AN EXAMINATION OF THE CONTRIBUTION OF CORPORATE SOCIAL RESPONSIBILITY IN A RESOURCE EXTRACTION INDUSTRY TO SOCIAL SUSTAINABILITY: A CASE STUDY OF LAFARGE MINING SOUTH AFRICA (PTY) LTD AND RIDGEVIEW QUARRY

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Durban.

DECLARATION

Submitted in fulfilment of the requirements for the degree of Masters of Social Science in the Graduate Programme in the School of Environmental Science, University of KwaZulu-Natal, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. I confirm that an external editor was not used. It is being submitted for the degree of Masters of Social Science in the Faculty of Humanities, Development and Social Sciences, University KwaZulu-Natal, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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ABSTRACT

Corporate social responsibility is increasingly becoming an important component of the business world. With growing scrutiny of commercial operations, businesses are increasingly being driven to satisfy the expectations of society in order to thrive. In essence, businesses adopting corporate social responsibility believe that by operating ethically and responsibly, they have a better opportunity of success. This thesis examines Lafarge Mining South Africa and its Ridgeview Quarry located in Durban, South Africa, in order to assess the contribution to social sustainability of corporate social responsibility practices in the resource extraction industry. Literature used for this research is compiled from concepts such as sustainable development, social sustainability, social justice, public participation, vulnerability and well-being and furthermore evaluates conventional arguments for corporate social responsibility.

The methodology used for this research was based on a qualitative approach, where both secondary and primary data were used. The empirical materials needed for this research was collected through in-depth interviews conducted with stakeholders involved within the social upliftment programmes as well as discussions forums. Furthermore, purposive sampling was used for this study, as the study was concerned with individuals involved with the discussion forum and the social responsibility programmes. The thesis investigates the nature of public participation in the discussion forum with respect to social sustainability. With regards to the discussion forum, meetings were held intermittently, on an ad hoc basis, therefore affecting the degree to which total social sustainability was achieved in the decision-making process. However, it was found that when meetings were convened that the discussion forum was inclusive and in no way discouraged any form of participation from the community, hence contributing to some form of social sustainability. The research encompassed aspects of evaluation research, whereby summative evaluation and impact evaluation was used to summarise information and examine the outcomes of the two corporate social responsibility initiatives, namely; the education-related and the skills-related social upliftment programmes. The research evaluated these two programmes, in order to assess the degree to which social sustainability was achieved. However these initiatives are a small part of the broader corporate social responsibility agenda. The key findings of the research were that social sustainability was very weak. Minimal difficulties were experienced by participants in the education-related social upliftment programme, where one of the challenges was to uplift learners from grassroots

level (primary school level). However, with regards to the skills-related social upliftment programme, individuals participating in the project, experienced more difficulties than compared to those participating within the education-related social upliftment programme. Difficulties that arose with regards to the skills-related social upliftment programme were that Lafarge Mining South Africa reneged on certain material promises and showed no interest in monitoring how the programme was facilitated. Furthermore, participation in the programme did not secure any employment opportunities for the women.

Thus corporate social responsibility has become a major focus of interest in society. Corporate social responsibility is not just a buzzword for businesses, it has developed into an invaluable tool for exploring ways to reduce and manage social and bio-physical costs, as well as provide many businesses with the opportunity to be successful. However, achieving corporate sustainability is not an easy task and is accompanied by a number of challenges.

<u>ACKNOWLEDGMENTS</u>

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CHAPTER ONE
INTRODUCTION

1.1 Introduction

In 21st century, as globalisation surges on and capitalistic modes of production continue to expand, competition between businesses have accelerated. This acceleration to expand in the corporate world has resulted in enormous negative impacts on the natural and social environment. As a result considerable pressure has been placed on the business sector to enhance and preserve the social development of citizens. In this instance, businesses, at present are faced with new challenges and have as a result, begun placing importance on corporate social responsibility.

In the past, a conventional approach to solving problems was adopted, where the social, political, economic, technical and bio-physical aspects were examined in isolation from each other. Furthermore, focus was placed on finding the technical solutions to biophysical and resource concerns affecting society and issues relating to the social environment were somewhat ignored (Jacobs, 1997). The increasing prominence of sustainability approaches resulted in a shift from this conventional approach towards an integrated approach. The latter approach to sustainability involved observing all five aspects as integrated parts in order to achieve absolute sustainability (Jacobs, 1997).

In South Africa and elsewhere the intense focus on the growth of a developing economy raises concerns, as certain aspects of the social environment are marginalised. Due to this pro-economic development agenda, citizens are marginalised and power is being capitalised by corporate elites to produce a stronger economy (Jickling and Wals, 2007). Impacts such as lack of jobs and education opportunities are some of the many pressures that are felt in the social environment (McAulay, 1966; Blowfield, 2007; Jickling and Wals, 2007; Lawson, 2007; Welford et al.., 2007). In order to address and limit these pressures, it is essential for businesses to ensure that their practices are ethical and sustainable (Jickling and Wals, 2007; Welford et al., 2007).

Thus, many companies have begun to respond to calls for greater social responsibility, in order to improve sustainability. Presently, corporations are increasingly compelled to engage in activities that contribute to long-term benefits for the public. As a result, corporations are taking into consideration issues that pertain to the upliftment of the public

and one of the ways of addressing these concerns is to adopt corporate social responsibility initiatives. Recognition of citizens needs has resulted in corporations such as Lafarge Mining South Africa and its Ridgeview Quarry adopting corporate social responsibility initiatives that aim to actively engage with the public and promote social upliftment as well as encourage social sustainability.

Corporate social responsibility occurs when companies incorporate social and environmental issues into their working practices, whilst at the same time allowing for the public to interact with the corporate decision-making processes as and when these decisions affect them (Gouldson, 2006; Siegele and Ward, 2007). Decreasing vulnerability and improving well-being of citizens can be addressed, to a certain degree, through social responsibility programmes (Cutter and Solecki, 1996; Spiers, 2000; Coetzee and Nomdo, 2002; Hogan and Marandola, 2005; Lee, 2006; Horn, 2007; Jones *et al.*, 2008). This is apparent in circumstances where possible impacts of industry can be a cause of increased vulnerability or when industry operates in a context of vulnerable communities. Thus, companies that promote corporate social responsibility can be considered to be contributing to the enhancement of social sustainability.

This study further highlights the degree of social sustainability with regards to the social responsibility programmes. Social sustainability can be explained as one of the pillars in achieving sustainable development, which is aimed at enhancing and improving the quality of life and at the same time ensuring fair distribution of costs and benefits (Hill and Bowen, 1997; Bagheri and Hjorth, 2007). Two main principles/concepts form the foundation of social sustainability, namely social justice (equity) and public participation (Hill and Bowen, 1997; Beder, 2000). Both these principles highlight the importance for the consideration of the views and concerns of the public, so as to ensure the fair representation of individuals. Both corporate social responsibility and social sustainability promotes active participation of citizens. Despite South Africa being a democratic country, an examination of whether citizens are fairly and equally represented is offered in this thesis, paying particular attention to the case study examined.

This research will explore the nature of corporate social responsibility in order to understand its components. More specifically, intention of the research is to analyse the nature of corporate social responsibility practiced within a resource extraction industry, specifically Lafarge Mining South Africa and its Ridgeview Quarry, and to assess whether

this contribution is based on moral obligations or legalities. This research will therefore evaluate the social responsibility programmes, namely, the education-related social upliftment programme and skills-related social upliftment programme, as well as the discussion forum, that are employed by Lafarge Mining South Africa and its Ridgeview Quarry and assess their contribution to social sustainability. One must, however, bear in mind that there is no consensus on how much of corporate social responsibility should be prescribed for businesses and many in the corporate and academic arena struggle to articulate the notion of corporate social responsibility, whilst others challenge its efficacy (Jickling and Wals, 2007; Welford *et al.*, 2007). The rationale for undertaking the research is presented below.

1.2 Research rationale

The primary motivation of the research was to evaluate corporate social responsibility in a resource extraction industry, specifically Lafarge Mining South Africa and its Ridgeview Quarry, in terms of its contribution to social sustainability.

Globally and locally many businesses have begun to focus their attention on adopting corporate social responsibility programmes. This awareness stems from the fact that as a result of an integrated, expanding economy, the relationship between business and society is becoming more complicated (Lawrence *et al.*, 2005; Gouldson, 2006; Blowfield, 2007). The nature of engagement between business and society has been put under much scrutiny, and businesses are now faced with questions as to whether this relationship is sustainable. Thus, many businesses have been encouraged to adopt social sustainable initiatives which in effect enhance and intensify corporate social responsibility.

However, as a result of economic expansion and global competitiveness of business, the livelihoods and rights of numerous citizens have been affected. The need to recognise the human rights of citizens have become important because of the monopolisation of power by corporate elites (Jickling and Wals, 2007). Some businesses, in order to operate ethically have therefore placed on their agendas the protection of these human rights. In this regard, focus has been placed on individual rights within society and the need for citizens to be heard. As such, public participation has been introduced by many businesses in order to enhance social sustainability. This study investigated the nature of public participation with regard to Ridgeview Quarry in order to evaluate the degree to which corporate social responsibility and social sustainability was achieved.

Furthermore, social responsibility programmes are initiatives adopted by businesses to become socially responsible in a corporate environment. This research assessed social responsibility programmes that were employed by Lafarge Mining South Africa and its Ridgeview Quarry, in order to understand their contribution to sustainable development. Therefore, these social responsibility programmes were worthy of the research and were examined and understood in order to determine the degree of social sustainability being achieved. Another reason for undertaking the research was to provide knowledge on the nature and outcomes of corporate social sustainability and public participation activities, especially with respect to a resource extraction industry. This provided for a greater understanding of the role of corporate social responsibility in achieving social sustainability.

By assessing these social responsibility programmes and examining the discussion forum, the research developed recommendations by engaging with those associated with social responsibility programmes and the discussion forum. These recommendations will be beneficial to Lafarge Mining South Africa, its Ridgeview Quarry and the communities in terms of correcting initiatives that have flaws, and furthermore contributing to the company's social and labour plans. This study will therefore provide insight into how businesses achieve corporate social responsibility together with social sustainability.

1.3 Aim and objectives

The aim of this study is to evaluate corporate social responsibility activities in a resource extraction industry in terms of its contribution to social sustainability. Ridgeview Quarry located in Cato Manor, Durban, will be used as a case study for this research.

More specifically, the objectives of the study are to:

1. Investigate the nature of public participation with regard to the discussion forum related to Ridgeview Quarry activities.

2. Assess education-related social upliftment programmes associated with the Ridgeview Quarry.

3. Assess skills-related social upliftment programmes associated with the Ridgeview Quarry.

4. Evaluate the overall contribution to social sustainability by the corporate social responsibility programmes.

5. Develop recommendations for further contribution to social sustainability through interaction with those involved in the corporate social responsibility programmes.

The next section provides an overview of the structure of the thesis.

1.4 Structure of the thesis

This section presents the structure of the thesis. Details of the chapters are thus presented below.

The first chapter introduced the idea of corporate social responsibility together with social sustainability and presented the aim, objectives and the rationale for the research. The conceptual framework of the study is presented in Chapter Two. Concepts such as sustainable development and, more specifically, social sustainability, are presented to address the social issues that are associated with the operational activities of resource extraction industries (Hill and Bowen, 1997). Furthermore, social sustainability is viewed as encouraging the empowerment of citizens to participate within the decision-making process (Agyeman and Evans, 2003). Social justice and public participation are presented in order to evaluate how certain activities by businesses benefit local communities. These concepts further highlight the degree to which these practices adopted by businesses are operating justly and fairly (Chechile and Carlisle, 1991).

Chapter Three provides a background to the study. The background presents the concept of corporate social responsibility. Here, corporate social responsibility is viewed as a response to sustainable development with emphasis placed on the need for businesses to be accountable for their actions (Carroll, 1979; McIntosh *et al.*, 2003; Blowfield, 2007; Newell and Frynas, 2007; Welford *et al.*, 2007). The chapter further outlines corporate social responsibility in a South African context as well as providing a detailed explanation of corporate social responsibility with respect to Lafarge Mining South Africa and its Ridgeview Quarry activities. The methodology is explained in Chapter Four of the research. The collection of the data was based on a qualitative approach, with interviews used as the main source of information. An intensive, qualitative approach was adopted for the research, since it was restricted to a small sample size. This approach allowed for rich

and meaningful information to be collected and analysed. In addition, the research used purposive sampling, as the study was concerned with individuals involved within the discussion forum as well as the social responsibility programmes. Furthermore, the study adopted methods used in evaluation research, such as; summative evaluation and impact evaluation. These methods were used to summarise information and examine the outcomes of the two corporate social responsibility initiatives examined in the study.

The results chapter is divided into two chapters, Chapter Five and Chapter Six. Chapter Five investigates public participation at Ridgeview Quarry. Chapter Six explores the overall contribution to social sustainability by the social upliftment programmes. These chapters also offers recommendations for further contribution to social sustainability which have been developed through interaction with those involved in the social upliftment programmes at Ridgeview Quarry. Chapter Seven of the research provides a conclusion to the study.

1.5 Conclusion

This chapter has provided the introduction, rationale, aims and objectives as well as the structure of the thesis. The research investigated corporate social responsibility in a resource extraction industry with respect to social sustainability. Lafarge Mining South Africa and its Ridgeview Quarry was used as a case study for the research. The following chapter provides the theoretical framework for the research.

CHAPTER TWO
CONCEPTUAL FRAMEWORK

2.1 Introduction

The conceptual framework chapter for this study has been developed through the use of a variety of literature relevant to building an understanding of the contribution of corporate social responsibility to social sustainability, in a resource extraction industry. In order to understand the contribution made by businesses in achieving social sustainability, it is necessary to understand how certain activities adopted by businesses, assist in improving an individual's quality of life. Thus it is important to explain social sustainability within the context of this study.

Social sustainability can be explained as one of the pillars in achieving sustainable development, which is aimed at enhancing and improving the quality of life and at the same time ensuring fair distribution of costs and benefits (Hill and Bowen, 1997; Bagheri and Hjorth, 2007). Thus the degree to which an individual's quality of life is improved is dependant on the degree to which social sustainability is achieved (Chechile and Carlisle, 1991; Cutter and Solecki, 1996; Spiers, 2000; Coetzee and Nomdo, 2002; Bull-Kamanga *et al.*, 2003; Hogan and Marandola, 2005; Lee, 2006; Horn, 2007; Jones *et al.*, 2008; Hardoy and Pandiella, 2009).

In the past, focus was placed by businesses on finding technical solutions to biophysical and resource concerns affecting society, more specifically, waste management, urban planning, and technological development, while issues relating to the social environment were largely ignored (Jacobs, 1997). More recently, there has been an increasing emphasis on social sustainability. As a result of South Africa's apartheid planning in the past and the considerable need for developing countries, to expand economically, many individuals, in the low-income bracket, are being negatively impacted upon (Lélé, 1991; Yanarella, and Levine, 1992; Jacob, 1994; Doyle, 1998; Robinson, 2004; Smith, 2004). This has implications for issues of justice and the degree to which social sustainability is currently being achieved.

To this end, the theoretical framework will draw on ideas related to sustainable development, social sustainability, vulnerability, and well-being. These concepts will form the theoretical basis of the study. Other concepts explained in this chapter such as social

justice (equity) and public participation allow for an evaluation of whether the contribution made by Lafarge Mining South Africa and its Ridgeview Quarry was sustainable or not towards the local communities.

Section 2.2 introduces sustainable development, and explains the definition, history, pillars and principles of sustainable development. The concept of social sustainability is presented in Section 2.3. Two concepts that are imperative in achieving social sustainability, namely social justice (equity) and public participation are introduced in Section 2.4 and 2.5 respectively. The conclusion to the chapter is presented in Section 2.6. The following section will begin the discussion by addressing the concept of sustainable development.

2.2 Sustainable development

Sustainable development is a very important concept when dealing with issues that surround resource extraction industries and their contribution to the community. This section provides an understanding of sustainable development by explaining the history and definition of sustainable development. The pillars and principles of sustainable development are presented later in the section, where a critical discussion is offered. This section also highlights the spectrum in which sustainable development exists.

As a result of problems created by an ever expanding economy, urbanisation, growing population, increased use of resources and escalating waste, significance has recently been placed on the notion of sustainable development (Carley and Christie, 1992; Meadowcroft, 1999; Meadowcroft *et al.*, 2005; Wolch, 2007). A focus on sustainable development has meant that emphasis has been placed on the environment to ensure for the equitable distribution of its benefits across society (Cairns, 1997; Dudziak, 2007; Gray, 2007; Chance, 2009). This focus has resulted in countries, businesses, organisations and communities to engage in activities that are more socially, economically and environmentally sustainable than in the past (Karake-Shalhoub, 1999; Lawrence *et al.*, 2005; Werther and Chandler, 2006). However, even though sustainable development places emphasis on non-discriminatory practices, the need to understand the degree to which sustainable development is being achieved will be explained in this chapter.

Sustainable development is intertwined with other concepts such as vulnerability, social justice (equity) and, most importantly public participation. However, for this concept to be clearly understood a brief history of the approach will be provided below.

2.2.1 History of sustainable development

In order to understand the sustainable development concept, it is necessary to discuss the history of sustainable development. In the past the environment was not considered for its intrinsic value and was merely acknowledged for its instrumental value so as to sustain human life (Parfit, 1982; Buchanan, 1985; Dobson, 1990; Carley and Christie, 1992; Dryzek, 1992; Ekins, 1992; O'Neill, 1993; Bagheri and Hjorth, 2007). However, sustainable development can be traced as far back as the 1950's, whereby human interaction with the environment resulted in negative impacts on the environment. This was emphasised in Garret Hardin's 'Tragedy of the Commons' and Rachel Carson's 'Silent Spring' (Carley and Christie, 1992; Hill and Bowen, 1997). These writers were purely focused on educating humanity on preserving and conserving the environment so as to reduce environmental impacts resulting from human activities, thereby prioritising the notion of needs against wants (Carley and Christie, 1992; Hill and Bowen, 1997). These writers encouraged society to become more environmentally conscious so as to limit damage to the natural environment and ultimately, to promote sustainable development. Concern for the environment has resulted in increased awareness amongst many individuals, as the way in which people think of the environment has expanded to include the social, bio-physical, economic aspects, political and technical aspects (Goodland, 1995; Hill and Bowen, 1997; Oelofse, 2001; Bansal, 2002; Mitlin, 2002; Hermans and Knippenberg, 2006; Kenworthy, 2006; Nilsson, 2006; Lyytimäki and Rosenström, 2008; Short, 2008; Chance, 2009).

The concept of sustainable development, was for the most part initiated in 1972 at the United Nations Conference on the Human Environment held in Stockholm (Hill and Bowen, 1997). The ideas that surfaced from this conference included the need to create environmentally friendly development, namely; 'ecodevelopment', which focused on combining social and economic ideas whilst at the same time encouraging ecological management (Hill and Bowen, 1997). During the 1970's, the Club of Rome published a document termed 'Limits to Growth' which dealt with issues such as pollution, environmental degradation and natural resource depletion (Hill and Bowen, 1997). The International Union for the Conservation of Nature and Natural Resources (IUCN) then published the 'World Conservation Strategy' in 1980, which integrated the concepts of conservation and development in order to encourage sustainable development for future generations (Hill and Bowen, 1997). These initiatives encouraged awareness and

responsibility of individuals towards all aspects of the environment, thereby contributing to a sustainable society.

The concept of sustainable development was further developed when the World Commission on Environment and Development published a document named 'Our Common Future' in 1987, which is commonly referred to as the 'Brundtland Report' (Hill and Bowen, 1997). This report focused on the need for meeting the basic needs of present and future generations (Turner, 1993; Goodland, 1995; WCED in Reid, 1995; Cairns, 1997; Hill and Bowen, 1997; Jacobs, 1997; Mäler, 2008). As a result, a definition of sustainable development was developed from this foundation, which is commonly used. According to the Brundtland Commission, sustainable development is defined as, "development that meets the needs of the present without compromising the ability of the future generations to meet their own needs" (Turner, 1993: 4; Goodland, 1995: 4; WCED in Reid, 1995: xv; Cairns, 1997: 1164; Hill and Bowen, 1997: 224; Satterthwaite, 1999: 20; Mäler, 2008: 18).

The Brundtland Report primarily focused on promoting equity, in order to ensure for sustainable use of resources (Hill and Bowen, 1997). According to the Brundtland Report the concept of sustainable development, in essence, emphasises the significance of the needs of individuals and more specifically draws attention to those that are disadvantaged due to political demands, as well as caring for environment so that future generations benefit. The report further expressed the need for developing the economic sector whilst at the same time sustaining the natural environment (Hill and Bowen, 1997). The report promoted 'ecodevelopment' in that it emphasised the need to develop economically, at an equitable rate where there would be sustainable redistribution of resources (Hill and Bowen, 1997). Thus the report concentrated on establishing social transformation and fundamentally expressed that for sustainable development to be achieved, harmonisation needs to exist between the natural environment, economic environment and the social environment (Hill and Bowen, 1997). In 1991, as a response to the Brundtland agenda, the IUCN, published 'Caring for the Earth', which stated that sustainable development remained somewhat vague and further described sustainable development as improving the quality of life within the carrying capacity of the environment (Hill and Bowen, 1997). The concept of sustainable development was given more attention during and after the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 (Hill and Bowen, 1997).

The United Nations Conference on Environment and Development, commonly referred to as the Earth Summit, took place in Rio de Janeiro, Brazil and focused on the environmental crisis and sustainable development. The aim of the summit was to highlight the importance of protecting the environment, as human actions created enormous pressure on the environment. This summit promoted eco-efficiency by introducing plans and policies that encouraged economic growth whilst at the same time protecting the environment (Johannesburg Summit, 2002a; Goodland, 1995; Hill and Bowen, 1997). This summit allowed for the development of many plans and conventions such as Agenda 21, the Rio Declaration on Environment and Development, the Statement of Principles for Sustainable Management of Forests, the United Nations Framework Convention on Climate Change and the United Nations Convention on Biological Diversity (Johannesburg Summit, 2002a; Goodland, 1995; Thomas, 1996; Hill and Bowen, 1997; Selman, 1998). One very important plan that emerged from the Rio Summit was Agenda 21. This plan focused on achieving sustainable development, particularly by changing patterns of production and reducing fossil fuels (Johannesburg Summit, 2002b; Thomas, 1996; Jacobs, 1997; Young 1997; Selman, 1998; Satterthwaite, 1999; Rydin, 2002; Enticott and Walker, 2005; Lee, 2006). However, more recently, in 2002, the World Summit on Sustainable Development (WSSD) was held in Johannesburg.

The World Summit on Sustainable Development (WSSD) was held in Johannesburg in 2002. This Summit focused on overcoming difficulties by reducing poverty and improving the well-being of individuals as well as conserving the natural resources (Johannesburg Summit, 2002c; Beall, 2002; Rydin, 2002; Wapner, 2003; Ndezi, 2009). The Summit aimed to address inequalities, by empowering marginalised individuals to improve their social environment (Beall, 2002; Rydin, 2002; Wapner, 2003; Ndezi, 2009). Thus the WSSD presented a greater understanding of the concept of sustainable development and an increased awareness of promoting development that is equitable and sustainable. However, the question arises as to whether, through the establishment of these summits and policies, the aim of addressing these inequalities and empowering marginalised individuals to improve their well-being has actually been achieved. In practice, many poor and marginalised individuals in developing countries, including South Africa, are the ones who bear the brunt of unjust development practices (Brecher et al., 2000; Banerjee, 2003; Wapner, 2003; McLennan and Farrelly, 2010).

Furthermore, these summits, and the policies that arose from them, were influential in making society more aware of the importance of the environment and of the requirement of individuals to act responsibly and sustainably. In order to understand sustainable development as an approach to achieving sustainability, the words 'sustainable' and 'development' will be presented below.

2.2.2 Unpacking the words 'sustainable' and 'development'

There are multiple and varied definitions of sustainable development. The most common and well used formulation of sustainable development is that developed by the Brundtland Commission in 1989 (Turner, 1993; Goodland, 1995; WCED in Reid, 1995; Cairns, 1997; Hill and Bowen, 1997; Jacobs, 1997; Marcuse, 1998; Satterthwaite, 1999; Bagheri and Hjorth, 2007; Mäler, 2008), which was provided in Section 2.2.1. The Brundtland definition of sustainable development places more emphasis on the social and economic aspects of society with respect to ecological goals. More specifically, it places emphasis on developing countries, for example South Africa, Ghana and Kenya to name a few, since it is aimed at promoting economic advancement whilst conserving the environment (Gardner, 1989; Carley and Christie, 1992; Beckerman, 1994; Cairns, 1997; Hill and Bowen, 1997; Satterthwaite, 1999; Mintz *et al.*, 2001; Qizilbash, 2001; Grosskurth and Rothmans, 2005; Gaffga *et al.*, 2007). This definition fundamentally highlights the need to care for the social environment as well as the biophysical environment so that future generations are able to survive and have a decent quality of life.

To more fully understand sustainable development, the concepts 'sustainable' or 'sustainability' and 'development' need to be examined. The concept of 'sustainable' or 'sustainability' can be elucidated as: something that can be sustained over a long period of time (Cairns, 1997; Fergus and Rowney, 2005; Quinn II and Collie, 2005; Nilsson, 2006; Swilling, 2006; Davies, 2008; Mannberg and Wihlborg, 2008). Lele (1991, in Fergus and Rowney, 2005) explained that sustainability encompassed both a literal and ecological meaning. The literal meaning of sustainability refers to the: 'continuation of anything' and the ecological meaning refers to "maintaining the ecological basis of human life within a time-based structure, indicating concern for both future and the present" (Fergus and Rowney, 2005:19). In addition to 'sustainable' or 'sustainability', an understanding of the term 'development' is provided below.

Carley and Christie (1992: 41) explain development as: "a process by which the members of society increase their personal and institutional capacities to mobilize and manage resources to produce sustainable and justly distributed improvements in quality of life consistent with their own aspirations". This notion of development explains that development is not thought of as physical development, but is rather the social upliftment of citizens to engage and participate in improving their social and economic environment. Furthermore, Fergus and Rowney (2005: 20) explain development in terms of a process and an objective. As a process, development is elucidated as a "growth and change", whereas if it is explained in terms of an objective, it means satisfying basic human needs (Fergus and Rowney, 2005).

However, a complete consideration of development cannot be understood without understanding the concept of growth. According to the World Book Dictionary, grow means to 'expand' or 'increase' in size (Barnhart and Barnhart, 1989). Goodland (1995) describes 'growth' as a quantitative physical or material increase and 'development' as a qualitative improvement or a transformation. Thus the meaning of 'sustainable development' incorporates growth, which implies positive enhancement, and development, which entails change. Development is further based on the growth and improvement of individuals, whereby individuals are encouraged to actively participate in the decision-making process (Gardner, 1989; Goodland, 1995; Lehtonen, 2004; Grosskurth and Rotmans, 2005). Sustainable development is focused on achieving long-term participation of individuals, whilst at the same time promoting economic development and emphasising eco-efficiency (Hamilton, 2002; Soppe, 2004; Bell and Morse, 2007; Davies, 2008; Mannberg and Wihlborg, 2008; Morse, 2008). Sustainable development is considered as a bottom up approach where focus is placed on individuals to expand their knowledge and therefore serves as a foundation of educating individuals to support development that is sustainable (Meadowcroft *et al.*, 2005; Lee, 2006). Thus sustainable development embodies both of these concepts, namely growth and development, so as to ensure that the quality of life of individuals is improved. Sustainable development thus aims at enhancing an individual's well-being within a social context and emphasis has been placed by developers and organisations to engage in bottom-up approaches so as to ensure for sustainable development (Newman and Kenworthy, 1999; Qizilbash, 2001; Davies, 2008; Mannberg and Wihlborg, 2008). Sustainable development therefore maintains the idea of managing and promoting equity throughout society in order to maintain a balance between social, political, economic and biophysical aspects (Goodland, 1995; Oelofse, 2001;

Qizilbash, 2001; Mitlin, 2002; Hermans and Knippenberg, 2006; Kenworthy, 2006; Nilsson, 2006; Short, 2008; Chance, 2009).

