Can you tell me more about that? Why is that important? Why do you believe this? So you believe end products are important?
		T2	*What do managers believe regarding output and its part in a proactive organisation's greening process?*	How important is it that an organisation plays an active role in the local community? What types of interaction should take place in your opinion? Can you give examples of what they say they do? Is this communicated through published media e.g. websites, literature? So you see a direct correlation with companies that engage positively with the environment?

P2	*Managers believe that operations should be part of an EPO's greening process.*	T3	What do managers believe regarding logistics and its part in a proactive organisation's greening process?	What influence can logistics (warehousing and distribution) have on the environment? Does the organisation make a statement regarding this in their literature? Why do you believe this is important? What kind of economic benefit? So just to clarify that point you feel….?
		T4	What do managers believe regarding office functions and its part in a proactive organisation's greening process?	What influence can office functions (daily routines) have on the environment? Has this always been your opinion? And that's your belief is it? Have they committed to do this? How?
		T5	What do managers believe regarding production and its part in a proactive organisation's greening process?	What relevance has production on the environment? I'm interested in what you believe. What changes have taken place? How can the company report these accurately?
P3	*Managers believe that support services should be part of an EPO's greening process.*	T6	What do managers believe regarding support staff and their part in a proactive organisation's greening process?	The role played by support staff (administration, marketing, sales, technical), how relevant is it in relation to the environment? Which has greater relevance in your opinion? Why? Are organisations committed to this? How do you know?
		T7	What do managers believe regarding staff satisfaction and its part in a proactive organisation's greening process?	What influence can staff satisfaction have on the organisation's environmental footprint? Explain to me if you will how that can influence them? What if some staff have no concern for the environment? Do you think this varies between organisations? Why is this the case? Is this your belief? Can you give me some examples of this?
P4	*Managers believe that upstream (suppliers and association membership) should be part of an EPO's greening process.*	T8	What do managers believe regarding suppliers' and their part in a proactive organisation's greening process?	How can suppliers influence the organisation's environmental footprint (profile)? What type of relationship could there be between the supplier and the organisation? How does it influence? Is it mentioned in their literature or website? Is this what you believe?
		T9	What do managers believe regarding association membership and its' part in a proactive organisation's greening process?	What influence can association membership have on the organisation's environmental footprint? Why is it important? Is this the case for all organisations in all industries? Can you explain to me the difference in your opinion?
		T10	What do managers believe regarding a suppliers' environmental profile and its' part in a proactive organisation's greening process?	How important is a supplier's environmental profile to the organisation's environmental profile? Where have you seen this happening? Can you recall seeing this in your experience? What do you mean by it is judged by who it associates itself with in its supply chain? Why do you think that way?
P5	*Managers believe that downstream (relating to product or service or community involvement) is part of their organisation's greening process.*	T11	What do managers believe regarding output and its part in their organisation's greening process?	How does this organisation, through its products and systems, influence the environment? Have you examples of this? How do you know customers feel this way?
		T12	What do managers believe regarding community involvement and its part in their organisation's greening process?	How does this organisation influence the local community? What specifically has the organisation done? Is this a regular occurrence? Is this reported in the media or company publications?
		T13	What do managers believe regarding any other activities and their part in their organisation's greening process?	In your opinion, is there any other way the organisation influences the environment post production? Can you explain this to me by giving an example? Do you see this happening often?
P6	*Managers believe that operations are part of their organisation's greening process.*	T14	What do managers believe regarding logistics and its part in their organisation's greening process?	What logistics and distribution actions are taking place that influence the environment? Is this a new initiative? Why was it introduced? What benefit is it expected to have? Were you involved in the design of this?
		T15	What do managers believe regarding daily office routines and their part in their organisation's greening process?	What routine office actions are taking place that influence the environment? Have you seen these benefits taking place?
		T16	What do managers believe regarding production and its part in their organisation greening process?	What is production doing that influences the environment? What was driving this change? How worthwhile is this in relation to the environment
P7	*Managers believe that support services are part of their organisation's greening process.*	T17	What do managers believe regarding support staff and their part in their organisation's greening process?	How does the role played by support staff influence the environment? How do departments influence? Are you sure? Are there KPIs or targets set in this regard?
		T18	What do managers believe regarding staff satisfaction and its part in their organisation's greening process?	How do staff feelings and beliefs affect the organisation's environmental profile? Which staff feel this way? Have you had discussions with colleagues confirming this? Does it vary between departments or functions? Can you elaborate on that for me so I understand?
P8	*Managers believe that upstream (suppliers and association membership) is part of their organisation's greening process.*	T19	What do managers believe regarding suppliers and their part in their organisation's greening process?	How do suppliers influence the organisation's environmental footprint (profile)? How do they do this in practice? What difference is there between suppliers in this respect of influence? Can you give me an example?
		T20	What do managers believe regarding association membership and its part in their organisation's greening process?	Which associations affect the organisation's environmental profile? Why is this the case? What information is transferred from the association organisation relating to the environment? How is it directly relevant in your opinion?
		T21	What do managers believe regarding any other external upstream issues and their part in their organisation's greening process?	Are there other external issues that affect the organisation's environmental profile? Have I missed something, in your opinion?

Table 6. Table of topics (data collecting) opening questions associated with relevant propositions

4.6 Summary

The research propositions derived in this chapter have been aligned with the research questions from Chapter 2. The chapter has developed an approach to gaining insight into beliefs concerning corporate environmentalism as an orientation from which greening of the organisation may evolve and flourish. Management must develop and implement strategy to deliver shareholder satisfaction. They have this responsibility. It follows that an examination of their beliefs is a legitimate and necessary focus of research to improve the extant understanding of corporate greening.

In Chapter 1, the study problem and research objectives were outlined. Following a review of relevant literature in Chapter 2, appropriate research questions were derived which, when answered, would bridge the literature gaps and attempt to provide a solution to the study problem. Chapter 3 reviewed an appropriate set of methods to address the research questions and this chapter. Chapter 4 has developed a set of propositions related to the research questions that have focused the study for the research phase or fieldwork, setting up the interview guide that was used as the data collection mechanism during the fieldwork interviews. Chapter 5 presents the study findings.

Chapter 5. Findings

5.0 Introduction

This chapter presents the findings of this study. As discussed in Chapter 3, section 3.4.6, presentation of the findings is the second stage in the three stage process of data analysis described by Miles and Huberman (1994). The third stage will be the discussion of the findings in Chapter 6, in an attempt to synthesise with the existing literature.

The data was collected as described in Chapter 3 and based on the propositions developed in Chapter 4. Analysis of the data was made by extracting, simplifying and transforming the transcribed interview documentation into manageable and meaningful information. The layout of this chapter is intended to ensure that the presentation of the information and meaning distilled from the data follows a logical sequence.

Section 5.1 displays the findings in a reduced data matrix format, as suggested by Miles and Huberman (1994). If it is a method of linking to show these connections, it can only deal superficially with the data. For this reason, after presenting the reduced data matrix in section 5.1, there follows a more detailed explanation and summary of the findings in relation to each proposition and topic in sections 5.1.1 to 5.9.3, by underpinning the summarised feeling of the interviewees with actual text discussion in the form of quotations from the transcribed interviews

Section 5.10 discusses supplementary questioning that was part of the interview and their relevance to the study.

In section 5.11 the findings of the study are consolidated, referenced and tabulated in preparation for discussion in Chapter 6.

The chapter draws to a close by providing a summary in section 5.12 and linking this chapter to the next, Chapter 6 - Discussion of findings.

5.1 Data display using a reduced data matrix

The chosen method for display of the study findings using a reduced data matrix was designed to convey the maximum relevant information possible to the reader in a logical, knowledge-building way, as suggested by Miles and Huberman (1994).

The reduced data matrix was used to resist overloading the reader with extended text descriptions and to make information more meaningful using alternate methods. Providing information in this way was recommended by Romney and Faust (1982) as a means of identifying patterns more easily for the benefit of both researcher and reader.

The reduced data matrix is a key record of 'strength of feeling' of individual interviewees towards the topics discussed during interview. It is also, and more importantly, a display of all information collected and amassed in a graphical summary. It links the research propositions with associated topics and corresponding feelings of each individual.

The reduced data matrix is presented in Table 7 on the following page.

Company types are defined as follows:

LE – Large Enterprise
PLC – Public Limited Company
PSO – Public Sector Organisation
SME – Small/Medium Enterprise

Respondent		Managers' belief regarding organisations - commitment										Managers' belief regarding practice in their own organisation - implementation										
		P1 Downstream		P2 Operations			P3 Support Services		P4 Upstream			P5 Downstream			P6 Operations			P7 Support Services		P8 Upstream		
		T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	T21
		Output	Community	Logistics	Office Functions	Production	Support Staff	Staff satisfaction	Suppliers	Association membership	Supplier profile	Output	Community	Other Influences	Logistics	Office Functions	Production	Support Staff	Staff satisfaction	Suppliers	Association membership	Other Issues
A1	PLC	strong	strong	strong	modest	strong	modest	modest	strong	weak	strong	strong	modest	weak	weak	strong	weak	strong	modest	strong	strong	weak
A2	PLC	strong	strong	strong	modest	strong	modest	weak	modest	weak	modest	strong	modest	weak	modest	strong	weak	modest	modest	strong	weak	modest
A3	PLC	strong	modest	strong	strong	strong	modest	weak	weak	strong	strong	strong	weak	modest	weak	weak	weak	weak	strong	weak	weak	weak
A4	PLC	strong	strong	strong	strong	strong	modest	weak	weak	weak	weak	strong	modest	weak	modest	weak	weak	modest	modest	modest	modest	weak
B1	SME	strong	weak	strong	strong	modest	modest	strong	weak	weak	modest	strong	modest	modest	modest	strong	modest	modest	modest	modest	modest	weak
B2	SME	strong	modest	modest	modest	modest	weak	weak	modest	weak	weak	modest	modest	strong	weak	strong	modest	modest	weak	modest	weak	weak
B3	SME	strong	strong	strong	strong	strong	strong	strong	strong	strong	modest	strong	strong	modest	strong	strong	strong	strong	modest	modest	modest	weak
B4	SME	strong	strong	strong	strong	strong	modest	strong	modest	modest	modest	strong	strong	modest	modest	modest	modest	strong	modest	modest	strong	strong
B5	SME	strong	strong	strong	strong	strong	modest	strong	strong	modest	weak	strong	weak	weak	modest	modest	modest	modest	modest	strong	strong	weak
B6	SME	strong	strong	strong	strong	modest	modest	modest	strong	weak	modest	strong	modest	weak	modest	strong	modest	modest	modest	modest	modest	weak
B7	SME	strong	modest	strong	modest	strong	strong	modest	modest	strong	modest	strong	strong	strong	weak	modest	modest	modest	strong	modest	weak	modest
B8	SME	strong	weak	modest	modest	strong	strong	strong	weak	strong	weak	modest	modest	modest	weak	modest	modest	strong	strong	modest	modest	strong
C1	LE	strong	strong	modest	modest	modest	modest	modest	modest	modest	weak	strong	strong	modest	modest	weak	modest	modest	strong	strong	modest	modest
C2	LE	strong	strong	strong	modest	modest	strong	weak	modest	modest	weak	strong	strong	strong	strong	modest	modest	modest	modest	modest	strong	modest
C3	LE	strong	weak	modest	strong	modest	modest	weak	modest	weak	weak	modest	weak	weak	weak	weak	weak	weak	modest	weak	weak	modest
C4	LE	strong	strong	modest	modest	strong	modest	weak	modest	weak	strong	strong	weak	modest	weak	weak	weak	modest	weak	weak	modest	strong
C5	LE	strong	strong	strong	strong	strong	modest	strong	strong	modest	weak	strong	modest	modest	strong	modest	strong	weak	strong	modest	strong	modest
C6	LE	modest	modest	strong	modest	modest	modest	weak	strong	weak	modest	strong	weak	modest	strong	strong	weak	weak	modest	weak	strong	modest
D1	PSO	strong	strong	strong	strong	strong	strong	modest	modest	strong	strong	strong	strong	strong	modest	strong	modest	strong	modest	modest	strong	modest
D2	PSO	strong	strong	strong	strong	strong	strong	modest	modest	modest	modest	modest	strong	modest	strong	strong	modest	modest	modest	modest	modest	modest

Key – Strength of feeling by colour

Strong Modest Weak

Table 7. Reduced data matrix

The reduced data matrix presented in Table 7 shows each individual case evident in the foremost left vertical column. Each proposition and their associated topics are presented on first the and second rows respectively. Propositions and topics are given tags (numbers) to identify them without the need for a full description of the proposition or topic question. The propositions are referred to in the reduced data matrix as P1, P2, P3, and so forth. This is for clarity in presenting the reduced data matrix.

The same holds for each of the associated topics, which were the basis of the questioning put to each interviewee. The actual questions put to interviewees were therefore referred to as *topic questions*. The reduced data matrix displays the relationship between each proposition and each topic by vertical column. For example, it is clear from the above that the topics associated with proposition tag P1 are topic tags T1 and T2, and those associated with proposition tag P2 are topic tags T3, T4, and T5. It is also necessary that at this point the reader should peruse the information contained in the reduced data matrix with the meaning of the proposition and research findings. In order to make this data more digestible, they are provided in close proximity.

This reduced data matrix was colour keyed to provide a visual summary, useful in conveying strength of feeling associated with each topic questioned and associated proposition.

In the following section of the chapter (5.2), the findings are presented in respect of each proposition. The topics that related to each proposition were discussed with each interviewee.

5.2 Proposition P1 – Managers believe that downstream (relating to product or service output or community involvement) should be part of an EPO's greening process

The opening proposition P1 was discussed with the interviewees based on topics T1 and T2.

Topic	*Topic Ref*	*Results of managers' beliefs*
What do managers believe regarding output and its part in an EPO's greening process?	T1	95% of managers strongly believed that output (product or services) should be part of an EPO's greening process. 5% of managers had a modest belief regarding this issue.
What do managers believe regarding community involvement and its part in an EPO's greening process?	T2	65% strongly believed that community involvement should be part of an EPO's greening process. 20% of managers had a modest belief regarding this issue. 15% of managers did not necessarily believe that it should be part of the process.

Table 8. Proposition 1 based on Topics T1 and T2

5.2.1 *Topic T1 - What do managers believe regarding output and its influence on a greening process?*

From the responses given during the interview to topic T1, it was very clear that a large majority of respondents strongly believed that an organisation should contribute positively to the environment with their output. Probing of one respondent gave additional insight, linking downstream post manufacture of a product and its downstream environmental benefit with another possible dimension, environmental impact, to create the green outcome.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"The environmental footprint is a good way of thinking about that; what is the whole effect you have in producing a product, it could be something really valuable like a life-saving drug, but if you are producing dioxins as a result of that process this reflects on the greening process."*
>
> ***Respondent D1***

> *"I think that it is important whenever possible, but some products or services don't lend themselves to greening. I think in some cases, it's not necessarily possible."*
>
> ***Respondent C6***

5.2.2 *Topic T2 - What do managers believe regarding community involvement and its influence on a greening process?*

From the responses given to topic T2, it was clear that the majority of interviewees (65%) also felt strongly that it was important that the organisation played a role in the local community. An interesting response was given by one respondent concerning community involvement, only on the basis of a return, perhaps financial. The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"From the CSR guidelines that we have been given, we have been advised that we can do a level of community involvement or sponsorship, but we have to be careful that the areas that we choose are not inflammatory in any way, that they reflect the company appropriately, so whether we, as an office here, would go down that route from a marketing perspective, I would have to ask what sort of return that would give us."*
>
> ***Respondent C3***

> *"I think in the cities, small companies just disappear, they cannot make a big influence on the community, but in the rural areas they definitely can."*
>
> ***Respondent C4***

> *"Small companies can contribute on a very local level and that is with the employees and their families. Larger companies with more capital certainly should be more active in the community and it may be by sponsoring activities; education is perhaps the most important contribution and then finally co-ordinating with government to help promote green activity."*
>
> ***Respondent C5***

5.3 Proposition P2 – Managers believe that operations should be part of an EPO's greening process

Proposition P2 was based on three topics T3, T4, and T5. These topics were designed to break down internal organisational operational activity into three clear areas; logistics (including warehousing and transport), office functions and also production, to assess interviewees' belief regarding influence on the greening process. The topics chosen reflected the core activities of operations within organisations and as such, responses here would be representative of strength of feeling regarding operations and the environment.

Topic	*Topic ref*	*Results of managers' beliefs*
What do managers believe regarding logistics and its part in an EPO's greening process?	T3	75% of managers strongly believed that logistics should be part of an EPO's greening process. 25% of managers held a modest belief on this issue.
What do managers believe regarding office functions and its part in an EPO's greening process?	T4	55% of managers strongly believed that office functions should be part of an EPO's greening process. 45% of managers held a modest belief on this issue.
What do managers believe regarding production and its part in an EPO's greening process?	T5	65% of managers strongly believed that production should be part of an EPO's greening process. 35% held a modest belief on this issue.

Table 9. Proposition 2 based on Topics T3, T4 and T5

5.3.1 *Topic T3 - What do managers believe regarding logistics and its influence on a greening process?*

From the responses given to topic T3 concerning logistics, it was evident that a large majority (75%) of respondents, strongly believed that this part of operational activity should have an influence on an organisation's greening process.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"Very often companies get used to doing things a certain way and periodically they have to take fresh look at what's new and better for them, because the bottom line is, efficiency saves money and most companies are too willing to forget about that aspect, but once they implement, they realise the savings."*
>
> ***Respondent C5***

> *"Our company is trying to lower costs, but they are also lowering the carbon footprint by figuring out better ways to ship and also work with not only logistics, but manufacturing. We have taken weight out of our product and we make it just as well from a performance standpoint. They do the same things like simplifying packaging. They can figure out how to stack better and on the pallets and in the trucks and in the warehouse, basically lower carbon footprint but also, it's just wasteful to take up more space than you really need."*
>
> ***Respondent C2***

"Nowadays, companies I know from going up against competitors who don't have good cash flow as they would have had maybe four or five years ago, that they're not keeping as much in stock they have more logistics fees, so I'm sure the environment is negatively affected."

Respondent B8

5.3.2 *Topic T4 – What do managers believe regarding office functions and their influence on a greening process?*

The responses given to topic T4 confirmed a majority (55%) of managers interviewed in this study strongly believed that office functions should have a major effect on an organisation's environmental footprint. The following are examples of responses given to illustrate the relative strength of feeling of managers.

"I think that definitely they [office functions] have influence and even on small issues like printing all the emails, we can save a lot of paper just keeping them in the computers instead of keeping them in folders…. but I think it's not going to be a big effect, just a small effect . . . but if the company has some general rules or policies that staff use computer storage, or switch off lights when leaving the office, it will help. I think if it comes from the company, its going to have more effect than if it comes from just the individual."

Respondent C4

"Most places in the US, especially New Jersey, are recycling paper and separating garbage and hope it doesn't get mingled going down the hallway. At the source they separate it and round the corner the garbage men combine it all. It felt good doing it, but in the end it didn't necessarily serve its purpose. There are other things like turning off computers and lights, not opening windows. If everyone has the mind-set of saving, they can do something. Both helping profit and minimising waste."

Respondent C2

"There are green benefits through use of electronic communication, cutting down travel as much as possible and excessive printing. The other side of that is that companies have to keep contractual documents, often non-electronic. We have to protect the company. There is no use being green if you are out of business."

Respondent B5

"Not everyone is comfortable with storing everything on computers. We still see staff printing documents unnecessarily. We, and I am sure other companies, need to make staff more familiar and confident through training.

Employees seem to get something from all pulling together and doing their bit in terms of simple easy environmental measures, cutting down on paper or switching the lights off. They say they feel good about this and we try and encourage them to take this attitude.

On the other hand I have seen them get angry with colleagues who are lazy in this respect by not practising energy saving or recycling. It definitely improves productivity in the office, the factory etc."

Respondent A4

5.3.3 *Topic T5 – What do managers believe regarding production and its influence on a greening process?*

With regard to topic T5, 65% of managers interviewed, strongly believed that the organisation's production should have influence on its greening process. All managers in this study also believed that their organisation is committed to improving the greening of its production process.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

"Recycling and reusing materials can have a tremendous impact, a very positive impact. Many different little aspects where you can recycle the used materials, get some revenue back and then extend the life of those materials, find a new life for them. So those elements again can have a major impact on a company's bottom line. My experience has been, being green makes more money. Being green generates green, so to speak."

Respondent C5

"It begins with a mind-set of what you want to accomplish, what you feel is important and then from the very beginning in the engineering of how the plant will be laid out, taking into account what kind of by-products you might be producing in the manufacturing process; how are you handling any waste? Again it all goes back to did you engineer the plant with that in mind in the first place?"

Respondent C6

5.4 Proposition P3 – Managers believe that support services should be part of an EPO's greening process

Two topics that related to proposition P3 were designed to explore belief in the staff support roles within the organisation and their influence on organisational greening process.

Although various disciplines were outlined, this was not an exhaustive list and during the clarification process with interviewees, other roles such as maintenance, janitorial, IT and security staff all were included under the umbrella of support staff.

Staff satisfaction, and the effect it might have on the organisation's greening process was explored using topic T7.

Topic	***Topic ref***	***Results of managers' beliefs***
What do managers believe regarding support staff and their part in an EPO's greening process?	T6	30% of managers strongly believed that support staff should be part of an EPO's greening process. 65% of managers held a modest belief on the issue. 15% of managers did not necessarily believe that it should be part of the process.
What do managers believe regarding staff satisfaction and its part in an EPO's greening process?	T7	30% of managers strongly believed that staff satisfaction should be part of an EPO's greening process. 30% of managers held a modest belief on the issue. 40% of managers did not necessarily believe it should be part of the process.

Table 10. Proposition 3 based on Topics T6 and T7

5.4.1 *Topic T6 - What do managers believe regarding support staff and their influence on a greening process?*

The organisational disciplines that support services comprised in this study, as explained to each respondent were; administration, marketing, sales and technical (including research and development).

Reviewing the responses to topic T6, clarity was achieved by analysing transcripts to see which support services influenced a greening process more than others and this produced a clearer definition of managers' beliefs.

This suggested that technical support (including research and development) should have an influence through innovation and developing products and systems that improved the organisation's greening process. This view was strongly believed by 55% of managers, however they had weak views concerning marketing, sales and administration support.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"R&D are developing and experimenting and finding these products to replace former solvent-based or any kind of harmful product and replacing them with more environmentally friendly products. I always think of technical as front line. I think they're probably at the front edge all the time. The rest I really don't believe they can impact in nearly the same way."*
>
> ***Respondent C1***

> *"Of course CO_2 is going to be reduced by cutting transport journeys. It so happens that this also leads to an environmental benefit by reducing travel journeys and CO_2 emissions. But the initial goal was cost reduction."*
>
> ***Respondent B6***

> *"The plastic cartridges that are used for silicones and adhesives, they use a fraction of the material to package it and we tried and tried, but people liked the old tube, but they weren't conscious enough to make the effort. I believe they should make the effort even if it was different to use, which it wasn't, it just means a bigger gun and less wastage and people weren't interested."*
>
> ***Respondent B7***

5.4.2 *Topic T7 - What do managers believe regarding staff satisfaction and its influence on a greening process?*

In relation to topic T7, 30% of managers strongly believed staff satisfaction should have an influence on the organisation's greening process, while 30% of managers had a modest belief and 40% had a weak belief concerning the issue. From the transcripts, the evidence to support the above different feelings of the respondents related to the following respondents' comments.

> *"I can't think of an example (of how staff satisfaction impacts the environment).*"
>
> ***Respondent C3***

> *"I don't think it [staff satisfaction] has a lot to do with it."*
>
> ***Respondent C4***

"In general I think working with a company that is green and also with good ethical values makes a better working environment, it makes you feel good. Although sometimes you can just have lip service, or greenness for the sake of being green, it's just a small percentage, however."

Respondent C2

5.5 Proposition P4 – Managers believe that upstream (suppliers and association membership) should be part of an EPO's greening process

Three topics explored the external upstream influences that potentially had bearing on the organisation's overall greening process. From the responses by interviewees there was, as with proposition P3, a similar level of uncertainty when all results were analysed in respect of proposition P4.

Topic	***Topic ref***	***Results of managers' beliefs***
What do managers believe regarding suppliers and their part in an EPO's greening process?	T8	30% of managers strongly believed that suppliers should be part of an EPO's greening process. 50% of managers held a modest belief on the issue. 20% of managers did not necessarily believe that they should be part of the process.
What do managers believe regarding association membership and its part in an EPO's greening process?	T9	25% of managers strongly believed that association membership should be part of an EPO's greening process. 30% of managers held a modest belief on the issue. 45% of managers did not necessarily believe that it should be part of the process.
What do managers believe regarding a suppliers' environmental profile and its part in an EPO's greening process?	T10	20% of managers strongly believed that the suppliers' environmental profile should be part of an EPO's greening process. 40% of managers held a modest belief on the issue. 40% of managers did not necessarily believe that it should be part of the process.

Table 11. Proposition 4 based on Topics T8, T9 and T10

However not all topic questions provided uncertain answers. The findings for each topic are discussed below.

5.5.1 *Topic T8 - What do managers believe regarding suppliers and their influence on a greening process?*

Responses to topic T8 indicated a majority of modest belief (50%) to strong belief (30%), that suppliers should have an influence on an organisation's greening process. There were four responses (20%), supporting a weak belief on this point.
The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"We're going to design the building with a holistic environmental attitude and I think the supply chain is the same, or can be ensuring that our suppliers are also environmentally conscious."*
>
> ***Respondent C6***

> *"Suppliers are developing new products that are better for the environment. This can assist the green profile of your company by choosing such a supplier."*
>
> ***Respondent B1***

> *"I think that one thing that could improve things is the cost., because you obviously get these new products that are all singing and dancing with zero effect to the environment, but they come at such a high cost that maybe it's not feasible to use them."*
>
> ***Respondent B2***

> *"If you are choosing from a set of green products, at face value as they are presented in front of you, but you don't know what has gone into producing them. For example, aluminium extrusions, the product is the same no matter who you buy it from. There are companies that use hydro-electric power, so obviously that's a greener way of producing the product. All aluminium products are equally recyclable as the other, so they are the same, so it's the energy that goes into producing that aluminium."*
>
> ***Respondent B5***

5.5.2 *Topic T9 - What do managers believe regarding association membership and its influence on a greening process?*

Question T9, regarding the influence association membership has on an organisation's greening process, a high percentage of managers had beliefs classified as *weak* (45%), fewer with *modest* belief (30%) and even fewer again with any *strong* belief (25%).

Most managers believed that "logo gathering" by organisations at all levels to ensure they were considered by their potential customer base in a better light by being a

member of a particular association, sometimes occurred. Yet these managers all believed that association membership was, in effect, a market qualifier, even though many did not necessarily engage beyond paying their fees on a yearly basis. These views, in the main, applied to trade associations not specifically environmentally driven, associations such as; LEED, BREAAM or environmental product, or process certification bodies.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"It's an easy marker for people who are in a position of making decisions; they can see that the company has got the stamp, so it's been through a certification process. But this is not necessarily the case. The company may have just paid a fee to join an organisation to give them an enhanced image."*
>
> ***Respondent B5***

> *"I think an association can be an extension of the company, in that if the company's peers are moving in a certain direction then it often benefits the company to move in that same direction. They share resources, ideas and concepts and better understanding of the benefits of that direction."*
>
> ***Respondent C5***

> *"If there were any shared knowledge to be gained by being part of the memberships, maybe other people have procedures or standards that are followed that could be shared by these organisations to implement better environmental practices."*
>
> ***Respondent C1***

5.5.3 *Topic T10 - What do managers believe regarding a supplier's environmental profile and its influence on a greening process?*

Topic T10 was very similar in substance to T8 and was set in order to take the debate a little further on supplier's influence. The interviewees' responses were quite similar to topic T8, so only a few salient points are discussed here.

A large majority of managers (75%) had their responses recorded as weak or modest in relation to this topic. They were sceptical concerning the influence a supplier's profile has on an organisation's greening process. There was a view, again held by a majority of managers, that even organisations that were committed to environmental values often deserted these in favour of profit maximisation.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"My own feeling is that, going back to earlier questions, these policies don't necessarily make it down to daily practice. From a marketing perspective, we've looked at targeting specific environmental main contractors and companies and mirroring their stance to try and gain acceptance. In actual practice, it often just comes down to price and it becomes irrelevant that your environmental profile matches their own. Unfortunately that's what it is and therefore it stops at the marketing level."*
>
> ***Respondent C3***

> *"Frankly, for us to be competitive, we'll just look at . . . here's a specification we want for the part or service we're buying, we'll get four or five people to quote and we'll buy the one that meets our attributes; price, quality, scheduling, even if someone has the best quality . . . we won't even look necessarily at the rest of the overall company. They all need to pass a minimum threshold of honesty and integrity however."*
>
> ***Respondent C2***

> *"But the reality is that people do produce these things for commercial reasons and that will always be the case. It is still important that people have the proper practices inside, but my opinion would be that these things shouldn't be made, but the reality is that my opinion doesn't count, but they're there for defensive purposes."*
>
> ***Respondent A1***

5.6 Proposition P5 – Managers believe that downstream (relating to product or service output or community involvement) is part of their organisation's greening process

The topics relating to proposition P5 asked similar questions to those of P1 but in relation to the implementation of greening strategies in managers' own organisation.

Topic	*Topic ref*	*Results of managers' beliefs*
What do managers believe regarding output and its part in their organisation's greening process?	T11	80% of managers strongly believed that output was part of their organisation's greening process 20% of managers held a modest belief
What do managers believe regarding community involvement and its part in their organisation's greening process?	T12	35% of managers strongly believed that community involvement was part of their organisation's greening process 40% of managers held a modest belief 25% of managers had weak belief that it was part of the process
What do managers believe regarding any other activities and their part in their organisation's greening process?	T13	20% of managers strongly believed that other activities were part of their organisation's greening process 50% of managers held a modest belief 30% of managers had weak belief that these were part of the process

Table 12. Proposition 5 based on Topics T11, T12 and T13

5.6.1 *Topic T11 – How does manager's own organisation influence a greening process by its output?*

Topic T11 elicited a very clear set of comments and statements very similar to responses to T1, relating to organisations in general. There was clear description of the individual effect that these have in an environmental context. For a large majority of these organisations, their end product or service was designed to reduce environmental impact and therefore improved the green profile of the organisation. Most had moved to this position through continued innovation, with a focus on delivering greener products. Green benefit from their output was a major focus for these organisations. The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"Less use of solvent in our glues. We are trying to have as much heat reflective roofing products as we can, whether it be TPO, PVC and white Energy Star colours."*
>
> ***Respondent C1***

> *"We're probably the most specialised in this country and would be the most innovative in that range of products as well and some of our suppliers would be innovative themselves in terms of products and user friendly they would be*

environmentally friendly. Moving away from polyurethane to MS polymers is a big positive step to help the environment."

Respondent B8

"Maybe there is a slight issue with bringing the majority of product ranges from America, but the sealants are the ones that cross my mind now and again in terms of being solvent free."

Respondent A4

5.6.2 *Topic T12 - How does manager's own organisation influence the local community?*

For topic T12, there were a minority of managers (35%) with strong beliefs that their organisations are quite involved in the community, but a significant percentage of managers (40%) who believed they only make a token gesture to the community and others (25%) believed their organisation was doing very little engaging with the community.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

"We feel we need to implement, as a responsible corporate citizen, by also participating in local activities. For example, late last year, we supplied some of our products for a charity at the community level that was powered by our products. It gave us a chance to showcase our product, but more importantly show the local citizens of the community, how solar plays a key role in benefitting their lives, without polluting their lives."

Respondent C6

"We've got lots of local groups that use the facilities, they come in and use training rooms for example. Also we are in partnership with the public library so we exchange materials so can get access to our books and there is a van that goes around and we can swap books. We've got various partnerships locally."

Respondent C2

"Not as a company, maybe as an individual. There is no specific charity or programme that the company donates to."

Respondent A2

"Well the MD, over the last three years he has been doing 'Coast to Coast' and there are about twenty people from this company doing it and there has

been other charity events and raising money recently, but when you see the MD taking part, it galvanises interest concerning these issues more than the company just making a financial donation."

Respondent B1

5.6.3 *Topic T13 - In what other ways does manager's own organisation influence the environment?*

Responses to topic T13 were linked to all downstream activity to do with product, services and any other external activity post process or production. A minority of managers' responses were coded as strong (20%).

The following are examples of responses given to illustrate the relative strength of feeling of managers.

"Basically we're looking into ways where used shingles can be recycled back into roads. The asphalt granules can be ground up and put into road surfaces or recycled back into our own manufacturing. Right now it just winds up in landfill and it's really just a total waste. But if you could reuse it, it might be win-win for a lot of people, including our customer. We're always looking for an exclusive edge and the green area could give us something like that to be better than the competitors. We have to innovate and green initiatives are actually a growing percentage of the ideas we have."

Respondent C2

"Benefits to the environment would be the hybrid engine courses in autos that we are planning to offer in the near future. This is not only reflecting a green technology but also educating the local community."

Respondent D1

5.7 Proposition P6 – Managers believe that operations are part of their organisation's greening process

The responses to these topics were the most varied for any proposition. Each question had a mixed range of responses. The salient points are discussed here.

Topic	*Topic ref*	*Results of managers' beliefs*
What do managers believe regarding logistics and its part in their organisation's greening process?	T14	25% of managers strongly believed that logistics were part of their organisation's greening process 40% of managers held a modest belief on this issue 30% of managers had a weak belief that it was part of their greening process
What do managers believe regarding daily office routines and their part in their organisation's greening process?	T15	45% of managers strongly believed that daily office routines were part of their organisation's greening process 30% of managers held a modest belief on this issue 25% of managers had a weak belief that they were part of their greening process
What do managers believe regarding production and its part in their organisation greening process?	T16	10% of managers strongly believed that production was part of their organisations greening process 55% of managers held a modest belief on this issue 35% of managers had a weak belief that it was part of their greening process

Table 13. Proposition 6 based on Topics T14, T15 and T16

5.7.1 *Topic T14 - What do managers believe regarding logistics and its part in their organisation's greening process?*

Topic T14 explored logistics operations' green expressions taking place within the interviewee's organisation that had an influence on the environment. A minority of respondents (25%) strongly believed that their organisation was implementing green strategies in line with the organisation's commitment. A larger minority (35%) of respondents believed that their organisation was not implementing greening strategies and 40% of respondents believed their organisation was only partially implementing greening strategies through logistics operations. The respondents who strongly agreed, pointed to a number of positive green strategies that clearly demonstrated their position related to logistics.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"My colleague, she really picked up the mantle and started running with it (transport reduction through load consolidation). It was her who said, there are things we can do here that are much more proactive than you think and when you actually sit down and start going through these different things, you*

*think, we've done it like that for years, but why have we been doing that for years? Don't do it like that. It was amazing.***"**

Respondent B6

"The second thing is, we are adjusting the size of the modules to optimise them to the standard shipping container size, so we will be able to now fit more modules into a single container, which ultimately will mean if we are going to ship fifty megawatts of our product overseas every year, we will use a hundred containers instead of three hundred containers."

Respondent C6

"Spending more time optimising how to ship, putting more per truckload, increasing the way they stack on a pallet, how they fit into the trucks and railcars, how they combine operations. We've spent some amazing amounts of money on software and trained people well who can optimise this and how we can improve."

Respondent C2

"We have a huge problem. Where possible, we would send supercubes (40ft container), but the target here is that 70% of what we send out should be supercubes and 30% would be small rigids, but we offer next day delivery and the consequence of that is that you get some trucks going to sites that are houses and you can't send supercubes to a house, you have to send a small truck. The way around that is that we've been trying where possible to put all our sales of these products through local merchants and there's a lot of that."

Respondent A1

"Yes, we are trying to cut down the number of deliveries we make. We are delivering to sites all over the country. It's not always possible to meet our shipment targets because people want things on site at different times. We're trying to plan more effectively. But people don't always have the time. I would say the prohibitive factor is cost and human resource."

Respondent B5

5.7.2 *Topic T15 – What do managers believe regarding daily office routines and their part in their organisation's greening process*

Topic T15 was concerned with daily office routines within the interviewee's organisation and their influence on the organisation's greening process.

From the responses given, less than half of managers (45%) interviewed, strongly believed that their organisation was implementing green strategies through daily office routines in line with the organisation's commitment. A minority of managers (25%) believed their organisation did not. The remaining managers (30%) believed that, in part, their organisation fulfilled their commitment on this issue.

From some of the committed organisations, many simple measures were already in place to make an effective contribution.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"We encourage people to car share or take a bike to work, buy a bike schemes (bike racks provided by the organisation), automated lighting, saving energy by switching off when there is nobody in the room, probably not enough of them."*
>
> ***Respondent D1***

> *"It was part of us getting through 14001, not to say that people didn't do it before, but it was formalised at that point. The email came round saying we would like to try and do this. Can you try this and set your printing settings to print less paper and print double sided when necessary? There was some further explanation in the 14001 briefing meetings."*
>
> ***Respondent B5***

> *"In terms of how to dispose of some waste, I'm aware of it knowing that this isn't the right way to do this, but I don't have a lot of time, I'm tidying up and I need to move on."*
>
> ***Respondent B4***

> *"I've seen places where more could be done. We've an older building where we've gradually upgraded the lights... well some of it is limited by capital."*
>
> ***Respondent C2***

> *"Not a lot of action is taken for the daily routines. I can't think of anything ...we print everything and keep in files and folders."*
>
> ***Respondent C4***

> *"There's not. This company has a wonderful campus with trees and shade and the buildings work well in the landscape but in the office, I'm sure we're as much of an abuser as any other company out there, the lights are on, heating and air conditioning is running 24/7, there's not a lot of pavement where we are, there is a lot of green area but I'm not aware of any programme that they have to reduce the impact the number of people working there – 500 people work in there."*
>
> ***Respondent C1***

5.7.3 *T16 - What do managers believe regarding production and its part in their organisation greening process?*

The topic relating to production T16 contained a predominance of negative or weak responses from managers and their belief regarding their organisation's production process and the measures taken to improve the organisation's greening process.

From the responses, a small minority of managers (10%) strongly believed that their organisation was improving the greening process through production, in line with the organisation's commitment. A larger minority of managers (35%) believed their organisation did not. The majority of managers (55%) believed that in part, their organisation fulfilled their commitment on this issue. Some statements were coded as strong, which demonstrated an integrated production approach to improving the organisation's environmental footprint.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"We source responsibly, energy efficiency as much as we could...install voltage regulators...that is something that is fantastic...a straight 10% reduction in electricity."*
>
> ***Respondent B3***

> *"The nature of the process [thin skin photovoltaic laminates] that we have developed actually has very high materials utilisation, so that turns out to be the second benefit, that we implement naturally within our company and then finally we look at recycling all of our materials."*
>
> ***Respondent C5***

> *"There is some waste you can never get rid of."*
>
> ***Respondent A3***

> *"There are other things that we will get down to doing, but just haven't got the cash in place to do it, for instance; install voltage regulators is something that is fantastic, that we would like to do because it is a straight 10% reduction in electricity."*
>
> ***Respondent B3***

> *"There was a programme to reduce CO_2 emissions, but we are not sure how to go about it. Is it better to focus on production process, or something that gives a green effect quicker?"*
>
> ***Respondent C4***

"Now what we haven't got, and this sounds rather demeaning or patronising to folk, there aren't many people here who have some form of management training. The majority of people in the business left school very early; didn't necessarily have a great academic skill and that's the same for most of our supervisors. We not only have to design production equipment to be waste and energy efficient. We have to educate our staff on green reasoning to enable them to operate machines at the optimum. It's almost a culture change to improve."

Respondent B4

5.8 Proposition P7 – Managers believe that support services are part of their organisation's greening process

The topics discussed with managers concerning proposition P7 were related to support staff and staff satisfaction in their own organisation. The results of managers' beliefs and associated findings are presented below.

Topic	***Topic ref***	***Results of managers' beliefs***
What do managers believe regarding support staff and their part in their organisation's greening process?	T17	25% of managers strongly believed that support staff were part of their organisations greening process 55% of managers held a modest belief on this issue 20% of managers had a weak belief
What do managers believe regarding staff satisfaction and its part in their organisation's greening process?	T18	25% of managers strongly believed that staff satisfaction was part of their organisations greening process 65% of managers held a modest belief on this issue 10% of managers had a weak belief

Table 14. Proposition 7 based on Topics T17 and T18

Responses by interviewees to the topic questions above were the basis of findings in relation to proposition P7.

5.8.1 *Topic T17 - What do managers believe regarding support staff and their part in their organisation's greening process?*

From the responses given, 25% of managers interviewed strongly believed that their organisation was implementing green strategies through support staff. A minority of

managers (20%) believed their organisation did not. The majority of managers (55%) believed that their organisation only partially fulfilled their commitment on this issue. The following are examples of responses given to illustrate the relative strength of feeling of managers.

> "*They're not sure of the environmental profile as a whole, because I don't think it filters down to that level."*
>
> ***Respondent C3***

> *"The marketing department are trying to promote how green our products are."*
>
> ***Respondent C4***

> *"It's significant. From a procurement standpoint, we can either buy the wrong thing or we can get the wrong lead time."*
>
> ***Respondent B4***

> *"R & D people are focused in a certain area and then they don't look outside of that area for creativity and change."*
>
> ***Respondent A2***

> *"I would have to say that those parts of the company are so small it doesn't really have an impact one way or another."*
>
> ***Respondent C6***

5.8.2 *Topic T18 - What do managers believe regarding staff satisfaction and its part in their organisation's greening process?*

From the responses to topic T18, 25% of managers strongly agree that staff satisfaction was part of their organisation's greening process. The majority of respondents (65%) held a modest belief regarding the issue and 10% did not feel that staff satisfaction was a part of their organisation's greening process. From the responses given, a relationship was indicated by one respondent between staff satisfaction and greening principals, as well as financial performance.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

"I would say that more than half of the people in the company work here because they believe we are helping the world, rightly so, and that includes me to a certain extent, but also to make money and to help build something from nothing and then the rest of the people will take environmental actions because it makes economic sense."

Respondent C5

"We have a positive message, something positive to promote, environmentally friendly products. People can feel good about what they sell and enjoy coming into work as a result. But I suppose it filters from me and my other senior colleague here. We chose to put the company on this path. But we are also closer to our staff and that helps get the message across."

Respondent B7

"There is quite a team spirit within this company. It is a fairly flat hierarchy, so no-one feels particularly at the bottom of the pile, so that has an effect. Everybody feels like their green contribution is important to the company, plus I think being quite small helps. People really are that important. Communication is good and having a green outlook helps make staff feel they are contributing in some way to a better society."

Respondent B5

"I think it does make you feel a bit more satisfied that you do work with products that are greener and do carry out environmental policies within the office, but I don't think everybody thinks like that. I don't think it bothers a lot of people. I can be the way they are brought up."

Respondent A4

5.9 Proposition P8 – Managers believe that upstream (suppliers and association membership) is part of their organisation's greening process

The answers given to the topics T19, T20 and T21 addressing proposition P8 concerning upstream activity to the interviewee's organisation and the effect it had on the organisation's environmental profile, are presented in the table below.

Topic	Topic ref	*Results of managers' beliefs*
What do managers believe regarding suppliers and their part in their organisation's greening process?	T19	25% of managers strongly believed that suppliers were part of their organisations greening process 55% of managers held a modest belief on this issue 20% of managers had a weak belief
What do managers believe regarding association membership and its part in their organisation's greening process?	T20	35% of managers strongly believed that association membership was part of their organisations greening process 40% of managers held a modest belief on this issue 25% of managers had a weak belief
What do managers believe regarding any other external upstream issues and their part in their organisation's greening process?	T21	15% of managers strongly believed that other external upstream issues were part of their organisations greening process 45% of managers held a modest belief on this issue 40% of managers had a weak belief

Table 15. Proposition 8 based on Topics T19, T20 and T21

5.9.1 *Topic T19 - What do managers believe regarding suppliers and their part in their organisation's greening process?*

Responses to topic T19, relating to suppliers and their part in the managers' organisation's greening process, were split between a high level of modest responses (60%) and significantly lower levels of responses classified as weak (20%) or strong (20%).

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"We are keeping track that of all of the products have the proper certification and also all of our suppliers just trying to meet all of the regulations in the UK."*
>
> ***Respondent C4***

> *"Sometimes they come to us with ideas but they are not necessarily new or beneficial from an environmental standpoint."*
>
> ***Respondent C2***

> *"I suppose that some of the companies that supply us will always be trying to improve their product's performance, improve their packaging, make it more*

economical to transport, easier to use, less energy for people to use, just better for the environment because the technology is less toxic whatever it might be, that's constant."

Respondent B7

"There hasn't been any drive from the company to improve on that. (Manager's own organisation) There is no driver for local sourcing unless it's legislative and it's not relevant to their locality, so there was no impetus for them to work on that."

Respondent C3

"But we already know from an environmental point of view they are not the best but we don't have substitutes for these products."

Respondent C4

"We require them to be environmentally responsible and that includes minimising the waste of the materials that we receive, also the efficiency of the shipments that we receive and then finally providing the most direct communications for them with our staff."

Respondent C5

"It's very integrated, it's not like we're just sitting there waiting for granules, we're influencing it."

Respondent C2

"There are two cases where suppliers have actually come up with materials that won't be drawn from oil based materials."

Respondent A1

5.9.2 *Topic T20 - What do managers believe regarding association membership and its part in their organisation's greening process?*

Topic T20 looked at the interviewee's organisation's association membership and the effect on its environmental profile. Responses were split with 35% suggesting a strong belief that association membership played a part in their organisation's greening process, while 40% held a modest belief and 25% believing that they play little, or no part.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

"I feel our level of involvement is a token level and our stance isn't strong enough to attend these meetings to say we're here and we're committed. Just now we're saying we just want to use your logo."

Respondent C3

"To be honest with you we rarely participate, probably because we just don't have enough time."

Respondent B7

"...also NFRC, they are also advising on some issues, like CO_2 emissions. They were advising that the regulations are going to change and we should be more eco-friendly."

Respondent C4

"...It's pretty major. There's a lot of linkages and networking...they're focused on these kind of issues, like recycling. They have a positive role, the main benefit is just receiving some information – what can be done in these areas (environment)..."

Respondent C1

"There is an overlap there with the environment and we're also a member of BISRA, the built environment people and we get our products tested there, and we receive up to date market and industry information from them, so that keeps us informed."

Respondent B5

"Regarding the Manufacturers Association in the UK and if it wasn't for the combined effort of that organisation and everyone feeding into it, the industry could have died and the same thing could have happened as with the asbestos".