Sustainable development is thus focused on increasing society's well-being and emphasis is placed on present and future generations, however, this emphasis is experienced differently with regards to developed and developing countries (Carley and Christie, 1992; Cairns, 1997; Meadowcroft, 1999; Meadowcroft *et al.*, 2005; Lee, 2006; Swilling, 2006; Davies, 2008; Mannberg and Wihlborg, 2008; Short, 2008). In developed countries, such as Canada, Australia and the United Kingdom, the needs of the present are given prominence but even greater emphasis is placed on the future, whereas, in developing countries, such as South Africa, emphasis is placed on meeting the needs of the present, leaving future generations with opportunities to engage in improving their lifestyle themselves (Reid, 1995; Kirkpatrick and Lee, 1997; Short, 2008; Swilling, 2006; Gaffga *et al.*, 2007). Sustainable development is therefore a holistic approach in maintaining all aspects of the environment.

However, although proponents of sustainable development argue that it is holistic in nature, many theorists argue that sustainable development lacks uniformity and is ambiguous (Lélé, 1991; Yanarella, and Levine, 1992; Doyle, 1998; Robinson, 2004). These theorists believe that sustainable development is not different to other 'green ideologies' which are merely used to promote environmental change and do not ultimately result in environmental change (Lélé, 1991; Yanarella, and Levine, 1992; Doyle, 1998; Robinson, 2004). Sustainable development is therefore considered as a concept in achieving sustainability; however, the problem that arises is not how sustainable development is defined in principle but how it is measured in practice. Critics argue that the sustainable development language is used by businesses to promote unsustainable activities, in other words a 'smokescreen' (Yanarella, and Levine, 1992; Doyle, 1998; Robinson, 2004). Secondly, even though sustainable development encourages social growth and equity, many critics argue that the needs of poor and marginalised individuals are still not taken into consideration. These arguments are discussed in detail further in the chapter.

This section provided definitions and critical discussions in order to establish a framework to understand the sustainable development concept. Given the history and definition of

sustainable development, it is imperative to present the principles of sustainable development below.

2.2.3 Principles of sustainable development

Whilst trying to develop an understanding as to what sustainable development entails, an understanding of the principles of sustainable development needs to be considered. Palmer *et al.* (1997) explained that sustainable development embodies four principles, namely, social justice (equity), public participation, futurity and ecological integrity.

The principle of social justice (equity) is focused on improving the well-being of individuals who are considered to be marginalised (Miller, 1976; Carter, 2001; Scott and Oelofse; 2005). Whereas, public participation provides a framework for individuals to actively participate within the decision making process (Arnstein, 1969; White, 1996; Qizilbash, 1996a; Fraser, 1997; Palmer *et al.*, 1997; DEAT, 2002; Lee, 2006). However, for this research social justice (equity) and public participation are explained in detail in Section 2.4 and 2.5 respectively.

Futurity is one of the core values upheld in the Brundtland Report. The principle of futurity explains that any present actions towards the environment will in effect have a great impact on future generations (Palmer *et al.*, 1997). More specifically, futurity deals with the two types of capital, one being human capital and the other natural capital. Human capital is described as a capital that is not shared between individuals, but rather it is a private good of that individual (Goodland, 1995; Goodland and Daly, 1996; Rees and Wackernagel, 1996; Hill and Bowen, 1997; Goodland, 2002). Human capital is based on service provision such as health care, infrastructure, skills and the provision of education facilities (Goodland, 1995; Goodland and Daly, 1996; Rees and Wackernagel, 1996; Coetzee and Nomdo, 2002; Goodland, 2002). Whereas, natural capital is fundamentally comprised of the bio-physical environment, natural capital specifically deals with limiting the use of natural resources (Rees, 1995; Goodland and Daly, 1996; Rees and Wackernagel, 1996; van Zeijl-Rozema *et al.*, 2008). Goodland and Daly (1996:1005) further explain that natural capital is defined as: "the stock of environmentally provided assets (such as soil and its microbes and fauna, atmosphere, forests, water, wetlands) that provides a flow of useful goods or services". Natural capital can be classified into renewable (such as solar energy), replenishable (groundwater) and non-renewable resources (fossil fuels) (Rees,

1995). Thus the concept of futurity aims at maintaining a balance between both types of capital, in order to benefit future generations.

Two concepts become important when discussing sustainable development and futurity, namely, inter-generational equity and intra-generational equity. Inter-generational equity is where fairness occurs between generations and intra-generational equity is equity that occurs within generations (Pearce and Vanegas, n.d.; Goodland and Daly, 1996; Haughton, 1999; Heywood, 1999; Beder, 2000; Oelofse, 2001; Thompson, 2003). Futurity entails the protection of current resources and ensuring that future generations are better off than current generations (Palmer *et al.*, 1997). Thus more particularly, futurity encourages well-being so as to ensure for a better quality of life now and in the long term.

The precautionary principle is linked to concerns for futurity. The precautionary principle argues that if actions carried out in the present have uncertain consequences then individuals are advised not to carry out that activity or they could carry out that activity with caution (O'Riordan and Jordan, 1995; Gibbs *et al.*, 1998; Kriebel, *et al.*, 2001). The precautionary principle is believed to have originated from Germany, from the German word *Vorsorgeprinzip* and was used as a response to climate change and ecosystem depletion as well as effects on human well-being (Kriebel *et al.*, 2001). There are four components of the principle that encourage the protection of an individual's well-being, firstly, taking action if consequences are uncertain; secondly, making those individuals responsible for an activity accountable; thirdly, investigating alternatives to risks and fourthly, encouraging public participation in decision-making (Kriebel *et al.*, 2001). The precautionary principle ensures that individuals develop into moral beings, whilst ensuring that negative impacts are not passed on to future generations. The precautionary principle enhances the responsibility of individuals and protects current and future generations from harm (O'Riordan and Jordan, 1995).

The other principle underpinning sustainable development is ecological integrity. More often than not the environment is explained in terms of the social, political, economic and biophysical. However, ecological integrity relates specifically to the biophysical environment, including biodiversity and ecosystems as important life support systems (Jacobs, 1997; Palmer *et al.*, 1997). The protection of the environment as explained in previous sections has become of paramount concern, since emphasis is now placed on the protection of the environment in order to minimise any negative impacts on the future

generations. This principle emphasises the need to protect natural resources while encouraging and improving quality of life and further looks at improving the relationship between human environment and the biophysical environment (Jacobs, 1997; Palmer *et al.*, 1997). Ecological integrity is linked to a 'green ideology', whereby total consideration is given to the bio-physical environment and where human actions that are considered detrimental to the environment are controlled by regulations or completely prohibited (Jacobs, 1997). Thus, this principle emphasises that there are limits placed on development, predominantly because certain natural resources cannot be replenished, and this therefore enhances the moral obligation of society in respect of the bio-physical environment.

As mentioned previously sustainable development must be considered as a holistic approach, where all principles such as social justice, public participation, futurity and ecological integrity must be contemplated. Beyond the principles of sustainable development, a consideration of the pillars of sustainable development is useful when examining this concept. The following section thus presents these five pillars.

2.2.4 Pillars of sustainable development

Beyond the definitions and principles of sustainable development, it is important to explain the pillars of sustainable development. The pillars of sustainable development provide a greater insight to the concept of sustainable development

Initially sustainable development was explained in terms of three pillars, namely; social, economic and environmental sustainability, which are aimed at meeting human needs whilst preserving the environment for future generations (Goodland, 1995; Oelofse, 2001; Qizilbash, 2001; Bansal, 2002; Mitlin, 2002; Hermans and Knippenberg, 2006; Kenworthy, 2006; Nilsson, 2006; Lyytimäki and Rosenström, 2008; Short, 2008; Chance, 2009). However, more recently, the political and technical pillars have been included to better expand the understanding of sustainable development (Hill and Bowen, 1997) (see Figure 2.1). Figure 2.1 makes reference to the different pillars of sustainable development.

Carley and Christie (1992: 47) further explain: "Above all else therefore, sustainable development..., will be the result of a process of mediation among environmental, economic and social goals". Thus in order to achieve complete sustainable development, there must be harmony between all the pillars of sustainable development. One pillar

cannot be given more attention or focus than the other. It must be understood that all the pillars of sustainable development must overlap to achieve total sustainable development (Goodland, 1995; Hill and Bowen, 1997; Oelofse, 2001; Qizilbash, 2001; Bansal, 2002; Mitlin, 2002; Hermans and Knippenberg, 2006; Kenworthy, 2006; Nilsson, 2006; Lyytimäki and Rosenström, 2008; Short, 2008; Chance, 2009). In theory this is very possible, however, in reality there is a great deal of politics and challenges involved.
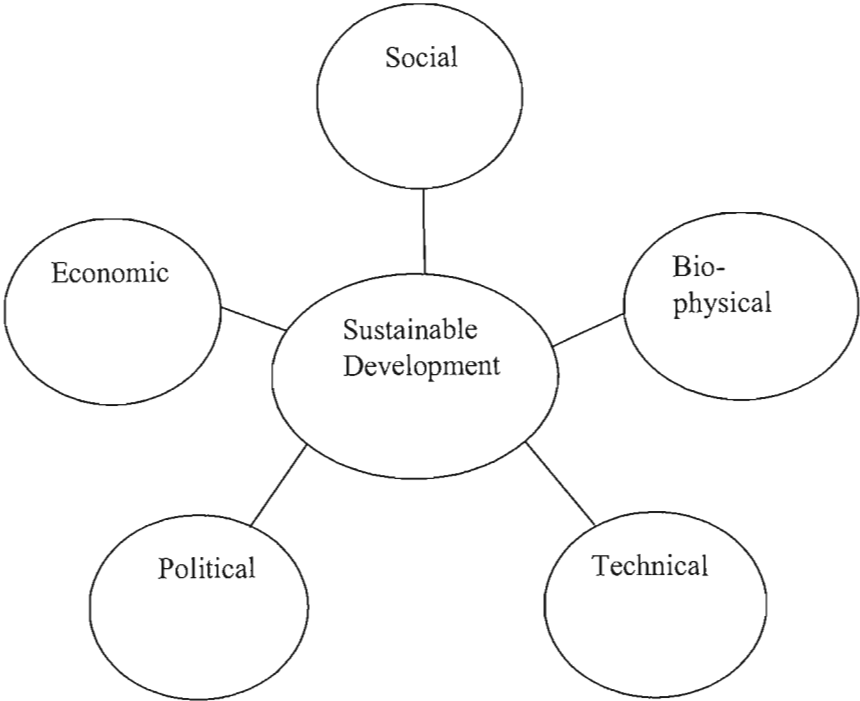
Figure 2.1: Pillars of sustainable development

Source: Adapted from: Goodland (1995); Hill and Bowen (1997); Oelofse (2001); Qizilbash (2001); Bansal (2002); Mitlin (2002); Hermans and Knippenberg (2006); Kenworthy (2006); Nilsson (2006); Lyytimäki and Rosenström (2008); Short (2008); Chance (2009).

Social sustainability or community sustainability, as referred to by some, is a critical concern for this study, and can be explained very briefly as improving the quality of life by securing basic needs and equity. Social sustainability will be discussed in detail in Section 2.3 of the thesis. Therefore in subsequent paragraphs, economic, environmental, political and technical pillars of sustainable development will be explained. Firstly the economic pillar of sustainability will be examined.

Economic sustainability is described as maintaining capital (Beckerman, 1992; Goodland, 1995; Gibbs, 2002; Nilsson, 2006). However, economic sustainability is based on the idea

that economic growth can be achieved if it is geared towards enhancing well-being as well as improving the environment. Goodland (1995) and Goodland and Daly (1996) refer to Hick's (1940) definition of income as relating to economic sustainability; Hick (1940) states that income is: "the maximum value a person can consume during a week, and still expect to be as well off at the end of the week as at the beginning" (cited in Goodland and Daly, 1996: 1005). Thus economic sustainability is not only about accumulating capital, it is described as increasing capital within a sustainable context (Goodland, 1995; Goodland and Daly, 1996). Furthermore, sustainable development is understood as: "incorporating environmental assets into the economic system" (Doyle, 1998: 774). Doyle (1998) explained that here, sustainable development is problematic as it is focused on favoring the economic aspect over the ecological. In effect, this has created vast difficulties, as many businesses use the sustainable development language as a means to promote unjust methods (Doyle, 1998). Similarly, sustainable development is understood in this aspect as encouraging expansionism and exploitation (Yanarella, and Levine, 1992; Doyle, 1998; Banerjee, 2003). Here, economic growth is placed on top of human needs. Although, economic sustainability encourages job creation, thereby enhancing basic human needs, nevertheless, in reality this is very difficult to achieve. Many individuals, especially the poor, have become marginalised and their needs are secondary to that of the wealthy (Brecher et al., 2000; Banerjee, 2003; Wapner, 2003; McLennan and Farrelly, 2010). This is particularly evident, where developments such as quarries, landfills and mines, to name a few, are located in economically challenged areas. Although these developments provide a service to society they considerably impact on the rights of the poor and marginalised.

Solow (1993, cited in Hill and Bowen, 1997) and Rees and Wackernagel (1996) further explained that in order to achieve sustainability, consideration must be given to introducing replacement options between natural and human capital so as to achieve total capital with regards to future generations. However, in the case of economic sustainability some may argue that protecting human capital against natural capital would be beneficial, since human capital can be an alternative for natural capital (Rees and Wackernagel, 1996; Palmer et al., 1997). However, with regard to natural and human capital, Rees and Wackernagel (1996) argue that this capital approach is beneficial when explaining sustainability, since any development cannot be considered sustainable if it continues to diminish the productive capital. This states that human capital, instead of natural resources and more specifically non-renewable resources, are utilised to achieve economic improvement. In the past the environment was viewed for its instrumental value until

recently (Parfit, 1982; Buchanan, 1985; Dobson, 1990; Carley and Christie, 1992; Dryzek, 1992).

Economic sustainability with respect to businesses focuses on the cost of a business' activities with respect to the biophysical and social environment. Economic sustainability involves the polluter pays principle, where if the damage caused by a business is greater than its benefit, then the business pays for the damage it causes, as in most cases it is often the poor or disadvantaged that bare the brunt of incorrect practices (Rees and Wackernagel, 1996). The implementation of the polluter pays principle allows for the enforcement of fines for incorrect practices, however, in an attempt to escape this, these big multinational corporations settle in developing countries and exploit many of the worlds poor and it is these poor who experience the negative impacts of development (Isaacs, 1997; Bond, 2008). It must be acknowledged that although sustainable development is a concept that emerged in the 1950's, it is fairly new in practice. Businesses that benefited from previous unsustainable ways become hostile to change to a sustainable manner, especially if their profits suffer (Blowers and Hinchliffe, 2003; Robinson, 2004). Thus achieving economic sustainability is a huge challenge. The second pillar, which is environmental sustainability will be discussed below.

Environmental sustainability is regarded as improving human welfare while at the same time protecting raw materials (Goodland, 1995; Goodland and Daly, 1996; Stinchcombe and Gibson, 2001; Nilsson, 2006; van Zeijl-Rozema et al., 2008). Goodland and Daly (1996) and Rees and Wackernagel (1996) explain that environmental sustainability involves sustaining natural capital. Due to globalisation, the use of the earth's resources have been accelerated and is becoming depleted and it is for this reason that emphasis has been placed on environmental sustainability. Goodland and Daly (1996:1006) further explain that: "the goal of environmental sustainability is thus the conservative effort to maintain the traditional meaning and measure of income in an era in which natural capital is no longer a free good, but is more and more the limiting factor in development". This means that in order for environmental sustainability to be achieved, any unsustainable development that occurs should be prohibited. Environmental sustainability therefore involves assessment of the carrying capacity[1] of an environment with respect to a development so as to ensure that the environment can cope with the impacts of the

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[1] Rees and Wackernagel (1996: 224) define carrying capacity as: "the maximum population of a given species that can be supported indefinitely in a defined habitat without permanently impairing the productivity of that habitat".

development (Rees, 1992; Goodland and Daly, 1996; Hill and Bowen, 1997; Marcuse, 1998; Nilsson, 2006; van Zeijl-Rozema *et al.*, 2008).

Carrying capacity focuses on the sustainable relationship between a population and its biophysical environment in a reciprocated environment (Rees, 1992; Rees and Wackernagel, 1996; Marcuse, 1998). This pillar to sustainable development ensures that a sustainable relationship exists between inhabitants and its habitat.

Thus environmental sustainability creates conditions within society, thereby ensuring that individuals act responsibly in order to preserve and conserve the environment for the future (Rees, 1992; Goodland and Daly, 1996; Hill and Bowen, 1997; Marcuse, 1998; Nilsson, 2006; van Zeijl-Rozema *et al.*, 2008). Furthermore, environmental sustainability contains an output and input rule (Goodland and Daly, 1996). The output rule explains that waste production with respect to development must be sustainable and within the capacity of the environment (Goodland and Daly, 1996). The input rule requires that renewable resources must be renewed within the environment and non renewable resources must not be depreciated. Furthermore, development of non-renewable substitutes must be emphasised (Goodland and Daly, 1996). However, under environmental sustainability, acknowledging that the earth is finite and that there are limits to economic growth, Doyle (1998) explains that sustainable development measures environmental problems as efficiency issues that need to be managed under economic effectiveness. The issue that arises from this is that businesses become more powerful and the environment is valued for its instrumental worth (Doyle, 1998; Blowers and Hinchliffe, 2003). In addition, many businesses pretend to adopt measures that are sustainable and it becomes very difficult to assess whether they adhere to sustainable activities (Yanarella, and Levine, 1992; Jacob, 1994; Doyle, 1998; Blowers and Hinchliffe, 2003; Robinson, 2004). Political sustainability is discussed in the paragraph below.

Political sustainability is fairly new to discussions of the sustainable development approach. In the past, focus was only placed on achieving equilibrium between the social, economic and biophysical environments. Political sustainability is focused on creating structures within society that promote equity and justice, thereby creating an environment for individuals to be satisfied and protected with respect to rules and laws (Rawls, 1997). Underlying, political sustainability, is the idea of maintaining liberty and self-respect as well as creating opportunities for individuals within society (Miller, 1976).

Political sustainability is associated with environmental politics. Past ideologies viewed the environment as having instrumental worth and humans used the environment for potential gains, but an increased awareness of environmental politics has lead to this relationship being challenged (Dobson, 1990; Dryzek, 1992; Ekins, 1992; Low and Gleeson, 1998). For some, the environment is viewed as one that brings about many negative consequences, whilst for others it is seen as good. Connelly *et al.* (1999) notes that environmental politics shifts away from the practicalities of the changing and creation of policies and rather addresses the challenges that individual's experience in terms of understanding and participating within the world. Thus political sustainability makes reference to the relationship between individuals and the biophysical environment. Thus when power is abused and is capitalised by an individual or a group of individuals, political sustainability ensures that justice and fairness is evenly distributed. Achieving sustainable development is therefore a political task (Doyle, 1998; Blowers and Hinchliffe, 2003). Without the political will to overcome inequalities and the marginalization of the poor, it will prove difficult to achieve total sustainability and those with less power, such as the poor, would be adversely affected (Lélé, 1991; Yanarella, and Levine, 1992; Jacob, 1994; Brecher *et al.*, 2000; Banerjee, 2003; Wapner, 2003; McLennan and Farrelly, 2010). An example of this is evident in the research, where low-income individuals are located in close proximity to the Ridgeview Quarry and are the ones who are impacted upon. Thus by understanding political sustainability, technical sustainability can be explained.

Technical sustainability according to Hill and Bowen (1997) is one that encompasses issues relating to the built environment and is simply more about the creation of structures that may last in the future. Technical sustainability involves creating structures that are considered to be resilient to stresses created by any negative outcomes that may arise at some future time, be it man made or natural (Hill and Bowen, 1997). This pillar of sustainable development focuses on how efficient and serviceable a development is, with regards to the environment it occupies (Hill and Bowen, 1997). This emphasises that a development must be beneficial towards society, which basically means that individuals living within close proximity to a development must be able to benefit from that development (Hill and Bowen, 1997). Promoting sustainable construction is a primary concern in promoting technical sustainability, since services that are put into practice by government are encouraged to assist in promoting equity and fairness (Hill and Bowen, 1997). Technical sustainability thus incorporates the efficient and equitable provision of services such as water, electricity, health care and transport, all of which are considered to

be basic human services, in order to aid in promoting the social well-being of individuals. The aim of technical sustainability is also to promote urban renewal, by upgrading present urban infrastructure as well as renovating and modernising degraded areas (Hill and Bowen, 1997: 228). Technical sustainability further involves improving and restoring networks of communication and transport so as to allow for enhancement of societal well-being.

The pillars of sustainable development provide a greater understanding of the concept of sustainable development. In order to achieve total sustainable development and for businesses, such as Lafarge Mining South Africa and its Ridgeview Quarry, to be considered as sustainable, all five pillars need to exist harmoniously. However, in reality, there has been strong emphasis on economic expansion and power is capitalised by corporate elites (Lélé, 1991; Yanarella, and Levine, 1992; Jacob, 1994; Doyle, 1998; Robinson, 2004; Smith, 2004). Many individuals located near developments are prime examples of injustices that occur in present society (Blowers and Hinchliffe, 2003; Wapner, 2003; McLennan and Farrelly, 2010). Theoretically developments that are sustainable and not detrimental are very possible. However, in reality there are political dynamics and challenges involved that impede sustainable development. Dealing with concepts presented above, acknowledgment must be given to the spectrum of sustainability, which will be discussed below.

2.2.5 Spectrum of sustainability
Sustainability can be thought of as existing on a spectrum. Gibbs *et al.* (1998), with the aid of Table 2.1 below, explains that on the spectrum, sustainability can be divided into four parts, namely, very weak sustainability, weak sustainability, strong sustainability and very strong sustainability. These aspects of the range of sustainability will be discussed in this section.

Very weak sustainability is explained when human and natural capital is stable over a period of time (Pearce *et al.*, 1994; Beckerman, 1995; Rees and Wackernagel, 1996; Hediger, 1999; Neumayer, 2003). However, very weak sustainability allows for an unlimited substitution between different types of capitals (Pearce *et al.*, 1994; Beckerman, 1995; Rees and Wackernagel, 1996; Hediger, 1999; Neumayer, 2003). This allows for natural capital to decrease as it is replaced by human capital (Pearce *et al.*, 1994; Beckerman, 1995; Rees and Wackernagel, 1996; Hediger, 1999; Neumayer, 2003). Rees

and Wackernagel (1996) explain weak sustainability as sustaining the stable and regular accumulation of human and natural resources. Weak sustainability is based on the idea that manufactured capital will be enough to sustain future generations. According to weak sustainability, future generations will not be restricted in terms of usage of non-renewable resources, since natural capital can be replaced with manufactured goods (Pearce *et al.*, 1994; Beckerman, 1995; Rees and Wackernagel, 1996; Hediger, 1999; Neumayer, 2003). Weak sustainability therefore operates under the notion that problems relating to the biophysical environment can be solved by technical solutions.

Table 2.1: Spectrum of sustainable development
Source: (Gibbs *et al.*, 1998: 1353)

Version	Features
Very weak sustainability	Overall stock of capital assets remain stable over time, complete substitution between human and natural capital. Essential link between willingness to pay and sustainable development.
Weak sustainability	Limits set on natural capital usage. Some natural capital is critical that is, nonsubstitutable. Related to precautionary principle or safe minimum standards. Tradeoffs are still possible.
Strong sustainability	Not all ecosystem function and services can be adequately valued economically. Uncertainty means whatever the social benefits foregone, loses of critical natural capital are not possible.
Very strong sustainability	Steady-state economic system based on thermodynamic limits and constraints. Matter and energy throughput should be maintained

Daly and Cobb (1989, cited in Plamer *et al.*, 1997) explain weak sustainability in terms of a weak sustainability ethic. A weak sustainability ethic emphasises individual improvement with little regard to the biophysical environment (Rees and Wackernagel, 1996; Daly and Cobb (1989, cited in Palmer *et al.*, 1997). Weak sustainability relies on the assumption that technical solutions will aid in solving society's problems and emphasises

that weak sustainability disregards inter-generational equity (Daly and Cobb 1989, cited in Palmer *et al.*, 1997). Strong sustainability theorises that natural capital can not be substituted as certain parts of the environment needs to be sustained, since certain natural resources are not replenishable and future generations are able to benefit from it (Pearce *et al.*, 1994; Beckerman, 1995; Hediger, 1999; Neumayer, 2003). Rees and Wackernagel (1996) explain strong sustainability as sustaining natural capital completely, whereby natural resources are used in a sustainable manner and where non-renewable resources are not depleted. Strong sustainability is in contrast to the concept of weak sustainability, since strong sustainability emphasises that natural capital cannot be replaced by human capital. Strong sustainability focuses on biophysical values and purpose, where emphasis is placed on recycling (Rees and Wackernagel, 1996).

Daly and Cobb (1989, cited in Palmer *et al.*, 1997) explain strong sustainability in terms of a strong sustainability ethic. Daly and Cobb (1989, cited in Palmer *et al.*, 1997) explain a strong sustainability ethic as when society is considered sustainable only if the 'quality of life' is distributed evenly across the population and when the biophysical environment is not depleted. Daly and Cobb (1989, cited in Palmer *et al.*, 1997) further explain that strong sustainability involves two concepts, namely eco-efficiency and eco-justice. Eco-efficiency is essentially based on long-term benefits, whereby emphasis is placed on using natural resources sustainably, taking into consideration the carrying capacity of the bio-physical environment Daly and Cobb (1989, cited in Palmer *et al.*, 1997; Marcuse, 1998; Goodland and Daly, 1996). Eco-justice ensures for inter-generational and intra-generational equity (Palmer *et al.*, 1997; Marcuse, 1998; Goodland and Daly, 1996). Very strong sustainability is explained as having its roots in 'deep ecology', but takes a radical stance whereby emphasis is place on the preservation and conservation of natural resources (Goodland and Daly, 1996; Palmer *et al.*, 1997; Marcuse, 1998). Thus, sustainability can move to different aspects along a spectrum, from weak to strong sustainability.

Overall, sustainable development maintains the idea of managing and promoting equity throughout society in order to maintain a balance between social, political, economic and biophysical aspects. However, although the biophysical environment and economic aspects play a key role in establishing sustainable development, this study is concerned with examining the social aspects of sustainability. Social sustainability will therefore be presented in the following section.

2.3. Social sustainability

As discussed earlier, social sustainability is one of the pillars of sustainable development. Social sustainability encompasses two important concepts namely, social justice (equity) and public participation, which will be discussed in sections. This section provides a discussion on the roots and development of social sustainability. The section further defines and critically discusses social sustainability, by providing an understanding of social capital, vulnerability and well-being.

2.3.1 Roots of social sustainability

Social sustainability is believed to have developed as a result of ethical awareness, whereby individuals and corporations were encouraged to be responsible agents in society and this evident with regards to Lafarge Mining South Africa, its Ridgeview Quarry and the community in which it is situated. Qizilbash (1996a) explains this development as 'ethical development', which surfaced as a result of a challenge against traditional development where focus was placed on economic enhancement to the detriment of the environment. The main concern was to improve the quality of life of individuals, thereby maintaining their well-being, since economic growth posed limits on certain human freedoms (Qizilbash, 1996a; Lee, 2006). Qizilbash (1996a) states that ethical development is thus a form of changing development in a sustainable manner, with respect to social justice, human freedom and well-being. Ethical development is thus concerned with regarding human beings as ends as opposed to means; decreasing poor quality of life and lastly giving freedom intrinsic worth (Parfit, 1982; Buchanan, 1985; O'Neill, 1993; Qizilbash, 1996a). Qizilbash (1996a: 1210) explains that development occurs: "if and only if there is some overall expansion in human flourishing of the quality of human lives of human well-being consistent with the demands of social justice and freedom". This explanation fits in well with social sustainability, as one of the main components in achieving sustainability is ethical consciousness, whereby emphasis is placed on supporting the social environment.

However, other theorists, such as Sen (1990, cited in Qizilbash, 1996a; Qizilbash, 1996b; Qizilbash, 2001) have contributed significantly to improving human development with respect to social sustainability. Sen (1990, cited in Qizilbash, 1996a; Qizilbash, 1996b; Qizilbash, 2001) explains that in order to improve human well-being and quality of life one must make reference to development as emancipation and development as empowerment. Sen (1990, cited in Qizilbash, 1996a; Qizilbash, 1996b; Qizilbash, 2001) argues that

development as emancipation involves acknowledging the capability approach, whereby the quality of life is not realised by an individuals achievements but rather by the ability of that individual to achieve them. Sen (1990, cited in Qizilbash, 1996a; Qizilbash, 1996b; Qizilbash, 2001) further explains quality of life in terms where intrinsic worth is given to human freedom.