Respondent A1

5.9.3 *Topic T21 - What do managers believe regarding any other external upstream issues and their part in their organisation's greening process?*

Topic T21 was the last in relation to proposition H8 and was designed to capture any other information that the interviewees might believe was relevant but did not feel the topics T19 and T20 covered. Responses given suggest that 15% strongly believed that other upstream issues played a role in their organisation's greening process, while 45% had a modest belief in this respect and 40% had little or no belief that other issue were involved.

Two key responses were deemed as important evidence relating to this question. The first concerned the way marketing was a key driver, enhancing the prospects for green acceptance in society at large, evident in the comment of one respondent, but also highlighting the risk of greenwashing.

The following are examples of responses given to illustrate the relative strength of feeling of managers.

> *"…that's why he found our company website and this is changing his mind, all of these advertisements are changing the way people feel about the environment and that is good, provided there is no over-environmental claiming on behalf of the companies concerned."*
>
> ***Respondent C4***

> *"Obviously in this economic climate, people are going back to, or they think they are saving money going back to the cheapest and inevitably with the cheapest, you might lose out on the environmental aspect."*
>
> ***Respondent B8***

5.10 Supplementary topics and associated questions

During the course of the interviewing, it transpired that the initial interviews were unearthing interesting yet related concepts to the research questions and it was evident that some limited further questioning could benefit the study on important issues related to, but separate from, the commitment and implementation propositions. These topics concerned; managers' roles in the greening process, the communication process in managers' own organisations, CEP of the organisations and the importance of an ethical approach in business.

It emerged that, while dealing with EPOs, the extent to which any of the sample organisations were working to a structured CEP was minimal. In addition, the issue of ethics in business had developed naturally during the interviewing process. These issues were clearly of relevance to some of the research questions and it was decided to take the opportunity to collect data relating to these. Supplementary questions were therefore added to the original data collecting questions (topic questions).

The questions for supplementary topics were based on a mixture of open and closed questioning, with a purpose to enrich the findings by discussing context. Example

questioning is listed below in Table 16 in association with these supplementary topics S1-S4.

Topic Reference	Reason	Topic	Example of questions asked
S1	*Supplementary information*	**Management's role in a proactive organisation's greening process**	How should management formally advise on environmental issues? What communication tools should there be? Is there a person or department responsible for advising on environmental issues?
S2	*Supplementary information*	**Communication process in manager's own organisation**	How is advice taken/passed on relating to environmental issues affecting the organisation? How does the structure of your organisation affect impact communication regarding environmental issues?
S3	*Supplementary Information*	**CEP content**	Are you aware of the organisation's environmental policy? If so, by what means do you know of its existence?
S4	*Supplementary information*	**CEP communication**	How is CEP communicated through the organisation? How could CEP implementation be measured?

Table 16. Supplementary Information – Topics and example questioning

They were not part of the original research design and not developed against a theoretical framework. The results or interpretations of interviewee answers for the supplementary questions are not displayed in the reduced data matrix but they are incorporated into the following discussion Chapter 6.

It should be noted that these supplementary questions were asked after all other questions associated with original research questions and propositions P1-P8 and associated topics questioning T1-T21, and responded to in full after the main interviewee had taken place. This was to ensure that any thoughts provoked by such supplementary questioning did not in any way conflict with, interrupt the flow, or influence the interviewee with respect to the answers that they would give to the questioning related to the original topics (T1-T21). The information gathered by the

supplementary questioning was used in the discussion chapter, Chapter 6, to assist in developing understanding and sense making of study findings.

5.11 Consolidation of findings

The consolidated findings are presented depending on the type of analysis used. There were two types in this study. Firstly relating to 'strength of feeling' of managers' beliefs, as detailed in the reduced data matrix in section 5.1 concerning each topic and proposition and secondly, relating to a deeper analysis of transcribed data as described in Chapter 3.4.5.

5.11.1 *Findings based on managers' 'strength of feeling'*

The following tables consolidate the 'strength of feeling' findings from the interviews relating to the developed propositions (P1 to P8), concerning commitment to and implementation of organisational greening strategy.

These findings are consolidated separately in Tables 17 and 18 below.

A comparison is then made between findings related to commitment and implementation and the outcome presented in Table 19. This approach helped to establish findings in relation to greenwashing.

The findings from supplementary questioning are presented in Table 20. Commitment findings are prefaced CF and numbered 1 to 10.

- Implementation findings are prefaced IP and numbered 1 to 7
- General findings are prefaced GF and numbered 1 to 5
- Findings relating to the supplementary questions are prefaced SF and numbered 1 to 6

Reference	Finding based on the commitment propositions P1, P2, P3 and P4
CF1	Overall, managers in this study believe internal and external green expressions have almost equal importance in developing an organisation's greening process.
CF2	However managers believe that downstream green expressions are the most important in developing the organisational greening process.
CF3	Of these, organisational output is more important than community involvement in this respect according to all, except managers in the public sector, who believe community involvement is more important.
CF4	In contrast, upstream green expressions are the least important in developing the organisational greening process. Managers in most organisational types in this study believe this.
CF5	Managers in all organisations believed that simple internal green expressions (recycling, energy conservation and print reduction for example) when encouraged and practised, added to a positive feeling among staff. However when avoided by individual employees, could lead to resentment by others.
CF6	Managers believe that there should be more focus on external rather than internal CSR green expressions. However the majority of managers in SMEs believe the opposite.
CF7	Managers believe internal green expressions related to operations are more important in developing the greening process that those of support services. This is the case for managers of all organisational types.
CF8	Managers in all types of organisations believe the most important internal green expressions are to do with logistics (warehousing and distribution) and the most important internal greening expression. Least important are staff feelings.
CF9	Managers in larger organisations (PLCs and LEs) believed that support services had less importance in developing the organisation's greening process than managers in SMEs and PSOs.
CF10	Managers in all organisations believe leadership by senior executives is necessary in developing an organisation's greening process.

Table 17. Consolidation of findings for propositions P1, P2, P3 and P4

Reference	Finding based on the implementation propositions P5, P6, P7 and P8
IF1	Overall, managers believed their organisations focused on external green expressions rather than internal green expressions as part of their greening process.
IF2	Managers believed that their organisation focused on external downstream green expressions as part of their organisational greening process rather than upstream.
IF3	Of these, green expressions related to organisational output were implemented more than community involvement according to all, except managers in the public sector who believed a community involvement focus was dominant in their organisation.
IF4	Overall, managers in this study believe upstream and support services green expressions are almost equally the least implemented in their organisation. However green expressions associated with production are the least implemented overall.

IF5	Overall, in most organisational types, managers believe that green expressions associated with office functions are implemented more than logistics in their organisation. Managers in LEs, however, feel the opposite.
IF6	Managers in SMEs and PSOs believe that green expressions through support staff functions are implemented more in their organisations that managers in larger organisations (PLCs and LEs).
IF7	Association membership as a means of implementing greening process is practised to a greater degree in LEs than in PLCs and SMEs.
IF8	Manager in EPOs believed the third most important area of influence on a greening process was production.

Table 18. Consolidation of findings for propositions P5, P6, P7 and P8

Reference	Findings based on comparing commitment v implementation
GF1	Overall, managers believe their organisation implements fewer green expressions than they commit to, or should commit to.
GF2	The above is true for all deconstructed elements of the organisation, internally and externally, except for the issue of association membership. In practice, association membership strategies are implemented more than managers feel is necessary in an organisation's greening process.
GF3	Managers in this study believed that downstream organisational output green expressions should be committed to the most and in their own organisations, were implemented the most, but not to the same extent.
GF4	Managers believe the operations element of organisations has the greatest difference between what green expressions should be committed to and what are implemented in their organisation. This specifically concerns production (15%) and logistics (33%). (Implementation rates relative to commitment).
GF5	While managers believe downstream organisational output has the highest green expression level of commitment and implementation, the other downstream issue of community involvement has the third lowest implementation rate of green expressions (54%).

Table 19. Consolidation of findings for commitment v implementation

Reference	Findings to supplementary questions
SF1	Managers in all organisations in this study believe that leadership by senior executives (director or owner level) on green issues is necessary as part of a greening process.
SF2	Managers in SMEs in most cases in this study (75%) believe a senior executive in their organisation is successful in leading and driving the greening process. PLCs and LEs or PSOs in this study did not have such a person.
SF3	CEP was a published document in 80% of sample organisations. • PLCs - Detailed document • LEs - Split between detailed and basic. 1 not yet developed • SMEs - 1 detailed, 2 work in progress , 1 not yet developed • Public sector – basic document

SF4	Managers in all organisations with a CEP had a basic understanding of content. More detailed CEP documents in PLCs and LEs caused senior managers some confusion over content and meaning. SMEs who had a detailed CEP, or were developing one, were familiar with content and meaning.
SF5	Managers believe organisational structure can impact their knowledge and understanding of environmental issues. Remoteness from the environmental policy-makers (department or person) was an issue for 70% of larger organisations (PLC's and LEs) but only 25% of SMEs and PSOs in this study.
SF6	Managers in all organisations believe the greening process in their organisation could be improved by engaging staff at all levels. In PLCs and LEs by education from enthusiastic knowledgeable trainers and time allocation. In SMEs, through increased resources (financial and time) enabling completion of certification process - 14001 for example.

Table 20. Consolidation of findings for supplementary questions

5.11.2 *Findings based on analysis of transcript data*

The following table consolidates the findings from the interviews based on the data analysis of transcribed interviews as described in Chapter 3.4.5 relating to the developed propositions (P1 to P8), concerning commitment to and implementation of organisational greening strategy.

The transcript data analysis findings are presented in Table 21.

- Findings related to the transcript data analysis are prefaced TF and numbered 1to 24

Reference	Finding based on the analysis of transcript data
TF1	Larger organisations saw value for the greening process in supplier relationships if they shared similar sustainable goals.
TF2	Greening expressions varied depending on organisational size. Larger organisations often selected external image forming green expressions and this caused confusion among the workforce regarding the greening process.
TF3	Managers in all EPOs believed they were proactive. SMEs and the PSOs shared environmental responsibility between management and staff enabling embedment. Larger EPOs typically had a manager or department responsible and did not share environmental responsibility to the same extent. Sometimes the greening information was irrelevant to remote isolated business units.
TF4	Managers in all EPOs related greening strategies to improving 3P performance. Financially beneficial strategies were measurable and provided a win-win benefit. A majority believed external CSR strategies were less obvious and often to appease external stakeholders and the implementation cost should be offset by some financial payback.

TF5	Larger EPOs had greater knowledge of CSR strategies than SMEs but only equal levels of implementation of these strategies. Implementation was often ineffective causing resentment among workforce.
TF6	Managers believed policy commitment design was often inadequate in a majority of EPOs (generally larger organisations) and practice (implementation) was negatively influenced by lack of knowledge of greening strategies through ineffective communication. There was a lack of information of how to embed greening strategy. Little guidance was given by environmental manager or department.
TF7	According to managers, committed leadership was vital and drove an effective greening process. A senior level 'green champion' had power to effect change through resource allocation, organisational structure and task delegation. They were often charismatic and passionate about sustainability strategy and believed eventually all organisations would need to embark on a greening process for sustainability of the organisation.
TF8	Managers believed that recruitment of employees already predisposed to positive greening beliefs assisted with embedding greening strategies in the organisation. Strong green leadership took this approach.
TF9	Greening champions had a 'hands on' approach to the greening process ensuring that implementation levels closely aligned with commitments made. They made greening goals and targets and incentivised the workforce to achieve these.
TF10	Managers in all EPO types believed that face to face meetings were an effective greening knowledge conduit. However they needed to be small scale with eight or fewer participants, allowing an interactive discussion between an informed knowledgeable educator and engaged workforce.
TF11	Simple internal greening expressions had a positive impact on the workforce, according to managers. These included energy saving, waste disposal, and recycling. When fostered by management and practised by employees in their departments, they gained momentum amplifying the greening benefit. There was also a social 'team spirit' benefit. It brought harmony in the workplace and aligned positive values. There was also an organisational economic benefit. Conversely, if one member did not practice these it dissolved the harmony and they could be resented by their colleagues as a result of 'not doing the right thing'.
TF12	Managers in EPOs had different feelings regarding the effectiveness of their approach to the greening process. EPOs who had engaged their workforce through regular planned meetings discussing green goals and objectives suggested this was effective. Other EPOs had not engaged their workforce in the same way and believed their approach was ineffective.
TF13	Managers believed organisational greening knowledge delivered to all levels of the workforce was necessary to build on the background sustainability information people receive through social contact, social media and external news bulletins. Knowledge of what to do, how to do it and when, was necessary to impart on the workforce together with the support of any resources necessary.
TF14	Corporate architecture, the organisational infrastructure including communication, hierarchal authorities and task allocation influences the greening process. Managers in larger companies with longer communication lines and complexity with numerous levels of authority often received disjointed greening information and unestablished feedback loops to discuss implementation difficulties. This resulted in lower implementation levels of greening strategy than flatter structures with less complexity and increased greenwash potential.

TF15	Complexity in communication structure of the larger EPOs could impede internal greening knowledge transfer between departments relative to the simplified structures found in the SME EPOs. The PSO had a single site operation communication on greening strategy relatively straightforward also. Multi-site larger EPOs (both PLCs and LEs) had different issues depending on whether centralised or decentralised authority level existed.
TF16	More complex larger EPOs attempted to deliver the greening knowledge to the extremities of the organisation by making greater use of IT. Managers believed this was not as effective as face to face small team meetings. SMEs delivered greening knowledge on a face to face basis supported by IT as a reinforcing medium. The greening champion often was the educator improving the effectiveness of the communication strategy.
TF17	According to managers CEP is sometimes poorly planned and badly written specifically regarding CSR. It can either lack ambition or be overly ambitious in its stated aims, often the major commitments that the organisation makes for its greening process. If targets are not detailed and SMART regarding social and environmental greening issues managerial focus can drift back towards being financial dominant.
TF18	According to the majority of managers, EPOs neglect simple internal cost saving strategies to focus on implementing strategies that develop an external green image.
TF19	Greening champions in EPOs had experience that simple internal greening strategies (energy saving, waste disposal and recycling) helped provide a balance to the 3P objective of EPOs addressing the economic, social and environmental issues that must be tackled in a greening process.
TF20	While managers understand that organisational greening is only achievable through a balanced 3P approach with equal resources and energies allocated to economic, social and environmental policies and practices they believe it is not always possible to have equal balance at all times due to extenuating circumstances.
TF21	Performance based on the 3P principal can be applied to all organisational types in a greening process even PSOs and other non-profit organisations based on adopting cost saving strategies.
TF22	Not all EPOs draft and develop a CEP prior to embarking on a greening process. A well written (comprehensive and consideration of timing to complete each committed strategy) and balanced (economic, social and environmental equal resource allocation) CEP is an essential tool for all organisations to assist in elimination of greenwash potential and suboptimum performance.
TF23	Managers in EPOs often faced competitors making unsubstantiated pro green claims. Responding with an external green strategy dominance could cause greenwashing charges and suboptimum performance.
TF24	Financially restrained EPOs were often selective regarding green expressions due to potential implementation cost. This also included the PSO in this study.

Table 21. Consolidation of findings for data analysis of transcripts

5.12 Summary

This chapter has presented the findings carried out from analysis of the fieldwork and data collection through the interviewing process of participants from organisations in the study sample.

The following chapter, Chapter 6, will discuss these findings with a view to sense making in relation to existing literature and relevance in relation to the study objectives and answering the research questions.

The new conceptual framework for the reduction of greenwash in EPOs is articulated in Chapter 6, based on the findings in this chapter, and presented at the beginning of that chapter.

Chapter 6. Discussion of findings

6.0 Introduction

In Chapter 4, propositions were developed from the study research questions to assist in understanding green expressions, both internal and external to the organisation. The findings from the study propositions were presented in the previous chapter. This chapter attempts to make sense from these findings by relating them to existing literature, where appropriate, to present a new conceptual framework for organisational greening in EPOs to reduce greenwash. The answer to each of the study research questions that underpin the new conceptual framework is given with reference to the elements of this new framework.

The chapter begins by presenting the new conceptual framework in section 6.1 clearly articulating each of its elements.

The following sections 6.2 - 6.5 and their subsections deal with each of the research questions in turn, providing an answer to the question posed and also the relationship with the relevant element of the new conceptual framework.

Where the discussion relates to a particular finding from Chapter 5, the relevant finding's table reference is drawn to the reader's attention in parenthesis in the body of the text. These specific findings can be found in the consolidated findings tables in Chapter 5, section 5.11.

The new conceptual framework has an internal and external perspective and this chapter reflects this throughout when answering the research questions and discussing elements of the framework.

The following section 6.1 describes the new conceptual framework for the reduction of greenwash in EPOs.

6.1 A new conceptual framework for the elimination of greenwash in EPOs

The new conceptual framework is presented in Fig 6.

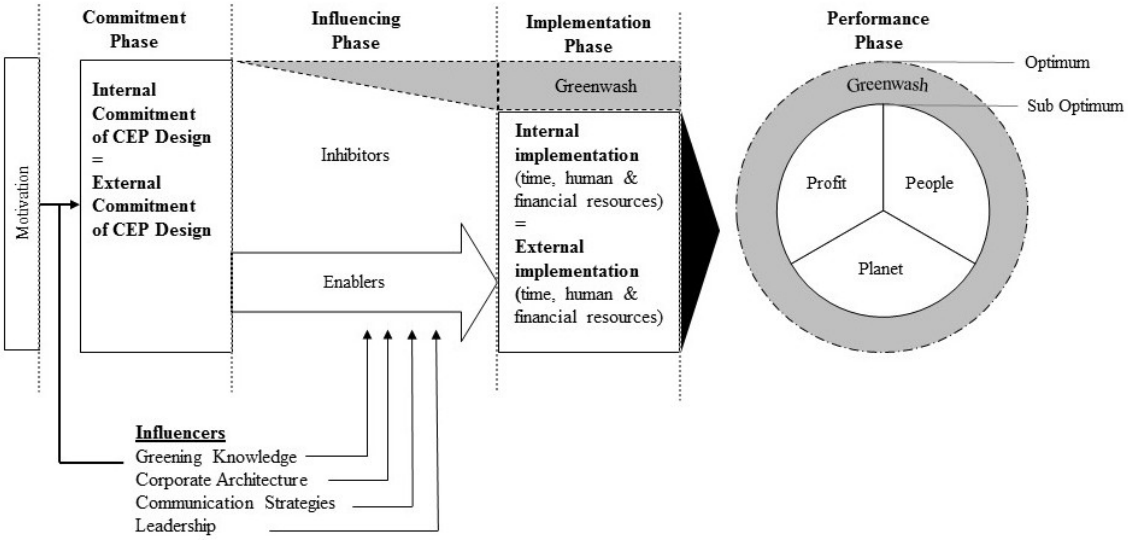


Figure 6. New conceptual framework for the elimination of greenwash in EPOs

A holistic approach was achieved by deconstructing the organisation into individual parts (upstream, downstream, operations and support services) associated with either an internal or external view. This allowed analysis of green expressions associated with each of these components from two perspectives, commitment to and implementation of organisational greening strategies. For EPOs, an assumption of this study was that motivation to green the organisation was already in place. The academic literature is already well established regarding motivational drivers for organisations to "go green" and subsequently it was not an objective of this study to explore this area. All EPOs in this study had been motivated to embark on a greening process.

The key components of the new conceptual framework begin immediately after the motivation phase. Firstly, concerning managers' beliefs regarding to which green expressions EPOs should be committed (including their own) in a greening process. The commitment phase is a key component of the new conceptual framework. Secondly, concerning what managers' beliefs are regarding their own organisation's implementation of green expressions. The implementation phase is also a key component of the new conceptual framework.

Comparing organisational commitment to implementation of greening strategy gives a view on the potential for greenwash development in these organisations, following existing definitions of greenwashing. The new conceptual framework suggests that the greening commitments made through the CEP should be equally balanced, internally and externally, to assist in making a robust design at the outset to avoid greenwash development. The resources allocated in the implementation phase should also be equally balanced internally and externally in terms of financial, human and management time. The new conceptual framework also suggests that all commitments made in the CEP should be implemented to the full extent of the commitment to avoid greenwash development.

Following through the greening process leads to an organisational performance outcome. Performance is a key element of the new framework and understanding the relationship between it and greenwash development was an important objective of this study.

Greenwash development in EPOs directly affects organisational performance by making it sub-optimum. Optimum performance in the conceptual framework follows closely that of Elkington's (1997) 3P approach *(people, planet and profit)* all equally balanced and focused on. This thesis suggests that an imbalance of strategic *profit* focus at the expense of a *people (CSR)* and or *planet (pollution, mineral depletion and waste generation)* focus can result in greenwash development, resulting in sub-optimum performance.

The commitment and implementation constructs of a greening process are following existing literature (Henriques and Sadorsky, 1999; Ramus and Montiel, 2005; Stubbs and Cocklin, 2008).

Their importance with commitment linked to development of CEP (what to commit to) should also set targets and goals for implementation specifically what to do and when to do it.

The existing literature indicated that organisations may alter the timing regarding when they implement environmental policy depending on their environmental primary environmental driver. In assessing evolving micro-business environmental practices,

Parry (2012) highlighted the different stages in the greening process that formal environmental policies were adopted. Where business legitimacy was the main reason for going green formal policies were adopted early in the process. However for businesses with an economic focus as primary green driver, adoption came at a later stage.

The committed strategies are influenced by a number of factors; greening knowledge, corporate architecture, communication strategies and leadership and these also enable or inhibit implementation. Based on this work, these influencers (enablers or inhibitors) are an important element of this conceptual framework and directly impact organisational performance in the influencing phase.

By adding Elkington's (1997) 3P theory as a performance measurement construct for greenwash indication, this enhances existing conceptual models and frameworks focussing managers to consider greening process designs to avoid greenwash.

Understanding is also improved by discussion concerning how greenwash may develop differently in one EPO relative to another, depending on type and impact on organisational performance of the influencing phase. This approach addresses the greenwash and performance elements of the new conceptual framework.

6.2 What are the ways in which EPOs express a green image? (Research Question 1)

The first research question related to understanding an organisational greening process, specifically its scope and what could be involved in such a process. It had a relationship with establishing what EPOs could commit to and where they should focus implementation as part of their attempt to go green.

Organisations engage in image building on a regular basis as a means of enhancing their asset value. A more positive image of the organisation creates value (Esty and Watson, 2009; Lai et al., 2009) and it can be strategically beneficial for organisations to create or enhance a green image. Russo and Fouts (1997, p. 539) confirmed this in their research; *"a strong environmental stance can be expected to become part of an organization's image and identity. Once gained, a pro-environment reputation is itself a valuable inimitable resource.*"

In order to address this research question, the study dissected the organisation's locus into relevant elements, internally and externally, searching for green expression activity. The literature review guided the study to take the holistic view through internal and external examination (Asif et al., 2008) and EPOs were focused on, to complement literature on 'brown' firms, as discussed by Delmas and Burbano (2011).

6.2.1 *Internal and external activity develops a green image*

Research findings indicated that organisations project a green image as a result of both internal and external factors. Managers in this study believed that internal and external green expressions have almost equal importance in developing the organisation's greening process (CF1). A green image was attributed to both internal and external pro-environmental activity.

Internal examination focused on the organisation's operations and support services (including internal CSR activity). Internal green expressions included those associated with operations; *office functions, logistics and production* and support services; *support staff and staff satisfaction*.

External examination concerned the green expressions that organisations had with their external stakeholders both downstream; *product, service output and community involvement (external CSR)* and upstream; *suppliers and associations.*

The findings indicated that organisations in the study were more proactive in implementing external green expressions than internal green expressions (IF1), despite managers believing that internal and external green expressions should have equal attention (CF1). Greening behaviour externally was expressed in a variety of ways, for example, greening of supply chains or engagement with the local community. The overwhelming belief of managers in this study, however, was that a greening process is strongly influenced by green expressions associated with organisational output and that is where most resource and effort was focused (CF3). This interaction of the organisation with external stakeholders, principally customers, was very often a management focus, as it created and developed their green image. External engagement had the potential to engender a very positive image of the organisation to the outside world, heavily overshadowing the internal green image among employees.

In summary, this research indicated that there was often an imbalance in the way internal and external green expressions are practised (IF1) and resourced. A more equal balance could be achieved by management spending the same resources on internal and external green expressions. This would require similar planning, leadership, education and finance levels on internal and external green strategies to correct any imbalance.

Organisations that have equal internal and external green expression balance by exercising as much attention and focus within the organisation as they do externally have greater overall sustainability prospects.

6.2.2 *Green expressions associated with downstream (post production output and community involvement)*

As indicated above in section 6.2.1, there was strong belief among managers that the nature of the organisation's output (products, processes, systems and services) had a fundamental impact on its greening process (CF3). Post-production output was the most widely accepted green expression of achieving a green image identified in this study (CF2). This is somewhat explained by previous studies concerning consumer behaviour theory. Overall, the key factor in consumers building loyalty with organisations is through satisfaction with the products and services they offer through their output (Fornell, 1992, Fornell et al., 1996 and Szymanski and Henard, 2001). Their (consumers') perception of the organisation is influenced positively if they are more satisfied with the output. In an environmental context therefore, the greener the output, the greener the consumer's image is of the organisation.

Later research suggested that consumers' expectations of greener products were not always fulfilled (D'Souza et al., 2006) resulting in market shares of many green product showing little growth in the last decade (Brécard et al., 2009 and Sheth et al., 2011). Customer expectation and perception of an organisation's green output were sometimes misaligned, causing some discrepancy between their requirements and purchasing behaviour (Lin et al., 2013).

As previously indicated, most organisations regard their image as being determined by the perceptions of existing or potential external stakeholders, very often customers (Chen, 2008). It follows that externally perceived image is a strong driver in

determining where the focus of organisational greening and investment should lie. The majority of organisations studied in this research held a belief that their *output* was the single most important factor in developing a green image (CF3). If their *output* was 'green' (pollution free) as a product, or very efficient as a system or service, reducing waste or energy saving to the consumer, then this was considered as having the most impact as a green expression on the green image of the organisation.

This study did not detect any significant differential between type of organisation and managers' belief that green output is the most important green expression in developing a green image.

However, this focus exposes EPOs to potential *greenwashing* charges on the basis that management are more concerned with external image than any other green expression. That would be acceptable if equal levels of commitment to and implementation of greening strategy concerning green organisational output took place.

However in this study there were discrepancies, as lower levels of implementation relative to commitment concerning output were found in almost half of the organisations interviewed. An example was clearly evident in the study where the environmental claims of the product (output) in the marketing literature were not fully supported by independent certification or other evidence based criteria.

6.2.3 *Green expressions associated with upstream (suppliers and association membership)*

The research findings indicated that managers believed that suppliers (CF4) had the least impact on the greening process of the organisational elements tested.

Where the organisation was environmentally proactive in their selection of a supplier, it was possible for suppliers to support the organisation's claim for evidence of a greening process. Here, the organisation needed suppliers to conform to specific requirements aligned with its greening process. On the evidence of this research, other organisations, principally smaller in size, generally had a different view of suppliers and did not engage to the same extent as larger organisations (TF1). This issue will be discussed in more detail in section 6.2.5 relating to green expressions defining organisational type.

There is an extensive body of literature concerning supply chain greening and its relevance to this study centres on the intra-firm relationship between supplier and buyer in a greening context.

The extant literature emphasises the role of organisational learning in implementing and building sustainable processes into the supply chain (Cramer, 2005; Jones, 2002 and Oelze et al., 2014).

The research findings indicated that overall the greening process was enhanced if the organisation and supplier shared the same environmental or ecological values (TF1). This issue was explored in questioning associated with topic T8. In this situation, the supplier could be encouraged to become part of the organisation's (its customer's) greening process, innovating green expressions of its own towards the organisation. This finding sits in the existing literature beside previous research that suggests environmental and social initiatives in the supply chain are dependent upon a set of diverse capabilities including shared vision, stakeholder management and strategic proactivity (Oelze et al., 2014; Torugsa et al., 2012). These might be new greener products for the organisation to use as raw materials for its own product or system development, reduction in waste through packaging, and CO_2 through transport initiatives from supplier to the organisation. There was evidence of differences in engagement with these supplier opportunities depending on organisation type and these will be discussed in answering research question 2 in section 6.2 of this chapter.

There was evidence that managers believed association membership can enable greening (GF2). Membership associations are broadly defined in the literature as formally organised groups of members who receive no financial gain for their effort in elevating the position of the member group. (Knoke, 1986). Association membership is described as an external green expression in this study because of the potential to exchange knowledge about the environment to benefit either the association or the organisation, improving the environmental position of the participant members of the group or association. There could be greening benefits depending on the type of association and the level at which the organisation engaged. Dreher and Voigt (2011) refer to the credibility benefit that association membership can offer to organisations. This is particularly important to smaller or recently established organisations striving to convince customers of their potential value.

The type of association, according to managers, can have significance as some are specific industry only and related just to their sector, covering all issues that concern the sector. Managers believed the issues confronting the industry, common to all, could be discussed in such a forum and sometimes decisions can be taken on a collective basis on how to proceed to the benefit of all association members. However in this study based on EPOs, managers believed that specific environmental organisations were much better than standard trade associations in advising on greening issues (TF1). There were only four organisations that participated in such environmentally focused associations, however the managers concerned all had positive views on participation. In these cases, associations could be environmental knowledge conduits, providing low cost routes to improving an organisation's greening process through network resourcing support on green issues, knowledge transfer of best practice and green issue support when engaging with governmental or other trade associations.

In the extant literature, association membership is recognised in providing organisations with support from fellow industry competitors when confronted with government regulation and stakeholder pressures on environmental issues. (Lenox and Nash (2003). highlighted the economic gains possible, specifically related to being a member of an association that will support and assist its member participants. Engaging with a membership association projected a green image and opened the organisation to green knowledge building, which is in itself a greening activity. Openness, education and knowledge transfer are all green expressions in their own right.

The literature also draws attention to the influential role of leadership in developing organisational identity among external stakeholders (Cornelisson et al., 2007; Rodrigues and Child, 2008). In this study, organisations of all types had leaders engaging in external green image building associated with community involvement, supplier relationships and association membership. Therefore, through leadership by owners, directors and managers, organisations can express a green image.

6.2.4 *Internal green expressions and development of a green image*

Internally, a green image could be developed, principally among employees (management and staff) but also among external stakeholders, as associated green

expressions can often interact with customers, for example through logistics, production and support services.

The findings indicated that the majority of managers believed that through *logistics and warehousing operations,* an organisation should express a green image. This way of enhancing the greening process was second only to developing a green image by post production output, in the opinion of managers (CF8). Logistics, therefore, had a very important role to play.

Transport environmental impact reduction through improved logistics planning by consolidation of shipments and using greener vehicles was referred to most often by managers as relevant green expressions, in this case. Managers also believed warehouse buildings, which are often large and thermally inefficient could be improved, as indeed could inventory control, by focussing on reducing waste and scrap with first in and first out (FIFO) processes. One respondent referred to security of warehousing and transport as important considerations due to their efficiency benefit (less loss or wastage) and this study finds this as a green expression.

Managers believed the third most important area overall (equal with external community involvement) were green expressions associated with production (IF8). Reducing scrap and reducing energy were the most discussed issues. This entailed keeping equipment well maintained and operators trained in handling machinery. Managers saw production departments as potentially making the greatest contribution to recycling. There was evidence from one organisation of innovative recycling practice by investing in machinery assisting in separating scrap product back down into raw material compound through filtering and reuse at the start of the production cycle. This also improved financial performance, reducing raw material purchasing and waste disposal cost.

Greening the organisation through *internal office functions* related to practising everyday green expressions, for example, energy saving of lights and computer screens, recycling and electronic mail. These activities registered positively with employees and generated a feeling of staff contribution to reducing the environmental footprint of the organisation. There was a perception among managers that staff associated these green expressions as reducing harm to the environment, but also of a cost-reduction benefit and improvement in organisational performance.

There was evidence that when simple, internal green expressions are avoided or not practised, this caused resentment and ill-feeling among employees. (CF5) Two interviewees from separate organisations related issues among their staff supporting this belief. Simple, internal green expressions in these cases were not supported and management's role here was almost non-existent. One case concerned an SME and the other a PLC. There was no evidence that organisational type influenced this belief.

A minority of organisations in this research took a different approach, i.e. reminding, educating and encouraging employees to achieve the best positive effect. Research findings indicated that simple, internal green expressions are practised more often when management fostered a positive green policy in the organisation and communicated this internally (CF5). In the opinion of managers interviewed in organisations experiencing this effect, this resonated well with the generally proactive disposition of most employees. This approach, in turn, achieved the best internal greening effect and there was evidence that the effect perpetuates itself (TF11). The internal green image developed was local, as it was practised within the organisation and rarely noticeable by external observers. The literature confirms this effect as Rupp et al., (2006) indicated that practised internal micro-CSR activities bring positive behavioural attitudes of employees towards their organisation.

These internal green expressions were associated with CSR strategies related to staff satisfaction. There is a lack of discussion in the extant literature relating to the benefit of staff job satisfaction and morale concerning fostering internal simple green policies of recycling and energy conservation by management. (Lyon and Montgomery 2015).

These strategies should be part of an internal CSR approach in addition to more obvious employee incentive and benefit programs. The existing literature focusses internal CSR strategies in a greening process on the latter, highlighting employee rights, job security and skill evaluation, (Montiel, 2008) as well as prosocial employee motivation (Ramus and Killmer, 2007).

6.2.5 *Internal CSR strategies neglected in favour of an external focus*

The majority of organisations in this study gave less attention in practice to internal CSR issues as a means of expressing their green credentials than the interviewees believed they should (GF4).

Most organisations appeared to have difficulty implementing internal CSR related green expressions. There were also low levels of commitment of these green expressions except by SMEs (CF6). This difficulty in implementation may be explained in relation to a lack of a clearly defined greening pathway for internal CSR implementation for larger organisations in this study. An example of a greening pathway would be an internal CSR policy within the CEP. Any CEP examined in this research did not specify internal CSR strategies, however some detail on external strategies relating to community involvement, for example, was evident in most cases. This was because external CSR issues were associated more closely with developing a green image and wider recognition of being proactive.

The literature informs that in the past there were very low levels of awareness of CSR activities among consumers and other stakeholders (Du et al., 2007). However today, CSR is identified in the prior literature as a pillar of any greening process. There is also increasing interest by external stakeholders in the internal as well as external CSR programs of organisations.

In this research, larger organisations (PLCs and LEs) tended to focus more on external CSR issues relative to smaller organisations (SMEs) (CF6). An explanation from this research may be that larger organisations are having to work harder on their external CSR activity to develop consumer trust than smaller organisations. Recent research by Green and Peloza (2014, p. 283) suggested that*, "Consumers have greater levels of trust and lower levels of expectation for CSR engagement for small firms."*

Findings indicated that organisations in general, even proactive ones, strived for developing their external green image at the expense of working internally on CSR policy. This created an imbalance in CSR strategy, a situation which increases the risk of greenwashing.

6.2.6 *Ways that EPOs express a green image*

From the research findings and a review of the literature in this study, Table 22 below summarises the ways that EPOs express a green image depending on the element of

examination. This is a comprehensive summary taken from analysis of managers' interview transcriptions in this study.

Ways that EPOs express a green image					
EXTERNAL			**INTERNAL**		
Downstream	***Element of examination***	***Green expression***	**Operations**	***Element of examination***	***Green expression***
	Product output	Green product innovation, green system development, green customer seminars, green conference presentations, green product certification, green organisation certification		*Logistics*	Transport reduction through load consolidation (product),greener vehicles, efficient warehousing (building), efficient handling equipment (internal), inventory efficiency, security
	Community involvement	Local employment, community education, sponsorship, local issue support, use of assets, leadership		*Office functions*	Recycling, electronic mail, energy saving, waste reduction
				Production	Scrap reduction, energy efficiency, production flow efficiency, packaging control, health and safety
Upstream	***Element of examination***	***Green expression***	**Support Services**	***Element of examination***	***Green expression***
	Suppliers	Innovative greener products, transport initiatives, partnering programs, packaging and waste reduction, leadership		*Support staff*	E-communication, green product/system development, transport reduction (sales and technical staff), green certification (process), car sharing
	Association membership	Knowledge transfer, green certification (support), networking resource base, industry green issue support, green leadership		*Staff satisfaction*	Green education, training, employee development, incentive programs, good leadership/clear instruction, occupational health program, 'bike to work scheme'

Table 22. Ways that EPOs express a green image

6.3 How are EPOs differentiated based on the type of their green expressions? (Research Question 2)

While the first research question provided the study with a deeper understanding of how EPOs express a green image, it was equally important to understand how green expressions related to different organisational types. The EPOs in this study were split between PLCs, LEs, SMEs and PSOs. There was the potential to gain deeper understanding of the greening process by examining green expression activity in

relation to organisational type. This would assist in addressing the objectives of the study.

6.3.1 *EPOs are often selective regarding greening activity*

Organisations in this study were often selective regarding what activity or green expressions added to their green image. In some cases, more obvious or attention grabbing expressions were chosen. This applied more to larger organisations than SMEs. As discussed in section 6.2.1, this suggested a focus on developing an external green image. Internal processes, for example energy conservation or recycling, all held potential for greening but they were not necessarily the first choice. They often chose external green expressions described by one interviewee as "low hanging fruit" as these expressions were quick to demonstrate greening proactivity to external stakeholders. The issue here is opening larger organisations to risks of greenwashing charges with negative reputational consequence.

This type of selectivity suggested that some organisations misunderstood the concept of corporate greening. This implied a belief that only processes that were identifiable and functional were open to greening. It also suggested a 'bolt-on' approach to corporate greening and a token approach to developing organisational sustainability. In one organisation in this study this was a problem, as management focus on greening issues were downstream external with virtually no resource dedicated to internal CSR development, causing a degree of resentment among staff.

An organisation typifying this 'bolt-on' approach was characterised by having an environmental department or manager who alone accepted full responsibility for reducing the organisation's environmental footprint, allowing other individuals or departments to be released from the responsibility of organisational greening engagement. This was a larger organisation. Their approach did not embed sustainability in the culture of the organisation and work towards institutionalising sustainability in the minds of employees and other key stakeholders, in the way that Bansal (2003) identifies as a means of achieving corporate sustainability.

Managers of SMEs in this study did not believe this as being an issue in their organisations (TF3). There was not a single department or manager responsible for

environmental matters in any of the SMEs or PSOs in this study. They discussed a greater sharing of environmental responsibility between management and staff. However, two of the SMEs were very clear regarding inspirational leadership and its role in benefitting their greening process. Leadership will be discussed in section 6.4.1.

Although SMEs in this study avoided the isolated external or 'bolt-on' approach evident in larger EPOs, they had other issues regarding selectivity of green expressions. These concerned resource constraints, as discussed in 6.3.1, but specifically, choosing initially less resource demanding, internal, simple green expressions in the initial phase of their greening process. This type of selectivity was necessary due to financial constraints, generated some cost reduction and, importantly, reduced the risk of greenwashing charges to almost nil, provided exaggerated claims were not made

Larger organisations (PLCs and LEs) typifying the 'bolt-on' approach, however, genuinely believed they were proactive and in a greening process, yet they had not put the environment at the core of their strategic thinking (TF3). In two of the larger organisations in this study, the burden of developing environmental strategy had been delegated to a reluctant individual or department (production department in one case). To some external stakeholders, this projected a responsible environmental image from which positive green expressions flowed; yet these green expressions related to generating a positive external green image but lacked implementation of greening expressions in parts of the organisation.

In this study, selectivity could lead to confusion among management and staff regarding the particular greening process being undertaken; what was 'in' and what was 'out' in the organisation's quest to reduce its environmental footprint (TF2). In these organisations, the whole task of corporate greening was complex and in some cases arduous, causing anxiety among management and resentment towards management from staff. This issue was handled in two of the SMEs by developing clear greening process timescales and phased introduction communicated to all stakeholders. The other SMEs in this study, without a phased plan for implementation of their greening process, appeared uncertain about what they would do and when it would be done, clearly affecting the greening process.

Selectivity relating to green expressions was evident but different for larger and smaller organisations (TF2). Generally, larger organisations selected external green expressions, particularly downstream, to enable an external green image to be developed promptly and to be visible to external stakeholders. Smaller organisations including PSOs were selective, based on resource availability and sometimes chose lower cost implementation, internal green expressions over more resource demanding external green expressions (TF24). Unless there was a clearly defined greening process agenda, all EPOs potentially risked confusion regarding which green expressions to engage and in what order, which had the potential to develop anxiety among management.

6.3.2 *Organisational size effects on the greening process*

The literature has extensive reference to the difference between organisations on environmental issues relating to their size, ranging from the enhanced ability of larger organisations to implement greening strategies, to the lack of benefits perceived by smaller organisations of environmental programmes (Brammer et al., 2012). Barney (1991) referred to larger organisations as having greater resources to handle environmental issues than small organisations. Russo and Fouts (1997) indicated that larger organisations have greater pressures on them to perform in an environmental context due to their visibility. This, in part, explained the reason that larger firms are more likely to engage in external CSR programmes (King and Lenox, 2000). In this study, there was evidence that organisational size influenced the extent and type of green expressions employed by EPOs (TF2).

From the evidence of this study, managers in PLCs had strong feelings that suppliers and their relationship with them should influence the greening process (TF1). This was also the case, although to a lesser extent, for managers in LEs and PSOs. Managers in SMEs, however, had quite a contrasting belief and generally saw no role for suppliers in this respect. Reviewing the general SME literature assisted in understanding this finding.

Arend and Wisner (2005) in their study found that SMEs do not implement supply chain management as deeply or intensely as large firms. They engage much less with suppliers in joint product or system development to improve quality and efficiency.

They have a short-sighted partnering selection approach in comparison with larger firms. SMEs are more likely to choose local suppliers than large firms, who have more power to exert influence on national suppliers.

Archer et al., (2006) also refer to a key difference of firm size relative to suppliers, relating to large firms' use of command and control tactics towards suppliers, whereas small firms accept command and control from dominant suppliers. Rationalising these views suggests that smaller EPOs may sacrifice efficiency or scale economies in dealing with large suppliers which, in turn, may increase cost in favour of using more local, smaller suppliers. There can be two impacts on performance in this situation. Firstly, financial performance can be affected negatively. However, secondly, if indeed local suppliers are used instead of larger national suppliers, then the possibility exists to increase environmental performance by reducing transport journeys and improve community involvement. This implies a potential increase of greening expressions in terms of this study.

There was also evidence in some cases that the greater the cost of implementation, the greater there is a necessity to "see the financial benefit", especially in respect of community related green expressions (TF4).

It was difficult for some organisations to link CSR issues with corporate greening and there was frequent evidence of confusion about the relevance that the role CSR played in corporate greening. Larger organisations had a better understanding of CSR in general and there was less confusion regarding its role in the greening process (TF5).

However, despite better understanding of CSR by larger organisations, there was no evidence that they were more successful at implementing CSR strategies than smaller organisations (TF5).

6.3.3 *Ways in which EPOs are differentiated by the type of their green expressions*

While managers in all organisational types concurred regarding the importance of the organisation's external output and also believed their organisation did implement related greening expressions, they did not necessarily agree on other issues concerning internal/external green expressions.

Table 23 below summarises the differences highlighted by this study in terms of organisational type concerning green expressions associated with suppliers, CSR, organisational structure, leadership and resource availability.

EPOs differentiated by the type of their green expressions			
Organisation type	**External**	**Internal**	**Important differences on key issues**
PLC	Strong focus on external green expressions in commitment and implementation.	Weak focus on internal green expressions in commitment and implementation.	Supplier integration important. CSR external important. Evidence of isolated environmental departments or environmental managers. Organisational structure can be complex inhibiting greening education. Resources generally available.
LE	Strong focus on external green expressions in commitment and implementation.	Modest focus on internal green expressions in commitment but weak in implementation.	Supplier integration important. CSR external and internal important. Organisational structure can be complex inhibiting greening education. Resources generally available.
SME	Strong focus on external green expressions in commitment but weaker in implementation.	Modest focus on internal green expressions in commitment and implementation.	Supplier less important. Internal CSR programs important. Flat organisational structure enable greening education. More evidence of leadership driving greening process. Potential lack of resources for implementation.
PSO	Modest focus on external green expressions in commitment and implementation.	Modest focus on internal green expressions in commitment and implementation.	Centralised purchasing resulting in weak manager/supplier relationship. Internal and external CSR important. Leadership sometimes weak. Potential lack of resources for implementation.

Table 23. EPOs differentiated by the type of their green expressions

To summarise, organisations were differentiated, therefore, by the extent to which a holistic approach was taken to green expressions. For some, every expression of the organisation had the potential to be a 'green' one. For others, only certain expressions (selectivity referred to in section 6.1) were relevant in consideration of reducing their environmental footprint.

6.4 How are green expressions supported by policy and practice in different EPOs (Research Question 3)

Analysing the support of green expressions through policy (commitment) and practice (implementation) concerning an EPO assisted in understanding the risk of greenwash development. This research provided explanation (such as time lag through phased implementation, resource availability or organisation size) as to why the level of commitment and implementation do not always correspond. It also identified further reasons for a differential between corporate commitment and implementation of strong greening policies, including ignorance, confusion and lack of understanding of the level of commitment needed (TF6). Selective rather than holistic commitment was largely evident and this caused confusion regarding the greening process. Support for different green expressions can vary between EPOs and this issue is discussed in the remainder of this section in relation to the major categories that emerged from the data analysis; *people, communication, education, organisational structure and performance* (TF2).

6.4.1 *Influential people through leadership can affect the greening process*

Within organisations taking a holistic approach to sustainability, there was evidence of an environmental or 'green' champion who was committed to driving the sustainability agenda and was knowledgeable regarding its implementation (TF7).

These green champions made themselves evident in research interviews because of their apparent commitment to everything that had an environmental benefit and their willingness and capability in articulating an argument in favour of issues that others apparently found trivial, or did not understand. For all topic questions, environmental champions made a positive response and supported their position with explanation and detail.

Such champions were able to influence the speed of change because they could change structure, allocate resources and direct others, ensuring implementation happened. The position of a champion as an owner, director or senior executive prioritised environmental issues on the organisation's agenda and ensured resources were available to enable change to take place (TF7).

Environmental champions in key influential positions catalysed and drove change in organisations taking a holistic approach. The presence of these champions was also considered to be a green expression of the organisation. They could develop more environmental champions internally through recruitment and education of existing employees, a reflection of the momentum of greening (TF8).