With regards to development as empowerment, Sen (1990, cited in Qizilbash, 1996a; Qizilbash, 1996b; Qizilbash, 2001) argues that development must be seen as moral and just, whereby benefits are distributed evenly across society and where individuals especially those that are poor are provided with the opportunity to engage within the process. Thus development with regards to empowerment is important as it allows for opportunities to participate within the decision-making process, thereby enhancing an individuals social capital (Bebbington and Perreault, 1999; Baetan, 2000; Mayoux, 2001; Edwards *et al.*, 2002; Sastray and Manikandan, 2002). Dudziak (2007) explains that in developing countries, social sustainability is characterised as the ability of individuals to maintain their livelihood, decrease social exclusion, and improve educational, legal and social service. Thus this approach to development as empowerment, ensures that individuals are not excluded from the decision-making process (Edwards *et al.*, 2002).

Overall, Qizilbash (1996a, 2001) argues that these two ways of thinking of development as emancipation and empowerment involves the basic needs concept. Streeten (n.d. cited in Qizilbash, 1996a: 1212) explains that the basic needs concept is, "a reminder that the object of development effort is to provide all human beings with the opportunity for a full life". This opportunity is based on providing individuals with skills in order to improve human well-being and the quality of life (Qizilbash, 1996a, 2001). This was evident in the study, as Lafarge Mining South Africa and its Ridgeview Quarry attempted to contribute to social sustainability by embarking on social upliftment programmes to benefit the surrounding community. Thus by understanding how social sustainability evolved, a definition of the concept is provided below.

2.3.2 Defining social sustainability

Social sustainability can be explained as one of the pillars of sustainable development, which also include economic, environmental, political and technical sustainability (Goodland, 1995; Marcuse, 1998; Stein, 2001). As discussed in the previous section the environment in the past was considered merely for the purpose of economic satisfaction

and both the social and ecological aspects of the environment were not dealt with sufficiently or completely ignored (Carley and Christie, 1992; Newman, 2006; Swilling and Annecke, 2006; Devereux, 2008; Scheinsohn and Cabrera, 2009). It is, as a result of increased awareness of people that the concept of social sustainability has been given more significance presently.

The social pillar of sustainable development is defined by Yap (1989, cited in Hill and Bowen, 1997: 227) as to: "improve the quality of human life by ensuring secure and adequate consumption of basic needs, which are food, clothing, shelter, health, education and beyond that by ensuring comfort, identity and choice". Social sustainability is therefore about creating a social environment for individuals to prosper in, with respect to improving quality of life. Social sustainability is broadly explained as that which empowers people to play an active role in the decision-making process, thereby enhancing and maintaining social capital (Hill and Bowen, 1997; Selman, 2001; Goodland, 2002; Newman, 2006; Swilling and Annecke, 2006; Devereux, 2008; Scheinsohn and Cabrera, 2009). However, Hermans and Knippenberg (2006) refer to social sustainability as social solidarity and define it as including equal opportunities, shared values, international cohesion and maintenance of social capital. Goodland (2002: 2) provides a further definition of social sustainability as: "maintaining social capital". This definition of social sustainability emphasises that individuals with common goals and aims are geared towards social improvement. Social capital is explained in Section 2.3.3.

Social sustainability is therefore aimed at enhancing and improving the quality of life while ensuring a fair distribution of costs and benefits (Hill and Bowen, 1997; Newman, 2006; Swilling and Annecke, 2006; Devereux, 2008; Scheinsohn and Cabrera, 2009). According to Dudziak (2007: 44), "social sustainability implies equitable access to learning and job opportunities, social mobility, social cohesion and justice, quality of life, participation, empowerment, and cultural identity based on self-confidence and a balance between innovation and tradition". Social sustainability thereby tries to ensure that the social well-being of society is given priority and further encourages educational development of individuals in society (Dudziak, 2007). Thus social sustainability entails "inclusion of all population groups through guaranteed access to education and lifelong learning, and the right to work" (Dudziak, 2007: 44).

Hill and Bowen (1997) further explained that the social principles of sustainable development include:

- The improvement of the quality of life, whereby basic needs such as food, health and education are maintained
- Social self determination and cultural diversity is taken into account.
- Protection of an individuals health, by developing a safe working environment.
- Encouraging capacity building and skills development amongst individuals, so as to ensure for the increase in public participation in decision-making.
- Social costs and benefits must be distributed evenly across society and fair representation of individuals must be taken into consideration.
- Encouragement of inter-generational equity, so that costs of present development are not passed onto future generations.

Social sustainability therefore takes into consideration the needs of current generations and the impact that present day practices may have on future generations. Most of the time, explanations regarding social sustainability separate the individual from the natural environment, however, this can not be done since the ability of an individual to perform to its full potential is determined by the environment it is situated in (Hill and Bowen, 1997; Selman, 2001; Goodland, 2002; Newman, 2006; Swilling and Annecke, 2006). This therefore relates to the approach of sustainable development, since one must acknowledge that in order to achieve total sustainability one must take a holistic approach, whereby the biophysical, social, economic, political and technical aspects society must be considered.

Advocates contend that social sustainability enhances an individual's social well-being and promotes equality (Lélé, 1991; Jacob, 1994; Doyle, 1998; Robinson, 2004). While it is easy to present hypothetical discussions about social sustainability, attempting to achieve this in reality, is very difficult. Although social sustainability attempts to promote equality, justice, improvement of basic livelihoods and social cohesion, there are a vast number individuals that are presently without access to basic necessities and who experience injustices (Brecher *et al.*, 2000; Banerjee, 2003; Wapner, 2003; McLennan and Farrelly, 2010). More than a billion people, especially in developing countries, such as South Africa, Ghana, Uganda and Liberia to name a few, lack access to safe drinking water, basic necessities and equal opportunities (Gleick, 1998; Mintz *et al.*, 2001; Gaffga *et al.*, 2007; McLennan and Farrelly, 2010). In addition, many critics argue that not being able to achieve total social sustainability is attributed to inexorable growth of corporate-driven,

market-oriented economic forces (Lélé, 1991; Yanarella, and Levine, 1992; Jacob, 1994; Doyle, 1998; Robinson, 2004; Smith, 2004). With strong emphasis on economic growth and market expansion, businesses are seen as powerful economic players and their interests are given priority above citizens (Lélé, 1991; Yanarella, and Levine, 1992; Jacob, 1994; Doyle, 1998; Robinson, 2004; Smith, 2004).

As a result of economic expansion of businesses in a global environment, many developing countries such as South Africa experience difficulties with regards to multinational corporations (Isaacs, 1997; Bond, 2008; Matten and Crane, n.d.). These conglomerates settle in developing countries and exploit many of the world's poor in order to expand economically (Isaacs, 1997; Bond, 2008; Matten and Crane, n.d.). Many critics of social sustainability argue that as a result of multinational corporations and the emphasis being placed on businesses to expand, considerable negative impacts are experienced by poor and marginalised individuals (Isaacs, 1997; Brecher *et al.*, 2000; Banerjee, 2003; Bond, 2008; Matten and Crane, n.d.). This economic expansion has further marginalized the poor sectors of society, undermining their basic human rights in terms of access to land, water, food, employment, other services, and thereby hindering the achievement of social sustainability (Brecher *et al.*, 2000; Banerjee, 2003; Wapner, 2003; McLennan and Farrelly, 2010). Thus Doyle (1998) and Brecher *et al.* (2000) emphasise that the gap between the rich and poor is constantly widening.

Originally, social sustainability was considered to include human capital and social capital, however, over time this notion has changed, as human capital has been related to economic sustainability, since upliftment of individuals are based on investments in the education and health sectors of society (Goodland, 1995, Hill and Bowen, 1997; Goodland, 2002; Newman, 2006; Swilling and Annecke, 2006; Devereux, 2008; Scheinsohn and Cabrera, 2009). This economic emphasis has weakened the achievement of social sustainability, since society is governed by the influence of economic expansion. The economic expansion of countries is a challenge to the achievement of social sustainability. Social capital is explained below as it is particularly relevant in considering social sustainability.

2.3.3 Social capital

An understanding of social capital which some refer to as moral capital is necessary to completely understand social sustainability. This concept of social capital will be discussed below.

Social capital is a concept describing how individuals are bonded together with respect to shared values and interests (Goodland, 1995; Bebbington and Perreault, 1999; Goodland, 2002; Selman, 2001). Falk and Kilpatrick (2000, cited in Selman, 2001) define social capital as involving social interactions based on a common purpose, in which individuals engage in to protect well-being. This can be further explained, whereby social capital involves the maintenance of shared values and rights in order to encourage for social sustainability. Goodland (2002) further explains that this common purpose and shared values is determined by reciprocity, tolerance, consideration, moderation, companionship and transparency, as well as ethics. Social capital therefore represents the connections of people with respect to their values so as to ensure for cohesion of shared interests within society, whilst at the same time achieving mutual benefits (Bebbington and Perreault, 1999; Goodland, 2002). By ensuring for fair representation of shared interests, social capital encourages people to become active in their everyday lives ensuring for fair representation (Bebbington and Perreault, 1999; Goodland, 1995; Goodland, 2002; Selman, 2001). However, problems arise from this definition, since even though social capital is aimed at enhancing active participation, Goodland (2002: 2) argues that social capital requires these shared values and equal rights based on religious and cultural interactions. Social capital involves equal distribution of benefits in society, whereby all individuals are considered and benefits are not concentrated in one specific group. Goodland (2002) further explains if there exists no harmony with regards to the above mentioned then social sustainability would decrease thereby creating inequalities in society. Social capital therefore attempts to decrease inequalities by creating an environment for everyone to interact equally.

Social capital arises from social cohesion between people, and thereby creates organisation and cooperation for mutual benefit (Goodland, 2002). Coetzee and Nomdo (2002) explain that social capital is created when individuals or households arrange themselves into one unit, be it temporary or permanent. This occurs because individuals form groups dependent on common association in an attempt to improve their quality of life. These associations also arise with respect to civil society, for example, rate payers associations, youth league movements or a sport clubs that form as a result of shared interests, values, trust and reciprocity (Coetzee and Nomdo, 2002).

Mitlin (1999, cited in Coetzee and Nomdo, 2002) argue that social capital does not always provide benefits, as there exists disadvantages for society. In this case, certain services

provided to society may not directly benefit certain members of society and may cause more harm than good. The argument provided here is that, social cohesion in groups can be exclusive or elitist and leave people out. For example, businesses may in fact adopt sustainable environmental methods only to discover that these methods may in fact result in negative consequences to the social environment (Coetzee and Nomdo, 2002). Coetzee and Nomdo (2002: 13) state that, "as such, social capital can serve to reinforce boundaries of inclusion and exclusion, affirm inequalities in participation or decision-making, and marginalise individuals or households". This can be observed with regards to the informal sector of society, where in most cases these groups are virtually ignored or disconnected from the decision making process. Social capital therefore attempts to eliminate any inequalities that may exist, by creating trust between society and the private sector, thereby enhancing community well-being (Coetzee and Nomdo, 2002). The degree of social capital experienced by individuals depicts the level of social sustainability achieved within society.

Social sustainability is a concept that is a holistic approach to sustainability, which is focused on providing benefits to communities as a whole with regards to improving the quality of life. Social sustainability creates a society that is socially aware of impacts that may result from inconsiderate actions. Social sustainability is not only focused on uplifting one individual, but it is focused on enriching many individuals with skills so as to sustain themselves for the future. The following section will provide an understanding of vulnerability and well-being as the degree to which an individual is vulnerable determines the level of social sustainability.

2.3.4 Vulnerability and well-being

Vulnerability and well-being are important concepts with respect to this research as they both are interrelated to the concept of social sustainability. The degree of social sustainability is in many ways dependant on the level of an individual's well-being and vulnerability. Furthermore, the level of an individual's well-being is dependant upon their degree of vulnerability.

Vulnerability has been defined as determining when an individual or group will be exposed or antagonistically affected by a risk (Chechile and Carlisle, 1991; Cutter and Solecki, 1996; Spiers, 2000; Coetzee and Nomdo, 2002; Bull-Kamanga et al., 2003; Hogan and Marandola, 2005; Lee, 2006; Horn, 2007; Jones et al., 2008; Hardoy and Pandiella, 2009).

Cutter and Solecki (1996) argue that vulnerability is a dynamic process, as it deals with environmental risk sources (spatially defined in terms of a hazard) in relation to societal reaction. Coetzee and Nomdo (2002: 30) define risk as; "the likelihood of a detrimental outcome as a result of a particular activity or event". Risks are not considered in terms of environmental risks, however, risks can be explained in terms of social well-being (Chechile and Carlisle, 1991; Coetzee and Nomdo, 2002; Bull-Kamanga *et al.*, 2003; Lee, 2006; Jones *et al.*, 2008). Risks can be termed as chronic (small-scale, long-term exposures) and acute (large-scale, short-term events) (Schwing, *et al.*, 1980; Krimsky and Golding, 1991; Cutter and Solecki, 1996; Smith, 1996; Bull-Kamanga *et al.*, 2003; Scott and Oelofse, 2005; De Sherbinin *et al.*, 2007; Hardoy and Pandiella, 2009).

Thus the level an individual is exposed to a certain adversity affects one's level of social sustainability (Cutter and Solecki, 1996; Smith, 1996; Spiers, 2000; Coetzee and Nomdo, 2002; Hogan and Marandola, 2005). Individuals in close proximity to a particular development are vulnerable to exposure to fumes (toxic and non- toxic), noise and dust (Cutter and Solecki, 1996; Hogan and Marandola, 2005; Horn, 2007; Hardoy and Pandiella, 2009). It is mostly the poor and marginalised groups that are at greater risk (Coetzee and Nomdo, 2002; Blowers and Hinchliffe, 2003). At its core, "the concept of vulnerability implies a measure of risk combined with the level of social and economic ability to cope with the resulting event" (Smith, 1996: 25). However, Timmerman describes vulnerability at a society level as: "the degree to which a system, or part of a system, may react adversely to the occurrence of a hazardous event" (Smith, 1996: 25).

Moser (1996, cited in Coetzee and Nomdo, 2002) highlights the relationship between vulnerability and well-being and states that vulnerability is dependent on the variations of well-being in a changing environment. Well-being in terms of environmental concerns has been at the forefront of many debates. O'Neill (1993: 1) describes well-being as: "characterised in terms of the satisfaction of wants or preferences- the stronger the preference satisfied, the greater the well-being". Well-being is thus determined by the accommodation of environmental problems (Fadda and Jirón, 1999; O'Neill, 1993; Lee, 2006; Wackernagel *et al.*, 2006; Aguilar and De Fuentes, 2007; Holden and Linnerud, 2007; Jones *et al.*, 2008; van Zeijl-Rozema *et al.*, 2008). However, the level of well-being, with regards to the market, is dependent upon how much a person would pay in order to achieve satisfaction, whereas a non-market view would state that well-being is determined

by an improvement in services for an individual, be it education related or simply living within an environment that is not considered harmful (O'Neill, 1993).

The reality is that, ideal markets are non-existent and the exponential growth of people and the result of globalization, has resulted in many individual's well-being being affected. Utilitarian's on the other hand explain that well-being should be conceptualized in terms of utility (Griffin, 1986). Utility can be described as resulting in pleasure and the absence of pain, whereby an individual's desire is fulfilled (Griffin, 1986). Griffin (1986) further explains that well-being consists of basic needs and desires, however, Griffin (1986) stresses that needs have precedence over desires. Individuals needs outweigh desires, since needs are considered as achieving certain outcomes of an individual to survive. Needs can be classified as instrumental and basic needs, instrumental needs are defined as the needs an individual acquires as a result of an end and basic needs are defined as the needs for achieving essential human livelihoods (Griffin, 1986; Dobson, 1990; Dryzek, 1992; Ekins, 1992).

Coetzee and Nomdo (2002) argue that well-being can be explained in terms of a continuum. On one end of the continuum, well-being is explained as a state that is very vulnerable to changes in the urban environment while on the other end, well-being is explained as a state that is resilient to the changes in the environment (Coetzee and Nomdo, 2002). In this case, vulnerability and well-being are discussed with reference to households and livelihoods. In terms of households, the level of vulnerability is determined on the basis of a collective set of individuals in a given household and this can be explained in developing countries (Coetzee and Nomdo, 2002). Households can be described by levels of production, consumption and distribution and it is within this framework that livelihood is highlighted. Accoding to, De Satge (2002, cited in Coetzee and Nomdo, 2002: 10) a, "livelihood comprises the capabilities, assets (including both material and social resources) and activities required for the means of living. A livelihood is sustainable when it can cope with and recover from shocks and stresses and maintain and enhance its capabilities and assets both now and in the future, whilst not undermining the natural resource base". It can therefore be explained that an individual's or a household's livelihood, is determined by the level of vulnerability, as different livelihoods cope differently with respect to the changes in the environment.

Coetzee and Nomdo (2002), further explain that livelihood is dependent on an individuals or households access to assets. It is important to state that social responsibility programmes developed by a resource extraction industry, namely; Lafarge Mining South Africa and its Ridgeview Quarry, provide individuals and specifically in this case communities with assets to improve their living conditions, thereby encouraging social sustainability. It is explained that in order for an individual or household to sustain their livelihood, these assets need to be maintained (Coetzee and Nomdo, 2002). Moser's (1996) classification basically explains that vulnerability is decreased when households or individuals change their assets into a form of income, thereby sustaining their livelihood (Coetzee and Nomdo, 2002). Moser (1996, cited in Coetzee and Nomdo, 2002) classifies assets into labour, human capital, productive assets, social capital and household relations. Vulnerability is at its greatest when these assets are depleted, resulting in an individuals level of well-being being affected. As a result, companies who seek greater social responsibility try to adopt mechanisms that are socially acceptable and which increase resilience and this further creates a need for corporate social responsibility and increasing social sustainability.

Thus the greater the vulnerability of an individual, the greater the impacts of a development on that individual's level of well-being, however, if the vulnerability is low, the impacts on well-being are minimal (Coetzee and Nomdo, 2002; Lee, 2006; Wackernagel *et al.*, 2006; Holden, and Linnerud, 2007; Horn, 2007; Jones *et al.*, 2008; Hardoy and Pandiella, 2009). Because vulnerability can be linked to an individual's ability to cope, this is an area in which building capacity through social responsibility programmes can be helpful in decreasing vulnerability and thereby enhancing social sustainability.

Thus the concepts illustrated above, such as vulnerability and well-being were important to examine in this research, as an individual's level of vulnerability and well-being determines the degree of social sustainability. Social sustainability can be explained as one of the pillars of sustainable development and is therefore believed to have evolved as a result of ethical awareness. Social sustainability involves social capital and is therefore about creating a social environment for individuals to improve their quality of life, while ensuring a fair distribution of costs and benefits (Hill and Bowen, 1997; Newman, 2006; Swilling and Annecke, 2006; Devereux, 2008; Scheinsohn and Cabrera, 2009). The following sections of this chapter Section 2.4 and 2.5 will explain the two principles that are important for social sustainability, namely social justice (equity) and public

participation. Addressing the concept of social justice (equity) and public participation in this study allows for the evaluation of the contribution to social sustainability by social responsibility programmes.

2.4 Social justice

Social justice is one of the main principles of the concept of social sustainability. This discussion explains the principle of social justice with respect to its significance when establishing sustainability. This principle underpinning social sustainability is important when issues related to any type of development, for example Lafarge Mining South Africa and its Ridgeview Quarry, become prevalent with respect to their social contribution to society. In these cases, it is useful to evaluate whether practices produced by developments, such as Lafarge Mining South Africa and its Ridgeview Quarry, are socially 'just'. The section highlights key definitions of the concept and further provides explanations as to how this concept relates to the research.

Foundational to social justice is the concept of justice. Justice is a moral principle of fairness and promotes the concept of equity. Justice is fairness and can be considered as morality of social organisation (Vanderschueren, 1996; Rawls, 1997; Fraser, 1997; Hermans and Knippenberg, 2006; Scheinsohn and Cabrera, 2009). There are two principles of justice. According to Rawls (1997), the first principle is that everyone is entitled to the same amount of rights while the second principle proposes that inequalities are good only if the marginalised benefit. Actions are considered to be just when they bring about just affairs or when outcomes are desirable. Justice can be explained when benefits and burdens are distributed equally (Miller, 1976). It can also be explained in terms of aggregative and distributive political principles. An aggregative principle is when a 'good' is enjoyed by a group, whereas distributive principles are when everyone in a group enjoys a 'good' (Miller, 1976). Justice occurs when every individual has benefits and burdens that are a result from their own actions and characteristics (Miller, 1976). Justice also encompasses what is known as legal justice, this occurs when a certain action is punishable, this is due to the nature of that action and it also allows for the law to be enforced in order to allow fairness (Miller, 1976). Thus the concept of justice, therefore allows for the principle of social justice to flourish and will be elucidated below.

As with justice, social justice, simply put can be explained as the equal distribution of benefits and burdens within society and deals with issues such as the protection of people's

rights, equity, welfare, legal system and housing (Harvey, 1973; Miller, 1976; Robins and Kumar, 1999; Eade and Mele, 2002; McDonald, 2002; van Vliet, 2002; Smith, 2004; Oelofse, 2005; Gray, 2007). Social justice allows for order, fairness and the eradication of unsustainable methods, in order to allow for more orderly and just relationships (Eade and Mele, 2002; McDonald, 2002; van Vliet, 2002; Winton, 2004; Oelofse *et al.*, 2005; Kjellstrom and Mercado, 2008). Social justice aims at equally distributing rights, opportunities and resources between people (Robins and Kumar, 1999; Carter, 2001; van Vliet, 2002; Winton, 2004; Smith, 2004). In relation to the case study the Ridgeview Quarry, even though it provides a service to society, does not do so without negative consequences. These consequences or social and bio-physical problems can be explained as existing in areas located in proximity to developments, thereby resulting in uneven distribution of costs and benefits within society (Blowers and Hinchliffe, 2003; Smith, 2004). In effect individuals located in close proximity experience injustice, which introduces us to the concept of equity.

Equity forms an integral part when an explanation is offered in addressing social justice. Equity can be described as encouraging fairness and ensuring for equal and fair representation (Beder, 2000; van Vliet, 2002; Kjellstrom and Mercado, 2008; Muller, 2008). There are four types of equity that exist, namely; inter-generational equity, intra-generational equity, geographical equity and lastly procedural equity (Heywood, 1999; Haughton, 1999). Inter-generational and intra-generational equity were explained in Section 2.2.3. Geographical equity, commonly referred to as transfrontier responsibility is the implementing of local policies that are geared to solving global problems (Haughton, 1999). One common local policy is the 'Polluter pays principle', where the polluter pays any cost that was caused by their actions (Haughton, 1999). Finally, procedural equity, commonly referred to as procedural justice, relates to the regulatory systems that are put in place which encourage fair and open representation of all people. This type of equity embraces the concept of public participation, as it ensures for equal access to information as well as fair representation (Haughton, 1999; Heywood, 1999). In addition to equity, social justice encompasses two types of equality, namely; formal and legal equality. Formal equality is where people should be treated equally by rules of social practices (Heywood, 1999). However, people may not have the same wealth and status as everyone else and this is what justice should look beyond. Legal equality is whereby government and rules are exercised in society and substantive equality is where people should start at one level, so the future will be more prosperous (Heywood, 1999).

The nature of modern society is seen to value and emphasise the centrality of the individual. Individualism is an important aspect or element in modern societies, as emphasis is placed on the individual and the freedom of qualities and access to assets (Heywood, 1999). In society today value is attached to the individual and the individual is given special salience. However, it must be highlighted that effects resulting from development are not always distributed evenly across society and that people who are less advantaged are often the ones that have to bare the burden of negative results. It can be said that there exists a divide between the rich and the poor. It is for this reason that social and environmental justice has been brought to the forefront, in order to achieve social sustainability.

It is believed that in most cases, people with little political power are those that are most affected by environmental problems (Satterthwaite, 1992; Hardoy *et al.*, 2001, Gray, 2007). It is these people who lack the opportunity to acquire basic needs, such as a safe living environment and are thereby forced to settle in areas close to developments, such as a quarry (Brecher *et al.*, 2000; Banerjee, 2003; Blowers and Hinchliffe, 2003; Wapner, 2003; McLennan and Farrelly, 2010). The individuals located in close proximity to the Ridgeview Quarry depict this, as individuals living in close proximity to the quarry are considered as coming from low-economic backgrounds. The social justice principle attempts to enhance democratic procedures, so as to ensure that the poor are not marginalised or completely ignored (Blowers and Pain 2001 in Scott and Oelofse, 2005). Thus Marsh and Oelofse (1998, cited in Scott and Oelofse, 2005: 11) further define social justice as; "a normative discourse which therefore promotes the most vulnerable and marginalized groups in society that have suffered from historical forms of exploitation and neglect". This definition explains social justice with respect to social space, as it examines the relationship that exists between individuals, and individuals and their environment. Social space cannot be explained as uniform and certain communities in urban areas have different levels of living, resources, political power and different interests (Scott and Oelofse, 2005).

For this instance, there exists a hierarchy in society, where divisions occur as a result of social and economic unevenness. Thus it can be explained that people in certain areas lack proper facilities and resources and thereby lack choices to escape these externalities (Marsh and Oelofse, 1998 cited in Scott and Oelofse, 2005). Thus social justice attempts to create a social space that allows for fair and equal interactions, thereby distributing benefits evenly

throughout society. Social justice attempts to create a 'common ground' for every individual in society, by promoting equality and thereby contributing to social sustainability. Many theorists for this matter, explain social justice as avoiding social crisis by taking into account economic and social relations, which is opposed to ecological modernisation, which favours technical solutions over social equity (Scott and Oelofse, 2005). In principle the concept of social justice seems favourable but questions arise as to the degree to which this is being achieved, especially in South Africa as the basic needs of the majority of people are still not being met (Gleick, 1998; Brecher *et al.*, 2000; Mintz *et al.*, 2001; Banerjee, 2003; Blowers and Hinchliffe, 2003; Wapner, 2003; Gaffga *et al.*, 2007; McLennan and Farrelly, 2010).

During apartheid, millions of black people were forcefully removed to inferior areas, close to industrial developments and this contributed to further racial oppression (Peffer, 1990; Davenport, 1991; Hendler, 1991; Isaacs, 1997; McDonald, 2002; Bond, 2008; Matten and Crane, n.d). In addition, black South Africans were restricted to areas that had limited services and had no access to equal opportunities (Peffer, 1990; Davenport, 1991; Hendler, 1991; Isaacs, 1997; McDonald, 2002; Bond, 2008; Matten and Crane, n.d). Although apartheid was abolished and a new democratic government has been adopted, these social injustices are still felt presently (Smith, 2004). Smith (2004) elaborates that there are formidable obstacles in achieving progress towards social justice. Take for example, the issue of a quarry, developments such as these exist in areas where people struggle financially and have less political influence. Injustices are socially and spatially explained and the equal distribution of costs and benefits are often equal and comparative to the distribution of money (Davenport, 1991; Isaacs, 1997; Low and Gleeson, 1998; McDonald, 2002; Bond, 2008). As Low and Gleeson (1998: 104) have suggested, "these distributions which are highly variegated in socio-cultural and spatial terms interact to produce a diverse and shifting landscape of ecological politics". This can be seen in the cases of many developments and in this particular study, a quarry. It is the poor income groups that have to bear the brunt of impacts resulting from residing in close proximity to these developments. Social space is not homogenous and communities in urban areas have different levels of living, resources and political power (Brecher *et al.*, 2000; McDonald, 2002; Banerjee, 2003; Scott and Oelofse, 2005; Bond, 2008; McLennan and Farrelly, 2010). Thus it can be explained that people in certain areas lack proper facilities and resources and thereby lack choices to escape these externalities (Marsh and Oelofse, 1998 cited in Scott and Oelofse, 2005).

Although achieving a 'socially just society' is a favourable vision, accomplishing total social justice is a challenge. Presently, society is influenced by economic growth and market expansion and this impacts on the degree to which social justice is being achieved. In principle, realising social justice is very possible, but in reality an individual's well-being is influenced by market forces (Lélé, 1991; Yanarella, and Levine, 1992; Doyle, 1998; Robinson, 2004; Smith, 2004). Furthermore, society is characterised by uneven distribution of rights and resources and the degree to which social justice is being achieved is restricted. Thus a hierarchy exists in society, as certain individuals are favoured over others (Brecher *et al.*, 2000; Banerjee, 2003; Wapner, 2003; Smith, 2004; McLennan and Farrelly, 2010).