In this research, two SMEs had senior managers (directors) that conveyed this feeling. They were enthusiastic concerning the whole process and they discussed a holistic (internal and external) approach to organisational greening. Although completely different organisations in different market segments, they described a very similar experience of the process. During interview, they gave a narrative account of their thoughts, mixing both what should be committed to and what they were implementing in their own organisations (TF7). They described how "times had changed" and this was the only way forward to build a sustainable organisation. One went further, believing that all organisations large and small would be unsustainable at some point if they did not adopt a similar approach (TF7). Their narrative described a change in strategic thinking by them from a profit-only focus to one that paid almost equal attention to people and the environment. In both cases they had made the change in their mind influenced by media on environmental change, corporate scandals in banking and other industries, improving the organisation's ethical reputation. Importantly, they had a strong internal focus concerning the wellbeing and education of their workforce. They clearly demonstrated that this was a fundamental pillar of any greening process. One commented that such a focus had more value to the company than just making a donation (financial) within the local community (TF8). He went on to illustrate this by suggesting that his organisation focused on recruiting staff at all levels that were willing to be educated and trained, not just on environmental issues, but had an open approach to improving their knowledge on matters that were beneficial to the organisation and in the process improving their employability prospects. This manifested itself by employees attending courses during and outwith working hours that the company would sponsor.

The point made by the manager was that it was easier to positively influence the greening process by engaging a receptive workforce at all levels. As a manager you could drive your environmental policies through the organisation via well-established education and knowledge building processes (TF8). These were seminars (internal and

external) on environmental matters ensuring managers were aware of latest greening initiatives and regular discussion with the workforce looking for efficiency and savings (incentive for best suggestions). A director of one of the SMEs personally took charge of informing at all levels on environmental matters; training, setting targets and incentives to meet and reach these monthly. These were simple targets and small incentives (meal voucher in one case) but engaged the workforce and created environmental change momentum (TF9). Employees were often included in decision making regarding what greening path might be followed. The outcome was described by the manager as very often "fruitful" and worthy discussions from which employees "bought into any greening process decided upon." Equally, these discussions highlighted to management at an early stage where obstacles may lie in implementation of the greening strategy and often employees had innovative ideas regarding overcoming these. This improved the overall greening process of the organisation. Implementation of environmental strategy was clearly being led by a greening champion in these two organisations.

The differential between commitment and implementation was much less than that of other EPOs who had not had an environmental paradigm shift or a 'greening champion' in a senior executive position. As a result, these organisations had almost eliminated any potential for a charge of greenwashing (TF9).

Leadership is defined in the literature as the process of co-ordinating the actions of employees with reference to a particular goal (Yukl, 2002). Leaders are influential in shaping an organisation's identity (Cornelisson et al., 2007; Rodrigues and Child, 2008). This means that they can develop and project an organisation's green image

Leadership in the two SMEs described above centred on greening the organisation as a specific goal. Yukl (2002) indicates that this type of participative leadership initially assists in decision making regarding commitment and then implementing with the backing of employees. A director of an organisation displays leadership qualities by having a strategic focus, according to research by Aslan et al., (2011). Organisational greening is clearly a strategic focus and therefore this type leadership is strategic leadership.

According to Yukl (2002), leader-member exchange theory describes how leaders develop different relationships with different subordinates over time. Subordinate satisfaction, commitment and performance are higher when the relationship is favourable. The relationship is more likely to be favourable when both leader and subordinate have similar values and attitudes. This explains the finding in this research that the greening process is enhanced through the recruitment of employees with similar values and attitudes towards the environment. In his book, Conger (1989) reviewed the role of the charismatic leader and how their behaviour leads to a perception of charisma from followers. This concurs with the work of House and Howell (1992) that charismatic leaders provide support to all levels in the organisation, are sensitive and considerate to subordinate opinions and nurture development of their subordinates. The greening champions in this study displayed these behavioural traits that enhanced the greening process of their organisation (TF7).

6.4.2 *Knowledge transfer through internal communication influences organisational greening*

Organisations undertaking corporate greening sought to change their current position to a new, more sustainable position for future prosperity, even survivability. Managers in this study suggested that existing beliefs, routines and practices including employee attitudes and culture had to be changed if a paradigm shift was to take place. For this reason, there was a heightened requirement for communication infrastructure to facilitate such a change (TF10).

The literature informs that changing organisational culture takes time and requires leadership (Kotter, 2008; Cameron and Quinn, 2005; Atkinson, 1990). Culture change therefore is not an instantaneous process, implying that corporate greening process will take time to achieve a paradigm shift. In her book on organisational behaviour and work, Wilson (2013, p. 179) outlined other researchers' definitions of organisational culture ranging, simply from 'the way we do things around here', Deal and Kennedy (1982, p. 4) to a more detailed expose by Hofstede (1992, p. 262) as 'the collective programming of the mind that distinguishes one member of an organisation from another.' Schein (1985) referred to organisational culture relating to deeper shared beliefs by members of an organisation that operate unconsciously. If these deeper

beliefs are embedded collectively among the workforce and are not beneficial to a greening process they will need replaced by beliefs and attitudes that are.

Greening process in an organisation will therefore require time for workforce attitudes and beliefs to change as well as leadership, described in section 6.3.1. However time and leadership alone will not suffice. Managers in this study referred to a lack of specific information on greening issues. They and their workforce need to acquire knowledge in the subject area to effect the necessary change process (TF6).

In this research, there were different greening process outcomes between EPOs according to whether or not they had made a strong commitment to education, knowledge transfer and good communication structures related to environmental issues (TF6). Organisations with such an infrastructure were more likely to fully engage employees in a corporate greening process than those lacking in some, or all, of the above. Organisations that engaged the workforce with regular, planned information delivery through internal seminars, team meetings and training sessions found these beneficial in educating at all levels on green issues facilitating the greening process. For a minority of organisations in this study (four in number - one plc, one LE and two SMEs), the managers interviewed were very clear regarding the benefits of educating in this way. They discussed the benefits of small scale meetings (less than eight participants) and well prepared relevant content delivered by an informed internal manager or external consultant as a good means of supporting education throughout the organisation (TF10). By educating in this way with relatively small numbers, participants had time to explain to each other their views and opinions and interact with the educator (in one PLC this was an external consultant; in both SMEs this was a company director). Managers in these organisations claimed that this was an effective means of progressing the organisations' green agenda, as it informed on green issues and alleviated the concerns of the workforce simultaneously. Importantly, organisations carrying out a green education program referred to the innovative, simple ideas discussed by members of the workforce, enabling almost all to engage in the education process (TF11).

The SMEs and the PLC concerned had the relevance and content aligned with discussion on greening issues as they were using such internal methods to facilitate organisational greening. Managers in these organisations believed their approach to

organisational greening was effective. They had a planned targeted approach that they believed was working (TF12). They came to this conclusion by relating how the workforce was engaging in the process and how internal targets on energy saving and recycling were set and achieved or, if not, by internal discussion with the workforce regarding rectification.

Managers from other large organisations in this study did not feel confident concerning the effectiveness of their greening process. There were a number of issues that led them to believe that their greening process was not optimum (TF12).

One large organisation had good internal communication structures yet had not used them in relation to deploying greening knowledge. However, they were effective in informing the workforce on other unrelated issues, for example internal, technical, production or sales training (TF10). This appeared to be a missed opportunity, as the internal communication structure was available, yet no greening content was delivered through this mechanism. Both managers of the organisation concerned referred to a small environmental department that had an almost total focus on pollution and emission control but little else.

Another large organisation attempted to educate their workforce through occasional large meetings (more than twenty participants) with little time for discussion and setting targets by participants. These meetings were hosted by an environmental department manager. Any targets were set by the environmental department with little inter-managerial or inter-departmental discussion and further information was only made available through the organisation's intranet (TF10).

Managers in the above organisations gave these reasons for an ineffective greening process. They were looking for guidance from their environmental manager or department to assist in the educating process (TF6).

In SMEs where managers described an ineffective greening process, they suggested there was a lack of greening knowledge by the educator (usually a senior director of the organisation), not enough time to absorb the complexity of the issue, dispirited or unmotivated audience and a lack of engagement among the workforce regarding the greening process (TF6).

The research indicated that workforce knowledge and understanding had a direct influence on corporate greening. Influenced by media and social contact, managers said that they and their subordinates were already aware of environmental issues beyond the workplace environment, yet in some cases there was little evidence of a structured approach to the greening process within their own organisations (TF13). In these cases the corporate greening process was often 'ad hoc', with management, in some instances, exclusively focused on the external output (as suggested in sections 6.2 and 6.3 above).

There was little evidence that meetings, seminars or workshops took place within the organisation regarding communication, education or engagement about an integrated, corporate greening policy. The majority of management interviews carried out suggested little evidence of discussion, questioning or knowledge transfer about corporate greening within the organisation (TF6). In some cases, meetings had been held occasionally (annually or less) with the environmental manager. There was no evidence of an exchange of information concerning best practice, or of innovation influencing the organisation's strategic framework, or embedding greening practice throughout the organisation's different functions (TF6). The indications were that there was no alignment of greening expressions, indicating that the internal greening process was trivial for some organisations. However, the evidence also reflected a belief on the part of interviewees in both senior and middle management that they would, in the main, willingly engage corporate greening if time (resource) was available.

Education of management and employees had an important part to play in the success or otherwise of the greening process in all organisations in this research (TF13). This required engagement of the workforce, management and staff, through effective communication strategy on greening process.

The literature suggests that "Engagement is about driving employees toward a rational, emotional and intellectual commitment to the company" (Shaw, 2005, p. 26). If the workforce is engaged with the issue then there is a greater likelihood of effective greening process.

6.4.3 *Building a more effective internal corporate communication strategy*

Embarking on a greening process requires the organisation to change and employ a new greening strategy. It is critical that this is communicated effectively throughout the organisation. Managers in this study, within organisations large and small, have complained that a key inhibitor of the greening process in their organisation has been an ineffective communication of the greening process to the workforce. Klein (1996) refers to seven key principals which when taken together form an effective communication strategy for management change based on previous empirically founded studies;

1. ***Message redundancy is related to message retention.***
   - *Repetition of the message improves receiver's memory retention. Ineffective communication can be when a single written bulletin or email does not reach its intended recipient. Often the receiver is blamed causing frustration and misinformation among workforce (Bachrach and Aitken, 1977; Daft and Lengel, 1984).*

This situation was described by managers in both large and small organisations in this study.

2. ***The use of several media is more effective than the use of just one.***
   - *Different communication media reinforces the message and receiver's memory retention* (Dansereau and Markham, 1987).

3. ***Face-to-face communication is a preferred medium.***
   - Empirical studies confirm face-to-face communication has greater impact than any other method of imparting information (D'Aprix, 1982; Jablin, 1979; 1982) Most effective method as it encourages interaction, clarification of key points and ambiguities (Gioia and Sims, 1986; O'Connor, 1990).

4. ***The line hierarchy is an effective organisationally sanctioned channel.***
   - Line authority is an effective communication channel. Large organisations often rely on formal authority and a hierarchal system for final decision making responsibility. Most participants in organisations at all levels accept this. (Snyder and Morris, 1984; Young and Post, 1993).

5. ***Direct supervision is the expected and most effective source of organisationally sanctioned information.***
    - Supervision (immediate supervisors) has an essential role to play in communication strategy throughout a hierarchal management system essentially as they are almost in continual contact with their supervisees. (Higgenson and Waxler, 1989; Smeltzer and Fann, 1989)

6. ***Opinion leaders are effective changers of attitudes and opinions.***
    - According to Klein (1996, p. 38), "those who have collegial authority have a disproportionate impact on others' opinions and attitudes." Informal leaders have the capability to change hearts and minds and form new opinions in others.

7. ***Personally relevant information is better retained than abstract, unfamiliar or general information.***
    - Making information relevant directly to the employee's own work experience is better retained than issues affecting the company, plant or other workers. (Pincus, 1986). Therefore communicating environmental information that the individual can act on in their own job function will be better retained, understood and implemented improving the greening process.

The above principals, if adopted as a communication strategy, would provide a platform and assist in supporting green expressions throughout the organisation. The findings of this research suggest that this would be enhanced by;

- Encouraging engagement through interaction between managers and employees during environmental meetings. Managers in this study suggested eight participants or fewer enables better interaction.

- Use of digital media, including internal organisation social media, to enhance the learning and information dissemination process. This could allow the use of employee blogs as one platform to enable upward communication.

Cornelisson (2014), describes the effect when only one way (downward) communication exists in organisations between managers and subordinates as organisational silence. The existence of this phenomena was highlighted by some

managers in this study when probed on ideas and opinions from subordinates. Cornelisson (2014) explains that this impedes any development of internal communication by blocking negative feedback and hindering the detection and correction of strategy implementation. Conrad and Poole (2011) defined communication climate as the internal environment of information exchange between managers and employees through an organisation's formal and informal networks. Organisations are characterised as having an 'open' climate when information flows freely between individuals, groups and departments enabling learning and knowledge transfer. Workers expect their superiors to take in and act on the information they provide to benefit the organisation. This engenders a feeling of value and worth within the workforce enabling greening and other strategic development. Organisational silence, however, has the opposite effect, closing off opportunities for the organisation to learn from errors and the communication climate is referred to as 'closed' as the workforce sees no point in offering information upward as no action will be taken. This is an inhibitor to organisational learning and consequently organisational greening.

It is clearly necessary to educate at all levels within the organisation to facilitate an effective greening process, one that is regarded by managers and employees as engaging all in a participative approach to organisational greening. The methods adopted to embed greening strategy in the organisation rely heavily on a communication strategy that engenders open communication systems. The issue of internal education and communication are pillars of organisational greening. There is, however, another dimension to the subject that this study identifies and the extant literature discusses, that of an organisation's corporate architecture and its influence.

6.4.4 *The influence of corporate architecture on corporate greening*

In section 6.3.2, the importance of education as an effective communication strategy was discussed in relation to answering research question 3. In this research, managers often referred to the complexity of internal communication systems or task organisation between people or departments as enabling or inhibiting support of green expressions, the infrastructure of the organisation, referred to in this study as the corporate architecture (TF14).

Corporate architecture is concerned with the organisation of people and their associated tasks. The question of how best to organise these has preoccupied leaders since

organisations first formed (Dess et al., 1995). Joseph and Ocasio, (2012, p. 634) added to this by suggesting that corporate architecture relates to the "structure of communications, interactions, and authority relationships across the organisational structure." Corporate architecture can therefore become complex in larger organisations depending on the hierarchical arrangements and authority structures in place between individuals, teams, departments and business units. Complexity can be extended when organisations are multi-site or transnational.

In this research, the PLCs and LEs, had multi-site departments or business units, often geographically located in different countries. In contrast, the SMEs had a single-site operation. Organisational structure was more complex and hierarchal in the larger organisations and often fragmented but relatively simple, flat and non-hierarchal in the SMEs. In the college PSO, the organisation was large and hierarchal with many departments and complex interaction structure but located on a single local site.

In most of the larger organisations (PLCs and LEs), the decision to embark on an organisational greening process was taken at headquarter or executive level, often away from the departments or business units. It was a corporate policy decision made at the most senior level. Managers operating at sites remote from the decision complained of the difficulty caused by less engagement with the HQ decision makers, lack of localisation in the green strategy planning and uncertainty regarding how to implement (TF14). A strategic decision of this magnitude is taken at the most senior level, yet with any proposed future strategy commitment, implementation of it will be expected in the remotest extremities of the organisation by local managers and their workforce. If, as suggested in the literature, corporate architecture encapsulates physical organisational structure and associated authority level, then issues concerning centralised or decentralised decision making also impact the support of greening strategy in organisations. Managers must balance controlling the organisation from the top down with empowering the workforce from the bottom up (Fraser et al., 2006).

In larger organisations, the physical structure necessitates decentralisation to be closer to markets and customers but also to increase competitiveness by taking advantage of low cost labour or raw material availability, for example. However larger organisations can often see benefits in centralisation of purchasing, collection of knowledge (marketing and technical, for example) enabling remote smaller sites to "tap into" these,

but importantly, the collection of more information and data at a central point to make better decisions (Malone, 1997).

It was evident in this study that the decision to green the organisation taken by some larger organisations at HQ level did not always lead to what the managers believed was an effective greening process. In some cases, information coming from the centrally located environmental manager or department was irrelevant, or impractical, as a greening strategy at the remote location (TF3). This implies that the decision making process regarding which local greening expressions to focus on and which strategies to implement should be taken closer to the operational site. Decentralising the decision making process, in this case, would have improved the effectiveness of the greening process. An example of this, in this study, concerned the CSR strategy of one multi-national that was almost totally focused on the country hosting the organisational HQ. Some managers in other countries found this frustrating and an ineffective greening process locally, causing resentment among their staff towards the policy. Corporate architecture that does not empower local managers to design and implement relevant local greening strategies develops an ineffective greening process (TF5).

In smaller local organisations with simple corporate architecture (very few levels of management - usually flat, few or single operational sites), management/owner decision making and engagement is very close to all of the workforce, enhancing communication of the desired greening strategy. The owner/senior manager was driving the process, not a separate department, which is often the case in larger organisations.

At the same time, this research indicated that the more complex communication structure of larger organisations could impede the delivery of greening education programs or discussion between individuals, departments and business units (TF15). Griffiths and Petrick (2001) indicated that hierarchies are killers of initiative and innovation and impede the effective utilisation of employee knowledge. Hierarchies are generally present in larger organisations that frequently have more management levels than smaller organisations

There were instances where interviewees complained about a lack of information on greening policy, including a view that subsidiary, parent or sister organisations or departments were “remote” or that they had “little contact” with these organisations and

departments. There seemed to be an acceptance among some managers that because sister organisations were in different countries or regions, or because they worked in different departments, they could not get together to share, communicate and educate/be educated (TF15). This applied only to larger organisations in this study (PLC and LE). In these cases, the corporate architecture of their organisations was complex and managers found difficulty in organising meetings to ensure attendance by various departments, especially if they were overseas. Getting all staff together to take the organisation forward on the greening process was in itself a frustrating task and often a low priority. These circumstances had impacted negatively on the potential within these organisations for corporate greening and, in consequence, on organisational sustainability. Larger organisations in this study with multi-sites and many departments had greater difficulty in organising greening education meetings than SMEs or the single site PSO. Instead they attempted to progress the greening agenda through communication by email and intranet to the workforce and some managers did not feel that this engendered the necessary enthusiasm and lacked passion in delivery that, in their opinion, was necessary to get the workforce engaged in the process (TF15/16).

In sharp contrast, there was evidence from two smaller organisations in the study that simple corporate architecture had been an enabler of corporate greening, facilitating communication and knowledge transfer and increasing the potential for corporate greening and organisation sustainability. Communication was two-way and feedback on implementation issues was directly between the policy generator and policy implementer. There was less communication interruption than could be the case in larger organisations, enabling clarity and correction of communicated message, if necessary, improving the greening process (TF17).

6.4.5 *Corporate architecture's influence on greenwash development in EPOs*

External and internal communication issues are key to the potential generation of greenwash. Greenwash is a result of miscommunication, i.e. the statement of a position that does not exist in practice. Greenwash can arise if there is potential for discrepancy between the organisation's stated position on environmental issues and its perceived position, as measured and communicated by stakeholders. Stakeholders, in this instance, may include employees who are not responsible for the development of CEP. Information, here, includes records or targets of organisational activity related to its

environmental position that is communicated to external agencies and other stakeholders.

Corporate architecture has a significant role as an enabler or inhibitor of communication flow within the organisation. Communication flow as a consequence of organisation structure and procedures, including knowledge transfer between departments and individuals, has significant and varied impact levels on implementation.

The organisation's external communication of its values and efforts concerning implementation of CEP may include publications in the media, advertising, websites and published corporate literature. Monitoring of these media channels by stakeholders and others may posit a particular orientation by the organisation on green issues. While care is often taken to only provide bona fide information concerning environmental matters, variance with the implementation achievements can still occur, sometimes unnoticed by the organisation's media generators.

Internal communication can be adversely affected by complex corporate architecture. Complex organisational structures can bring about a lack of awareness of CEP or hinder information flow in general. In this study, the larger organisations (PLCs and LEs) had developed a CEP available through the corporate website for download to all stakeholders. In three of the four larger organisations that had a CEP, managers had issues regarding its content and the means of establishing implementation. In some cases, they suggested that the CEP referred to purely meeting regulatory targets. There was no information regarding the organisation's position on CSR nor of its stated aims or achievements in this area. Managers in one larger organisation referred to the CEP as a list of environmental targets, that were "ambitious" in their opinion but the frustrating issue was there was very little support to the manager with implementation. The disjointed nature of internal communication as a result of complex organisational design (for example multiple business units with many hierarchal authority levels) disrupted the message (TF17).

Managers in some larger organisations had difficulties with allocated greening tasks in the CEP that had not been shared between business units per country or region to make the process more efficient. They discussed a better solution during interview that never made it back to the policy developers due to decentralised structure of the organisation

(TF14). Their suggestion would have been to align the external CSR programme per country as that made it more meaningful and relevant to that country, in essence more effective. The business units in that country could each share a different aspect of work to promote the CSR programme. In all cases, the managers in larger organisations found it more difficult to meet CEP targets (commitment objectives) with relevant implementation strategies due to the more complex nature of corporate architecture, compared with the flatter more simple structure of SMEs (TF14).

In SMEs, the policy maker (senior executive, director or owner) was closer to the workforce who would implement the green policy or strategy. Corporate architecture was simple and effective as often implementation was at the same site of strategy development. Problems, if any, with implementation were evident immediately and corrected to produce a more effective greening process.

It was evident in this study that greenwash could therefore develop in an EPO simply as a result of complex corporate architecture. This finding potentially challenges the extant definition of greenwashing.

6.4.6 *Ways that green expressions are supported throughout EPOs by policy and practice?*

A summary is given below in Table 23 of the influencers supporting policy and practice of green expressions throughout EPOs.

Influencer or support mechanism	Policy (commitment)	Practice (implementation)
Greening knowledge	Owner stakeholders (small organisations)/managers (large organisations) must have greening knowledge to develop a workable CEP specific to their organisation.	Workforce stakeholders must have access to greening knowledge regarding what and how to implement, relative to resources available (time, financial, human).
Communication strategies	CEP developers must communicate with internal/external stakeholders, including consultants, to draft policy commitments and targets.	Effective communication strategies must be developed to support organisational learning depending on organisational type and design (flat or hierarchal).
Leadership	Motivated leaders (owners/directors/managers) must develop CEP, making realistic goals specific to their organisation. Goals should have target dates for completion.	Management must provide leadership to implement CEP ensuring goals are achieved by monitoring effectiveness. Feedback to develop/adjust CEP making Policy and Practice identical.
Corporate architecture	Commitment phase must take account of corporate architecture type and design CEP appropriately. This may mean, in some cases, adjusting architecture if possible.	Implementation must not be interrupted by corporate architecture issues. Corporate architecture should complement communication strategies.

Table 24. Ways that green expressions are supported throughout EPOs by policy and practice

6.5 How do green expressions relate to performance in different EPOs? (Research Question 4)

The improvement, or otherwise, of organisation performance as result of greening strategy is much debated in the academic literature as well in corporate boardrooms (Azzone and Bertele, 1994; Craig and Dibrell, 2006; Darnall et al., 2008). Two environmentally proactive viewpoints emerge. The first is that corporate performance is enhanced by a paradigm shift and a platform of greening strategies as a first strategy, as discussed earlier in this chapter (Elkington and Burke, 1987; Rugman and Verbeke, 1998; Shrivastava, 1994). A second contrasting view, confirmed by this research, is that as long as there is an end result that enhances performance, then environmental

strategies are worthwhile for many organisations (Ketola et al., 2009; Stubbs and Cocklin, 2008). In all of the EPOs in this study, managers believed that greening strategies must produce a tangible financial benefit (TF4). The exception was the PSO, however financial performance is also important in these organisations, as explained in the following section 6.5.1.

6.5.1 *Different green expressions may have different performance outcomes*

The research indicated different perceptions of what was meant by organisational performance. Interviewees generally tended to discuss financial performance (sales, profit, margin and cost) following their natural instinct as managers.

For interviewees in the same organisation, however, there were often differences regarding how environmental performance should be measured. Interviewees generally discussed environmental performance in financial terms related to generating additional profit. Reducing shipments, for example, was discussed in terms of saving fuel and transport cost, as well as being good for the environment and energy saving expressions (switching off lights, office waste reduction) was discussed in terms of financial savings. This effect was also evident in PSOs, as their cost budget was always in sharp focus. The organisation had systems to ensure that overspending was impossible and financial measures appeared to be the paramount measure of performance. However, again, a minority of organisations measured performance through additional criteria with a non-profit focus, for example, staff satisfaction and community engagement (TF4). These were internal and external related CSR strategies.

Ironically, the majority of organisations in this research in the opinion of managers, chose not to focus on those green expressions that had an obvious impact on cost saving and financial performance (energy conservation, recycling, transport reduction and electronic mail usage). These were referred to as internal green expressions and were not a focus, as they were perceived less beneficial to corporate image than an external green expression (TF18).

Some external green expressions had measurable financial benefit, for example, supply chain greening and improvements in quality sourcing, leading to reduced downtime and cost. However, other external green expressions were less tangible in terms of financial benefit, for example, external CSR associated expressions. It was evident that some

organisations engaged in such activity in anticipation that customer stakeholders would approve with the potential of gaining business for the organisation (TF4).

6.5.2 *Internal green expressions have financial as well as social and environmental performance benefit*

In line with findings already discussed, it was evident that having a balance between internal and external green expressions generally offered better financial, social and environmental performance results overall. It was evident from the research that internal green expressions relating to simple everyday tasks can provide a tangible cost saving (TF19).

An internal focus ensures that tangible cost saving opportunities are maximised, as well as developing the tangible and intangible benefits of engaging and integrating the workforce and affording more time resource internally. Evidence from interviews with managers indicated that an internal focus enhanced the workforce environment and improved productivity. Managers viewed positively green expressions that benefitted the environment and also produced a financial benefit to the organisation describing these as win-win strategies in line with 3P literature. They viewed positively internal cost saving strategies that also benefitted the environment, for example, waste reduction and energy saving, however generally were more sceptical regarding community involvement and the benefits to the organisation (TF4). On further discussion, these concerns revolved around being unable to see tangible results from external CSR strategy. It was difficult to target and measure, causing some confusion concerning how best to engage within their greening process. This is evidenced by the findings from the fieldwork as managers showed high levels of commitment to such strategies but quite low levels of implementation (GF5).

This situation is closely related to the building of a sustainability platform from which all strategic decisions are made. The organisations in this research that are on the way to achieving this also have a profit focus, however evidence shows it was not their only focus.

The new conceptual framework that this thesis developed indicates that performance in EPOs should be measured with reference to the 3P concept. EPOs must measure their

performance in relation to their success, or otherwise and also with people strategies (CSR) and their organisation's effect (polluting, mineral depletion, waste generation and energy consumption) on the natural environment, the planet.

Furthermore, it is important to have meaningful targets with respect to people and planet strategies as well as profit goals. The 3Ps need to be in balance with greening knowledge used at the outset of developing a CEP to ensure that they are relevant, with improved performance across all platforms over time. Again, not just profit improvement.

Recent literature confirmed the importance of a relationship between commitment of greening strategy, employees' motivation and environmental performance outcome. When commitment to greening strategy and resource is available to invest in specific training relating to greening issues, workforce motivation levels are greater and environmental performance is enhanced (Sands et al., 2015). This thesis adds to this knowledge by suggesting that performance will be improved provided greenwashing does not erode this enhancement through greening strategy implementation reduction relative to commitment.

6.5.3 *Difficulties in measuring corporate sustainability performance*

Corporate sustainability performance measurement is a complex issue. In their literature review concerning corporate sustainability, Montiel and Delgado-Caballos (2014) attempted to help clarify definition and measurement of the subject. From their study it is evident that the majority of corporate sustainability scholars refer to a definition encompassing the economic, social and environmental objectives of the organisation.

This view is often referred to as the "3Ps" or "Triple Bottom Line" view of corporate sustainability (Bansal, 2005; Elkington, 1997; Hart and Milstein, 2003). This view suggests that organisational performance should be measured not only on the amount of profit it generates for shareholders, but also on the positive integration with employees, community (people) and on its impact on the environment (planet).

All managers interviewed in this study had an understanding that sustainability is only achievable by taking more than a profit only focus. The evidence that supports this relates to their beliefs regarding what type of commitments are involved in a greening process. All managers interviewed related to CSR and environmental issues such as energy and waste conservation as also being important (TF20).

In this study, there was evidence that all organisations afforded energies to a strategic focus on profit, people and planet and attempted to develop strategy that integrated these three significant concerns to build a sustainable future for the organisation (TF20).

However, while the route to building a profitable organisation was well understood by managers, not all were clear on how to establish planet and people strategies within their own organisation. Importantly, in contrast to measuring financial performance through regular monthly management account information, they had difficulty measuring proactive people and planet performance. They had less experience in this area compared with setting and managing financial budgets. People and planet targets were less obvious than financial targets. These targets, if any, were often annual or even longer term "vague ambitions" as described by one manager, rather than specific monthly targets for financial objectives (TF17).

Managerial focus could drift back to almost financial only performance targets and measurement. This view is supported in the literature in studies by Marshall and Brown (2003), as cited by Hubbard (2009, p. 181), which indicated that environmental performance reporting analysis revealed, "82% of measures were descriptive, with only 13% having targets and only 5% being efficiency based".

Bayle-Cordier et al., (2014) also stressed the importance of integrating these performance objectives. They found that when a leadership change decoupled profit from an original 3P focus and made it the most important performance objective, employees resented such a move and morale suffered. Reverting the integrated 3P approach by another subsequent leadership change restored the balance, and performance.

Performance expectation can be different depending on organisational type. A simple example from this study was the difference in profit expectation between the private

sector organisations and the PSO. It would be wrong, however, to indicate that PSOs do not have a financial focus. The PSO managers in this study indicated that the organisation was continually involved in reviewing their expenditure relative to budget. They had clear objectives relating to financial issues and they had to balance these with their performance objectives relating to people and planet. In this sense, the 3Ps principal is still valid for PSOs (TF21).

Organisational type may dictate an occasional imbalance within the 3P concept in order to facilitate organisational greening in the longer term. An example of this from this study was an SME that required a short term profit focus to generate investment capital resource in order to purchase more efficient production equipment, therefore improving energy conservation, quality and reducing waste (TF20).

6.5.4 *Existing corporate sustainability performance measurement*

There are numerous indices and methods that attempt to measure corporate sustainability performance. Most, however, focus only on one dimension of the issue. Singh et al., (2007) implied that although there are various international efforts on measuring sustainability, only few of them have an integral approach taking into account environmental, economic and social aspects.

Due to the lack of clearly defined measurement units (financial, social or environmental) and uniformity of information on sustainability performance disclosed by organisations, corporate sustainability scholars have developed their own methods of assessment. As a result, there is an extensive array of frameworks and measurement tools devised to attempt to measure the complex performance mix and make meaningful contribution to management practice (Skouloudis et al., 2010).

Organisational performance measurement in general has utilised a balanced scorecard, BSC (performance against set objectives with targets in a given timescale) or organisational benchmarking (comparison against similar organisations in same industry) approach. Both these approaches have been adopted to measure corporate sustainability by researchers. Nikolaou and Tsalis (2013) highlighted six studies between 2002 and 2010, based on empirical work for corporate sustainability measurement utilising a sustainability balanced scorecard (SBSC) method. None of

these or any of the key performance indicator (KPI) based methods, often associated with organisational benchmarking, integrate corporate greenwashing as a performance inhibitor. The methods in many studies are complex and require extensive sustainability information to be disclosed. This is often unavailable. Importantly, however, they attempt to measure sustainable performance or development of the organisation.

6.5.5 *Practical approach to corporate sustainability measurement - greenwash reduction*

The 3Ps concept suggests that balance of profit, people and planet objectives will be achieved over time. If short term profit focus is required for the greater good of achieving corporate sustainability, it is important that this is made clear in the commitment phase and associated CEP policy drafting with relevant timescales added to ensure the potential for greenwash is minimised.

From the evidence of this study, the CEP is an important document to have in place prior to embarking on an organisational greening path from a performance standpoint also. It was evident that not all EPOs in this study had a CEP developed prior to beginning their greening process. It was also the case that managers in these organisations believed the workforce had some degree of frustration with the process, in contrast to managers in organisations with even a rudimentary CEP in place who expressed less frustration levels among the workforce (TF22).

The CEP should provide a focus for managers and employees on the objectives of the greening organisation's greening process with goals, targets, timescales and resources to be allocated.

Implementation of these commitments should be measured against the CEP to assess performance in terms of potential to greenwash. Meeting these objectives, as detailed in the CEP, can reduce the risk of greenwashing

The concern of this thesis is organisational performance and how it affected by greenwashing. The new conceptual framework that this thesis proposes relates to a focus on eliminating greenwash by implementing all committed greening strategies.

This simplified approach of linking well-communicated, committed greening strategies directly to equal levels of implementation along appropriate timelines is a simple, practical approach that managers in practice can grasp and importantly, implement.

6.5.6 *Green backlash to performance by inappropriate green expression usage*

There was evidence that proactive environmental organisations often competed against other organisations with equal or greater environmental claims in the same industry. In some cases, the competing organisations' claims were unsubstantiated. Responding with external green expressions of its own, the organisation gave something of an impression of desperation and ran a risk of a charge of greenwashing (TF23).

Academic literature (Dahl, 2010) has confirmed a growing trend of organisations downplaying their green credentials. This is in order to avoid a 'green backlash' as potential customers level a charge of greenwashing against over-zealous green marketing. There were indications that organisations in this study were affected by a green backlash where the organisations could not substantiate all of their environmental claims and subsequently, lost customers. This situation, again, lends support to the view that a focus on internal green expressions is likely to be beneficial to organisational performance in the long term. Performance measured exclusively or principally in terms of profit maximisation may have this focus only in the short term, if necessary, to invest in greening strategy resource, as discussed in section 6.5.1. A long term focus on profit maximisation as performance measurement criteria would be unhelpful to those trying to build sustainable organisations. For organisations who take a wider, holistic and long term view, which includes a focus on people and the planet as well as profit, there is potential for improvement in environmental profile and therefore potential for sustainability.

6.5.7 *Ways that policy and practice of green expressions relate to EPO performance*

Performance Criteria (3P)	INTERNAL	EXTERNAL
People	Internal CSR strategies, specifically workforce are extremely beneficial. Linkage with simple energy and waste reduction saving strategies generates a positive momentum within the workforce of the organisation.	External CSR strategies specifically community. Green product application or service output.
Planet	Internal energy conservation and waste reduction benefits planet and the environment.	Emission, mineral depletion and pollution reduction related to upstream/ downstream transport, packaging, energy and raw material focus.
Profit	Cost reduction strategies linked to above: *internal CSR strategies* improves morale and productivity, increases profit; *internal waste and energy conservation* reduces cost.	Sales and profits improve due to corporate reputation enhancement from above external people and planet strategies. This could be reversed if greenwashing exists.

Table 25. Internal and external green expressions and performance benefit

Table 25 is based on viewing performance in EPOs through the 3P lens or triple bottom line principal. Again, two different perspectives are taken in this study, an internal perspective and an external perspective. This allows strategies to be focused and balanced. Balancing the 3Ps of people, planet and profit over time engenders corporate sustainability. The balance of people, planet and profit strategies to be achieved at any given point in the greening process will be a matter for the individual organisation and the pressures, including threats and opportunities faced at that moment. This can result in external and internal perceptions of greenwashing unless the communication strategies are in place to precisely explain timing of specific strategies and how they interact to achieve overall equal resource allocation.

The policy (commitment) and practice (implementation) constructs have been an essential mechanism to develop this thesis and comparison of these allowed a view on greenwash development. Existing definitions of greenwash relate to the image

generated by the organisation to external stakeholders. However, in closing the fourth research question that relates to greenwash development, this thesis suggests that greenwash is a phenomena that also has an internal organisational dimension. The justification of this relates to workforce frustration with internal greening policy objectives not being implemented as evidenced in this study. This damages morale and productivity, resulting in suboptimal performance in line with the new conceptual framework that this thesis develops. This is a form of internal greenwashing not referred to in current academic literature.

6.6 Summary

This chapter began by introducing the new conceptual framework for reducing greenwash in EPOs, providing discussion concerning its component elements and their relevance to existing literature where appropriate.

The following sections related the answers to the four research questions to the findings and existing literature supporting this new conceptual framework.

In-depth discussion of salient points within each of research questions was presented and followed by a simplified summary in tabular form for each research question answer.

The following final chapter 'Chapter 7- Conclusions and recommendations for management practice' brings together the theoretical and practical implications of this work to improve understanding for managers on organisational greening process.

Chapter 7. Conclusions and recommendations for management practice

7.0 Introduction

This chapter brings the thesis to a close by drawing together the study findings and discussion chapters and relating them to the study aim and objectives. It is anticipated that satisfying these study objectives will make a contribution to management practice in EPOs by assisting managers involved in or about to embark on an organisational greening process.

A framework for the development of organisational greening, based on improved management understanding of the greening process and reduction in the potential for corporate greenwashing was articulated in the previous chapter, Chapter 6. In addition to the new conceptual framework that this thesis presents, there are a number of theoretical and practical implications for management that the study makes as a contribution to management science.

Importantly, the recommendations for management practice are discussed here, relating to both the understanding of the greening process and the reduction of greenwashing. It is envisaged that implementation of any resulting recommendations purported by this work will ultimately result in improved performance of EPOs by providing a framework that will assist in guiding managers along the organisational greening path, improving implementation of greening strategy and reducing the risk of greenwashing, a known performance inhibitor.

The following sections in this chapter firstly present the theoretical implications of this work that add to or challenge the academic literature. This is followed by presenting the implications for management practice and recommendations for reducing the risk of corporate greenwashing.

In section 7.3, the limitations of the study are discussed. The chapter and thesis closes in section 7.4 by discussion on relating the work to the study objectives.

7.1 Theoretical implications and contribution of this thesis

This study had two principal objectives; to enable a deeper understanding of a greening process and to understand the development of greenwash in EPOs and how to reduce its effect, thereby improving performance. Any theoretical implications are based around these two objectives and are described in the following subsections.

7.1.1 *All activity in which organisations engage, both internally and externally, has the potential to be part of a greening process*

The literature confirms that a holistic approach to corporate greening is required and a greening strategy should be embedded in corporate decision making at all levels (Asif et al., 2008; Banerjee, 2002; Valente, 2015). This study supports this view and also that there is potential for all activity to be greened. If greening strategy is embedded in all decision making then each individual element, task and relationship, internal and external to the organisation, can be improved. The improving process is a greening activity.

7.1.2 *Practising internal green expressions related to energy conservation, waste reduction and recycling builds relationships between individuals perpetuating the greening process*

This study highlighted the organisational benefits that managers experienced when the workforce engaged in simple greening activity within their domain of influence, their workspace. This could be conserving energy by energy saving, waste reduction or recycling. These small acts engendered a positive feeling between individuals that improved morale and often productivity with performance benefit.

7.1.3 *Organisational greening knowledge is required by CEP developers, prior to making policy commitments*

The evidence of this study suggests that unless CEP is developed by managers with knowledge of organisational greening, the risk of greenwashing increases due to implementation falling short of CEP commitments.

7.1.4 *It is necessary to balance CEP to embed greening strategies in EPOs*

Having a well written, balanced CEP that is tailored to needs and available resources will significantly assist in embedding greening strategies throughout the organisation. Balance refers to equal resources (human and financial) as well as internal and external greening strategy over time.

7.1.5 *EPOs can develop greenwashing*

In current literature there is very little, if any, reference to EPOs and the potential for greenwash to exist. This study concludes that all organisations have the potential to greenwash under current accepted definitions that relate to non-implementation of committed greening strategies. The study focused only on EPOs, whereas the existing body of literature focused on "brown" or "non-green" organisations. This study highlights issues including lack of resources (human and financial), lack of understanding of greening process, CEP not aligned with organisational capabilities and corporate architecture complexity as reasoning why EPOs can greenwash.

7.1.6 *Current accepted definition of all greenwashing as "deliberate" can be challenged as unintentional greenwashing exists*

Bowen and Aragon-Correa (2014, p. 109) indicated that greenwashing is a deliberate strategy carried out by organisations to gain competitive advantage. This study did not make such a conclusion. Greenwashing, for the reasons given in section 7.1.5, exists in EPOs and is non-intentional by these organisations in nearly all cases. Ignorance of the most effective communication strategies to avoid non-intentional greenwash should not be an opportunity for such organisations to be labelled as greenwashing. Attaching such labelling to EPOs has been seen to damage reputation, specifically for larger organisations, from the external stakeholder perspective, reducing performance and rendering the greening process counter-productive.

This study suggests that the current definition of greenwashing as a deliberate act cannot hold in most cases for EPOs who over-commit to, but under-implement, greening strategy for justifiable reasons and an acceptance of this existing phenomena

calls for an alternative definition that differentiates intentional and unintentional greenwashing.

7.1.7 *Greenwashing is not only evident from an external organisational perspective but also can exist internally with reduced performance consequence*

Existing perceptions of greenwashing are taken from an external stakeholder perspective and are founded on the externally communicated greening strategy commitment versus implementation differential. However, this study found that there is an intra-organisational greenwashing existence under current accepted definitions of the phenomena. This is from an internal stakeholder perspective where management and employees have "committed" to simple greening strategies however do not implement these without justification. Managers in this study suggested that this caused resentment among the workforce, affecting morale and productivity with reduced performance consequence.

7.2 Practical implications and recommendations for managers

In Table 26 below, a tabulated summary is made concerning the recommendations this study suggests for management practice. This is followed in section 7.2.1 by a more detailed explanation of each recommendation. These recommendations follow the conceptual framework for eliminating greenwash potential in EPOs.

	Conceptual framework phase	Key points
STAGE 1	PRE-EMBARKATION CONSIDERATIONS	*PLANNING* - Resources; human and financial - Timing: outline per greening strategy
STAGE 2	COMMITMENT PHASE	*GREENING KNOWLEDGE DEVELOPMENT* - for senior management *CEP Development* - Publicised statements for internal and external release
STAGE 3	INFLUENCING PHASE	*INFLUENCE OF COMMUNICATION* *INFLUENCE OF LEADERSHIP AND KNOWLEDGE* *INFLUENCE OF CORPORATE ARCHITECTURE*
STAGE 4	IMPLEMENTATION PHASE	*PHASE IMPLEMENTATION* - for smaller and financially constrained EPOs - for larger organisations slow implementation in remote units
STAGE 5	PERFORMANCE MEASUREMENT PHASE	*GREENWASH POTENTIAL DETERMINATION* *FEEDBACK*

Table 26. Practical recommendations for managers in EPOs

7.2.1 *Practical recommendations for managers In EPOs*

In the following pages, a more detailed explanation is given regarding recommendations for practising managers as a result of this study, on a stage by stage basis.

STAGE 1 - PRE-EMBARKATION CONSIDERATIONS

PLANNING

- Resources; human and financial
- Timing: outline per greening strategy

i. Managers need to ensure cost requirement per stage is fully understood.

ii. Managers must allocate resources on a stage by stage basis. Financial resources will be required to enable senior management to gain understanding of potential greening processes through consultation with external bodies. This requires a human resource allocation of senior managers.

iii. Managers need to understand at the outset, the timescale of the process. How long will each greening strategy take to acquire knowledge, communicate it through the organisation, implement it and measure resulting performance?

STAGE 2- COMMITMENT PHASE

GREENING KNOWLEDGE DEVELOPMENT

- For senior management

i. Senior managers must have some basic greening knowledge before making commitments in the form of a CEP. Managers must gain this knowledge through existing literature, external association (consultation with greening organisation consultants) or green education courses.

CEP DEVELOPMENT

- Publicised statements for internal and external release

i. CEP written with balance of internal and external green strategies to be achieved over time.

ii. Balance in social, environmental and economic performance objectives (3P framework) should be set out. An example of balance could be; achieving a cost reduction from a supplier by consolidation of shipments, or reducing packaging. The CEP should focus on building win-win scenarios into objectives, always seeking a cost reduction (potential profit increase) with an environment and/or social benefit.

iii. Managers must write CEP that delivers this balance. Internal CSR strategies are crucial to delivering a balanced focus for the greening process (employee incentives, education, fostering simple green expressions, energy saving, recycling, participative approach to greening decision making). These should have objectives and goals agreed with workforce.

iv. The CEP should provide a policy framework for corporate communications (websites, marketing publications, social media and link with corporate governance on email exchange and workforce external relationships).

v. Commitment statements in CEP should clearly outline timing of greening strategy implementation and expected outcome.

vi. Consideration should be given to developing a macro-CEP for large complex decentralised organisations, allowing adaptation at remote locations to formulate a more relevant local or micro-CEP.

vii. For smaller organisations (SMEs), CEP development can often, and should be, a participative process with workforce input to assist with high levels of implementation success. Often, however, these organisations do not have sufficient size to justify an environmental department or manager and the responsibility falls on the owner or director manager to develop CEP. Having existing responsibilities with which to cope, the quality of CEP developed can deteriorate unless sufficient time is allocated. Engaging external assistance from an organisational greening consultant should be a consideration in these circumstances.

STAGE 3 - INFLUENCING PHASE

INFLUENCE OF COMMUNICATION

i. Reduce the risk of greenwashing charges through a communication program with internal and external stakeholders to include information relating to when and how the process will be implemented. Managers should attempt to understand the difficulties that employees envisage or experience with implementation and feed these concerns back into CEP.

ii. For internal stakeholders (employees) this could take the form of consultation by managers with employees, engaging them in the process, increasing likelihood of improved success rates of implementation and understanding. This thesis recommends that communication of the greening message needs to be reinforced

regularly to improve retention levels within the organisation. Methods to consider should be;

- Regular face to face meetings with workforce and feedback sessions of eight or fewer participants to attempt to give all an opportunity to express their views.
- CEP updates on intranet, social media and workplace blogs.
- For larger organisations, this could be ideas from different business units or departments and sharing innovative implementation success.
- For SMEs, while the above is also beneficial, closer contact with policy makers enables more regular face to face consultation, fostering and encouraging engagement. This is an opportunity for inspirational and charismatic leadership on green issues which must be taken by senior management as it assists in embedding greening strategy in the organisation.

iii. For external shareholder communication (generally larger organisations; PLCs and LEs) this could take the form of presenting the reasoning and rationale behind the greening process. It is possible that not all shareholders will initially be supportive of embarkation on a greening process, especially if the organisation is experiencing financial constraint. SMEs may also have reduced resources and management may have to focus on the arguments and adopt the greening expressions closely related to improved financial performance as initial greening strategies. Initial phases could therefore be more concerned with energy saving, waste reduction and efficiency drives. These strategies are relatively low cost compared with adapting production equipment and will provide a revenue to reinvest in the greening process.

iv. For other external stakeholders, communication of the organisation's intent to embark on a greening process should be measured and related to what will be achieved within a given timescale to avert the risk of greenwashing. The communication method could be; meetings with upstream suppliers to garner their support by reopening negotiation on savings, for example, packaging reduction and alternative greener transport options including shipment consolidation. This is strongly recommended for SMEs as this study and the

literature indicates that there is a reluctance to engage with suppliers in this way, especially if the supplier is significantly larger than the SME.

v. Meetings should also be held with external downstream customer stakeholders to explain future greening strategy and how it will affect them and engage in dialog to share experience and innovative greening ideas. This will improve customer relations with an additional benefit of potential greening recommendations.

vi. Other external stakeholders, for example community and local authorities, should be communicated to by face-to-face meetings, letter, email, social media or website updates. For SMEs using current communication technology, this is an effective communication strategy which keeps costs to a minimum. Again, releasing information in a phased process to avoid exaggerated claims is paramount.