Social justice is a very significant concept used to underpin concern for the degree to which benefits are distributed within society as a whole. Social justice is a moral concept, which is aimed at creating awareness within society so as to ensure that unwanted and negative actions resulting from individuals are dealt with in a sustainable approach. Furthermore, it provides an understanding of the social well-being of people and illustrates how certain actions affect the rights and liberties of people. Adopting social justice as a principle seems like a favourable option, where benefits are evenly distributed throughout of society and equality is enhanced. However, in reality there are obstacles that hinder its realisation in society (Brecher *et al.*, 2000; Banerjee, 2003; Wapner, 2003; McLennan and Farrelly, 2010). Public participation is the second principle of sustainable development, which links directly to social sustainability and will be explained below.

2.5 Public participation

Public Participation is considered as one of the core concepts that form a foundation of sustainable development and particularly, social sustainability. As such, public participation is important in considerations of the contribution to corporate social responsibility to social sustainability. Public participation is intertwined with social justice, since for a development, such as Lafarge Mining South Africa and its Ridgeview Quarry, to be considered as socially just, the degree of inclusiveness of individuals within the decision-making process is essential for determining the level of social sustainability achieved. The following section discusses prominent conceptualisations of public participation.

Participation in a sustainability context is understood as actions and processes which enable participants to choose and interact in the decision-making process (Arstein, 1969;

Cole, 1975; Campbell and Marshall, 2000; Kasemir *et al.*, 2003, Bond and Thompson-Fawcett, 2007; Head, 2007; Paterson, 2008). Public participation is characterised as embracing a political implication, whereby power is given to the public to proactively participate in the decision making process, which forms the basis for mobilisation and empowerment (Arstein, 1969; Choguill, 1996; Wondolleck *et al.*, 1996; Head, 2007; Paterson, 2008). When power is given to the public, this is referred to as 'citizen power' (Arstein, 1969; Choguill, 1996; Wondolleck *et al.*, 1996).

Overall, public participation is intended to allow for the empowerment of individuals to interact in the decision-making process, especially in the context of social vulnerability (Arstein, 1969; Campbell and Marshall, 2000; Kasemir *et al.*, 2003, Head, 2007; Paterson, 2008). As a result of increased democracy, citizens are now educated about their rights and social responsibility and are in some cases considered equal partners in the decision-making process (Wondolleck *et al.*, 1996). However, Wondolleck (1996) explains that participation in decision-making is a two-edged sword. Thus although citizens are provided with the ability to participate, this does not always result in benefits. Wondolleck (1996) furthermore, explicates that citizens are now faced with pressures to critically analyse alternatives and this results in citizen groups challenging government agencies and industries (Wondolleck, 1996).

The level of inclusion of individuals within the decision-making process is attributed to South Africa's spatial engineering, during the apartheid era (Peffer, 1990; Isaacs, 1997; McDonald, 2002; Bond, 2008). During the apartheid era, South Africa's spatial engineering was the result of the segregation of people into different areas, as people were classified into different race groups (Isaacs, 1997; McDonald, 2002; Bond, 2008). Apartheid was used as a mechanism to regulate economic activities and social interactions on a racial basis. During the apartheid era, many blacks were removed from their lands and relocated in areas that were less productive and more polluted (Isaacs, 1997; Brecher *et al.*, 2000; McDonald, 2002; Wapner, 2003; Bond, 2008). Existence of a hierarchical arrangement was clearly evident, as whites were at the top of the hierarchy and were located in developed areas, whereas blacks were at the bottom of the hierarchy and located in less developed areas (Isaacs, 1997; Brecher *et al.*, 2000; McDonald, 2002; Wapner, 2003; Bond, 2008). Thus during apartheid, social and bio-physical issues were based on racial segregation (McDonald, 2002; Bond, 2008). Furthermore, during the apartheid era, laws were passed in order to reduce the power of blacks, as a consequence, blacks were not

allowed to participate in the decision making process (Isaacs, 1997; McDonald, 2002; Bond, 2008). These effects of the past are still felt in the present, as many South Africans, especially previously disadvantaged communities, are still experiencing inequalities in decision-making.

According to Innes and Booher (2004) there are five reasons for participation to occur. The first reason is to acknowledge the public's interest with regards to decision-making; the second reason is to integrate citizen's knowledge so as to improve decision; the third reason is to promote fairness and justice; the fourth reason is to enhance legitimacy in decision and the fifth reason is that it is seen as a requirement by law to create opportunities for public participation. Thus public participation ensures for collaborative involvement, whereby the disadvantaged are provided with the opportunity to engage in the decision-making process (Innes and Booher, 2004). Innes and Booher (2004) explain that collaborative participation has resulted in decreasing discrimination and enhancing social capital. Collaborative participation therefore decreases the need to choose between individual and collective interest, because individual interest results in collective interest (Innes and Booher, 2004; Godschalk *et al.*, 2003). If one individual is faced with an issue, the individuals view is taken into consideration and is acted upon with respect to the decision-making process (Innes and Booher, 2004; Godschalk *et al.*, 2003). Following this explanation of participation, Arnstein provides an understanding of citizen participation and makes reference to the Ladder of Citizen Participation (see Figure 2.2). Figure 2.2 explains the eight 'rungs' of participation.

According to Arnstein (1969), citizen participation is referred to as citizen power. This basically implies that those that were socially excluded, referred to as 'have-not citizens', are now given power and are socially included to participate, thereby facilitating a more equal distribution of benefits (Arnstien, 1969). Arnstein (1969), with reference to the figure (2.2) below, makes reference to eight 'rungs' of participation on a Ladder of Citizen Participation, ranging from manipulation, therapy, informing, consultation, placation, partnership, delegated power, to that of citizen control. These eight rungs are grouped into three types of participation. These types of participation include; non-participation, tokenism and citizen power.

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        ┌─────────────────────────┐
        │      Citzen control      │
      8 ├─────────────────────────┤  ⎤
        │     Delegated power      │  ⎬  Degrees of citizen power
      7 ├─────────────────────────┤  ⎭
        │       Partnership        │
      6 ├─────────────────────────┤  ⎤
        │        Placation         │  │
      5 ├─────────────────────────┤  ⎬  Degrees of tokenism
        │       Consultation       │  │
      4 ├─────────────────────────┤  ⎭
        │        Informing         │
      3 ├─────────────────────────┤  ⎤
        │        Theraphy          │  ⎬  Nonparticaption
      2 ├─────────────────────────┤  ⎭
        │       Manipualtion       │
      1 └─────────────────────────┘
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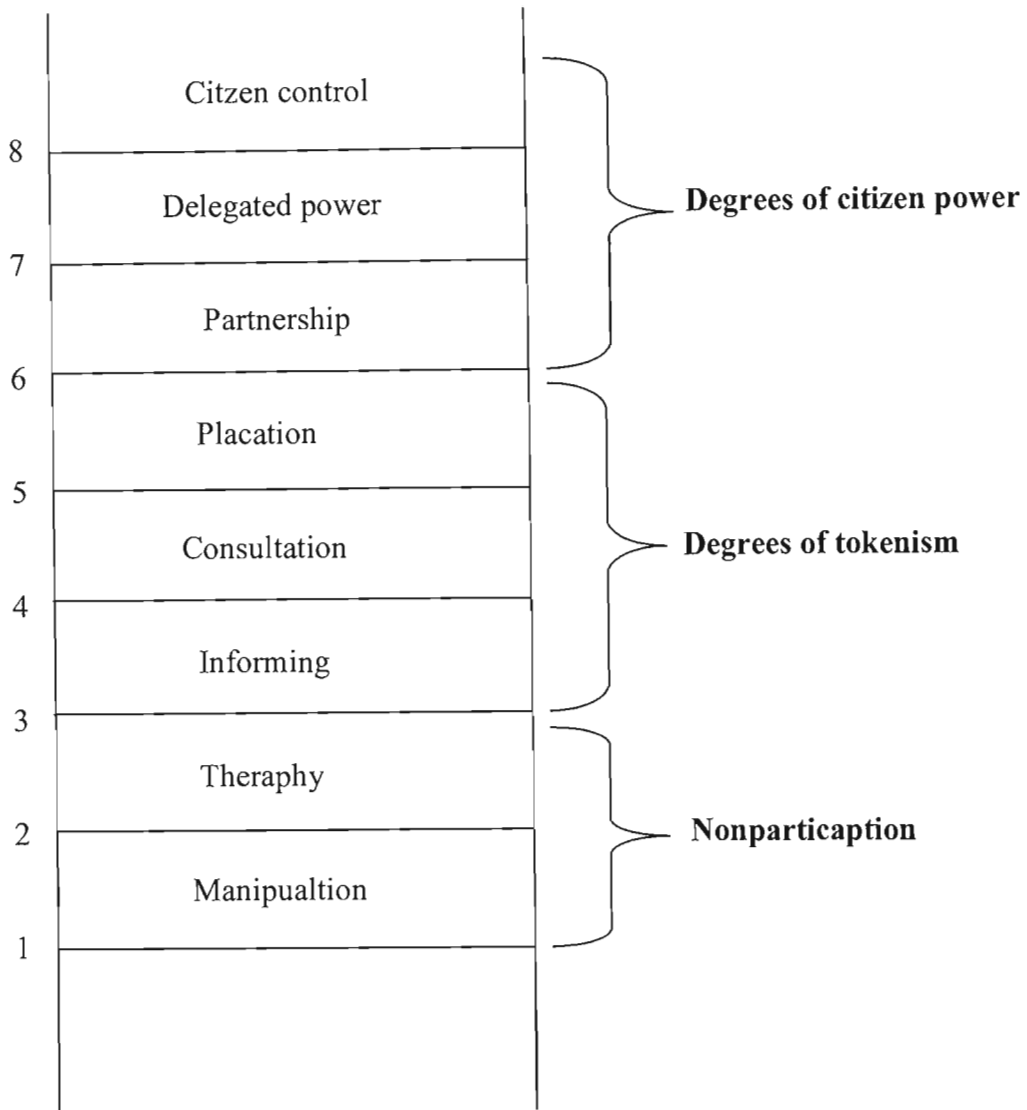
Figure 2.2: The Ladder of citizen participation

Source: Arnstein (1969: 217)

Arnstein (1969) explains 'non-participation' as consisting of manipulation and therapy. This is where the least public participation occurs and where power is taken away from the citizens and given to powerholders. In the first rung, namely manipulation, citizens are positioned, for example, in advisory committees in order to educate citizens to gain increased support for the powerholders (Arnstein, 1969). At this level citizens have the least power and power is capitalised by powerholders in society. The second rung, therapy, entails what Arnstein (1969) describes as 'dishonest' and 'arrogant' participation, where there is an assumption that the powerless are mentally incapable of making decisions. Arnstein (1969: 218) explains that at this level inequalities are exacerbated such that, "what makes this form of participation so invidious is that citizens are engaged in

extensive activity, but the focus of it is on curing them from their pathology rather than changing the racism and victimization that create their pathologies".

Alternatively, 'tokenism' is described as consisting of informing, consultation and placation. Slightly different to that of the non-participation, this level of participation, allows for the 'have-not' citizens to be heard, however, there is no guarantee that their views will be taken into account when decisions are made (Arnstein, 1969). The third rung, informing, maintains the idea of making citizens aware of their rights with regards to citizen participation (Arnstein, 1969). This level of participation is characterised by a one-way flow of information from officials to citizens and that there is no room for negotiation (Arnstein, 1969). The fourth rung of the ladder, consultation, allows for the opinion of citizens to be considered when decisions are made, however, these opinions may not be taken into consideration by the powerholders (Arnstien, 1969). Arnstien (1969: 219) further explains that "when powerholders restrict the input of citizens' ideas solely to this level, participation remains just a window dressing ritual". The fifth rung, placation, ensures that citizens have some power in the decision-making process, since certain individuals are selected and their opinions are taken into consideration (Arnstien, 1969).

Lastly, Arnstein (1969) describes another form of participation as 'citizen power', which comprises of partnership, delegated power and citizen control. This level ensures for citizens to participate actively and allows for 'have-not citizens' to have most power in the decision-making process. The sixth rung of the ladder, partnership, emphasises the negotiation of power between citizens and powerholders (Arnstein, 1969). Simply explained, this level allows for citizens and powerholders to share decision-making responsibilities, thus giving citizens some degree of power (Arnstein, 1969). The seventh rung, delegated power, increases the power or influence citizens have on decision-making (Arnstein, 1969). Arnstein (1969: 222) explains this as: "at this level, the ladder has been scaled to the point where citizens hold the significant cards to assure accountability of the program to them". The eighth rung and highest part of the ladder, citizen control, enhances the power of citizens, as it provides citizens with most power to actively engage and have control of the decision-making process (Arnstein, 1969).

Beyond Arnstein's (1969) ladder of participation, White (1996) theorises that participation should be viewed in terms of politics and provides a model for participation. White (1996) argues that there are two important components with regards to a politics of participation;

namely 'who participates' and the 'level of participation'. In terms of 'who participates', citizens are not considered as uniform beings but rather as beings that are constantly changing and evolving. However, with respect to the 'level of participation', citizen involvement should extend from implementation to that of management and decision-making. White (1996) further argues that both these components are important but are not executed well enough.

White (1996) further highlights that dynamics of participation exist, whereby interests are shown with regards to 'forms', 'top-down', 'bottom-up' and 'functions' of participation. These four categories of participation in decision-making are summarized in Table 2.2 below and will be discussed further in the following paragraphs.

Table 2.2: Categories of participation
Source: White (1996: 7)

FORM	TOP-DOWN	BOTTOM-UP	FUNCTION
Nominal	Legitimation	Inclusion	Display
Instrumental	Efficiency	Cost	Means
Representative	Sustainability	Leverage	Voice
Transformative	Empowerment	Empowerment	Means/Ends

The first column examines the 'form' of participation. Under this column, White (1996) categorises four types of participation in decision-making, namely; Nominal, Instrumental, Representative and Transformative. Nominal participation occurs when groups, for example women's groups, are formed and inclusion is based on legitimation of involvement (White, 1996). People involved in these types of participation claim they are in a group but rarely attend meetings, however, over a period of time they offer their inputs and the main function of this group is to display their involvement (White, 1996). Instrumental participation results when there is a decrease in government funding for infrastructure and where public participation serves as a way for gaining labour force pertaining to a particular project (White, 1996). The function of this participation is explained as relating to efficiency and costs, since contribution made through funding enhances the public's participation. The public in this instance invest a lot of time within a certain project, thus funding acts as an incentive for participation (White, 1996).

Representative participation occurs when local people form their own groups and enhance their rights and responsibilities (White, 1996). The function of this participation is explained as providing a 'voice' to its participants so as to ensure for sustainability (White, 1996). Transformative participation describes participation as a form of empowerment, whereby citizens are given a chance to develop practical knowledge with regards to making decisions and collectively fighting against any injustice (White, 1996).

The second column displays the interests in participation from 'top-down'. Simply put, White (1996) explains that with the 'top-down' approach, legitimation, efficiency, sustainability and empowerment concepts are related to each other and are represented within this dynamic. This explains the relationship between those that implement development programmes with those that participate. Legitimation deals with the implementation of policies and laws set by the government, which act as a foundation for public participation (White, 1996). Efficiency is described as the arrangement of processes at government level that promote good organisation for effective participation (White, 1996). Sustainability encompasses a holistic involvement in participation, this involves an active involvement, whereby all stakeholders are equally included (White, 1996). Lastly, empowerment is when 'outsiders' work in conjunction with the poor, in order to improve participation and quality of life (White, 1996).

The third column explains the 'bottom-up' perspective. This dynamic involves, inclusion, cost, leverage and empowerment (White, 1996). The 'bottom-up' perspective, allows participants to evaluate their roles in the participation process and allows them to examine outcomes that may arise from this process (White, 1996). Inclusion ensures that all stakeholders especially the community are provided with an equal chance of participating in decision-making (White, 1996). Cost deals with making certain that no external costs are incurred by the members of community (White, 1996). Leverage provides stakeholders and specifically members from the community with power and control over the decision-making process (White, 1996). With respect to empowerment, action is promoted from the 'grassroots' level, outsiders are only able to facilitate and power in decision-making is given to the individuals from the community (White, 1996).

The last column 'function' characterises the function of each type of participation, which include, display, means, voice and means/ends components. Display is a way that individuals show their involvement within the decision-making process (White, 1996).

Means ensures that certain resources are made available to stakeholders, in order to prevent costs (White, 1996). Voice, allows for individuals to be heard thereby enhancing social upliftment (White, 1996). Lastly, means/ends creates opportunities for individuals to participate within the participation process thereby allowing them to improve their quality of life by achieving better outcomes (White, 1996). The Department of Environmental Affairs and Tourism (DEAT), in South Africa provides a further understanding of public participation.

The Department of Environmental Affairs and Tourism, replaces the term public participation with that of 'stakeholder engagement' (DEAT, 2002). As a result of increased democratic governance the need for citizens to engage in the decision-making process has become amplified (DEAT, 2002). The benefits of increasing engagement of individuals allows for transparency in decision-making which is essential with respect to sustainable development (DEAT, 2002). Canter (1996, cited in DEAT, 2002: 6) provides a detailed description of public participation as:

> "a continuous, two-way communication process which involves promoting full public understanding of the processes and mechanisms through which environmental problems and needs are investigated and solved by the responsible agency; keeping the public fully informed about the status and progress of studies and implications of project, plan, programme, or policy formulation and evaluation activities; and actively soliciting from all concerned citizens their opinions and perceptions of objectives and needs and their preferences regarding resource use and alternative development or management strategies and any other information and assistance relative to the decision".

In many instances, public participation extends to the empowerment of people through shared responsibility and joint – decision making. At best, public participation is considered as a bottom up approach, as opposed to a top down approach, since it is focused on establishing a relationship of engagement with the public (DEAT, 2002). However, there are also problems that are associated with stakeholder engagement, such as: poorly administered stakeholder engagement process; costly delays; sensitive information and certain individuals may be doubtful or cautious about engaging (DEAT, 2002). The Department of Environmental Affairs and Tourism explains that public participation occurs as a spectrum of levels of decision-making and illustrates that engagement between stakeholders increases along the spectrum (DEAT, 2002) (see Figure 2.3).

Figure 2.3 illustrates the stakeholder engagement spectrum, which consists of different levels of engagement, including Protest, Inform, Consult, Collaborate and Empower. Protest occurs when interested and affected parties affect the decision-making process, which is a result of a failure in relationships (DEAT, 2002). Informing occurs when proponents provide information to stakeholders and where interested and affected parties are provided with a chance to understand issues brought about during the decision-making process (DEAT, 2002). To Consult entails discussion of information between stakeholders in order to raise concerns (DEAT, 2002). Involvement ensures that stakeholders are actively involved in decisions made within the decision-making process (DEAT, 2002). Collaboration involves a compromise, whereby stakeholders take all views into account, thereby reaching a consensus. Lastly, Empower refers to active involvement by citizens to develop and adopt skills presented within the decision-making process (DEAT, 2002).

One-way information flow

Information exchange

| Protest | Inform | Consult | Involve | Collaborate | Empower |

Increasing Level of Engagement
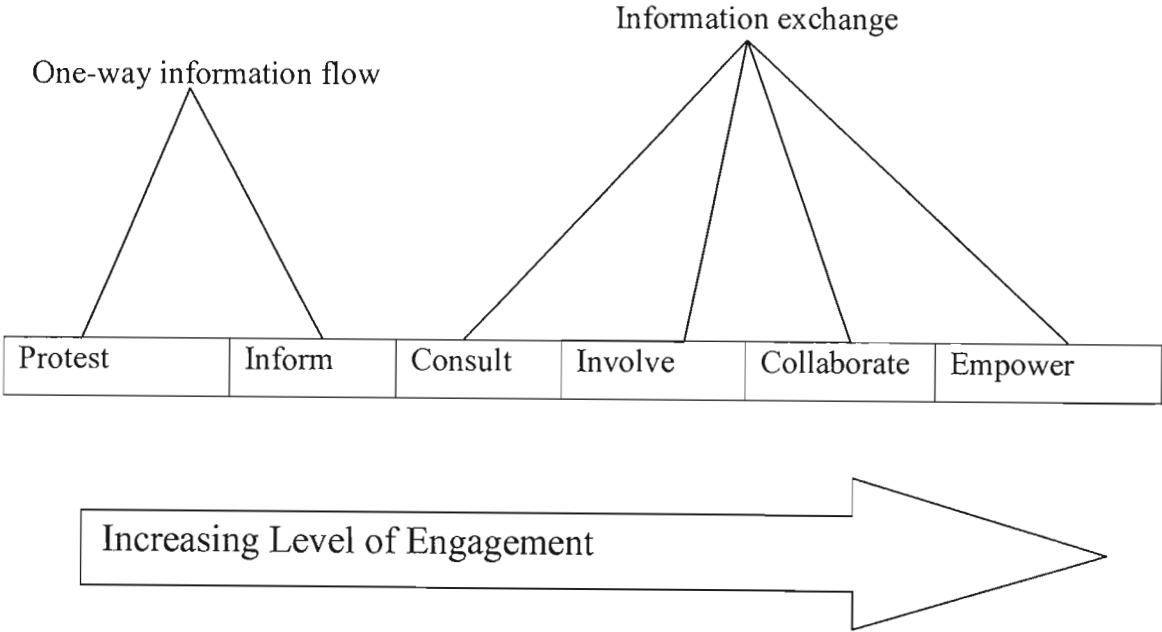
Figure 2.3: Stakeholder engagement spectrum
Source: DEAT (2002: 7)

Public participation is an important concept with regards to sustainable development as an individual's level of well-being is solely determined by that individual's inclusion within the decision-making process. Arnstein's ladder of participation and Department of Environmental Affairs and Tourism's explanation of public participation proves to be important when discussing this concept as it explains the different types of participation. Public participation in relation to social sustainability also includes consideration of the direct and indirect impact of a company's activity on its stakeholders. Social sustainability

is therefore: "achieved only by systematic community participation and strong civil society" (Goodland, 1995: 3). Social sustainability therefore requires active participation with regards to the decision-making process. However, public participation cannot be explained without addressing the inequalities that currently exist in society, as many individuals are still marginalised with regard to the decision-making process.

2.6 Conclusion

This chapter has presented a framework for understanding corporate social responsibility activities in the resource extraction industry in terms of its contribution to social sustainability. One of the fundamental theories that frame the research is sustainable development. Sustainable development has become imperative when dealing with issues that surround developments and their impacts and contributions towards community. The environment is no longer considered as having no value to society and emphasis is now placed on individuals to act in a sustainable manner with regards to their actions towards the social, economic, bio-physical, political and technical aspects. Sustainable development maintains the idea of managing and promoting equity throughout society in order to maintain a balance between these aspects. Yet, achieving sustainable development is very complicated as explained in this chapter, since there are many factors, such as social inequalities that hinder its development. Although sustainable development provides pillars and principles in achieving social justice (equity) and encouraging non-detrimental development, a large proportion of people around the world still live without access to basic necessities (Brecher *et al.*, 2000; Mintz *et al.*, 2001; Banerjee, 2003; Blowers and Hinchliffe, 2003; Wapner, 2003). As a result, it is the poor and marginalized individuals, who are impacted the most. Thus accomplishing sustainable development in theory is very possible, but in practice it is difficult to achieve.

Another significant theory that was explored in the research was social sustainability. Social sustainability was used in this research in order to understand the importance of maintaining and promoting equity and encouraging active participation within society with respect to future generations. Social sustainability is significant when issues relating to any type of development become prevalent with respect to their social contribution to society by eliminating unsustainable methods (Carter, 2001; Oelofse *et al.*, 2005). Thus broadly explained social sustainability encourages the empowerment of individuals to participate within the decision making process (Agyeman and Evans, 2003). Furthermore, social sustainability can be explained as a fundamental building block in achieving sustainable

development and improving the quality of life (Hill and Bowen, 1997). Similar to sustainable development, the total achievement of this principle cannot be realised, since there are issues of governance, distribution of power and politics within society. Due to the unequal distribution of power in society, business interests are prioritised over citizens' interests. This is evident within this research, as individuals located in close proximity to a development, such as the quarry, are impacted upon.

Two imperative principles of sustainable development were explored in this research, namely social justice (equity) and public participation. Social Justice is a concept that determines whether practices are operating justly and fairly. This concept is very important as it determines the distribution of equity and benefits within society. As explained in this chapter, social justice has many benefits, however the concept cannot be fully adopted in society as the needs of certain individuals, are prioritised over others, thereby enhancing the inequalities and injustices within society. Public participation on the other hand, relates to the social, political, economic and biophysical aspects that need to be addressed (Arstein, 1969; Cole, 1975; Kasemir *et al.*, 2003, Bond and Thompson-Fawcett, 2007). This research evaluates the spectrum of public participation provided by many theorists. One prominent theory in this respect is Arnstein's ladder of participation. Public participation is an important concept to discuss as it measures the degree of empowerment of individuals. The level of sustainability is determined by the degree of participation of individuals in the decision-making process. As a result of past and present inequalities, many individuals have their basic human rights limited, thereby affecting their level of participation within decision-making processes.

The literature has also shown that the level to which an individual is vulnerable determines the degree of sustainability. It is here where the concepts of vulnerability and well-being and risks are important to discuss. An individual's level of well-being is dependent on the degree of vulnerability an individual is exposed to. The level of an individual's well-being is dependent on the ability of that individual to improve their quality of life. Vulnerability and well-being are linked to the concept of social justice and social sustainability, since individuals are provided with opportunities to improve their lifestyles. The notion of risks and hazards were significant concepts within this research, given that, when individuals feel threatened by a particular development, it results in them mobilizing together so as to participate in the decision-making process (Chechile and Carlisle, 1991). Additionally, the

degree of the risk and hazard determines the level of vulnerability and well-being of that individual.

The concepts that were conceptualised in this research were used to structure the research and helped in analysing the data collected. The concepts that were used in this chapter included the following sustainable development, social sustainability, social justice and public participation. Addressing these theories will provide a framework to address the objectives of the study. The following chapter provides a background to the study and explores the history and development of the corporate social responsibility concept. The following chapter further provides a background to Lafarge Mining South Africa and Ridgeview Quarry.

CHAPTER THREE
BACKGROUND

3.1 Introduction

The following chapter is concerned with providing contextual knowledge regarding the mineral resource extraction industry and corporations in South Africa, specifically Lafarge Mining South Africa and its Ridgeview Quarry, which engage in corporate social responsibility programmes. As outlined previously, this research will examine current social responsibility practices employed by the Ridgeview Quarry and will evaluate the level of social sustainability being achieved. The chapter provides background information on corporate social responsibility. To this end Section 3.2 explains the business and society relationship, whereas Section 3.3 offers a definition of corporate social responsibility. Section 3.4 provides a brief explanation of corporate social responsibility in developing countries. Section 3.5 and 3.6 explain corporate social responsibility and impacts in resource extraction industries respectively. Finally, the background to the case study (Lafarge Mining South Africa and its Ridgeview Quarry) is presented in Section 3.7. Lastly the conclusion is presented in Section 3.8.

3.2 Business and society relationship

In order for one to understand corporate social responsibility, one needs to examine relationships that exist between businesses and its stakeholders, be they multifaceted or simple relationships (Lawrence *et al.*, 2005; Doh and Guay, 2006; Werther and Chandler, 2006). As a result of emphasis being placed on sustainable development, the success of a business is partly dependent on the relations with its stakeholders and society (Lawrence *et al.*, 2005, Doh and Guay, 2006; Werther and Chandler, 2006). Thus good business not only ensures the enhancement of economic activity but takes into consideration the needs and well-being of society (Lawrence *et al.*, 2005). The following sections attempt to define the terms business and society and also try to provide an understanding of the relationships created.