INFLUENCE of LEADERSHIP and KNOWLEDGE

i. Management taking a leadership role on greening issues influences positively the potential to embed greening strategies in the organisation, assisting the greening process.

ii. Greening knowledge must be obtained externally to the organisation by managers for developing commitment strategies.

iii. In PLCs and LEs, the greening knowledge is likely to be dispersed throughout the organisation by an environmental manager or environmental department.

iv. Environmental managers must be knowledgeable concerning social (people) and environmental (planet) strategies as well as appreciation of the financial goals of the organisation. They must be able to demonstrate leadership in these subject areas to command respect of the workforce (other managers and employees) in order to drive the greening agenda through the organisation. It is crucial they have the full support of the executive board and they focus their work on achieving consideration of green issues in all organisational decision making.

They must permeate greening strategies through the organisation and not be seen as a 'bolt-on' ineffective department. This will not embed greening strategy.

v. In SMEs, the owner/director is often involved in actively managing the business and the nature of organisational design suggests that the policy maker is closer to the workforce. Greening knowledge is, again, very important to gain the respect of the workforce but also the position of the director should automatically gain their attention, using this attention to inform the workforce of a well devised CEP, preferably in a passionate way. A greening champion has been shown by this study to be very effective in embedding greening strategy in an organisation.

vi. Leadership style and capability is vital and should be considered as having an important influence on the effectiveness of the greening process. Whether an individual manager, department or potential greening champion is responsible for galvanising the workforce, senior management must take into account who will spearhead this process.

INFLUENCE of CORPORATE ARCHITECTURE

i. Corporate architecture, as demonstrated in this study, has an important role in developing an effective greening process.

ii. Managers must take into consideration the organisational design and the relationships between individuals, departments and tasks, responsibilities allocated and hierarchal authorities. Existing architectures may need adjustment to enable the full effectiveness of a greening process. Information and responsibilities have to be able to flow through the organisation reaching its extremities, delivering the same message and receiving back data on localised issues that may be relevant to the organisation as a whole.

iii. Complex structures with many departments and hierarchal authorities, sometimes found in larger organisations, can inhibit the delivery of strategy and collection of information. However these complex organisations may contain very rich organisational data due to their reach, scope and size. They may have embedded information which, if centralised, would be of significant benefit to

the organisation's greening process. Managers must take this into account in communication strategy design.

iv. Smaller organisations (SMEs) generally have less complexity with few hierarchal levels of authority, shorter lines of communication and therefore potentially less interference between the message sender and receiver. In theory these organisations should find it easier to impart greening knowledge to the workforce and also receive feedback, allowing adjustment to CEP to ensure better implementation and reducing greenwash potential. They do not, however, have the same reach, scope and size to gather information that may be beneficial to the greening process.

v. In practice, management must overcome issues concerned with corporate architecture to enable the greening process.

vi. While an idealistic scenario would be to rebuild organisations with sustainability concepts and strategies as the guiding specification of corporate architectures, this is only very rarely possible and in most cases unrealistic.

vii. Managers have to deal with the realistic situation that not only is organisational greening is extremely important, but also that existing architectures are often difficult, costly and take time to alter or change.

viii. In larger organisations with complex architectures, organisational greening must be achieved with a focus on the communication strategy employed. Managers must pay specific attention to their communication methods ensuring they are designed to impart greening knowledge and also allow remote workforces to have input to commitment and implementation design.

ix. Centralised or decentralised large, complex organisations may have different issues to consider.

x. Decentralised large organisations may still have complex physical structures; offices and production units in varied and remote locations, however they usually have devolved decision making to these units. Therefore, organisational greening design must take this into account by developing a more locally-based and influenced greening process. Integrating greening knowledge into these

types of structures to empower local managers to design the process should be considered. The most effective greening process in these types of organisations may not be as uniform or as standardised as in centralised organisations, however it may bring richness to the organisation as a whole due to the variety of innovative ways in which managers adapt a greening process depending on local conditions. Internal and external CSR policy, for example, should be relevant to the local situation. The organisation's CEP has to be flexible enough to allow this adaptation and provide an umbrella encompassing framework that is based on the conceptual framework that this study recommends. In effect, local managers need to develop their own micro-CEP following the principals and phases of the corporate objectives, a macro-CEP. This could allow for deployment of a very effective locally driven and "owned" greening process. The role of the environmental department or manager at head office would be to ensure the corporate principals of the macro-CEP are being followed in the remote units.

xi. Centralised, large, complex organisations are more likely to benefit from a standardised corporate CEP with minor local adaptation in the remote units. This is because the levels of authority on resource allocation may not be available locally to design a micro-CEP, as suggested for decentralised units.

xii. Recapping communication possibilities from this study, full use of information technology should be made, preferably based on face to face video technology, supported by appropriate greening information sessions. These sessions should collect specific problems experienced in a remote location or country (extremity of the organisation) with commitment design and/or implementation difficulties and advice based on the latest greening knowledge kept in the head office environmental department. In both cases, however, the head office environmental department is utilised as a reservoir of best practice in greening information collected externally, from corporate sustainability scholars and practitioners and internally, from their remote units.

xiii. SMEs' shorter communication lines and flatter authority structures with few hierarchal levels provide managers with an opportunity to impart greening knowledge and receive feedback immediately. In SMEs, the CEP designer is

often the owner director and can be free of environmental managers or departments. This puts more responsibility on the owner manager to develop a well written and balanced CEP, as suggested in Stage 2 -'Commitment Phase' above.

STAGE 4 - IMPLEMENTATION PHASE

PHASE IMPLEMENTATION

- For smaller and financially constrained EPOs
- For larger organisations slow implementation in remote units

i. It is unrealistic for EPOs of any size to be able to gain greening knowledge, design a well-balanced CEP and successfully implement the committed greening strategies in the CEP as a short term project. Organisational greening is a long-term strategic goal. The pace of greening the organisation can be increased depending on available resources (human, knowledge and financial) at any time. In this respect, every organisation is different.

ii. Generally, larger organisations have more resources and, in theory, can accelerate the process. This will challenge management to ensure over-commitment and under-implementation is not experienced, as remote units struggle to implement within committed timescales, leading to greenwashing accusations. Phasing implementation by breaking the process down into achievable goals per business unit or department will assist in eliminating greenwashing.

iii. In larger centralised EPOs, this should be done at head office level.

iv. In large decentralised EPOs, this should be done locally in the remote locations and aligned with the micro-CEP. The organisation's macro-CEP should reflect this by only committing to the worst case scenario on implementation timescale.

v. A potential solution for EPOs, principally SMEs and PSOs suffering lack of resources, is for managers to implement greening strategy by phasing implementation in line with available financial resources.

vi. SMEs and PSOs in this position should focus initially on cost saving greening strategies (energy and waste conservation, recycling and using information technologies extensively for reducing meeting transport costs and marketing initiatives).

vii. Savings made in SMEs and PSOs using these initial strategies could be used to finance new, more efficient production equipment, for example. This would then generate further savings by improved quality with energy and waste disposal cost.

STAGE 5 – PERFORMANCE MEASUREMENT PHASE

GREENWASH POTENTIAL DETERMINATION

i. Comparison of committed strategies with implemented strategies.

ii. Organisational greening performance is measured in relation to the triple bottom line principle concerned with the social, environmental and economic objectives of the organisation and the CEP should have set out precisely what these were and the date by which they should have been achieved.

iii. For a greening process to be effective in reducing the potential of generating organisational greenwash, managers must be able to measure, with accuracy, the committed greening strategies developed in their CEP and how successfully these have been implemented.

iv. Detailed CEP commitments and also all official corporate communications (websites, marketing and social media) internal and external should have regular scrutiny by managers to ensure that what is stated actually happens, or has happened (been implemented) in practice. More regular scrutiny, monthly or even weekly, will reduce greenwashing potential.

v. In larger organisations with an environmental department or manager, the responsibility for scrutiny should reside there. This will sometimes mean that

managers in communications and marketing departments have to provide information to the environmental department on a regular basis for review.

vi. Managers (on evidence in this study) indicated that one of the main obstacles to the greening process was achieving committed greening goals on time, due to time required in other areas. Managers must decide that implementation performance timescales are realistic not optimistic.

FEEDBACK

i. As soon as managers become aware that a committed goal is not going to be achieved, they should alter the CEP and other corporate communications accordingly to ensure there is not a period of over-commitment by corporate communications.

ii. Difficulties with implementation of CEP will take place due to the nature of business. It is important that managers have feedback regarding why it is difficult to implement a particular strategy and break down the problem to seek an immediate solution, thereby allowing implementation. If a solution cannot be found, the CEP must be altered.

iii. Feedback is essential for managers to ensure implementation issues are dealt with immediately to limit the organisation's exposure to greenwash development. It is vital, therefore, that communication between greening policy makers and the workforce who implement that policy have open communication systems and managers encourage feedback. This can be incentivised and encouraged through workplace blogs and regular face to face meetings or, alternatively, video links for remote locations. Simple, effective feedback communication techniques are online and can even provide anonymity, if appropriate.

7.3 Limitations of this study

The limitations of this work are discussed in this section. These are highlighted initially and then depth is provided to each, in turn, by reflecting on each limitation to explain the nature of the limitation and justify the choices made at the time. Finally, each is

discussed with a suggestion regarding how such a limitation might be overcome in future.

There are three limitations to this work of which the reader should be aware. They are the sample size, the selection of organisational type and the issue of potential bias.

7.3.1 *Sample size*

Firstly regarding sample size. The study was based on ten EPOs that were classified into four different categories; PLCs, larger enterprises, small and medium size enterprises and PSOs.

The recommendations made are valid, based on the findings associated with these particular organisations and the different greening issues concerning each organisational type have been highlighted and results are reliable.

The qualitative methodology approach was applicable for this type of investigation. It allowed in-depth discussion in a one-to-one, semi-structured interview necessary for gathering the belief of individuals (Sykes, 1991). The in-depth interviews generated a large volume of data in the form of twenty transcribed interviews. Continuation with more interviews would not necessarily have made the findings more reliable, as the key issues and major influences on the greening process had been well established before the final transcribed interviews.

More detail and further recommendations could be made, however, regarding these types of organisations if the sample size of each type increased. This would have required a much larger study, perhaps a quantitative study, but would not have had the flexibility of the qualitative approach (Easterby-Smith et al., 2008, p.71).

7.3.2 *Organisational type*

Other organisational types were not tested, for example, “not for profit” organisations, or charities. These organisations also can be environmentally proactive, however the study is limited to PLCs, LEs, SMEs and PSOs of EPOs tested. Having selected organisations of types that represent almost all of the private sector and a very large proportion of the public sector, the study has credibility of being representative of organisational types, thereby justifying this limitation.

Different organisational types could be tested in a separate study specific to that type in future work to provide recommendations relating only to that type. This might be beneficial specifically to that organisational type, but perhaps not to organisations as a whole.

7.3.3 *Reliability of findings and conclusions affected by bias*

The study is also limited in terms of the reliability of findings and conclusions by the different forms of bias that may be present in the work. Every attempt was made to limit the potential for bias to develop in the work by adopting good practice recommended by previous researchers (Easterby-Smith et al., 2008; Strauss and Corbin, 1998).

There are many different forms, including moderator bias in qualitative interviews and question bias that were possible in the methods of data collection selected for the study. The researcher was neutral in dress, body language and did not share any opinions with participants during interviews.

Pre-planned questions were checked beforehand for bias. If any was present, the question was rephrased. Respondent or error bias could occur if the respondent gave an answer that was conflicting within the same company. Having two people for the same organisation for interview allowed a checking procedure to take place. If the second interviewee gave a different opinion, it was possible to check with the first interviewee on the same point. The researcher had agreed with all interviewees that later clarification on any points could be made post-interview with a telephone call or email verification.

7.4 Concluding remarks

This study had two objectives in Chapter 1 and they are restated here:

1. Understanding what constitutes a greening process in organisations. This objective would address the issue referred to in section 1.1 that managers, from personal experience, were unsure what constituted organisational greening and as a consequence, found a greening process difficult to engage with. It would also inform with regard to the second objective below.

2. Understanding the development of greenwash in organisations and its potential effect on performance.

A rudimentary conceptual framework was developed in section 1.4 (Fig.1) which bounded the study and identified areas of corporate sustainability and greenwash development to direct the literature review.

Following the literature review in Chapter 2, a refined version of the study objectives was formed that redirected the focus of the study to concentrate on EPOs only. This was an under-researched area, as the extant research focus is on reactive or brown organisations in terms of greenwash development.

It was anticipated that focusing the study in this way would make a greater contribution to management practice.

At the end of Chapter 2, the research questions were introduced to address the aim and objectives of the study.

Number	***Research Question***
Research Question 1	What are the ways in which EPOs express a green image?
Research Question 2	How are EPOs differentiated, based on the type of their green expressions?
Research Question 3	How are green expressions supported by policy and practice in different EPOs?
Research Question 4	How do green expressions relate to performance in different EPOs?

Table 27. Research questions

Research questions 1 and 2 focused on the first objective of the study. Research questions 3 and 4 focused on greenwash development and resulting performance.

In Chapter 3, an appropriate research design was introduced for the fieldwork element of the study that incorporated a qualitative approach methodology. The methods used involved a sample of ten cases of EPOs from PLCs, LEs, SMEs and a PSO. Two senior managers from each of these organisations were selected for carrying out in-depth, semi-structured interviews to gain traction over the research questions.

Eight propositions were developed in Chapter 4 based on the research questions. They were designed to examine the EPOs internally and externally in relation to committed and implemented greening strategies. They explored the key internal elements of the EPO and the external upstream and downstream influences on a corporate greening process.

In Chapter 5, data analysis took place using a three step approach, presenting the study findings from the proposition questioning to managers. These were presented in a matrix of all question topics and respondent answers. The matrix allowed managers' 'strength of feeling' for each question topic, proposition (linked to a research question), by respondent and organisational type to be displayed. The matrix also highlighted managers' beliefs regarding EPO commitment and implementation. Comparison of these answers allowed discussion on the potential for greenwash development within the EPO. Further analysis involving basic empirical work was carried out and presented later in Chapter 5 to support the fieldwork findings.

Chapter 6 presented a figure of the new conceptual framework for the reduction of greenwash in EPOs, articulating its associated elements. The chapter then proceeded to provide an answer to each research question in turn based on the findings from Chapter 5 and discussed at length the salient points and the relevance in terms of existing literature. Each research question answer was summarised in tabulated form.

Having presented the new conceptual framework for the reduction of greenwash in EPOs and answering the research questions in Chapter 6, this chapter (Chapter 7) brought the thesis to a close by presenting the conclusions and recommendations for management science of the study and thereby the contribution of this thesis.

From this work, our understanding has deepened in a number of areas, both theoretical and practical. These have clearly been presented in sections 7.1 and 7.2 of this chapter.

Section 7.1 outlined seven theoretical contributions to deepen our understanding relating to organisational greening and greenwash development in EPOs. Prior to this work, there was no recognition of greenwash development in EPOs.

Section 7.2 of this chapter provided the reader with a detailed practical approach incorporating different organisational types to reduce greenwashing during a greening process. This would have a positive impact on organisational performance.

The aim and objectives of this study concerning improving our understanding of organisational greening, greenwash development and its reduction in EPOs have been addressed.

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Appendix A. An example of a coded interview

The following is a summary of the definitions applied to the "strength of feeling" coding. An example of a coded interview follows thereafter.

Weak	The labelling of 'weak' to an interviewee response was applied when the interviewee had no knowledge or had a negative attitude to the question being asked or subject matter discussed. Recording of a 'weak' response in the coding when a typical negative response included words or phrases such as; "*No", "That's not how I see it", "Definitely not", "That's not the case here,"* etc. Recording of a 'weak' response was also made when there was clearly a lack of knowledge or understanding regarding the subject matter being discussed between author and interviewee. Typical responses in this category included, but were not limited to, *"I don't know", "I've no knowledge", "Its not my area of responsibility" etc.*
Modest	A 'modest' response was recorded when it was clear there was understanding of the topic. The extent or level to which the interviewee agreed determined whether any particular response would be recorded as 'modest'. The interviewee *somewhat* agreed in some cases to the best of their perhaps limited knowledge. They may have *thought* or *expected* or suspected the issue or topic to be the case. Typical responses included but were not limited to; *"Yes I do agree to some extent", "I think that is the case", "I suppose so", "I think so."* Words that signified a 'modest' response included "some", "suppose", "possibly", "maybe", "think", "often" and the like.
Strong	Defining a response to a topic question as 'strong' and coding appropriately in the reduced data matrix was a relatively straightforward process similar to 'weak' classifications than compared to 'modest' classifications. Typical responses that led to a 'strong' classification included but were not limited to; *"...that is definitely the case..", "...I feel strongly...","....there is no doubt...","...I believe..."* There were again obvious *trigger* or signifier words such as "definitely", "absolutely" and "strongly" that clearly supported the topic. The interviewee, in all cases where a 'strong' classification was coded, was in almost total agreement with the topic question.

Coded Interview

Discussion Topic (data collecting questions and answers)		Strength of Feeling		
Discussion Topic	**Personal belief regarding downstream being part of an organisation's environmental footprint**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Topic Question T1	***In your opinion and I'm only interested in your opinion, how important is it that companies or organisations should contribute positively to the environment with the products and systems they manufacture?***			
Respondent	It's very important. First of all, if you take it from an a energy conservation point of view, the vast majority of energy that is used is a finite material, it's not going to last forever, so we need to be using it wisely and using it, in my view, only for essential purposes. I think the day has gone when we should be burning oil. I really believe oil should be used for the very essential requirements and beyond that we should be using sustainable materials.	Strong	**Energy conservation** **Sustainability** **No fossil fuels** **Smart**	Essential – absolute necessity, cannot be any other way, vital, without which there could be a catastrophe, must be done, immediate. Wisely, smart, clever, sly? Intellect, could be efficient, cost saving
Topic Question T2	***How important is it that any company plays an active role in the local community?***			
Respondent	It's very important to do it from a practical point of view and to be seen to do it as well and also it augers very well from the perception of employment and drawing people working with schools as we do, working with sports, particularly at juvenile level, I think it's very important.	Strong	**Community involvement very important** **Demonstrable community involvement** **Provide employment** **Integrate with local youth**	Perception, extroverted, showing off, greenwashing? Imagery, implying almost more important to be perceived to do it than actually do it Pulling people in your direction (brainwashing?), brainwashing young people Something sinister, darker here perhaps bribery, hold over community as they need jobs.
Discussion Topic	**Personal belief regarding operations being part of an organisation's environmental footprint.**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Topic Question T3	***What influence in your opinion in any organisation, can logistics and by that I define it as warehousing and distribution, have on the environment, if any?***			
Respondent	I suppose the biggest problem that we would see from the logistical point of view is the amount of energy that's used in transporting our products around. It might not be the case for some high value products, but our products by nature are quite bulky to the point that some of the products we make would be no more than 2 tonnes of weight	Strong	**Logistics involves energy usage** **Local distribution mitigates**	Impression of vastness, high volumes, cumbersome Locations everywhere, rail cheaper and greener, current infrastructure poor.

	in a container; so I think the important point from our point of view is that this type of business needs to have satellite warehouses so that we can cut down on transport. It would be ideal if we could use, let's say a bigger country might have a good rail network where you could transport large quantities to smaller distribution points. It is a big issue for us, to the extent that from a cost point of view and in the same proportion you'd have the negative effect on the environment, 6-8% of cost is transport and the fuel associated with that fights very negatively in my view on the environment.		**environmental impact** **Greener modes of transport (rail) should be invested in** **Greener transport systems could reduce costs**	Financial cost or environmental cost?
Topic Question T4	***What influence can office functions, daily routines have on the environment? By that I mean people just working in an office, going about their day to day business, in any company.***			
Respondent	If we're talking about this, there are a number of facets to it, but first of all how the offices are planned and the sensible use of energy for instance and leaving burners and stuff turned on. I can give you an example here where we have a very environmentally friendly heating system where we draw the heat from, we have an air to water exchange system and that's great. We heat the building which is something like 1200 square metres with something like 10-15KW. The problem though is that in the summer time, if we're not very careful we could have people using heating and air conditioning at the same time and it actually took in this case, the installation of some fairly smart controls to stop people being able to over-ride one, as you could have a person at one desk being cold and another being warm and they are fighting with the other in terms of the equipment and that would have an phenomenal negative impact and that's an example of what happened here. The other thing is the putting off PCs and the ability to shut stuff down like heating and lighting. What we've done in this case and something I would highly recommend is the use of a low energy system but then putting sensors on lights so that when people leave the offices, they go off.	Strong	**Planning is important** **Can reduce energy use** **People often have different physical requirements** **Automation/ control can work but if not calibrated properly can have detrimental effect** **Simple effective controls work best**	Many possibilities to influence; facets equal faces of the same object?? Sensible (intelligent). Again are talking here about saving financial cost to company or cutting GHGs'? Conflicting feelings among employees. Management want to control staff behaviour in relation to costing company more – real concern on this - *phenomenal.* Don't trust staff to do energy/cost saving – hence automation.
Topic Question T5	***What relevance does production and production process have on the environment in your opinion?***			
Respondent	That's a minefield in terms of . . . my only experience of production is this type of business, but the waste streams and the control of waste streams is the first and foremost thing, the second thing is the company's ability to segregate and recycle waste as far as possible. The products we make, we are fortunate in the sense that they have fairly low embodied energy, we don't use any, there's very little heating used in the plant as you walk around. The product does generate heat and we can try to harness some of that where we can. The other thing is the extraction system. People have	Strong	**Difficult** **Waste control priority** **Recycling necessary** **Production planning should take**	**Minefield** - war, impossible situation, no winners, be careful, damaging, no go area, years to clear up. **Type** - differentiation & classification, uniqueness **control**- guide, in charge of, leader, control of the minefield! –a General in war situation perhaps. **Segregate** – divide, classify, in charge of streaming

	extraction systems in all sorts of places, but they never think what you heat in the building is the air and if you put an extraction system in, you're sucking it all out. If we're building a new factory, it now requires an environment impact study done, where you have existing . . . I know it has improved with the passage of time but there is a phenomenal opportunity there.		**environmental impact into account Significant opportunity to improve in design**	Try to harness – try to control, to use to positive effect. **They never think-** missing the point, not smart, a bit lazy perhaps, wasteful, not on same wavelength. They are not interested. Don't care about the environment or the company costs?? Not smart – something not quite right.
Topic Question T6	***Is it necessary that senior management should formally advise on environmental issues?***			
Respondent	It's absolutely no different from Health and Safety, it's the same and what I would always argue is . . . when we started a quality system here, Quality was at the top of the list, now what we have at the top of the list is Health and Safety, Environment then Quality it is the three functions of the system and I would always argue that it is absolutely vital. It's almost like rearing a family, we occupy this planet for whatever time we are here and we should pass it on to the next generation in as good a shape as we found it; and there is no doubt in my mind that we could actually make it better, rather than worse.	Strong	**Vital that management advise on environmental issues Environment control is a key responsibility of management. H&S, quality are key issues also Idealist opportunity for organisations to make thing better**	**I would always argue** –fight for, aggressive attitude, independent leader, set an example. Captain in war. In this context captain in organisation. Champion- champion the cause! **Absolutely vital** – decisive, leadership quality. **Like rearing a family** – head (Captain) of family, you have to set example, guide, educate, take responsibility, communicate effectively.
Discussion Topic	**Personal belief regarding support services being part of an organisation's environmental footprint.**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Topic Question T7	***The role played by support staff and by that I mean, admin, marketing, sales, technical, how relevant is it in relation to the environment? (Clarification I'm not just talking about their daily routines, switching lights and monitors off or the way they use their office, I'm talking about their job function, is there any impact that can be made by the support staff, technical, sales, admin and marketing?)***			
T Respondent	Difficult one. Right down to simple things, like if the MD comes in driving a 4 x 4, that's a fuel guzzler, that to me sends out the wrong signal. The way people live and the way they go about their work in terms of . . . it's probably easier in our case because the products we sell and market, part of the selling features of the product is their energy conservation characteristics and that makes me probably a little bit biased.	Modest	**Difficult Management sets example by behavioural statements**	**MD** (management) should lead by example. Signal- guide to a better place, safety. Signal – good communication necessary

				Probably less biased – reasonable; others are often more biased than me. I speak rationally (leadership) communication.
	I'll give you a steer on this, say you take your technical people or the marketing and sales people, in their day to day job, can they create less of an environmental footprint by the way they would specify?			
	Absolutely, we would even have a selection of products and there are two paths that we would actually specify the product that will give you for instance the most thermally efficient building, but we would also specify or what we should do, is that we draw attention to the fact that if someone put in for instance a different glazing system, he might use a little less of our material but the overall impact would be better and that's something we actively encourage, is to put forward the best system and this is where the marketing people need to do more in my view, we could specify a 150mm insulation and tell the fellow to put in single glazing, or we could specify 75mm and tell him to use a particular type of glazing which we would make no profit from but the overall building envelope would be better and that's what we need to be doing, putting the best foot forward and I think that type of technical sells in the long term. Cuts more ice with architects and specifiers and will more likely bring you back.		**Very important Ethical behaviour towards customer by support staff Sustainable approach to business through staff**	Covers both bases – best for company; best (cost) for individual. The respondent sees ethical behaviour here. **actively encouraged**- fostered, promoted, communicate environmental issues in a positive way by management – leadership **…that's what we need to be doing, putting the best foot forward** – the author feels here that there is real belief from the interviewee, genuine commitment and working towards implementation. There is some doubt about the timing….Is it being done now or will it be in the future?? Interviewee has a clear vision….is he senior enough to influence??
Topic Question T8	***Staff satisfaction – what bearing can it have on a company's environmental footprint?***			
Respondent	It can have a tremendous effect. If the staff are happy in their work they are more likely to take an interest in the purpose and goals of management. So if management are telling them to turn switches off to save money or reduce environmental impact they are more like to do it...	Strong	**Staff inclined to performer greener tasks if happy**	More likely - they won't follow without encouragement…need an incentive…this is the right kind of incentive for them, the staff. Does this mean that the staff will follow any management ideas with the right incentive, even negative on environment?
Discussion Topic	**Personal belief regarding upstream being part of an organisation's environmental footprint.**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Topic Question T9	***How can any company supplying to any organisation, how can suppliers impact a company's environmental footprint or profile, if at all?***			
Respondent	I think it is a huge factor.	Strong	**Important issue**	

	(Clarification- So if I get this right, what you're saying is that any organisation can work with their suppliers and those suppliers if they have ideas, innovations, whatever with an environmental benefit, that can reflect further down the supply chain?)			
	Absolutely, but it means forming a partnership with your suppliers but quite often we wouldn't want to tell our suppliers, we might buy raw materials and we wouldn't want to tell them what we're doing in case they go to the competition, but it means having a lot of trust with suppliers, more on a partnership basis. Where they will take a particular material and come up with something else and take some of the nasties out of theirs, well not nasties but maybe take some of the material out that would be much better made available for medical science or whatever, so from that point of view the answer is yes		**Partnering** **Trust in supply chain**	**…but it means forming a partnership with your suppliers -** sounds like this is a negative thing to do or could be positive depends on the respondent's tone/attitude….taken as more negative here in this context when reading on…**we wouldn't want to tell our suppliers**….this is dark meaningful in the sense that something is being hidden...what is it? This is not trust but mistrust in the supply chain **nasties ….well not nasties but**…there could be potentially some negative aspects to the production in relation to the environment.
Topic Question T10	***What impact can association membership have on a company's environmental footprint, in general? Does it help or hinder?***			
Respondent	You can if you have a relationship. The restrictions on that are always going to be people's unwillingness to share; knowing that an advantage comes from this will automatically go back to the competition. That's the negative side to that, that people are reluctant to do what they should do in case it benefitted the competition.	Weak	**Competitive attitude can be a hurdle to industry greening** **Knowledge sharing important** **Reluctance possible**	**Relationship** but also suspicion of the organisation having the relationship with. Erosion of competitive advantage *possible or likely?* Knowledge sharing externally. However vital to have knowledge sharing internally.
Topic Question T11	***In your opinion, is there any other way a company or organisation, public or private can impact the environment post-production. Now what I mean is when your stuff or anybody's stuff goes out the door, yours is pretty obvious what you do in your business here, but when stuff goes out the door is it relevant, I'll maybe rephrase this a little bit because . . . two companies can in their processes be very environmentally organised, green in terms of the process and they link with the community; one can be making bombs and bullets and the other could be making diabetes drugs, which one is the more green?***			
Respondent	So the question is?			

Researcher	***It's after production, after is leaves and the products and services go into it, whatever they have been designed to do. They've maybe been made in a very environmentally friendly environment, both . . .***			
Respondent	But one could be designed to destruct . . .?			
Researcher (probing)	***I don't know, I'm just interested in people's opinions. Because is one greener than the other because of what their products do afterwards? Probably a good question to ask you, because your products do something environmentally when they leave here.***			
Respondent	I'm trying to give you answer . . . the impact that we have from a sales point of view and the biggest selling feature of the product is its contribution to energy. I suppose the other aspect of our product is that we have a project on at the minute because we are actually trying to come up with a series of measures to deal with what happens seven years down the road, this cradle to grave, so we are working with a couple of companies to see what happens and they are taking a certain amount of material back and it is being reworked with a company in Germany making it into some sort of fence posts. I'm still not sure about the question because that's fine for us, but it's not easy to do, but it is do-able.	Strong	**Energy conservation downstream LCA attitude therefore upstream and downstream important Difficult but possible**	Trying – working hard to please, doing their best Sales point of view…profit/volume Active program on waste recycling –LCA Interviewee still unsure of question
Researcher	***It's a wider range question in that, is it important to the greenness of a company what its products do after in the market, in service, because some could clearly be demonstrated, some companies, we're talking in general, are very organised an deficient at what they do, then their products go and out they're cigarettes, or bombs and bullets. When they go out there and does it have any reflection?***			
Respondent	Of course it does, but the reality is that people do produce these things for commercial reasons and that will always be the case. It is still important that people have the proper practices inside, but my opinion would be that these things shouldn't be made, but the reality is that my opinion doesn't count, but they're there for defensive purposes.	Strong	**Profit will always be there and in many cases the driving force**	**Reality** – implies no matter how idealistic you are it will come down to profit mainly…. **Reality is my opinion doesn't count….** This is deep implying even companies have little control…profit is survival even if products are not beneficial to the environment.
Discussion Topic	**Actual belief regarding downstream being part of my organisation's measurement of its environmental footprint.**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Topic Question T12	***How does this company, through its products and systems, benefit the environment?***			
Respondent	There is no doubt, that's what attracted me to this business way back in the seventies, the products we make when properly installed, reduce the energy used to heat	Strong	**Green production drives recruitment**	**Attracted to** – love, willing to spend time with. Be there rather than elsewhere…this is a good

	buildings by 80-85%, depending on the thickness and how it is installed and that is the chief message from here			thing that is the **chief message from here…**marketing message, main theme of company...**message** communication.
Topic Question T13	***What does this company do that is beneficial to the local community?***			
	Apart from the obvious one of employment, there is quite a few jobs in this small town, there are over 100 people and most of them are from the area. We do work with the local GAA, we've actually contributed to sponsor the local soccer team and we continue to support the local new golf club. We do a little bit then with the, there are two charitable organisations; there's the St Mary's Hospice for the Aged, that and the local cancer society. Those are the two charities that the company supports. That's essentially it.	Modest	**local and widely spread among various local organisations youth and elderly prioritised**	Town survival dependent on company to some extent- this might imply control, lucky to have company otherwise no jobs, no GAA support. Town would be a shell somewhat less than it is today. Is it dependent? Does that mean some kind of manipulation?
Topic Question 13 (probing)	***So the company, any people, the employees as well as the local community, how do you think it makes them feel?***			
	Probably the fact that we do a little bit at the local GAA and because the workforce here are all most of them are younger than I am, a lot of them have young families and for that reason we like to think that having the company logo around the local GAA pitch and the Juvenile training ground, that's the one they tend to support more than the big teams, you just get a bit if a buzz about that and we sponsor one or two trophies as well. We also do a bit with the local school, we do sponsor one or two students and that's a thousand euro per annum scholarship, usually technically related. One or two people have managed to come back and work for the company as well.	Modest	**Encouraging youth imagery Potential recruitment opportunities**	Communicate to young with positive image of company. Logo reinforces affiliation. Let's all know who is in control?? On other hand positive impact on people encourage local people to take an interest in technical awareness. Is this win/win?
Topic Question 14	***Is there any other way the company impacts the environment post-production, apart from the energy saving issues and apart from the local community because that's nothing to do with production? Clarification - That's the company saying we want to be part of the community, so there are the post-product benefits benefitting the environment because of the products they are, there's the external issues that the company engages in the local community, is there anything else that I'm missing?***			
Respondent	Beyond that we are almost anonymous here. We do a lot of things and beyond that we're in the local . . . but beyond that . . . no.	Weak	**Local focus on community**	**Anonymous here**… interesting seems that there is a definite line drawn…are these token gestures to local town that can be highlighted. Is organisation just ticking boxes? i.e. commitment without implementation might = greenwash?

Discussion Topic	Actual belief regarding operations being part of my organisation's measurement of its environmental footprint.	1st Pass	Concepts	Memos/Researcher's thoughts
Topic Question T15	***Through logistics what actions are taking place here to reduce impact on the environment? I know you went over them a little bit but again, in a nutshell, through your transport and warehousing.***			
Respondent	It's really an issue for us and its one of the biggest issues we have. Maybe it's because there isn't much we feel we can do. The only thing that we've managed to do is we're trying to use big containers, reduce the numbers travelling, but other than that its . . . we would recognise it as a major cost and consequently a major weakness and a negative contribution, disproportionately so, because we would have, certainly in terms of value, not in terms of volume, but we would have a disproportionate amount of trucks leaving here, up to thirty trucks per day which is a lot, purely because it is a bulky material. We'd probably have no more than two or three coming on to the site but for every two or three going on to the site, there are thirty leaving.	Weak	**Major difficult issue Costly process but has a major impact**	Real time consumer…implying that things would be much better if they could solve this one – for who company or environment - Major COST implication financial. Question related to environmental cost but answer seems to be financial cost driven
Topic Question T15 (probing)	***Would I be right in thinking it's the nature of the business, as good as 85% you say, you've reduced energy conservation because of improvements? But there is another side to that which is by nature, these products have to be bulky.***			
Respondent	We have a huge problem, by using this distribution network they have, they've managed to, where possible, we would send 40ft containers and they're supercubes, but the target here is that 70% of what we send out should be on the subercubes and 30% would be small rigids, but we do offer next day delivery and the consequence of that is that you do get some trucks going to sites that are houses and you can't send subercubes to a house, you have to send a small truck. The way around that is that we've been trying where possible to put all our sales of these products through local merchants and there's a lot of that	Weak	**Targeting reduction Distribution cost**	Problem is still huge and most taxing of all it appears…..commercial innovation might solve… local distributors. It feels as though any decisions here will be driven by financial savings firstly rather than saving on their environmental footprint. That will be a pleasant consequence. The way round that – this suggests that this hurdle might be overcome by innovation.
Topic Question T16	***Through office functions in this company, what actions have been taken to reduce environmental impact, does this company have a formal . . . what's going on in the office on a day to day basis?***			
Respondent	First of all if you discount the day to day for a minute, the offices were designed with that in mind, you'll find where possible, it's all LEDs, low energy lighting, we're using all A Rated equipment where possible. All of the lighting in the offices, except this room, people leave the lights go out, that's done, people don't have to think about that.	Strong	**Automated programs Little staff involvement**	Designed- planned to do it that way. Trust or mistrust of workforce to do it so automate it. People don't need to be concerned as it's done for them. Control.

	We do have a system in place where people shut down their equipment and that's formalised but beyond that, that's it really.		**Staff passive to greening processes**	
Topic Question T17	***In this company is production doing or has done to reduce impact on the environment, or could it do more?***			
	So far, we've got the 18001 now and that's based on around that we have all these systems where we recycle and segregate and stuff like that, of course you do more. I believe we could use a little bit less energy in the plant. We have a team of people who have identified five or six areas that have insufficient lagging in the heating pipes and stuff like that. There is a programme going on where we have taken in an outside consultant who has also done a report but the big problem we have in this place is getting people to close doors and stuff like that.	Weak	**Focus team to reduce energy** **More possible** **External consultancy** **Basic issues problematic**	**All these systems** – is there a reluctance here? **Of course you do more** – this has proactive connotations. Are the programs and systems not the right one in the interviewee's mind? This might be the case as despite 'all these systems' the big problem is getting people to close doors etc. The small green expressions are the important ones then. It's not necessarily a money thing. Getting people to change attitudes/culture is necessary? Education in this respect regarding simple tasks. Communicate effectively but is anyone listening?
Topic Question T18	***How is advice taken or passed on in relation to environmental issues in the company?***			
Respondent	Because of the system, we are forced to do a bi-annual presentation but that covers Quality, Environmental and Health and Safety. I suppose it would be how we deal with our waste. Now waste has been greatly reduced, waste product, whether it be rejects and so on, we've managed to get it down by 60%, but it's a huge problem for us as we can't eliminate it.	Modest	**Reluctant communication**	Forced – don't want to do; don't want to communicate. Perhaps because don't have anything good to report which makes presentation difficult or don't like to present anyway-human nature
Discussion Topic	**Actual belief regarding support services being part of my organisation's measurement of its environmental footprint**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Topic Question T19	***In this company how does the role played by support staff impact on the environment?***			
Respondent	I believe so, even controlling the lighting and heating, I believe there is a consciousness now purely because of the . . . there are structured meetings here, where we . . . we have supervisor's charge hands and each charge hand has small teams and they do have regular meetings, more often than once a month where these aspects are covered and most of the projects have been done by teams on the floor and a result of that I think it's quite positive.	Strong	**Conscious support** **Communication** **Education** **Teamwork on shop floor** **positive**	Controlling – once things are being controlled everything is ok. Work is being done on education (informing through communication) and regular meetings work well improving consciousness of issue. Corporate communication actively engaging all in a common goal. Breaking down into teams for

				better communication and positive results. This internal approach implies education, communication and trust works and contrasts with the mistrust of external communication.
Topic Question T20	***Staff satisfaction, how is this affected by this company's environmental profile? Clarification-Do you feel that if staff are feeling better, does it help? Do you think it makes them more interested in energy conservation, closing doors, if they are happy at their job?***			
Respondent	I believe that's quite positive on this side, I believe so. The general tidiness and associated bit, there's work to be done on that. I just think people do, that's just my opinion.	Modest	**Moral good through greening** **Room for improvement**	There is an uplift factor
Discussion Topic	**Actual belief regarding upstream being part of my organisation's measurement of its environmental footprint**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Topic Question T21	***How do suppliers impact this company's environmental footprint (profile)?***			
Respondent	You're talking about people who would supply raw materials?			
Topic Question T21 (Clarification)	***Raw materials, or paper cups or anything that comes into an organisation.***			
Respondent	It's huge. I'll give you an example and you may or may not want to use this; for instance, when we looked at the impact of some of our raw materials, one of the principal panels we use here is aluminium. Aluminium is a very important part of our process; it provides vapour control, it provides reflectivity. Now the big problem with aluminium is, there is a huge amount of energy used in manufacturing now we would work closely with a company to come up with something that has the same properties, for example melamine and there's metalised polyester and in certain instances that would have met some of the criteria that the end product requires, but that product has a lot less embodies energy and that's one case where would have worked with suppliers to actually improve the product. There's another, where we have two types of rigid cellular material, one is phenolic, and we have extruded as well if you take core of what we have on this site, we're working with a company now that can actually produce one of the raw materials which comes from a certain type of wood. Now that would never happen with PIR but it will happen with the phenolic so there are two	Strong	**Important** **Energy use high** **Partnerships improve greening process** **Pressure to reduce oil dependent products**	Example illustration in response to how strongly interviewee feels on the issue. This contrasts with what interviewee views as controversial, namely discussion with suppliers that could lead to a competitive disadvantage. This is selective.

	cases where suppliers have actually come up with materials that won't be drawn from oil based materials.			
Topic Question T22	***How can associations that this company is involved in affect its environmental profile***?			
Respondent	I don't want to talk about too many examples but if you take the CFC issue and you're going back to '95 when that really . . . this industry was set around the very effective blowing out in CFC 11. If it wasn't for that work done where people forgot about their competitive edge if you like and had to work with plenty companies and the Manufacturers Association in the UK and if it wasn't for the combined effort of that organisation and everyone feeding into it, the industry could have died and the same thing could have happened as with the asbestos. So what we've done is we've actually come up with an alternative in two stages, one is basically we've taken out the alcohol out of the beer and then we've come up with something entirely different and a result of that, we've managed to improve the environmental impact phenomenally of the product and still retained its environmentally positive impact by retaining its thermal properties. Again that's an example of absolutely where I believe associations can help.	Strong	**Competition restricts greening in this context** **Research through associations reduces environmental impact**	Without collaboration it is not possible to advance the industry overall. Competitive instinct can restrict development of benefit to the environment
Topic Question T23	***Are any other external issues that affect this company's environmental profile that we haven't really touched on?***			
Respondent	I don't think so	Weak		
Discussion Topic	**CEP content**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Supplementary Question	***Are you aware if the company has an environmental policy?***			
Respondent	Yes			
Researcher (probing)	***If so, by what means do you know of its existence?***			
Respondent	There is a policy document which is signed by the MD and the reason I know about it is because I'm actually involved in the quality systems which includes the Health and Safety, the Environment and the ISO9000.			Direct involvement so vested interest
Supplementary Question	***If I refer to this as the CEP, the Corporate Environmental Policy statement, does the company meet its CEP in your opinion? I know most companies are striving to get there.***			

Respondent	It's getting there. The group's environmental policy at the moment is very ambitious, we're talking about zero carbon by 2020, it's a huge challenge, so from that point of view it's struggling but they're spending a huge amount of money and resources on it.		**Policy v practice differential** **Cost of implementation high and therefore barrier**	Defensive, ambitious long term range objectives…..**but they're spending a huge amount**…. Implies that interviewee is not taking the decision to spend…perhaps at a different level. Slightly uneasy with that.
Supplementary Question	***What is the content of the company's environmental policy? I have had a quick scan of your policy and I don't expect you to know chapter and verse, but you are aware of the bulk of it?***			
Respondent	Yes.			
Discussion Topic	**CEP communication and measurement**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Supplementary Question	***In your opinion, how could the CEP be better communicated within your organisation, if it could be, or is it fine?***			
Respondent	Course it could be and it should be as well. Down through the organisation . . . I'd say when you ask this question to other people, the next person you talk to probably won't be aware of it and they should be and that will be the telling factor there. It probably comes down to a certain level and it will come down very clearly to the people who manage this site and beyond that I'd say we've fallen short and if you look across the entire divisions I'd say beyond this level . . .		**Necessary to improve communication** **Management and workforce disconnect on policy content**	Communication sometime erratic…**fallen short...** embarrassed to fall short, not like us. Perhaps because not enough time /money spent developing effective communication.
Supplementary Question	***I'm trying to get at, why . . . one of the things I'm doing, going right back to the start of this conversation, I'm looking at companies who are proactive genuinely, you can see it and feel it about them, but sometimes it doesn't permeate throughout the company, there are barriers and I'm trying to understand that.***			
Respondent	As a management team here, we're probably not doing enough and we could always improve and I think we should more in terms of, even where we position it on the notice board. If you go round the factory you'll see measures on how we did this week and last week and I think it should go alongside the Health and Safety stuff, from that point of view I think we need to do more.		**Management could do more** **Simple things might be effective**	Management not devoting enough time to this issue. Is it less of a priority despite the huge amount spent in the area in general? Does it need incentivised? This appears to work or just better education communication.
Supplementary Question (probing)	***And probing this more because it is very interesting ;it's not that the will isn't there or the money hasn't been spent on it or that the money hasn't been spent on it***			

Respondent	I think it's in terms of the perception and maybe an older management thing. First priority on site will be to keep everyone safe and the next thing will be to be profitable and the next will be how did the line do yesterday because the day before is complete history and from that point of view it's where you position it. If you asked this question this time next year, I believe it would be different, but right now we just need to move the priority at that level, I mean at supervisor and charge-hand level, that's where we need to push it		**Older managers react more negatively** **Lowest of key priorities** **Priorities need to change**	Profit today has higher priority. Implying that certain amount of lip service is paid to CEP – window dressing and unintentional greenwashing?
Supplementary Question	***And in terms of measurement, how would you implement the measurement of your policy?***			
	The only measurement here is the internal and external audits that we have to do because of the system we have. We also have an IPC licence so we have to measure all emission points, we have to measure for the licence, which is a condition of the manufacturer. We have to do our own and submit them and where anything falls outside, we have to put certain measures in place and that's how it's measured.		**Audits done reactive to meet licence requirements**	Reactive-only strategies as not all reported on
Supplementary Question	**And in these other issues, the softer issues, like involvement in the community or staff satisfaction are there measures in the policy or are they still to be developed?**			
	A lot of the measures we have in regard to the local environment are more to do with how we impact round here and that's why we're actually doing up the outside of the building. We had to stop it because we were short of money. First of all, that's for the visual appearance. The other thing is we do the monitoring. We don't have a situation where there is dust or anything like that		**Local emission impact important** **Financial obligation low**	Reactive-only strategies approach to local rules on the environment in terms of emission control.
Discussion Topic	**Business ethics importance**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**
Supplementary Question	***Is it important for the organisation to have an ethical standpoint in business?***			
Respondent	Definitely, if you talk to the MD of the site, he would confirm that loud and clear, it's very, very, very important.		**Highly important at highest level**	Ethics important from the very top. This implies that as yet this may not through all levels of the organisation. It also implies that very senior management place great importance on it perhaps due to recent corporate scandals among executives in other industries being exposed.
Discussion Topic	**Barriers to strong CE policy and practice**	**1st Pass**	**Concepts**	**Memos/Researcher's thoughts**

Supplementary Question	***And do you see any barriers to having a strong business ethics policy in an organisation, this one or in any one for that matter, that are difficult to implement?***			
Respondent	They're very black and white, I'd say no. I wouldn't say in any organisation, but in my own experience here.		**Ethically straightforward**	Ethically minded person and generally organisation gives that impression. Right and wrong and they know which is which. However acknowledgement that there are problems in organisations on these issues.