Lawrence *et al.* (2005) explains that *business* can be defined as one of the main organisations that aim at developing products whilst at the same time promoting economic profitability. Werther and Chandler (2006) explain that the word *company* originates from the Latin words *cum* and *panis* which means 'breaking bread together', this basically means that companies were seen as agents in providing change. Companies are understood

as creating the most jobs, education opportunities and innovations in order for society to thrive (Werther and Chandler, 2006). Whereas *society* is defined as individuals who interact with their social structures (Lawrence *et al.*, 2005). Thus business is part of society but at the same time it is considered a separate body within society (Lawrence *et al.*, 2005; Werther and Chandler, 2006; Doh and Guay, 2006). Understanding the relationship between business and society is very important, since business activities impact on society, be it in a negative or positive way. Thus businesses have begun to participate in sustainable behaviour, such as taking into consideration the provision of certain services and enhancing the social environment. One way of understanding the relationship that exists between business and society, is by explaining the 'general systems theory' (Lawrence *et al.*, 2005). The "general systems theory' was established in the 1940's and states that organisms are exposed to their outside environments with which they interact with. Similarly, individuals within society interact and form relationships with businesses and other organizations. Lawrence *et al.* (2005) argues that individuals just like organisms may have boundaries, however, this cannot be viewed in isolation as relationships are formed with other organisations and groups in the outside environment. Lawrence *et al.* (2005) uses an example of a plant, just like a plant needs many components to survive such as: oxygen, soil and sunlight, businesses form affiliations with other organisations and further adapt to societal pressures in order to function sustainably. Lawrence *et al.* (2005) illustrates that this results in a mutual relationship between business and society and explains that this forms an interactive social system (see Figure 3.1). Figure 3.1 below explains that society and business are interdependent, whereby society needs business and business needs to society and both influence and impact on each other (Lawrence *et al.*, 2005; Werther and Chandler, 2006).
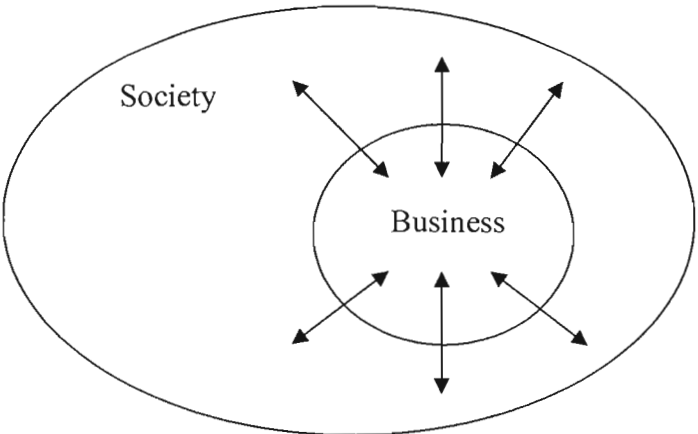
Figure 3.1: Business and society in an interactive system
Source: Lawrence *et al* (2005: 4)

With an understanding being provided on the relationship that exists between society and business, an attempt in explaining the concept of corporate social responsibility has been presented. The following section provides an introduction of corporate social responsibility as well as offers an explanation of the definitions of corporate social responsibility and the development of the concept.

3.3 Defining corporate social responsibility

This section begins by defining corporate social responsibility and thereafter describes how corporate social responsibility originated and developed. In this regard, it must be acknowledged that corporate social responsibility predates concerns about sustainability (Norris and Innes, 2005). The study uses a variety of definitions provided by leading writers on the concept so as to allow for a holistic understanding of corporate social responsibility.

Traditionally, the private sector has been solely focused on increasing profits, with substantial disregard for the social and bio-physical environment (Farmer and Dickerson-Hogue, 1973; McIntosh *et al.*, 2003; Kotler and Lee, 2005). With the increasing prominence of the concept of sustainable development since the early 1990's and the continued effort of society to progress sustainably, increased pressure has been placed on business and corporations to modify their activities. In the past, human development was viewed as being detached from business objectives (Lawrence *et al.*, 2005; Gouldson, 2006; Blowfield, 2007) whereby: "doing well and doing good were seen as separate pursuits" (Kotler and Lee, 2005: 1). However, due to emphasis being placed on sustainable behaviour, focus has been placed on self-regulation whereby business's carry out activities that are in accordance with the law (Utting, 2007). As a result increased pressure has been placed on businesses to improve their operational activities, many businesses have begun to adopt corporate social responsibility measures. Thus businesses are encouraged to be more proactive thereby enhancing human development and growth (Lawrence *et al.*, 2005; Habib and Maharaj, 2008). Corporate social responsibility is one means through which companies attempt to contribute to social sustainability. This is observed in most resource extraction industries, as they adopt corporate social responsibility (McAulay, 1966; Griffin and Mahon, 1997; Bansal and Roth, 2000; van Marrewijk and Were, 2003; Hamann, 2004; Jenkins, 2005; Doh and Guay, 2006; Gouldson, 2006; Cibane, pers. comm., 6 November 2007).

Corporate social responsibility is used by many organisations to remain accountable, so as to ensure that their activities are not unfavourable to the social and biophysical environment. This can be explained where: "corporations have been encouraged, and some would say forced, to extend their horizon of interest beyond the traditional areas of markets and the workplace, to include the community (both proximal and distant) and the natural environment" (McIntosh *et al.*, 2003: 47). By adopting responsible behaviour, businesses are encouraged to embrace the sustainability concept. There is no universal definition of corporate social responsibility and multiple definitions exist. In this study the following definitions provided by Kotler and Lee (2005) and Werther and Chandler (2006) were found to be useful.

For corporate social responsibility to be fully appreciated, the terms corporate, social and responsibility need to be explained. Werther and Chandler (2006) break up the corporate social responsibility concept by first explaining that, 'corporate' relates to business. 'Social' is explained as including and involving all stakeholders that are concerned with the functioning of the organisation, which is based on the relationships of individuals within society (Werther and Chandler, 2006). Lastly, 'responsibility' is the state of being accountable coupled with initiatives taken by companies and society to improve social, economic, political, technical and bio-physical aspects.

Kotler and Lee (2005: 3) define corporate social responsibility as: "a commitment to improve community well-being through discretionary business practices and contributions of corporate resources". This definition relates to a voluntary obligation by businesses to apply certain practices so as to enhance human development as well as concern for the bio-physical environment (Kotler and Lee, 2005). However, corporate social responsibility can be defined in more complex terms as, "operating a business in a manner that meets or exceeds the ethical, legal, commercial, and public expectations that society has of business" (Kotler and Lee, 2005: 3). This definition explains that corporate social responsibility encompasses ethics as well as legal requirements in order to improve human well-being and the bio-physical environment (Kotler and Lee, 2005). Werther and Chandler (2006) provide a simple definition that is framed on ethical values and state that corporate socially responsibility occurs when companies move beyond profits and are considered to be transparent and accountable for their actions.

Corporate social responsibility can thus be explained as the manner in which companies incorporate social and environmental issues into their working practices, whilst at the same time allowing for the public to interact within the corporate decision-making processes in order to rectify issues when these decisions affect them (Bansal and Roth, 2000; van Marrewijk, and Were, 2003; Doh and Guay, 2006; Gouldson, 2006; Jenkins, 2005; Siegele and Ward, 2007; Habib and Maharaj, 2008). The next section of the chapter, introduces how the term was developed.

3.3.1 The development of the term corporate social responsibility

This section of the chapter provides an elucidation as to when the idea of corporate social responsibility originated. In order to comprehensively understand the idea of corporate social responsibility, the meaning as to why the concept surfaced is important and is provided in the study. Corporate social responsibility has been through some different phases and incorporates a number of definitions and aspects since the 1930's.

Historically, corporate social responsibility can be traced as far back as the 1930's, where pressure was placed on businessmen to be more socially responsible (Carroll, 1979; Norris and Innes, 2005). More specifically in 1953, Bowen's publication on 'social responsibility of the businessman', further highlighted the term (Bowen, 1953; Carroll, 1979; Norris and Innes, 2005). Bowen stressed the importance of changing the mindset of the individual with respect to business, in terms of being socially responsible (Bowen, 1953; Carroll, 1979).

In the early 1960's discussions of corporate social responsibility was further enhanced, with writers such as Davis, Eells and Walton debating about the concept (Carroll, 1979). In 1960, Davis proposed that social responsibility involved making businessmen's decisions priority over economic priority, moving away from profit (Carroll, 1979). Ells and Walton (1961, cited in Carroll, 1979) further argued that corporate social responsibility dealt with society considering corporations as having an ethical obligation towards society. These writers tried to explain that corporate social responsibility was entirely based on an ethical relationship between society and corporations.

Corporate social responsibility was further recognised in 1963, when McGuire and Backman argued that corporate social responsibility was more than acknowledging economic and legal requirements, whereas other writers, such as Manne, thought of the

concept as being voluntary (1963, cited in Carroll, 1979). Other writers such as Hay, Gray and Gates (1976, cited in Carroll, 1979) discuss corporate social responsibility, as encouraging businesses to improve certain areas of their operation with respect to their responsibility to society, by providing resources to curtail certain social problems.

In 1971, in the USA, the Committee for Economic Development (CED) described corporate social responsibility with the aid of 'three concentric circles' (see Figure 3.2) (Carroll, 1979: 498). With regards to Figure 3.2, the inner circle comprised of jobs and economic growth (Carroll, 1979). Secondly, the middle circle explained that there must be social awareness with respect to economic growth (Carroll, 1979). The last circle which is the outer circle emphasised that businesses should be more active in developing and improving the social environment (Carroll, 1979). This figure explains that business priority in the past was focused on achieving and improving the economic aspects first and later became aware of the need to take into consideration the social aspect (Carroll, 1979). The awareness of businesses of their responsibility to society led to many businesses becoming pro-active (Carroll, 1979).
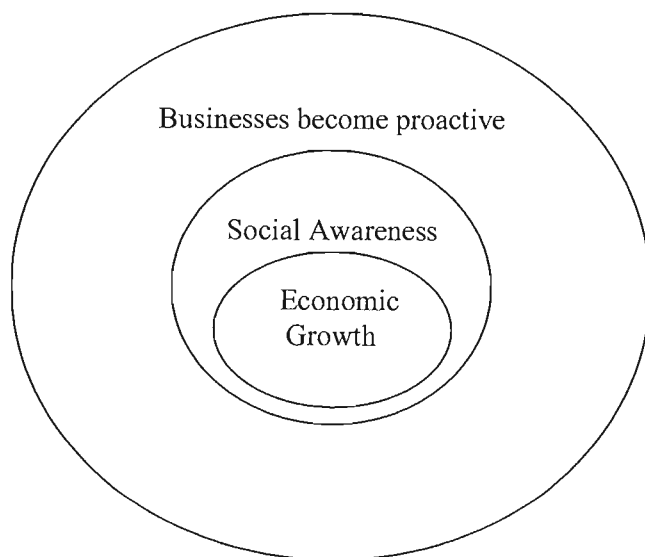
Figure 3.2: Three concentric circles of corporate social responsibility
Source: Carroll (1979: 498)

Thus corporate social responsibility grew as a concept as it became increasingly necessary to regulate business's power within society (Lawrence *et al.*, 2005; Gouldson, 2006; Lawson, 2007; Welford *et al.*, 2007). Accordingly, Lawrence *et al.* (2005) highlights two fundamental principles which emerge from the origins of the concept, namely, the charity principle and the stewardship principle. The charity principle is concerned with the

expectation that those considered to be wealthy should assist the less fortunate (Lawrence *et al.*, 2005). Wealthy corporations are encouraged to help the poor and by undertaking this, these corporations were seen as acknowledging their responsibility to society (Lawrence *et al.*, 2005). The stewardship principle differs slightly from the charity principle, in that, it encourages corporations to believe that they have an obligation to ensure that those who were at risk or needed help benefited from a corporation's actions (Lawrence *et al.*, 2005). It must be noted that both principles were based on obligation, rather than being a legal requirement (Lawrence *et al.*, 2005).

Other writers argue that corporate social responsibility resulted from a concern for 'social performance', which encompassed community involvement, participation and sustainability (Norris and Innes, 2005) The concept of corporate social performance was developed by Berle and Means (1932, cited in Bowen, 1953). Berle and Means argue that corporate social performance involves legal and economic commitments towards society (1932, cited in Bowen, 1953; Norris and Innes, 2005). Berle and Means further explained that there existed a division between ownership and control, as ownership does necessarily lead to control (1932, cited in Bowen, 1953; Norris and Innes, 2005). Berle and Means (1932, cited in Bowen, 1953) and Farmer and Dickerson-Hogue (1973) explain that there are different categories of people owning and controlling certain property, namely owners of the property, to shareholders and directors; and this therefore results in different levels of implementation of social responsiveness. Thus Berle and Means (1932, cited in Bowen, 1953) focused on corporate governance so as to ensure for fairness and justice with respect to social performance.

Corporate social responsibility means that businesses should be held responsible for their actions towards society. The following sections present central components/characteristics of corporate social responsibility including 'social obligation' and 'social responsibility' and the other 'social responsiveness'. These components of corporate social responsibility have emerged in various phases since the early notions of corporate social responsibility emerged in the 1940's and 1950's.

3.3.2 Characteristics of corporate social responsibility

Corporate social responsibility is understood as being developed through different aspects in society. Sethi (1975, cited in Caroll, 1979), an influential author in this regard explains that there are three characteristics of corporate social responsibility for businesses to

enhance social needs, namely: social obligation, social responsibility and social responsiveness. All three aspects or as Sethi (1975, cited in Carroll, 1979) commonly refers to as a three-state schema are discussed below.

a) Social obligation and corporate social responsibility

Social obligation is widely understood as accepting some sort of blame but at the same time addressing the issue at hand, whilst providing solutions for change (Carroll, 1979; Lawrence *et al.*, 2005; Gouldson, 2006; Lawson, 2007; Welford *et al.*, 2007). With respect to understanding social obligation in terms of corporate social responsibility, Sethi (1975, cited in Carroll, 1979) explains that social obligation is based on a business's behaviour in relation to market forces or legal limits. Sethi (1975, cited in Carroll, 1979) explains that in this case, businesses are compelled by law to rectify corporate behaviour. Social obligation to a large degree results in some level of 'social conscientiousness', where individuals think before acting. This level of thinking has evolved through the years and has now been adopted by many businesses and corporations in order to promote sustainable development. Many writers refer to social obligation as social responsibility and this is discussed in the paragraph below.

b) Social responsibility and corporate social responsibility

In order for corporate social responsibility to be understood, one needs to understand the meaning of the word responsible and the concept of social responsibility. In the past, when emphasis was placed on sustainable development, individuals were encouraged to be responsible, however, responsibility was adopted by businesses and corporations in order to encourage sustainability.

McAulay (1966: 224) explains social responsibility as being answerable to society. McAulay (1966: 224) describes that, "responsibility involves the willingness to accept the consequences of one's own behaviour as well as dependability, trust worthiness, and a sense of obligation to the group and to one's own values". McAulay (1966) explains that social responsibility results from an individual's attitude and feeling and further describes that responsibility of an individual can only be measured with respect to that individual's acknowledgement of the consequence that may result from one's actions.

Social responsibility in relation to businesses is the sustainable operation of businesses with respect to societal norms and values (McAulay, 1966; Carroll, 1979; Lawson, 2007).

Carroll (1979: 497-498) defines social responsibility in relation to business as referring to: "objectives or motives that should be given weight by business in addition to those dealing with economic performance". Carroll (1979) states that before businesses are encouraged to adopt sustainable initiatives, businesses have to come to a realisation that they are responsible for improving and protecting the well-being of individuals within society. Social responsibility is typically thought of as the moral obligation of an organisation or individual that has a responsibility to society (Gouldson, 2006; Siegele and Ward, 2007). It ensures that sustainability and public participation are pursued by companies along with profitability measures and redefines the responsibilities and obligations of organisations (Siegele and Ward, 2007; Welford *et al.*, 2007). Social responsibility can be explained as involving local communities in the decision making processes which affect them. It is for this reason that social responsibility is therefore primarily focused on defending and encouraging human rights and is therefore associated with the four aspects of social responsibility, which is discussed below.

With respect to social responsibility being a major part in corporate social responsibility, corporate social responsibility is viewed in terms of four aspects of a hierarchy namely, economic, legal, ethical and discretionary responsibility (see Figure 3.3) (Carroll, 1979). Figure 3.3 illustrates the aspects of corporate social responsibility.
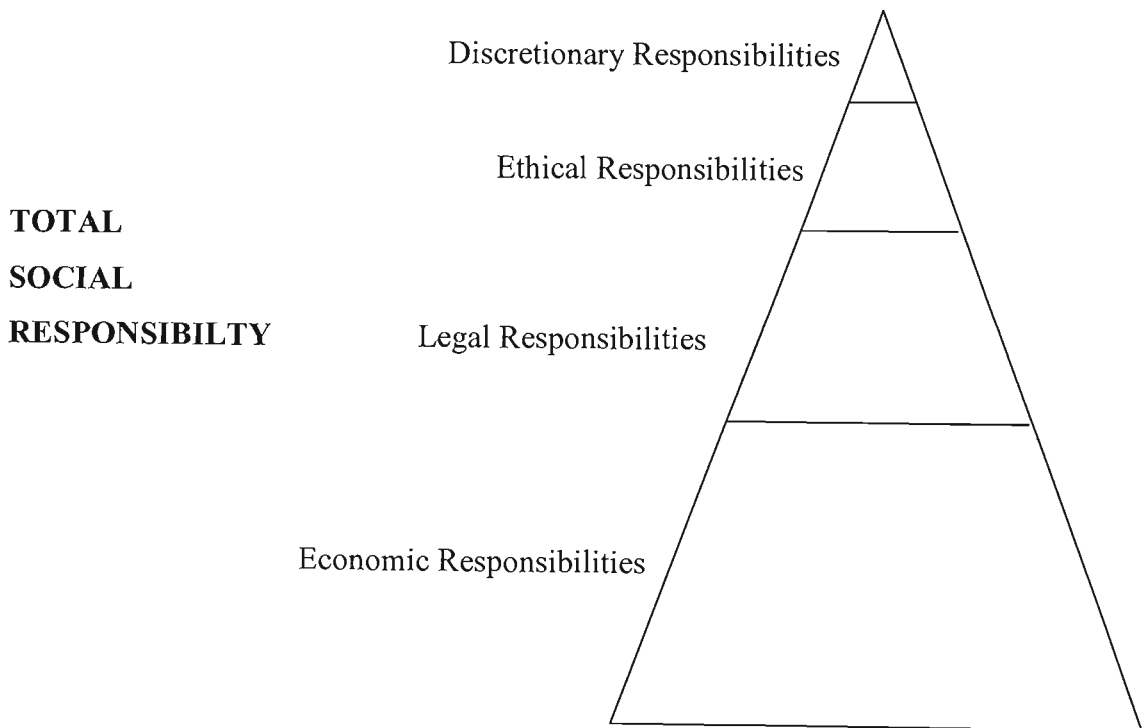
Figure 3.3: Aspects of corporate social responsibility
Source: Carroll (1979: 499)

Economic responsibility is primarily considered as the social responsibility of business, as it is here where businesses have the responsibility to produce commodities and services with respect to society (Carroll, 1979; Bowen, 1953). This can be further explained since profit expansion, as well as competition was considered of topmost importance for a business (Carroll, 1979). Legal responsibilities are considered as the second layer of the pyramid and are explained as society setting down rules and regulations for the operation of businesses with respect to the economic enhancement (Carroll, 1979). Thus there exists within this layer a 'social contract' between business and society, where businesses employ methods for economic enhancement but within the constraints of the law (Carroll, 1979).

Ethical responsibility is very difficult to define, as it requires businesses to act over and above the legal requirements (Carroll, 1979). Ethical responsibility is associated with the concepts of 'just', 'fairness' and 'equality' (Carroll, 1979). Discretionary responsibility is considered as an aspect of corporate social responsibility that attempts to ensure that businesses are 'behaving' in a good way (Carroll, 1979). This responsibility is considered as a voluntary responsibility by business to ensure that human well-being is taken into consideration and protected with relation to its actions. This last level of the pyramid is not really considered as a responsibility but more as an expectation of society from businesses (Carroll, 1979). Carroll (1979) further explains that the different levels cannot be treated in isolation to one another, as they are not considered as being separate entities. Thus, in order to achieve complete corporate social responsibility one needs to look at the different levels of responsibility in relation to each other.

Given the above explanation, corporate social responsibility can be explained as a means and an end (Werther and Chandler, 2006). It is a 'means', since it is focused on how a particular business or company provides services, and it is an 'end', since it is focused on representing authentic actions and behaviours as well as placing the public's concerns at the forefront (Werther and Chandler, 2006). Thus according to Werther and Chandler (2006), the success of a business's corporate social responsibility reflects a business's achievement in addressing stakeholder concerns as well as promoting economic profitability (Werther and Chandler, 2006: 8). Social responsibility therefore ensures that organisations 'give back' to society and this is often referred to as corporate social responsibility. Thus corporate social responsibility is based on understanding business's obligations towards society. Corporate social responsibility can thus be described as a means of a business to pursuing goals that encourage responsible behaviour while at the

same time ensuring sustainability and accountability (Gouldson, 2006; Siegele and Ward, 2007; Dahlsrud, 2008).

Corporate social responsibility further involves equality and equity. Utting (2007) explains that to think of corporate social responsibility in these terms, eliminates negativities in terms of addressing uneven distribution of income, power and social justice, whilst at the same time promoting equal opportunity. Thus corporate social responsibility with respect to equality and equity, focuses attention towards stakeholder participation, society and employment (Blowfield, 2007; Newell and Frynas, 2007; Utting, 2007; Welford *et al.*, 2007).

Utting (2007) further explains that with respect to equality and equity, corporate social responsibility encompasses four components: social protection, rights, empowerment and redistribution. Utting (2007) explains that in terms of social protection, corporate social responsibility focuses on protecting the welfare of individuals, by improving working conditions in order to improve living standards. Problems arise when one looks at how corporate social responsibility impacts on social protection. Firstly, not all corporations adopt corporate social responsibility (Utting, 2007). Secondly, where corporations adopt corporate social responsibility, implementation is not always effective and lastly certain issues are given prevalence over others (Utting, 2007).

In understanding corporate social responsibility in terms of rights, Utting (2007) bases his explanation on equality. Utting (2007:703) argues that, "the incorporation of human rights in the CSR agenda is important not only for socio-legal reasons but also because it can provide a framework for operationalising CSR by invoking a range of issues that require action". Thus corporate social responsibility is considered as a tool used by corporations so as to ensure that responsible strategies are implemented (Utting, 2007).

The third component of corporate social responsibility is empowerment (Utting, 2007). Here, corporate social responsibility is thought of as not only "equality of opportunity but also equality of improvement" (Utting, 2007:704). Understanding corporate social responsibility in terms of empowerment is very important as it focuses on providing individuals with the opportunity to participate in the decision-making process, thereby allowing for individuals in society, more specifically those individuals who are considered being unprivileged in society to have a voice (Utting, 2007). Utting (2007: 705) expresses

that, "CSR has been a useful mobilising tool". Thus corporate social responsibility is very useful as is encourages corporations and businesses to become more accountable for their actions. The last component of corporate social responsibility is redistribution. Utting (2007) explains that with respect to redistribution, corporate social responsibility is focused on providing employment for individuals and the distribution of income, in terms of skills development. Thus with regards to equality, corporate social responsibility is directly related to care ethics, which is discussed below.

In addition, the relationship of corporate social responsibility to care ethics deals with how individuals and in this particular study, corporations form relationships based on the notion of mutuality and well-being (McIntosh *et al.*, 2003; Hamann, 2004; Blowfield, 2007; Lawson, 2007; Newell and Frynas, 2007; Utting, 2007; Welford *et al.*, 2007). The notion of the 'triple bottom line' becomes relevant. Elkington (1997, cited in Vanclay, 2004: 267) describes the 'triple bottom line' as that which: "focuses corporations not just on the economic value they add, but also on the environmental and social value they add – and destroy". In addition, the 'triple bottom line' is aimed at evaluating corporations values and actions towards society and addresses the impacts caused by economic activity on the social environment (Vanclay, 2004; Hermans and Knippenberg, 2006; Werther and Chandler, 2006). Thus, it enables corporations to think about their processes and encourages sustainable development and as Savitz and Weber (2006: 21) explain, encompasses the notion of 'doing good and doing well'. The 'triple bottom line' results in finding a sustainable combination of business interests together with that of stakeholder interests (Savitz and Weber, 2006).

In many cases, responsibility towards society is not always an organisation's priority, however, this varies amongst organisations. According to Newell and Frynas (2007: 670) "CSR emerged among leading firms and business schools as a public relations tool, a way to deflect criticism, engage critics and potentially capitalise on emerging business opportunities associated with doing, and being seen to be doing, good". Although a company may adopt corporate social responsibility measures, these measures may not always result in a positive outcome as companies may not always adopt a proactive approach in order to implement these measures (Newell and Frynas, 2007). The reason for this is that companies are not legally required to adopt social responsibility strategies, as it is considered to be a moral obligation rather than being a legal requirement. Usually when corporations acknowledge their social responsibility towards society, the next step they

undertake is to be socially responsive by becoming corporate citizens and this is discussed in the paragraph below.

c) Social responsiveness and corporate social responsibility

Following social obligation and social responsibility, the third step taken by businesses in order to react to pressures from society is explained as 'social responsiveness'. This section explains how certain corporations respond to certain pressures from society. The concept of corporate citizenship is also introduced in this section and is explained as a mechanism used by businesses to be socially responsive.

Social responsiveness, is an individual's response to acknowledging and rectifying any mistakes (Carroll, 1979; Norris and Innes, 2005; Gouldson, 2006; Dahlsrud, 2008). With respect to businesses, corporate social responsiveness highlights a business's long-term goals with respect to the social environment in which it is situated (Carroll, 1979; Norris and Innes, 2005; Gouldson, 2006; Dahlsrud, 2008). It is assumed that businesses have a social responsibility towards society; however, social responsiveness can vary from 'no response' to a 'proactive response' (Carroll, 1979; Gouldson, 2006; Dahlsrud, 2008). Businesses are not compelled by law to provide assistance in social upliftment, thus social upliftment is therefore reliant on a business's ethical and moral values.

Corporate social responsiveness is defined as a, "literal act of responding or achieving a generally responsive posture" (Frederick 1978 in Carroll, 1979: 501). This can be explained where businesses acknowledge their effects on society and, as a result, provide solutions in order to uplift society. Social responsiveness is viewed by some writers as a transition from social responsibility, whereas some view it as expansion of the term, however, it is argued that social responsiveness is the 'action phase' of a business's response to the social environment (Carroll, 1979). Sethi (1975, cited in Carroll, 1979: 498) goes on to explain that businesses must be "anticipatory and preventive". Being socially responsive allows businesses to recognise and accept their responsibilities towards society. In this way, businesses not only become corporate citizens, but they also become responsible agents within society, which is described below.

d) Corporate citizenship and corporate social responsibility

Conceptualising the concept of citizenship is significant as it means membership within a political community (Hettne, 2000, cited in Matten and Crane, n.d.). Corporate citizenship

ensures that businesses become responsible members of society (Matten and Carne, n.d.; Marsden, 2000). Before corporate citizenship is tackled, citizenship must be understood as a set of individual rights that include; civil rights, social rights and political rights (Marshall, 1965, cited in Matten and Crane, n.d.). Civil rights are explained as freedom from abuse. Social rights consist of rights that provide the individual with opportunities to participate in society, such as the right to education and healthcare. Lastly, political rights refer to active participation in society, such as the right to vote. Thus with respect to corporate citizenship, companies are understood as having a responsibility in protecting these rights of individuals (Matten and Crane, n.d.).

McIntosh *et al.* (2003:48) defines corporate citizenship as, "a continuum that stretches from minimal at one extreme (consisting of compliance with laws governing the operation of business but nothing else) to a complex relationship of interlocking rights and responsibilities at the other end". This definition explains that businesses or corporations fully engage with society with respect to certain issues and should therefore attempt to provide solutions within the legal aspects (McIntosh *et al.*, 2003; Gouldson, 2006; Blowfield, 2007). McIntosh *et al.* (2003) explains that 'good corporate citizenship' is where both business and society benefit. Furthermore, McIntosh *et al.* (2003) explains that corporate citizenship extends towards global citizenship, whereby relationships are formed under an equal framework and where benefits are tangible and long-term.

Corporate citizenship can be explained as a holistic concept that deals with human rights, labour and environmental issues. McIntosh *et al.* (2003: 27) frames this well and explains that: "our organizations are our servants, not our equals or our betters, and that the starting point for society, and for citizenship, is the individual, not the company". With society becoming more involved with respect to economic upliftment and with the emergence of stakeholder empowerment, businesses and corporations are now encouraged to become more accountable for their actions towards society (McIntosh *et al.*, 2003; Blowfield, 2007; Newell and Frynas, 2007; Welford *et al.*, 2007). Thus corporate citizenship, "involves corporations becoming more informed and enlightened members of society and understanding that they are both public and private entities" (McIntosh *et al.*, 2003: 16). This means in part that for a corporation to succeed, society needs to legitimately approve of that corporation's activities (McIntosh *et al.*, 2003).

There are four categories of corporate citizenship (McIntosh *et al.*, 2003). These are:

1. Avoidance: this deals with businesses that are in the informal economy, such as drugs, prostitution etc and are not involved in contributing to social responsibility.

2. Compliance: businesses that are legally involved and contribute to corporate social responsibility.

3. Discretionary: businesses that argue that they have not participated in any activities that are detrimental to society.

4. Pro-active: this can be explained where businesses observe themselves as being pro-active with respect to being socially responsible and at the same time increasing profits.

Thus corporate citizenship seeks to understand the relationship that is forged between corporations and society (McIntosh *et al.*, 2003). Corporate citizenship is constantly developing and corporate citizenship initiatives are dependent upon the degree of organisational capital (McIntosh *et al.*, 2003).

Institutionalising and operationalising corporate citizenship are very important aspects of corporate social responsibility. McIntosh *et al.* (2003) explains that institutionalising corporate citizenship involves three levels namely: the individual level, firm level and inter-firm level. The individual level is considered as the basic level, whereby managers' beliefs and values are considered and are implemented with regards to a business or corporation (McIntosh *et al.*, 2003). Businesses can not entirely function as responsible entities without the 'major role-players' such as the managers being actively involved in creating what we term as 'sustainable behaviour' or more commonly referred to as socially acceptable behaviour (McIntosh *et al.*, 2003). The firm level is explained as involving a collective idea with respect to a business, thus implementation is considered as having a mutual impact (McIntosh *et al.*, 2003). The inter-firm level is focused on taking into consideration governmental and societal values and beliefs with respect to a business's activities, thus it is here where the business is considered as having less power (McIntosh *et al.*, 2003).

Operationalising corporate citizenship deals with good governance, political and social awareness, human rights, stakeholder management and business ethics (McIntosh *et al.*, 2003). McIntosh *et al.* (2003) links this to citizen capabilities, whereby citizenship capabilities are initiated by the level of the firm and the individual. McIntosh *et al.* (2003)

further explains that development occurs from within a firm, whereby firms engage in initiatives that promote skills transfer, education and responsible management. Thus Figure 3.4 below illustrates that, in order to encourage operationalisation of citizenship, corporations need to consider many initiatives as presented in the diagram.

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                    ┌──────────────────────────────┐
                    │     Corporate Citizenship     │
                    └──────────────────────────────┘
                                   ↕
┌─────────────────────────────────────────────────────────────────┐
│ Organization                                                      │
│ Selected Citizenship Capabilities                                 │
│ Human rights                     Business ethics                  │
│ Good governance                  Responsible supply-chain management │
│ Stakeholder management           Pollution                        │
│ Product stewardship              Political & social awareness     │
└─────────────────────────────────────────────────────────────────┘
                                   ↕
┌─────────────────────────────────────────────────────────────────┐
│ Sub-Organization                                                  │
│ Key Skills And Resources                                          │
│ Collaboration & partnership      Stakeholder engagement           │
│ Consultation reporting           Cross- functional working        │
│ Citizenship values               Employee participation           │
│ Life cycle assessment            Design for the environment       │
└─────────────────────────────────────────────────────────────────┘
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Figure 3.4: Citizenship capabilities

Source: McIntosh *et al.* (2003: 55)

Kotler and Lee (2005) explain that corporate social initiatives are actions that businesses adopt to encourage and assist with social initiatives such as health, education and employment programmes in order to enhance corporate social responsibility. Kotler and Lee (2005) further explain that there exist six main social initiatives with respect to corporate social responsibility, namely;

1. Cause promotions are where a corporation provides financial assistance (sponsorships) to a specific cause in order to improve consciousness, awareness and well-being of individuals.

2. Cause-related marketing involves a company contributing financially to a cause with respect to selling a specific product, thereby increasing the sales of the product as well as supporting a specific charity.

3. Corporate social marketing involves corporation supporting a change in behaviour of a specific development.

4. Corporate philanthropy is when a corporation directly aids a charity financially, through donations or grants. This is considered to be a traditional approach practised by most corporations.

5. Community volunteering occurs when a corporation encourages its employees or members to volunteer their time and skills with regards to supporting a cause.

6. Socially responsible business practices include a corporation's support for ethical business practices with respect to social causes and so as to enhance well-being.

Further to this discussion of corporate citizenship, Jackson and Nelson (2004) argue that there are seven principles that act as a framework for businesses or corporations. These aim to ensure the occurrence of sustainable growth as well as provide for economic enhancement. The first principle, 'Harness Innovation for Public Good', argues that focus is placed on social progress, where consumer needs and innovation are taken into consideration (Jackson and Nelson, 2004). This principle is aimed at protecting human well-being by improving services and operational aspects of business (Jackson and Nelson, 2004). The second principle, 'Put People at the Center', highlights the relationship between business and people (Jackson and Nelson, 2004). In this regard, businesses take into consideration the interests of stakeholders and strive towards sustainable transformation (Jackson and Nelson, 2004). According to this principle businesses strive for transparency and mutual benefit (Jackson and Nelson, 2004).

Thirdly, 'Spread Economic Opportunity', describes that businesses encourage economic development, by allowing for diversity, educational opportunities, training upliftment etc (Jackson and Nelson, 2004). 'Engagement in New Alliances' is the fourth principle which explains that alliances with other businesses promotes equitable market mechanisms but most importantly maintains improved business performance (Jackson and Nelson, 2004). The fifth principle, 'Be performance-Driven in Everything', states that businesses create goals based on sustainable initiative (Jackson and Nelson, 2004). Sixthly, 'Practice Superior Governance', exemplifies that understanding governance agendas is important for a business to progress and places emphasis on corporate governance as well as sustainable

governance (Jackson and Nelson, 2004). The last principle, 'Pursue purpose beyond Profit', explains that good business is based on purpose, principles and values which allow for consistency and organisation in a business's operations (Jackson and Nelson, 2004). These principles are important in understanding the concept of corporate social responsibility.

Corporate social responsibility places pressure on businessmen to be more socially responsible, as it is necessary to regulate business's power within society (Lawrence *et al.*, 2005; Gouldson, 2006; Lawson, 2007; Welford *et al.*, 2007). Corporate social responsibility has three characteristics; it began as a social obligation, then developed into social responsibility and lastly developed into social responsiveness. These three characteristics encourage businesses to become good corporate citizens. The next section provides an understanding of corporate social responsibility in developing countries.

3.4 Corporate social responsibility in developing countries

The relevance of corporate social responsibility in developing countries is very important, as businesses are extremely influential in many developing countries. A vast amount of research has been done about the development of the concept 'corporate social responsibility', with many writers debating and defending the concept.

Many developing countries lack in service provision and few businesses in these countries engage in responsible behaviour, by providing social goods to society (Visser, 2005; Visser *et al.*, 2006; Kaelo Worldwide Media: Stories of Hope, 2008; Dobers and Halme, 2009; Eccles *et al.*, 2009). There is, however, little literature provided on corporate social responsibility with respect to developing countries (Wood, 1991; Fox, 2004; Visser, 2005; Luken and Stares, 2005). Arguably, the role that businesses play in many developing countries cannot be ignored, as business serve as an economic livelihood for many citizens living in developing countries, businesses provide skills, jobs and infrastructure to many developing countries (Visser *et al.*, 2006; Bond, 2008).

However, distinct divisions exist between the rich and poor in developing countries (Allen and Hamnett, 1995; Kofman and Young, 1996; Isaacs, 1997). It is here, that the issue of transnational corporations and multilateral financial institutions come under scrutiny (Bond, 2008; Matten and Crane, n.d.). Many of these big conglomerates settle in developing countries so as to bypass regulations passed in their native countries and this

exacerbates the inequalities faced by citizens living in developing nations (Matten and Crane, n.d.; Isaacs, 1997; Visser, 2005; Visser *et al.*, 2006;).

Visser *et al.* (2006) explains that corporate social responsibility initiatives in developing countries differ from those practised in developed countries. Visser *et al.* (2006) explains this in relation to Carroll's pyramid of corporate social responsibility, whereby in developed countries economic responsibility is favoured over discretionary, legal and ethical responsibilities. In developing countries on the other hand, discretionary responsibility is greatly emphasised as businesses are encouraged to behave in a responsible manner (Visser *et al.*, 2006, Eccles *et al.*, 2009). It is for this matter that many businesses in most developing countries and particularly in South Africa are encouraged to adopt sustainable measures as well as being socially responsible.

With respect to South Africa, corporate social responsibility is believed to have emerged in the 1990's when businesses began to be socially accountable for their actions (Lund-Thomsen, 2005; Mitchell and Hill, 2008) (See Appendix A). Appendix A highlights businesses in South Africa that practice corporate social responsibility. Corporate social responsibility in South Africa emerged as a result of emphasis being placed on environmental and social awareness and most importantly, the interests of stakeholders (Mitchell and Hill, 2008). South Africa is considered to be one of many developing countries facing a variety of social problems, some being unemployment, poverty, increase of HIV/AIDS infections as well as poor health care (Mitchell and Hill, 2008). Visser *et al.* (2006) concurs that it is mostly African countries that require the improvement social needs, but at the same time these countries derive very little benefit from globalisation. On the other hand, Hamann (2004), Lund-Thomsen (2005) and O'Laughlin (2008) argue that corporate responsibility issues should be understood in the context of South Africa's spatial arrangement in the past, where there was uneven distribution of resources under the apartheid government. Lund-Thomsen (2005) explains that there were three ways in which apartheid impacted on corporate social responsible behaviour. Firstly, the policy of providing substandard services to black South Africans; secondly, prevention of black South Africans developing in white suburbs affected infrastructural development and; lastly, industrial developments were situated in areas near to black townships and away from white suburbs (Lund-Thomsen, 2005; Newell, 2008; O'Laughlin, 2008). Thus in the past whilst environmental and social protection was provided to white South Africans and black South Africans were ignored (Lund-Thomsen, 2005; O'Laughlin, 2008).

Due to South Africa's transition to a democratic government and the abolition of apartheid policies, emphasis is currently placed on providing services to the poor and marginalised (Hamann, 2004). This has resulted in institutional change in terms of the evolution of corporate social responsibility regarding the mining industries, one involving market-related changes and the other involving a change in the role of government (Hamann, 2004). The market-related changes involve integration of markets with other markets on an international level, thereby urging companies to adopt corporate social responsibility initiatives with regards to corporate governance (Hamann, 2004). The second involves the role of the state, where new acts such as the Minerals Health and Safety Act of 1996, Reconstruction and Development Programme and the new government since 1994 resulted in many companies to renewing their mining licences and adopting policies that encouraged social upiftment (Hamann, 2004). This allowed companies to encourage 'black economic empowerment' which was introduced to support the development of previously disadvantaged individuals (Hamann, 2004). Thus due to political changes since the abolition of the apartheid government, corporate social responsibility was and is still seen as a positive outcome with regards to mining industries as it focused on social development (Hamann, 2004).

Thus corporate social responsibility is a fairly new concept and is in its developing stages in many developing countries. However, with time, the concept is visualised as contributing in a positive way in the future. In the next section, corporate social responsibility in resource extraction industries is provided below.

3.5 Corporate social responsibility in resource extraction industries

Recently as a result of increased environmental awareness and the enhancement of sustainable development, the notion of adopting corporate social responsibility has been on the agenda of many businesses and specifically resource extraction industries. Resource extraction industries have begun to welcome change for reappraising economic growth and work practices as well as recognising the need for long-term protection of well-being within the social environment. Corporate social responsibility within the resource extraction industry is therefore important to discuss.

In the past, Jenkins (2004) explained that the mining industry took an unconcerned attitude with regard to the impacts caused by its operations, as many of these industries operated in areas without considering the social and bio-physical environment. This lack of concern as

Jenkins (2004) explained, resulted in major social and bio-physical damage as the cost benefit dialogue was often used as a mechanism to excuse this damage because it was overshadowed by the overall economic growth (Jenkins, 2004). However, Jenkins (2004) stated that in recent years, the resource extraction industry has attempted to address these issues by enhancing its social and environmental responsibilities (Cowell *et al.*, 1999; Jenkins, 2004).

The social impacts on local communities and the diverse environmental impacts associated with mining activities pertaining to their extraction methods, have led to many resource extraction industries adopting corporate social responsibility. Corporate social responsibility as elucidated in Section 3.3, is primarily exploring corporate attitude and social commitment of business towards the social environment (Cowell *et al.*, 1999; Peck and Sinding, 2003; Jenkins, 2004; Frynas, 2005; Jenkins and Yakovleva, 2006). With regard to the resource extraction industry corporate social responsibility is about harmonizing the different demands and challenges of the social environment as well as protecting the bio-physical environment, whilst enhancing economic growth (Cowell *et al.*, 1999; Peck and Sinding, 2003; Jenkins, 2004; Frynas, 2005; Jenkins and Yakovleva, 2006). Jenkins and Yakovleva (2006: 272) explain that with regards to sustainable development: "the corporate mining context requires a commitment to continuous environmental and socioeconomic improvement, from mineral exploration, through operation". In this respect, resource extraction industries are required to acknowledge and accommodate the interests of all relevant stakeholders, be they investors, employees, or communities (Cowell *et al.*, 1999; Peck and Sinding, 2003; Jenkins, 2004; Frynas, 2005; Jenkins and Yakovleva, 2006).

However, Jenkins and Yakovleva (2006) explain that the depletion of natural resources is a major issue facing resource extraction industries; however, these authors defend resource extraction industries as operating sustainably, in essence adopting corporate social responsibility initiatives. Firstly, the depletion of mineral resources should be compensated by generating new wealth, which benefits present and future generations (Jenkins and Yakovleva, 2006). Secondly, as a result of recycling non-fuel minerals, mineral depletion is not seen as a problem in the future (Jenkins and Yakovleva, 2006). Thirdly, discovering new mineral deposits from previously unprofitable deposits (Jenkins and Yakovleva, 2006).

The concept of corporate social responsibility is therefore a means by which companies structure their approaches, attitudes and relationships towards the social environment (Cowell *et al.*, 1999; Peck and Sinding, 2003; Jenkins, 2004; Frynas, 2005; Jenkins and Yakovleva, 2006). Furthermore, as explained in this chapter, corporate social responsibility is when businesses are focused on proactively promoting public interest by encouraging community growth and development; and voluntarily eliminating practices that harm the social environment, regardless of legality. Similarly, resource extraction industries are subject to the pressures of increased stakeholder accountability and social responsibility, since many of these types of industries operate in locations near poorer communities and their potential negative social and environmental impact is significant (Cowell *et al.*, 1999; Peck and Sinding, 2003; Jenkins, 2004; Frynas, 2005; Jenkins and Yakovleva, 2006).

Peck and Sinding (2003) explain that the mineral and resource extraction industries are considered to be one of the most destructive operations, as these industries, with respect to their extraction and processing operations impact considerably on the well-being of individuals in close proximity to such developments. Cowell *et al.* (1999) further explicates that as a result of these concerns to the social environment, taking cognisance of corporate social responsibility when discussing resource extraction industries becomes imperative.

Jenkins (2004) further highlights that many resource extraction industries have begun to include terms such as 'sustainable development' and 'environmental management' into their corporate dialogues in an attempt to demonstrate that they are dealing with problems resulting from the company's operations. However, Frynas (2005) explains that resource extraction industries invest in corporate social responsibility programmes not only to benefit the community but also in order to benefit the company as a whole. Firstly, these community investment programmes award certain concessions to companies, since companies that adopt corporate social responsibility are often favoured over companies that do not (Frynas, 2005). Secondly, corporate social responsibility initiatives are regarded as a mechanism to procure the consent of local communities to allow the company to operate within that area (Frynas, 2005). Thirdly, these corporate social responsibility initiatives adopted by companies create a positive environment, as gives people the impression that the company is operating in a way that enhances human development (Frynas, 2005).

Walker and Howard (2002 cited in Jenkins and Yakovleva, 2006) outline numerous reasons why corporate social responsibility and other voluntary initiatives are essential for mining companies. These are:

- Public opinion of mineral resource extraction industries is poor, as concern is placed on social and bio-physical environment.
- Pressure groups challenge the industries authenticity.
- The financial sector focuses on both the risk management as well as the social responsibility perspectives.
- Trying to maintain a license to operate is a major challenge for many resource extraction industries.

In view of this, a number of corporate social responsible principles, initiatives and guidelines have been developed (Jenkins and Yakovleva, 2006). Many companies, specifically mining industries are adopting these initiatives as a commitment to meet certain standards with respect to their interaction to the social and bio-physical environment (Jenkins and Yakovleva, 2006). One of the ways in which some resource extraction industries adhere to certain codes is by being members of the International Council on Mining and Metals (ICMM). The ICMM focuses on encouraging its members to improve performance by contributing to sustainable development and enhancing social well-being (Hamann and Kapelus, 2004; Jenkins and Yakovleva, 2006). The International Council on Mining and Metals (ICMM) was established in 2001 to act as a means to improve performance (ICMM, International Council on Mining and Minerals, 2010.a). The organization addresses sustainable development challenges faced by the resource extraction industry and furthermore strengthens the contribution of mining and minerals to sustainable development (ICMM, International Council on Mining and Minerals, 2010.b).

ICMM has five values that guide an organization (ICMM, International Council on Mining and Minerals, 2010.b). These include:

- Caring for the safety, health and well-being of all relevant stakeholders.
- Respecting the social and the bio-physical environment, with reference to host societies.
- Engaging under the notion of truthfulness with employees, communities and governments.
- Being accountable and maintaining commitments.

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- Collaborating in an open, transparent and inclusive way in order to address challenges and create opportunities.

Apart from these values, there are reporting guidelines and initiatives, such as the Global Reporting Initiative (GRI) and AA 1000, which focus on reporting transparency (Jenkins and Yakovleva, 2006). The Extractive Industries Transparency Initiative is aimed at helping citizens hold governments accountable for mismanagement (Jenkins and Yakovleva, 2006). Other initiatives include Socially Responsible Investing, which is explained when investors examine a company's social, bio-physical and ethical dimensions before investing into those companies (Jenkins and Yakovleva, 2006). Another initiative is the Resource Development Initiative, which enables mining industries to prepare their own assessments and enable its stakeholders to produce their own studies from resources (ICMM, International Council on Mining and Minerals, 2010.a). Thus the ICMM has contributed significantly to corporate social responsibility by providing businesses, such as resource extraction industries with guidelines and initiatives in order to improve their performance and attempting to achieve sustainable development. Complementary to the ICMM, the Mining, Minerals and Sustainable Development Project (MMSD) is imperative to discuss.

The Mining, Minerals and Sustainable Development Project (MMSD) in 2002 produced a report, 'Breaking New Ground' which introduced an initiative focused on protecting the social and bio-physical environment (Hamann and Kapelus, 2004). The MMSD project was developed through the partnership of the World Business Council for Sustainable Development and the International Institute for Environment and Development (MMSD, Mining, Minerals, and Sustainable Development, 2002). The 'Breaking New Ground' report was developed after this partnership and was focused on addressing and reviewing the minerals and mining sector with regards to sustainable development (MMSD, Mining, Minerals, and Sustainable Development, 2002).

The MMSD project together with 'Breaking New Ground' acknowledges that resource extraction industries considerably impact on the well-being of many individuals (MMSD, Mining, Minerals, and Sustainable Development, 2002).

The project has four objectives, which are:
- Assess the minerals and mining sector with respect to sustainable development.

- Identify services that maintain sustainable development within the minerals and mining sector.
- Providing recommendations to improve the minerals and mining sector.
- Enhancement of engagement initiatives for improved communication amongst stakeholders.

(MMSD, Mining, Minerals, and Sustainable Development, 2002)

The MMSD established regional partnerships in four of the world's mineral producing regions (MMSD, Mining, Minerals, and Sustainable Development, 2002). These regions include MMSD Australia, MMSD North America, MMSD South America and MMSD Southern Africa (MMSD, Mining, Minerals, and Sustainable Development, 2002). However for the purposes of the research MMSD Southern Africa becomes relevant and is briefly discussed (MMSD, Mining, Minerals, and Sustainable Development, 2002). In South Africa, the University of the Witwatersrand in Johannesburg and the Council for Scientific and Industrial Research in Stellenbosch were the institutions responsible for the MMSD activities in Southern Africa (MMSD, Mining, Minerals, and Sustainable Development, 2002). MMSD Southern Africa was established in order to indentify issues within the region and determine outcomes relating to the stakeholder engagement process (MMSD, Mining, Minerals, and Sustainable Development, 2002).

This project prioritises local communities that are in close proximity to resource extraction industries and attempts to provide a framework to guide the minerals sector for mitigating impacts (MMSD, Mining, Minerals, and Sustainable Development, 2002). The MMSD project implemented tools such as Social Impact Assessment (SIA) and Environmental Impact Assessment (EIA) that address and mitigate social and bio-physical impacts of resource extraction industries on communities and environment (MMSD, Mining, Minerals, and Sustainable Development, 2002). Thus the MMSD project aims at integrating economic growth with environmental integrity, accounting for social concerns as well as providing effective governance structures (MMSD, Mining, Minerals, and Sustainable Development, 2002). The MMSD project with regards to the minerals sector focuses on improving the well-being of the current generation in a way that ensures an equitable distribution of its costs and benefits, without potentially impacting on future generations (MMSD, Mining, Minerals, and Sustainable Development, 2002). Therefore the MMSD project encompasses aspects of sustainable development.

However the MMSD project highlights nine challenges faced by the minerals sector in achieving sustainable development. The first challenge is the 'Viability of the minerals industry', which elaborates that for the minerals industry to contribute to sustainable development, consideration must be given to return on investment, access to capital, maintenance of talent and a social licence to operate (MMSD, Mining, Minerals, and Sustainable Development, 2002). Secondly, 'The control, use and management of land', explains that as a result of lack of planning to manage uses of land, issues arise regarding land claims and protected areas (MMSD, Mining, Minerals, and Sustainable Development, 2002). The third challenge, 'Minerals and economic development', describes that although the mineral sector creates economic development, there exists corruption in balancing benefits (MMSD, Mining, Minerals, and Sustainable Development, 2002). 'Local communities and mines' is the fourth challenge and refers to when problems arise after permanent closure of a mine and the difficulty to achieve continued economic growth and benefits (MMSD, Mining, Minerals, and Sustainable Development, 2002).

Fifthly, 'Mining, minerals, and the environment' emphasises that resource extraction industries significantly impact on the environment and effectively dealing with these issues creates great challenges (MMSD, Mining, Minerals, and Sustainable Development, 2002). The sixth challenge, 'An integrated approach to using minerals', highlights that concerns relating to effectively managing the risks and hazards associated with the use of certain minerals (MMSD, Mining, Minerals, and Sustainable Development, 2002). 'Access to information', the seventh challenge presented by the MMSD, emphasises that issues arise with inclusion of all relevant stakeholders within the decision-making process (MMSD, Mining, Minerals, and Sustainable Development, 2002). The eight challenge, 'Artisanal and small-scale mining', elucidates that many individuals become dependent on this type of mining however there are negative impacts associated with this mining, such as unsafe working conditions, exposure to hazards and conflict with companies (MMSD, Mining, Minerals, and Sustainable Development, 2002). Lastly the ninth challenge as proposed by the MMSD is 'Sector governance: roles, responsibilities and instruments for change', which acknowledges the need for new guidelines as some countries lack the opportunity for mineral investment in sustainable development (MMSD, Mining, Minerals, and Sustainable Development, 2002).

Although MMSD is considered as a vital project in attempting to achieve sustainable development, there are many issues that still need attention. However the goal of MMSD

and its report 'Breaking New Ground' was aimed at drawing attention towards social and bio-physical issues associated in the mining sector. Relative to this, a discussion of the King Reports on Corporate Governance and the Mineral and Petroleum Resources Development Act (MPRDA) in South Africa are provided below.

The Institute of Directors in Southern Africa (IoDSA) established the King Committee on Corporate Governance (Institute of Directors in Southern Africa, 2008). The King Committee produced the first King Report I on Corporate Governance, which was published 1994. This was followed by the 2002 King Report II and most recently the King Report III published in 2009 (Institute of Directors in Southern Africa, 2008). The premise of the King Reports is that there is growing expectation for businesses, such as resource extraction industries in South Africa to act as good corporate citizens (Institute of Directors in Southern Africa, 2008). These reports present codes of corporate practice by which businesses conduct themselves, taking into account the impact of its operations on the social and bio-physical environment (Institute of Directors in Southern Africa, 2008).

The King Report I, when published, was recognised internationally, as the most comprehensive publication on the subject embracing the inclusive approach to corporate governance (Institute of Directors in Southern Africa, 2008). Thereafter, King Report II considered corporate governance within the South African context, which coincided with the social and political transformation during the emergence of a democracy. (Institute of Directors in Southern Africa, 2008). Most recently, the development of the King Report III advocated that businesses, such as resource extraction industries, produce an integrated report, which incorporates a financial report and sustainability report (Institute of Directors in Southern Africa, 2008). The King Reports developed codes under which businesses, such as resource extraction industries operate in order to mitigate impacts experienced by the social and bio-physical environments (Institute of Directors in Southern Africa, 2008). These codes of corporate practice apply to business that are listed on the Johannesburg Stock Exchange, large public entities as defined in the Public Entities Act; financial entities as defined by the Financial Services Acts and large unlisted public companies (Institute of Directors in Southern Africa, 2008). These codes of ethics ensure that:

- Corporations are committed to the highest standards of behaviour.
- Corporations involve all its relevant stakeholders.
- Chief executive officer and the board of the corporation are totally committed.

- Provision of a detailed guideline of behaviour of all employees.

(Institute of Directors in Southern Africa, 2008)

All these reports and more specifically King Report III, deal with three key aspects such as, leadership, corporate citizenship and sustainability (Institute of Directors in Southern Africa, 2008). These aspects are highlighted in the King Report III and listed below:

- Leadership is explained as enhancing good governance. In this respect leaders are encouraged to act responsibly and here emphasis is placed on ethical values of responsibility, accountability, fairness and transparency are based on moral duties.
- Corporate citizenship explicates that the company should embrace responsibility for the impact of its activities on the environment and further proactively promote the public interest by encouraging community growth and development.
- Sustainability is described as acknowledging that the bio-physical, social and economic pillars are interconnected.

(Institute of Directors in Southern Africa, 2008)

Thus the King Reports are important to discuss as the idea of these reports is to encourage businesses in South Africa to act as good corporate citizens. This report has direct relevance to the research, as the King Reports advocate that any business necessitates a sound understanding of their social and environmental responsibility, their contribution to sustainability and stakeholder engagement. Relative to the King Reports is the Mineral and Petroleum Resources Development Act (MPRDA), which is presented below.

The Mineral and Petroleum Resources Development Act (MPRDA) in South Africa is an important Act, which promotes sustainable development and corporate social responsibility (Mineral and Petroleum Resources Development Act, No. 28 of 2002). The MPRDA states that all mining companies are required to determine the characteristics of their socio-economic environments, focusing specifically on surrounding communities and employees, and furthermore identify the likely impact of mining operations on the environment presently and in the future (Mineral and Petroleum Resources Development Act, No. 28 of 2002). The objectives of the Act are:

- Identify that the State has the right to implement sovereignty over all mineral and petroleum resources within the Republic.
- To acknowledge the States custodianship of the mineral and petroleum resources.

- Promote equitable access to mineral and petroleum resources to all people of South Africa.

- Expand opportunities for historically disadvantaged people, including women, with regards to mineral and petroleum resources.

- Encourage economic growth and mineral and petroleum resources development in South Africa.

- Improvement of the social and economic welfare of South Africans, by promoting employment.

- Protecting tenure with regards to mining development and operations.

- To give effect to Section 24 of the Constitution, by making certain that the mineral and petroleum resources are developed in a sustainable manner, in terms of promoting social and economic development.

- To encourage mining operations to contribute to socio-economic development in areas which they operate from.

(Mineral and Petroleum Resources Development Act, No. 28 of 2002)

The MPRDA is thus an important act in addressing problems that arise from resource extraction industries (Mineral and Petroleum Resources Development Act, No. 28 of 2002). This Act ensures that mining operations define their roles by taking into consideration their impact on the social and well as the bio-physical environment (Mineral and Petroleum Resources Development Act, No. 28 of 2002). Furthermore, the Act led to the development of the Broad-Based Socio-Economic Empowerment Charter for the South African mining industry (Mining Charter, 2004). This Charter was developed in order to redress social injustices caused by Apartheid planning and to encourage black economic empowerment (BEE) with respect to the mining industry (Mining Charter, 2004). This Charter acknowledges the MPRDA and abides by the objectives presented above.

Given these acts and laws, it is useful to provide some examples of resource extraction industries that are practicing corporate social responsibility. One example of a resource extraction industry that practices corporate social responsibility is Exxaro, which is one of the largest black-empowered mining group in South Africa (Exxaro Powering Possibility, Company Profile, n.d.a). Exxaro is engaged in extracting commodities such as, coal, mineral sands, base metals and industrial metals and has operational interest not only in South Africa but all over the world (Exxaro Powering Possibility, Company Profile, n.d.a). The vision of Exxaro is built looking beyond operational activities and focuses on the

impact they have on the social environment (Exxaro Powering Possibility, Brand Vision, n.d.b). Exxaro firmly believes in corporate social responsibility, as the company is focused on creating a sustainable environment in which they operate (Exxaro Powering Possibility, Brand Vision, n.d.b). Socio-economic development projects are commitments provided by Exxaro towards enhancing the social environment (Exxaro Powering Possibility, Brand Vision, n.d.b).

Another resource industry similar to the above mentioned is Anglo Platinum Limited. Anglo Platinum Limited is considered as the world's leading primary producer of platinum group metals and is located in Rustenburg, South Africa with partners in Canada, Russia and China (Anglo Platinum Limited, Company Profile, n.d.a). Anglo Platinum Limited believes in corporate social responsibility as they are aimed at protecting human capital (Anglo Platinum Limited, Safety and Health, n.d.b). In addition, the company has co-funded and assisted many social development projects, such as education-related projects, health-related projects and infrastructural development projects (Anglo Platinum Limited, Safety and Health, n.d.b).

Similarly, Kumba Iron Ore Limited is a leading supplier of the iron ore to the global steel industry. Based in South African the company is the fourth largest supplier of seaborne iron ore in the world and exports more than 34 million tonnes per annum to steelmakers in Europe, the Middle-East, and Asia (Kumba Iron Ore Limited, Company Profile, n.d.a). Kumba engages proactively with stakeholders, government, regulators and surrounding businesses and local communities in order to enhance social and community development programmes with the aim of promoting positive outcomes in the areas where it operates (Kumba Iron Ore Limited, Social Sustainability, n.d.b). Furthermore, in assisting with sustainable development, Kumba favours projects that aim at building the skills and of local communities, where the company operates (Kumba Iron Ore Limited, Social Sustainability, n.d.b).

Relative to the discussion, Rockwell Diamonds Inc. is a diamond mining and development company that is located in South Africa. The company is focused on providing shareholders with the potential to grow and to identify diamond opportunities (Rockwell Diamonds Inc, Company Profile, n.d.a). Along with focused business objectives, Rockwell's social responsibility values form an integral part of their operations. Rockwell is committed to providing economic growth to its shareholders as well as

enhancing their social responsibilities (Rockwell Diamonds Inc, Corporate Responsibility, n.d.b). Rockwell believes in managing business that achieves sustainable growth while representing a high degree of social responsibility to its community (Rockwell Diamonds Inc, Corporate Responsibility, n.d.b). Rockwell is committed in enhancing corporate social responsibility, as it is focused on developing community programmes that support social development. Although these are some of few examples of resource extraction industries that practice corporate social responsibility, the research provides a detailed discussion of Lafarge Mining South Africa and its Ridgeview Quarry in Section 3.7 of the thesis.

A number of corporate social responsibility reports and laws have been developed for businesses; specifically mining industries. These reports and laws were initiated in order to determine businesses commitment to the social and bio-physical environment with regards to sustainable development. The relevance of these reports and laws and examples of resource extraction industries that are aimed at corporate social responsibility can not be explained with explaining impacts that result from resource extraction industries. This discussion is offered below.

3.6 Impacts of resource extraction industries

Mining and quarrying are classified as resource extraction industries and can be explained as the extraction of minerals and materials from the earth, such as coal, metals, diamonds, limestone and shale (van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Aigbedion and Iyayi, 2007). The extraction of these minerals and materials sometimes has disastrous impacts on both the social and bio-physical environment. This section briefly discusses ways in which resource extraction industries impact on both the social and bio-physical environment. However, in order to understand the impacts of resource extraction industries, consideration must be given to the processes involved within a resource extraction industry.

There are three stages of extracting mineral and materials from mines and quarries such as, exploration, mining and processing (van Oss and Padovani, 2003; Gosar, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). These three stages have resulted in enormous pressure being placed on both the social and bio-physical aspects of the environment (van Oss and Padovani, 2003; Gosar, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). The first stage,

exploration involves discovering the mineral and the value of the mineral to be mined (van Oss and Padovani, 2003; Gosar, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). The next stage, involves analysing whether the mineral is feasible to be mined (van Oss and Padovani, 2003; Gosar, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Finally the third stage, processing manages the mineral that was extracted (van Oss and Padovani, 2003; Gosar, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Once all three stages are completed and all the minerals produced by a mine or quarry is recovered, reclamation begins for future use (van Oss and Padovani, 2003; Gosar, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). In order to understand the processes involved in resource extraction industries, consideration must also be given to the types of resource extraction industries that exist.

Resource extraction industries can be classified under two types, surface mining and sub-surface mining. Surface mining is explained as removing the surface vegetation and layers of bedrock in order to extract valuable minerals and materials (van Oss and Padovani, 2003; Blodgett, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Singh and Pal, 2010). Techniques involved in surface mining include open-pit mining (quarrying), which extract materials from an open-pit in the ground, such as sand, aggregate, stone, gravel and building materials (van Oss and Padovani, 2003; Blodgett, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Singh and Pal, 2010). Sub-surface mining can be explained as excavating shafts into the earth in order to attain buried materials and minerals (van Oss and Padovani, 2003; Blodgett, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Singh and Pal, 2010). Both these types of mining require heavy machinery, such as bulldozers, drills, explosives, trucks and crushers and although these resource extraction industries create employment for many individuals, they consequently place a lot of pressure on the social and bio-physical environment (Aigbedion and Iyayi, 2007; Singh and Pal, 2010).

Mineral development in comparison to mining and quarrying can result in different degrees of pollution of air, water and land (Aigbedion and Iyayi, 2007; Singh and Pal, 2010). However, the degree of pollution is dependent on the stage and scale of activities (Aigbedion and Iyayi, 2007; Singh and Pal, 2010). Large-scale mining can result in high degree of degradation of vegetation, arable land, and landscape, adversely affecting humans and animals (Aigbedion and Iyayi, 2007; Singh and Pal, 2010). These impacts

imposed on humans and animals, raises a number of social and environmental challenges. Below, the impacts resulting from resource extraction industries are presented.

3.6.1 Air pollution

The most evident impact from aggregate, stone, and industrial mineral mines is degraded air quality, and associated health effects, resulting from airborne emissions (Laister, 2002; van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007). With regard to mines air pollution is mainly due to emissions of gases and particulate matter, which is classified as dust (Laister, G, 2002; van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007). Opencast mining and quarries cause greater air pollution, as they are known to emit gaseous pollutants and dust (Laister, G, 2002; van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007). Resource extraction industries such as these create air pollution problems not only within the mining and quarrying premises but also in surrounding residential areas as they affect air quality and have devastating implications on health.

Gaseous emissions may be generated during the construction and operation of a mineral resource extraction industry (Laister, G, 2002; van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007). Gaseous emissions reduce the air quality and have huge impacts on human health particularly where emissions are harmful gases. The impact can be extremely serious where emissions contain harmful compounds such as dioxins (Laister, G, 2002; van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007). The typical gaseous emissions from resource extraction industries include Nitrogen Oxides (N_2O), Sulphur Dioxide (SO_2), Carbon Oxides (CO and CO_2) and Methane (CH_4) (Laister, G, 2002; van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007). Exposure to these gases can result in headaches, nausea, tiredness and fatigue. However, in resource extraction industries other emissions are present as well, such as volatile organic compounds (VOC's), which are considered to be human carcinogens (Bloemen and Burn, 1993; Kerfoot, 1993; El-Fadel *et al.*, 1997). Similarly, acute effects of VOC's at high levels include: eye, nose and throat irritation, dizziness, headaches, loss of short term memory, fatigue and nausea (Bloemen and Burn, 1993; Kerfoot, 1993; El-Fadel *et al.*, 1997). Emissions of these gases considerably affect the social environment as the well-being of individuals is threatened. Furthermore, many

mines especially those operating in oil extraction, such as the Niger Delta in Nigeria, produce large red flames from the burning process, which leads to CO_2 and CO discharge thereby affecting the air (Aigbedion and Iyayi, 2007). Burning results in gaseous and particulate matter emissions which are discharged into ambient air (Gosar, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007). Resource extraction industries that are focused on extracting industrial minerals, like perlite and silica flux, can cause silicosis on prolonged exposure (van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007).

As a result of gaseous emissions, tainted air is taken into the body and can consequently deteriorate an individual's health. Gbadebo and Bankole (2007) explain that during inhalation and exhalation, these pollutants can cause serious damage to the lungs and tissues of human beings. Gbadebo and Bankole (2007) explain that the pollutants emitted from resource extraction industries enter the numerous tiny air sacs inside the lungs and also the blood stream which not only affect the lungs but may have disastrous impacts on other organs (Gbadebo and Bankole). Gbadebo and Bankole (2007: 39) elucidate that: "many of the possible serious health problems of these airborne dust pollutants on human include asthma, irritation of lungs, bronchitis, cancer, pneumonia, decreased resistance to respiratory and early death". These gaseous emissions present serious problems for the social environment, since emissions from these resource extraction industries affect the well-being of many individuals. However, Aigbedion and Iyayi (2007) explain that the bio-physical environment is also impacted on by these emissions, as these gaseous emissions contribute to global warming, since these gases are considered to be green-house gases. Thus these gaseous emissions pose serious harm to both the social and bio-physical aspects of the environment. However air pollution with regards to resource extraction industries is not only attributed to gaseous emissions but also to the increase prevalence of particulate matter (dust).

A large degree of dust from resource extraction industries is discharged daily into the air as a result of dust producing operations namely drilling, blasting, hauling, loading, transporting and crushing (van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Dust sources in mines can be categorised as primary sources that generate the dust and secondary sources which disperse the dust, known as fugitive dust, and carry it from place to place. In terms of primary sources, generation of dust can be explained as resulting

from poorly monitored crushers and non-compliant operations (Blodgett, 2004). Secondary sources resulting in fugitive dust is dust which is blown from the uncovered or partially covered dump trucks and also resulting from piles of sand and gravel at the construction sites (Blodgett, 2004; Gosar, 2004; Kitula, 2006). This can be observed in the case study as dust emitted from the Ridgeview Quarry is very visible. Aigbedion and Iyayi (2007) further explain that in the same way, a large number of air-borne particulate matters are created by the many stonecrushing industries. Other resource extraction industries that are focused on gypsum extraction can also produce very fine gypsum dust that can irritate the lungs and mucus membranes (Blodgett, 2004; Gosar, 2004; Kitula, 2006). Exposure to air laden with dust leads to health hazards such as respiratory problems, eye problems and asthma (Blodgett, 2004; Aigbedion and Iyayi, 2007). The digging, blasting and drilling in mineral extraction industries emit dust particles of various sizes into the immediate atmosphere, which can be inhaled by humans. Most of this dust is usually made up of Silica (occurring as Silicon Dioxide SiO_2) which is detrimental to the health of individuals (Singh and Pal, 2010).

Apart from direct health problems to human beings, dust not only deteriorates the social environment but also creates the serious problems for the bio-physical environment. Adverse effects of airborne dust pollution on the bio-physical environment, in general, are ozone layer depletion, green house effects, stunting of plant growth and acid rain (Kerfoot, 1993; van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). The effects of dust clouds and dust deposits are both visible and tangible in communities around industrial activities or construction sites (van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). The dust can pollute nearby surface water and stunt crop growth by shading and clogging the pores of the plants (Gbadebo and Bankole, 2007; Singh and Pal, 2010). Dust from mines and quarries settle on the soil which increases the soil pH, thereby affecting seed germination (Singh and Pal, 2010). Furthermore, Amira (2002 cited in Gbadebo and Bankole, 2007) explains that dust from mines and quarries changes the salt content of water, consequently disrupting aquatic communities and decreasing the quality of water used for drinking and irrigation purposes. Gbadebo and Bankole (2007) further explain that dust is capable of increasing water turbidity and reducing light penetration and further contribute to great water hardness or elevation of carbon dioxide which will increase other

pathological conditions (Kerfoot, 1993; van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007).

Mining and quarrying operations often contribute to the greenhouse effect. The greenhouse effect is a natural phenomenon which refers to the increase in the earth's surface temperature due to the presence of certain gases in the atmosphere (Kerfoot, 1993; van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). There is great concern that this phenomenon is being altered and enhanced by greater emissions of gases caused by human activity, such as those relating to resource extraction industries. In many resource extraction industries, burning of fossil fuels produces CO_2, a gas that is linked to global warming through the greenhouse effect (Kerfoot, 1993; van Oss and Padovani, 2003; Blodgett, 2004; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). The combustion of fossil fuels such as coal produces gaseous emissions of Sulphur Dioxide (SO_2) and Nitrous Oxides (N_2O) that are responsible for the production of 'acid rain' and 'ground level ozone', which negatively impacts the social and bio-physical environment (Kerfoot, 1993; Blodgett, 2004; Gosar, 2004; Aigbedion and Iyayi, 2007). Acid rain occurs when SO_2 and N_2O gases react with water, Oxygen and other chemicals in the atmosphere and consequently form acidic compounds (Kerfoot, 1993; Blodgett, 2004; Gosar, 2004; Aigbedion and Iyayi, 2007). Ground level ozone is formed when N_2O gases react with other chemicals in the atmosphere and produces smog over cities (Kerfoot, 1993; Blodgett, 2004; Gosar, 2004; Aigbedion and Iyayi, 2007). The emissions of SO_2 and N_2O are classified as trans-boundary air pollution because the environmental impacts from the production of these gases are not restricted by geographical boundaries (Kerfoot, 1993; Blodgett, 2004; Gosar, 2004; Aigbedion and Iyayi, 2007). Thus air pollution is not restricted to a certain area but can migrate and cause problems for many individuals.

These high levels of gaseous emissions and suspended particulate pose serious implications on both the social and bio-physical environment, as the health of individuals is compromised and the natural environment is seriously deteriorated. However resource extraction industries are not only associated with air pollution but its activities also contribute to water pollution.

3.6.2 Water pollution

Resource extraction industries and its associated activities not only use a lot of water but also affect the hydrological regime of the water quality (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). In numerous areas of the country, ground water resources have been exploited resulting in an alarming lowering of the water table. The enormous consumption of water by resource extraction industries activities generally reduces the availability of water in and around mining areas and its implication to the social and bio-physical environment are explained below.

Resource extraction industries use water for spraying on roads, conveyors, at loading and unloading points, however the excess amount of water is further discharged into the surface drainage system, thereby creating water pollution (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Emissions to surface water and groundwater may be generated during and after operation. Many resource extraction industries contribute to waterborne effluent, which reduces the water quality and impacts on human health, particularly where water is used for irrigation, public water supply and on freshwater and marine flora and fauna (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). During operations, effluent is discharged from cooling process equipment and runoff water. Effluents contain dissolved solids (potassium, chlorides and sulphates) suspended solids (calcium carbonate) and waste heat (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). These effluents have disastrous effects on aquatic life, as consumption of these effluents by fish may result in death. With regard to mines operating in oil-producing areas, burst pipelines and tanks results in water and land pollution, impacting on aquatic and terrestrial life and contributing to groundwater pollution (Aigbedion and Iyayi, 2007). Although considered a bio-physical impact, this can also lead to social impacts as fish living in the water are killed, thereby affecting the livelihood of many fishermen (Aigbedion and Iyayi, 2007). Singh and Pal (2010: 50) explain that: "mining and, particularly, the extraction of rock and minerals in open mining have always been considered aggressive activities with a high and negative impact on the environment". The presence of heavy metals such as Manganese (Mn), Nickel (Ni), Iron (Fe), Copper (Cu), Silicon (Si) and Lead (Pb) in high concentration in groundwater can cause an adverse effect not only on aquatic life but also on human health (Singh and Pal, 2010: 50).

Other problems that may arise from mineral extraction industries is acid mine drainage which results in severe water pollution problems (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Acid mine drainage refers to weathering and leaching of sulphide minerals that are present in coal and aggregate mining (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Leaching of heavy metals usually occurs during the rainy season, and affects surface water bodies as well as the groundwater systems (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). The effects associated with acid mine drainage may include contamination of drinking water and disrupted growth and reproduction of aquatic plants and animals (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Further effects of acid mine drainage relating to water pollution, include the killing of fish, loss of aquatic life and corrosion of mining equipment and structures such as barges, bridges and concrete materials (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010). Various toxic, trace and heavy metals from the extraction of minerals and materials become soluble in acidic water and may show higher levels of concentration depending upon their availability in the source material (Blodgett, 2004; Aigbedion and Iyayi, 2007; Gbadebo and Bankole, 2007; Singh and Pal, 2010).

The contribution to water pollution by resource extraction industries therefore impacts significantly on the social and bio-physical environment. Water is considered as a vital resource not only for human but also for aquatic life and when the quality of such an important resource is threatened so are the livelihoods of many organisms. In relation to this, an explanation is provided on how resource extraction industries contribute to the degradation of the natural landscape and ecological disturbance.

3.6.3 Degradation of the natural landscape and ecological disturbance

Resource extraction industries invariably result in enormous land and ecological disturbance. This section will attempt to explain that the operation of resource extraction industries impact considerably on the natural landscape at the time of development of the mine or quarry as well as during its operational activities.

Vegetation as described and understood by Aigbedion and Iyayi (2007) is the first to experience destruction during exploration of minerals and materials in mining operations. Aigbedion and Iyayi (2007) further explain that vegetation damage is more extensive

during the development of the mine or quarry. Impacts on the environment may not be experienced immediately; however resource extraction industries have disastrous impacts on the flora and fauna (van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007). In order to accommodate the development of a resource extraction industry, the natural landscape is significantly altered. This results in enormous stress being placed on the natural landscape as almost all of the vegetation is destroyed, thereby disturbing the ecosystem. The development of mines and quarries often results in deforestation, resulting in the destruction of plants thereby forcing the migration of animals' dependant on those plants (van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007). This has disastrous effects on the bio-physical environment as many birds and wildlife that were present before the mine would be forced to relocate.

Similarly, the operations of resource extraction industries have impacted on geological aspects of a landscape. Many resource extraction industries operations in turn, upset the balance in the physical environment, which may cause geological hazards such as landslides, erosion, flooding and tremors (van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007). These geological hazards pose serious threats to the social and bio-physical environment and in extreme circumstances may cause loss of life. The blasting of rocks and other operational activities of quarries and mines may cause tremors, which may sometimes damage house and buildings thereby further prejudicing those living in close proximity to these industries (van Oss and Padovani, 2003; Blodgett, 2004; Aigbedion and Iyayi, 2007).

These issues may not be considered as threatening the health of individuals, however impacts of this nature significantly contribute to a decrease of an individual's well-being. The degradation of the natural landscape and ecological disturbance of animals and humans is therefore an important issue to discuss in relation to operational activities relating to resource extraction industries. In addition to this, the noise resulting from a resource extraction industry becomes imperative to discuss and is considered below.

3.6.4 Noise pollution

Noise is considered a very serious problem in society today as no one wants to be disturbed. Noise pollution is any unpleasant harsh sound that is undesired. Resource extraction industries are one of many developments that audibly impose on the well-being of humans as well as animals and will be discussed in this section.

Noise can be explained in terms of the noise relating to the source and noise relating to potential receivers (Compton *et al.*, 1999; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007). Sources of noise pollution can be classified as stationary or corridor. Stationary sources are residential, industrial and demolition sites, whereas corridor noise sources are transportation networks (motor vehicles; noise generated from engine, exhaust and tires) and flight paths (Compton *et al.*, 1999; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007). Noise with regards to residents is assessed by finding the source of the sounds that are considered most disturbing to residents (Compton *et al.*, 1999; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007). Compton *et al.* (1999) explained that a disturbance from an unwanted sound depends on the quality of the sound and an individuals response to that sound. Furthermore, the degree to which noise affects an individual depends on an individual's social standing and his/her access to relief (Compton *et al.*, 1999). Compton *et al.* (1999) explain that the impact of noise is dependent on the proximity of an individual to a certain development and further explain that exposure to noise pollution can occur over long and short term periods. For example, it is most often the poorer members of society that are in close proximity to developments and are the one's most affected by noise, while richer members of society are further away and are able to use their wealth to escape the noise.

Although not extensively studied, noise pollution is still an issue that needs to be addressed. Noise pollution can be harmful to health or welfare of humans and animals. With regard to humans, health effects resulting from noise are, hearing loss, muscular tension, metabolic changes, reduced gastro-intestinal activity, nausea, headaches, tinnitus (ringing sensation in the ear), drowsiness and respiratory irregularities (Compton *et al.*, 1999; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007). Noise pollution also has psychological impacts on humans as it affects sleep, auditory communication and learning (Compton *et al.*, 1999; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007). Similarly, the noise generated by a resource extraction industry can also frighten away animals in a mining locality and this can have significant impact on the bio-physical environment as many animals are forced to migrate, thereby disrupting the ecosystem (Compton *et al.*, 1999; Gosar, 2004; Kitula, 2006; Aigbedion and Iyayi, 2007). Thus noise pollution from resource extraction industries is considered a nuisance as well as a health hazard, since it creates potential impacts on the social and biophysical environments. It can be seen that resource extraction industries whilst providing a service to society and providing employment, have considerable negative impacts on both the social and bio-physical

environments with respect to air pollution, water pollution, degradation and ecological disturbance as well as noise pollution. This has led to many developments such as mines and quarries adopting regulations and corporate social responsibility initiatives in order to moderate the negative effects of its operations and mitigate impacts to the social and bio-physical environments. In the next section Lafarge Mining South Africa is discussed in greater detail, so as to explain the degree of corporate social responsibility practiced.

3.7 Lafarge Mining South Africa and its Ridgeview Quarry

This section of the research provides a background to the case study, which is Lafarge Mining South Africa and its Ridgeview Quarry. The history, goals, visions and sustainable development initiatives of the company are explained in this section. Furthermore, the company's contribution to corporate social responsibility is evaluated in this section.

This study examined Lafarge Mining South Africa and specifically its Ridgeview Quarry in Durban. Lafarge Mining South Africa, a subsidiary of Lafarge International, is primarily focused on providing materials to the construction industry (Cibane, pers. comm., 6 November 2007). The corporate sections of Lafarge Mining South Africa are located in Westville, Durban, whereas Ridgeview Quarry is located 8km southwest of the Durban city centre and is adjacent to residential areas in Cato Manor (Environmental Design Partnership, 1983) (See Figure 3.5 and Appendix B). Figure 3.5 shows the location of Ridgeview Quarry in relation to Durban. Furthermore, Appendix B shows Ridgeview Quarry in relation to surrounding residential areas. Lafarge Mining South Africa and its Ridgeview Quarry are one of many companies that attempt to encourage sustainable development. Lafarge Mining South Africa has actively participated in establishing community upliftment programmes, firstly through the promotion of education-related social upliftment programmes and partnering with communities in creating sustainable development and secondly, through the promotion of skills-related social upliftment programmes, where women are allowed to develop their skills (Cibane, pers. comm., 6 November 2007). The development of an education-related social upliftment programme and a skills-related social upliftment programme are some of the ways that Lafarge Mining South Africa has undertaken to promote corporate social responsibility. The history of Lafarge Mining South Africa is presented below.
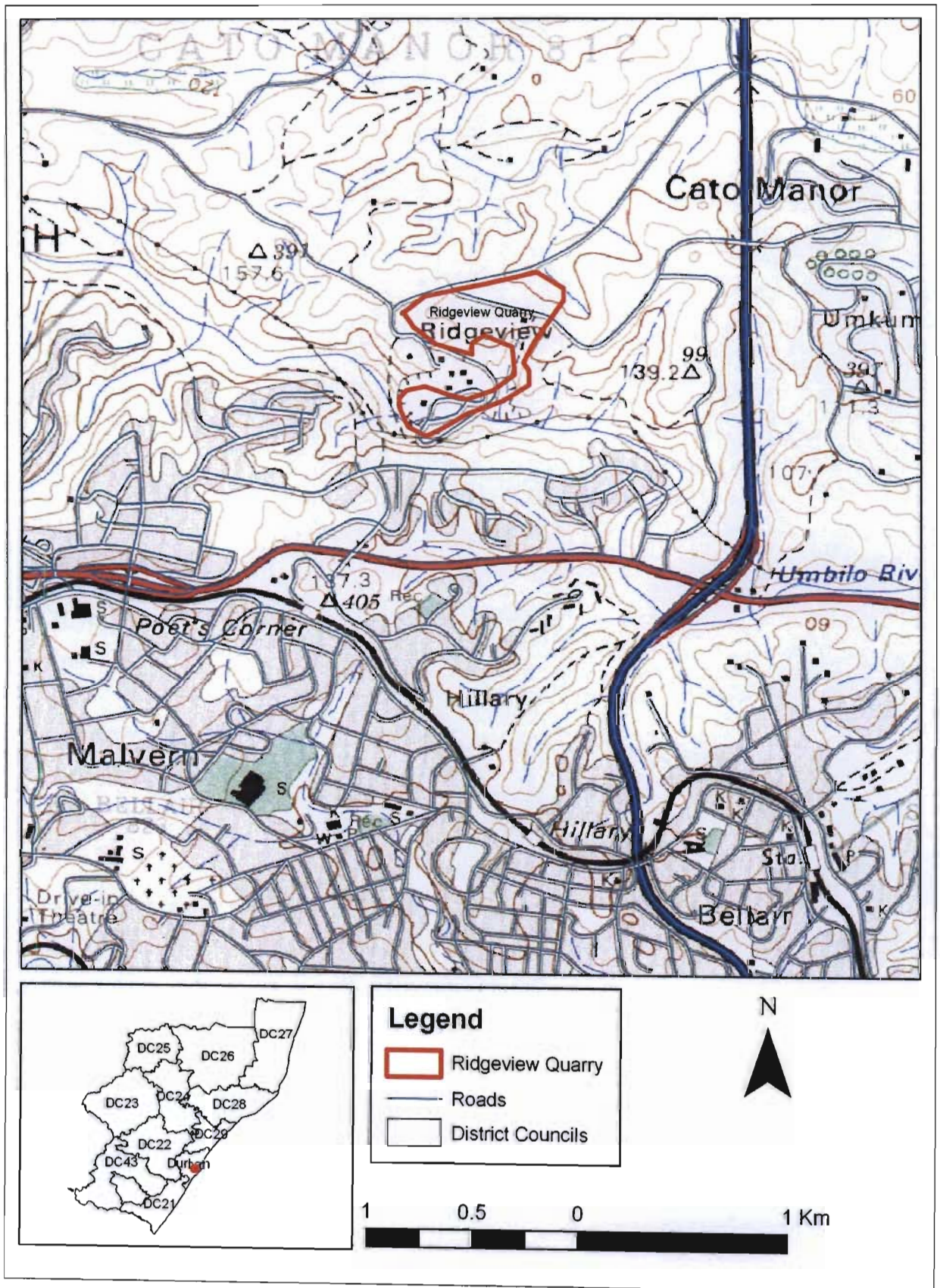
Figure 3.5: The location of Ridgeview Quarry in relation to Durban.

Source: (Kortenbout, 2009)

3.7.1 History of Lafarge Mining South Africa and its affiliations

Lafarge South Africa Holdings (Pty) Limited has two companies, namely: Lafarge Industries South Africa (Pty) Ltd which deals with cement, readymix concrete and gypsum and second Lafarge Mining South Africa (Pty) Ltd which deals with sand, aggregate, limestone and gypsum with respect to Quarry activities (Lafarge South Africa, bringing materials to life, n.d.a).

Lafarge, a French based group began from a small lime works company in 1833 in the southern parts of France (Lafarge South Africa, bringing materials to life, n.d.a). Lafarge Mining South Africa, a subsidiary of Lafarge international, is primarily focused on providing building materials to the construction industry since 1914 (Cibane, pers. comm., 6 November 2007; Lafarge South Africa, bringing materials to life, n.d.a). However, in 2001, Lafarge international took over Blue Circle United Kingdom and is well-known in South Africa as Lafarge Mining South Africa. Lafarge Mining South Africa and its Ridgeview Quarry have embarked on many social initiatives which will be explained in the following sections.

3.7.2 Goals, vision and sustainable development initiatives of Lafarge Mining South Africa

Many corporations in this new era are geared towards developing an economy that is sustainably grounded, so as to ensure equitable and efficient development with people and business working hand in hand and it is observed in this research that Lafarge Mining South Africa is considered as being one of those corporations. According to the company's vision, Lafarge Mining South Africa is focused on providing innovative solutions so as to develop and enhance the quality of life (Lafarge South Africa, bringing materials to life, n.d.a). One of the main goals of Lafarge Mining South Africa is to promote sustainable development with respect to social and economic upliftment and environmental protection (Lafarge South Africa, bringing materials to life, n.d.a). To this end, Lafarge is one of the few companies in the construction materials division that was listed in the '100 Global Most Sustainable Corporations' globally (Lafarge South Africa, bringing materials to life, n.d.a).

According to Lafarge Mining South Africa their operations are geared towards meeting the needs of people with regards to safety, health, housing, education and social upliftment, whilst at the same time encouraging innovative methods with respect to sustainable construction (Lafarge South Africa, bringing materials to life, n.d.a). Lafarge Mining South

Africa's vision is focused, not only towards becoming a world leader in building materials, but also aims at promoting sustainable development with respect to economic and social upliftment (Lafarge South Africa, bringing materials to life, n.d.a). As a result, according to Lafarge Mining South Africa, it has adopted a sustainable development strategy, whereby focus is placed on efficiency, value creation and environmental protection, whilst at the same time protecting the needs of human beings (Lafarge South Africa, bringing materials to life, n.d.a). In view of this, many adversaries of corporate social responsibility highlight that companies, such as resource extraction industries that adopt corporate social responsibility or sustainable development initiatives are merely presenting a facade in order to allow for its operations to be accepted within the community it is situated in. These criticisms of corporate social responsibility are further highlighted in Section 3.7.4 of this study.

Lafarge's documented principles of action include a focus on improving the quality of life for future generations (Lafarge South Africa, bringing materials to life, n.d.a). Thus, according to Lafarge Mining South Africa it is focused on the social and economic development of communities within which it operates so as to sustain future performance (Lafarge South Africa, bringing materials to life, n.d.b). Lafarge Mining South Africa is involved in many social and economic development schemes that involve Black Economic Empowerment such as Employee Share Ownership schemes and the introduction of learnership programmes to communities in which they operate (Lafarge South Africa, bringing materials to life, n.d.b). One of the ways in which Lafarge Mining South Africa and its Ridgeview Quarry envisage the encouragement of sustainable development, is by attempting to ensure that their corporation is socially responsible with respect to their activities by adopting corporate social responsible methods. Lafarge Mining South Africa has also adopted an Excellence 2010 plan which focuses on profitable growth and innovation whilst at the same time developing individuals (Lafarge South Africa, bringing materials to life, n.d.c). Advocates of corporate social responsibility explain that the emphasis on social responsibility, allows many businesses to increase long-term profitability as society becomes more accepting of them. This creates a problem free environment for businesses to operate in. These acclamations are further highlighted in Section 3.7.4 of the research.

Lafarge Mining South Africa is one of the many companies that are allegedly aimed towards encouraging sustainable development, so as to ensure that benefits of development

are extended towards the future. Lafarge Mining South Africa with regards to sustainable development supposedly not only emphasises economic profitability but also promotes awareness with respect to environmental quality and improvement of the social well-being of society (Lafarge South Africa, bringing materials to life, n.d.d). However it must be noted that although businesses may promote social upliftment on paper, their primary objective is economic profitability. Social upliftment programmes may be used to lull society into mistakenly accepting bad business practices. It is therefore important to understand Lafarge Mining South Africa's apparent contribution to corporate social responsibility and this will be discussed below.

3.7.3 Lafarge Mining South Africa on corporate social responsibility

Within its sustainable development concerns, Lafarge Mining South Africa has alleged that it is principally focused on enhancing the well-being of individuals and its most important areas of focus are education and infrastructure development since emphasis is placed on creation of jobs and elimination or reduction of poverty (Lafarge South Africa, bringing materials to life, n.d.e). According to Lafarge Mining South Africa, they seek to provide practical assistance to communities located in proximity to their operations as well as strengthening and emphasising long term relationships (Lafarge South Africa, bringing materials to life, n.d.e). One of the ways that Lafarge Mining South Africa purportedly promotes corporate social responsibility is by actively participating in sustainable development initiatives, including by supporting disadvantaged youths as well as women. Furthermore, it would seem that Lafarge Mining South Africa has engaged in a number of social upliftment programmes, which are explained below.

a) Social upliftment programmes in which Lafarge Mining South Africa and its Ridgeview Quarry are involved

One of the ways in which Lafarge Mining South Africa attempts to enhance social sustainability and corporate social responsibility is by providing a discussion forum to the community as well as engaging in social responsibility programmes. However, a brief discussion of these initiatives are offered below.

The discussion forum developed by Lafarge Mining South Africa and its Ridgeview Quarry provided the local community with the opportunity to voice out their concerns regarding the Quarry's operational activities (Cibane, pers. comm., 6 November 2007). The development of these forums thereby aided the facilitation of the decision-making

process. In light of the discussion forum, an area committee was selected, which included the three representatives from the local community, the Minerals manager and Quarry manager (Cibane, pers. comm., 6 November 2007). Below is a discussion of the social responsibility programmes.

In this study only two social responsibility programmes will be examined, namely; the education-related social upliftment programme and the skills-related social upliftment programme, as these were the ones which occurred in Durban and are related to Lafarge Mining South Africa and its Ridgeview Quarry. The education-related social upliftment programme involved Lafarge Mining South Africa providing financial assistance to the Chesterville Extension High School in order to purchase laboratory supplies and for the purpose of extra tuition so as to assist in the educational development of the learners. This education-related social upliftment programme undertaken by Lafarge Mining South Africa was aimed at providing learners with the opportunity to improve their ability to learn. Furthermore, the goal of this project was to enable and not limit the learners to achieve their full potential within the academic field. Provision of laboratory equipment to the school was not only aimed at improving the learning environment within the school but also indirectly changing mind-sets of the learners in thinking about careers after high school (Cibane, pers. comm., 6 November 2007).

The second programme examined in the study was the skills-related social upliftment programme. In this programme Lafarge Mining South Africa undertook an initiative with respect to developing women's skills in pottery and crafting. This programme provided classes every week for six weeks, which was free and a pottery teacher as well as transport was provided to all women in the community (Cibane, pers. comm., 6 November 2007). The goal of this programme was to encourage women to gain skills in order to improve their well-being by providing an opportunity for employment in the future (Cibane, pers. comm., 6 November 2007). Thus the initiative behind both these programmes was to provide disadvantaged individuals with the opportunity to improve their well-being, since the community surrounding Lafarge Mining South Africa and its Ridgeview Quarry are regarded as low to middle income groups (Cibane, pers. comm., 6 November 2007). Discussions of both these social upliftment programmes are provided in greater detail in Chapter Six of the research. Below a discussion of other initiatives adopted by Lafarge Mining South Africa are provided.

Other community projects include an eco-village in Ivory Park in Midrand where Lafarge donated cement and concrete to erect a centre for visitors. Lafarge also participated in providing construction materials for housing to 'habitat for humanity'. Lafarge South Africa in association with 'the national home builders registration council' participated in community project where they provided construction materials to disadvantaged individuals and also provided practical training in order for youth and women develop their skills. Another community project Lafarge was involved, with respect to social sustainability, was the provision of construction materials for the construction of nine Freedom Towers in Soweto in order to commemorate the adoption of the Freedom Charter (Lafarge South Africa, bringing materials to life, n.d.f).

Lafarge Mining South Africa is allegedly focused on training women and mostly disadvantaged individuals with practical skills so as to allow for greater sustainability. In pursuit of this, Lafarge Mining South Africa is affiliated with a project called, 'Women for Housing', which encourages women particularly disadvantaged women to develop skills. In 2006, Lafarge Mining South Africa provided a practical opportunity for 30 women from the Women for Housing organisation to gain knowledge and skill with respect to the construction industry. This initiative, allowed for job creation. Lafarge is also involved with learnership programmes, where disadvantage youths are given the opportunity to receive an education. One example is at its Tswana Lime Quarry, where in 2006 and 2007, 9 and 16 learners respectively were given training, including practical and theoretical knowledge on becoming electricians or millwrights (Lafarge South Africa, bringing materials to life, n.d.e). In addition, Lafarge Gypsum and CIDA Campus focused on educating learners in the field of construction and furthermore, sponsored and initiated a training centre in Roodekop (Lafarge South Africa, bringing materials to life, n.d.e).

Lafarge is of the opinion that they not only promote social sustainability but also enhance environmental awareness so as to promote holistic sustainable development and an improved corporate social responsibility ethic. To this end, Lafarge Mining South Africa attempts to encourage skills development, by providing expert knowledge and technical resources so as to ensure sustainability (Lafarge South Africa, bringing materials to life, n.d.g). Lafarge was one of the first corporations to engage in a partnership with the World Wide Fund for Nature, which is an environmental protection establishment that is focused on conservation practices (Lafarge South Africa, bringing materials to life, n.d.g).

Lafarge has also seemingly contributed to greening, by establishing a cement sustainability initiative which was aimed at reducing carbon dioxide emissions so as to ensure that their corporation engage in responsible management, with respect to sustainable development (Lafarge South Africa, bringing materials to life, n.d.g). Lafarge is also involved with the "Energy Efficiency in Buildings" project, which aims at reducing energy use in buildings (Lafarge South Africa, bringing materials to life, n.d.g). Lafarge Mining South Africa requires their quarries to undergo regular environmental audits that meet the terms and requirements of the Department of Minerals and Energy, whilst at the same time developing rehabilitation programmes (Lafarge South Africa, bringing materials to life, n.d.g). Lafarge Mining South Africa and NPC-Cimpor have engaged in alternative energy saving projects so as to increase and promote the use of alternative fuels in order to encourage sustainable development (Lafarge South Africa, bringing materials to life, n.d.g).

Going by appearances, Lafarge Mining South Africa can be seen as one of the many South African companies that are focused towards achieving sustainable development and social responsible behaviour. However, there are many criticisms that these businesses promote corporate social responsibility for the sole purpose of continuing their operations and not for any other reason. These criticisms were mentioned previously and will be discussed in detail below.

3.7.4 Critique of corporate social responsibility

The evolution of the concept of corporate social responsibility, as a result of focus being placed on sustainable practices, has led to arguments about a business's social responsibility. This section provides a critique of corporate social responsibility and highlights Lawrence *et al.* (2005) and Hamann and Acutt (2003) argument for and against corporate social responsibility.

Lawrence *et al.* (2005) provided arguments for corporate social responsibility. The first argument, 'balances corporate power with responsibility', explains that businesses are influential in society and that businesses who perform social responsibility measures understand that if they abuse the use of power within society, that power might be lost (Lawrence *et al.*, 2005). This ensures that businesses function orderly and fairly in society. The second argument, 'discourages government regulation', argues that if a business voluntarily commits to promoting good social acts, this allows for less governmental

intervention and therefore reduces costly government regulations (Lawrence *et al.*, 2005). The third argument, 'Promotes long-term profits for businesses', explains that the adoption of social initiatives by businesses increases long-term profitability (Lawrence *et al.*, 2005). The fourth argument, 'improves business value and reputation' states that by businesses adopting corporate social responsibility measures, trust between business and its stakeholders increases and this results in the prosperity of a business (Lawrence *et al.*, 2005). Lastly, 'corrects social problems caused by business', argues that businesses located within a society present an array of hazards, thus businesses in this respect acknowledge their responsibility in society and therefore rectify any problems created (Lawrence *et al.*, 2005).

Lawrence *et al.* (2005) also presented arguments against corporate social responsibility, as some businessmen are of the opinion that corporate social responsibility results in unexpected costs faced by business. According to the first argument, 'Lowers economic efficiency and profits', some businesses who undertake a social initiative may suffer a loss, for example if an unproductive company only operates for the sole purpose of the community, this results in enormous costs incurred by the business. Another reason for a decrease in profits is that businesses are encouraged to sell products that are at the lowest competitive price and the efficiency of some businesses is lowered and only the efficient businesses survive (Lawrence *et al.*, 2005). The second argument is 'Imposes unequal costs among competitors', explains that responsible businesses have to suffer unfair costs. Laws and regulations differ from country to country and certain foreign businesses are not required comply with certain legal requirements and therefore profit from this (Lawrence *et al.*, 2005). 'Imposes hidden costs passed on by stakeholders' argues that someone has to pay the cost even if business acts responsibly. If for instance, a business adopts measures to reduce air pollution, the community may benefit in a sense that the air will be less polluted, however, other stakeholders may disadvantaged, for example, employees may be paid less or consumers may be charged higher prices (Lawrence *et al.*, 2005).

The fourth argument, 'Requires social skills business may lack' states that placing businesses in charge of solving social issues may be detrimental as it may lead to expensive or insufficient solutions, since business people are not trained to solve social problems as emphasis is placed more on the economic sphere (Lawrence *et al.*, 2005). The last argument, 'Places responsibility on business rather than individuals', explains that responsibility can only be placed in the hands of individuals even with respect to a

business, since it is an individual with authority who makes decisions in business (Lawrence *et al.*, 2005). In this case, businesses as a whole cannot be responsible for its actions, and only individuals who are involved in encouraging a policy should be held accountable (Lawrence *et al.*, 2005). Thus it is wrong to explain social responsibility in terms of business but it should rather be explained in terms of social responsibility of individual businesspersons (Lawrence *et al.*, 2005).

There are two critiques of corporate social responsibility as presented by Hamann and Acutt (2003). The first critiques deals with the markets. Friedman (1970) argues that when businesses adopt social responsibility methods distortions occur in the market, as these impede on governmental responsibilities (cited in Hamann and Acutt, 2003; Karake-Shalhoub, 1999; Gouldson, 2006). Thus some argue that corporate social responsibility decreases the role of governments in businesses. The second critiques lies with civil society, since many businesses are now focused on adopting corporate social responsibility methods. However, it must be noted that understanding a business's motive is crucial for engaging in corporate social responsibility (Hamann and Acutt, 2003). This is evidenced by the adoption of corporate social responsibility by certain businesses in order to be 'seen' as doing good rather than 'actually' doing good (Hamann and Acutt, 2003). Both these critiques are related to Marsden's (2000, cited in Hamann and Acutt, 2003: 257) 'corporate citizenship paradox' which argues that, "large corporations are responsible for much of the social and environmental disruption in the modern world, but at the same time are considered key allies in the fight against these negative impacts". Because of these critiques, Hamann and Acutt (2003) view corporate social responsibility as relating to accommodation and legitimisation, which are discussed below.

Understanding corporate social responsibility as accommodation is very important. For one to accommodate, it means to adapt to changes in the environment or a situation, thus corporate social responsibility is viewed as a reaction to a change in social prospects (Hamann and Acutt, 2003). This can be noted in the early 1970's in South Africa, when American multinationals wanted to withdraw investments in the country due to apartheid legislation. This forced South African businesses to adopt the Sullivan Principles, which promoted anti-segregation laws, thereby emphasizing the moral conduct of many businesses and resulting in a change in corporate behaviour (Hamann and Acutt, 2003). However, critics of corporate social responsibility dispute that corporate social responsibility should be given so much positive attention, since it is not established on a

truthful effort for businesses to authentically improve their social and environmental impacts towards society (Hamann and Acutt, 2003). Hamann and Acutt (2003) further explain that it is important for businesses to be responsible, since under social pressures businesses adopt methods that simultaneously increase profits and allow for the business to be seen as responsible in the public eye.

Hamann and Acutt (2003: 259) therefore state that: "The essence of accommodation as an underlying motive for CSR is hence to make small, feasible changes to how things work (including cosmetic changes), so that demands for more significant changes can be precluded". Thus corporate social responsibility as some argue, is to change the surface of most business operations and therefore does not contribute extensively to being sustainable in the future.

Understanding corporate social responsibility as legitimisation is significant. Hamann and Acutt (2003) explain that to legitimise means to justify. Hamann and Acutt (2003) explain that accommodation and legitimisation are related. Accommodation is primarily focused on interactions between interests, whereby pressure is placed on companies to change their practice if they are doing harm; whereas legitimisation is a way to influence the discourse, by addressing what questions and solutions influence corporate behaviour (Hamann and Acutt, 2003). It is further argued that corporate social responsibility legitimises the capitalistic mode of development (Hamann and Acutt, 2003). Thus at an individual level, legitimisation influences the corporate social responsibility discourse by influencing an individual's perception thereby uncovering certain information (Hamann and Acutt, 2003). At the network level, legitimisation defines the problem in order for actors to develop solutions (Hamann and Acutt, 2003). Thus businesses are viewed as having the power to influence the corporate social responsibility discourse as well as affecting certain outcomes (Hamann and Acutt, 2003). Writers such as Ackerman, criticised the term corporate social responsibility as a term that emphasises obligation, since emphasis is placed on motivation rather than performance (Carroll, 1979). There are many critiques of the concept, however, a clear argument is that corporate social responsibility is not a legal requirement but more so an ethical obligation.

Thus corporate social responsibility can be explained as where businesses take a holistic approach by incorporating all aspects of the environment into their working practices, whilst at the same time encouraging social development. Topics that were discussed thus

far in this chapter were the definitions, emergence and critique of corporate social responsibility. Further to this an understanding of the relevance of corporate social responsibility in developing countries is offered in the next section.

3.8 Conclusion

Prima facie evidence suggests that Lafarge Mining South Africa is focused towards the creation of a relationship between society and the corporation in order to allow for equal and fair participation and social sustainability as well as promoting acceptable behaviour by business towards society as a whole. It would seem that corporations such as these are now focused on providing society with the opportunity to prosper as well as allowing for generations in the future to benefit. Corporate social responsibility is focused on understanding how ethical behaviour is important when discussing social construction of society. Focus is now placed on giving power to individuals in society and where interests of these individuals are met. Thus corporate social responsibility therefore challenges corporations to be attentive and responsive with regards to their involvement in the social sphere. The following chapter provides the research methodology used in the study and explores how data was collected and analysed.

CHAPTER FOUR

METHODOLOGY

4.1. Introduction

This chapter presents different methods that were applied in order to collect and interpret the data within the study. The methods allowed for the objectives of the research to be answered. The methodology for this research primarily focused on using a qualitative approach for understanding the degree of social sustainability with regard to social responsibility. Only techniques that were pertinent to the research were used to validate and authenticate the findings of the research. Discussion within this chapter outlines how the methods used assisted in the development and formulation of the research (Flowerdew and Martin, 1997). The research was structured according to a specific research design and data approaches such as following a deductive approach and undertaking an intensive study approach. This aided with the collection, structure, coherent understanding, and analysis of data within the study.

Firstly, the general approach to the research design is explained in Section 4.2. Section 4.3 describes the degree to which qualitative research was used. Section 4.4 illustrates the secondary and primary data sources used in the research, which consisted of site visits, in-depth interviews and the collection of documents and texts. Sampling methods that were used in the study is explained in Section 4.5. Section 4.6 provides an understanding as to how data collected for this research were analysed and interpreted. Section 4.7 explains the limitations that the researcher faced. The last section, Section 4.8 presents the conclusion of the methodology.

4.2 General approach to the research design

The research favoured a qualitative approach, where an intensive approach was used in order to corroborate the findings of the research. Methodological approaches that were used in this study, comprised of both deductive and inductive reasoning. Furthermore, the research encompassed aspects of evaluation research, which will be explained in detail in this section.

Prior to the commencement of the research, Lafarge Mining South Africa furnished the researcher with a letter confirming and approving the proposed research (see Appendix C, showing approval letter by Lafarge Mining South Africa). Thereafter, a proposal for the

research was submitted to the University of KwaZulu-Natal, where the research was approved for ethical clearance (see Appendix D, showing ethical clearance approval letter). Upon commencement of the research the Minerals manager, from Lafarge Mining South Africa, provided the researcher with information regarding the discussion forum in order to investigate the nature of public participation with regard to Ridgeview Quarry. In addition, the Minerals manager presented the researcher with two social upliftment programmes, namely, education-related and skills-related social upliftment programmes to be examined. Before a discussion of the approaches used in this research, an explanation of why positivistic methods were not applicable to the research is presented below.

Positivism is a modernist approach that was developed by Comte as a reaction against 'negative philosophy', where scientists sought to replace description with explanation and individual understanding with laws (Caldwell, 1982; Smith *et al.*, 1996; Kitchen and Tate, 2000). As a result, positivism is primarily concerned with quantitative techniques and in turn favours physical sciences more than human sciences. Kitchen and Tate (2000) argue that positivism is empirical in nature and this creates problems for social research, as positivism underestimates the complex relationship between theory and observations and in particular this presents difficulty in separating the effects of phenomena that are interrelated. Positivism has also been criticised for its exclusivity as it fails to acknowledge that spatial patterns are included in economic, political and social structures (Caldwell, 1982; Smith *et al.*, 1996; Kitchen and Tate, 2000). Positivism can be further criticised for its autonomy as it creates a false sense of objectivity that separates the observer from the observed, which is problematic as it disregards subjective thought (Caldwell, 1982; Smith *et al.*, 1996; Kitchen and Tate, 2000). Thus, positivism is a useful approach with regards to analytical and scientific explanations, but not all social and environmental problems can be resolved using scientific solutions. The research attempted to examine the deeper meaning and understanding provided from the collection of data, therefore favouring a qualitative research (Griggs, 2000). Thus this research moved away from a positivistic approach towards a deductive and analytical inductive approach.

The key intention was to use multiple methods (using secondary and primary sources) to evaluate the social upliftment programmes adopted by Lafarge Mining South Africa and its Ridgeview Quarry. Thus a case study approach was adopted with the focus on one specific company (Cook and Reichardt, 1979; Bennett, 2003; Gray, 2004). The case study approach

helped to confirm whether the initiatives that were assessed were being properly evaluated (Cook and Reichardt, 1979; Bennett, 2003; Gray, 2004).

Furthermore, methodological approaches adopted in this study, informed both components of deductive and inductive reasoning. More specifically the research was driven largely by multi-conceptual theoretical grounding. A deductive approach was used, since the theory occurred before the research and where the theory was verified or disproved by the research (Shaffir and Stebbins, 1991; Robinson, 1998; Kitchin and Tate, 2000; Silverman, 2005). Thus theories were used so as to validate and interpret the data collected during the research process (Kitchen and Tate, 2000). This approach allowed for relevant theories to be used in the research, thus providing a framework for the structure of the research. To develop theory that is empirically grounded, an inductive methodology was appropriate for this research (Shaffir and Stebbins, 1991; Robinson, 1998; Kitchin and Tate, 2000; Silverman, 2005). Analytic induction was preferred because it explicitly accommodates existing theories (Robinson, 1998; Kitchin and Tate, 2000; Silverman, 2005). Using this approach, the researcher went back and forth between data collection and theory generation. With analytic induction, researchers collect data intended to challenge their emerging hypotheses, in an effort to develop theory (Robinson, 1998; Kitchin and Tate, 2000; Silverman, 2005). Discrepancies between existing theory and the data were reconciled in the subsequent iteration. A key focus of this research was based on public participation and the evaluation of the social upliftment programmes undertaken by Lafarge Mining South Africa and its Ridgeview Quarry. To this end, the study was biased heavily towards community perceptions and concerns. However, it was important to note that the theoretical framework/understanding that guides the study was complimented by the collection of primary data, albeit reliant on qualitative methods rather that survey instruments which provides statistically instrument finding. This was deemed to be sufficient for this study and in keeping with the body of research that advocated the use of a qualitative approach (Cook and Reichardt, 1979).

This research further encompassed aspects of evaluation research. Bennett (2003: 14) defined evaluation research as, "to gather information to judge the value and merit of a specific innovation and to inform decisions". Evaluation research is methodical and systematic, as it takes into account different stakeholders (Struening and Guttentag, 1975; Cook and Reichardt, 1979; Weilenmann, 1980; Daponte, 2008). Evaluation can be defined as a methodical assessment of the merit of a certain project (Cook and Reichardt, 1979,

Rowland, 2000; Wilkinson, 2000; Daponte, 2008). Evaluation research is very valuable as it provides useful information pertaining to a certain project and further provides useful feedback to a variety of stakeholders. There are different types of evaluation, namely formative and summative evaluation (Cook and Reichardt, 1979, Rowland, 2000; Wilkinson, 2000; Daponte, 2008; Smith and Brandon, 2008). Formative evaluations aim at improving a certain project, whereas summative evaluations, in contrast, summarise information from a project and attempt to examine the outcomes of a project (Cook and Reichardt, 1979, Rowland, 2000; Wilkinson, 2000; Daponte, 2008; Smith and Brandon, 2008). This research adopted summative evaluation and more specifically, focused on impact evaluation. Impact evaluation addresses the overall effect of a project, be it intended or unintended (Cook and Reichardt, 1979, Rowland, 2000; Wilkinson, 2000; Daponte, 2008; Smith and Brandon, 2008). This research evaluated social upliftment programmes initiated by Lafarge Mining South Africa and its Ridgeview Quarry in order to determine the overall effect these programmes had on the livelihoods of individuals.

In collecting data for this study, the researcher sought to obtain information deep enough to ensure a rich accumulation of data from which to draw inferences. To this end information was collected from a variety of sources and an intensive approach was favoured. An intensive approach is based on qualitative analysis and allowed for a small sample to be selected (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). The research was restricted to 17 in-depth interviews, thereby favouring an intensive approach. A restricted sample size is not disadvantageous, as each interview was thoroughly studied in their environment with all their relevant properties and relationships, thus achieving a deep and meaningful understanding of their position and meaning within a social context (Sayer, 1984; Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). Intensive research provides a detailed study, since although few individuals were interviewed for the purpose of the research, a vast amount of crucial and in-depth information was gained (Sayer, 1984; Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). Intensive data allows the researcher to break down the data into many parts and each part is analysed in order to obtain a greater understanding (Sayer, 1984; Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). Thus using an intensive approach allowed the researcher to conduct a thorough analysis (Sayer, 1984; Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). This assisted in framing the structure and process of the research and further contributed to a holistic study. An explanation of the relevance of how qualitative research assisted the study is presented below.

4.3 Qualitative research

Qualitative research methodology was used in order to address the objectives of the study. Information was gathered from interviews held with individuals participating within the discussion forum, social upliftment programmes and through observations made during site visits.

A qualitative approach assumes that processes in society affect the way individuals respond to a change and that these social processes are not constant and are continually changing, thus individuals attitudes and beliefs are always affected by societal interactions (Shaffir and Stebbins, 1991; Robinson, 1998; Silverman, 2005). Qualitative research therefore involves understanding the behaviour of individuals with respect to the meanings they associate or attach to their social environment (Robinson, 1998). Critics of qualitative research explain that this type of research is far too subjective and biased (Wellington, 2000; Dwyer and Limb, 2001). However, defenders of qualitative research explain that meaning is assembled through the interaction between the researcher and researched (Dowling, 2005).

Qualitative data is explained as 'interpretative data', whereby acknowledgement is given to many interpretations, meanings and understanding, whilst quantitative data is explained as providing scientific and numerical analysis (Shaffir and Stebbins, 1991; Robinson, 1998; Wellington, 2000; Silverman, 2005; Winchester, 2005). The research favoured a more qualitative approach, as it was based on interviewees' understandings of the discussion forum and the social responsibility programmes. Furthermore, another reason, a qualitative approach was adopted in this study was that, it allowed the researcher to engage in the data collecting process and discourage any form of isolation, thereby allowing the researcher to interact and form a relationship of trust with the interviewees (Shaffir and Stebbins, 1991; Winchester, 2005). Qualitative data allowed for various understandings and views to emerge so that a holistic explanation could be determined within the research. Robinson (1998) explains that one of the benefits of undertaking a qualitative research is that it allows for data not to be controlled and ordered, thereby reducing any biases, which is exemplified in this research.

The use of a qualitative approach proved to be beneficial in this research, since qualitative analysis allowed for multiple interpretations and meanings (Winchester, 2005). It allowed the researcher to explore different theories that were relevant to the study, therefore aiding

the research process. This type of approach, further allowed the researcher to critically analyse data that were collected and therefore allowed the researcher to arrive at concrete conclusions and recommendations. The following section presents the types of data sources used within the study, namely secondary data and primary data.

4.4 Data sources

This research has been undertaken through the use of both primary and secondary data. Their use in this study is discussed below.

4.4.1 Secondary data collection

Secondary data consists of published sources used to frame the overall research process and the analysis of the data. A range of journals, electronic journal articles, books, theses, credible internet sites (government websites, Department of Water Affairs and Forestry (DWAF) website) and handouts and materials (provided by Lafarge Mining South Africa and its Ridgeview Quarry) were used in this study.

Both hardcopy and electronic journals were used, as both proved to be useful for obtaining a diversity of information to be included in the literature review. Journals proved to be useful as most were recent publications. Books were extensively used and contributed to the bulk of the information used for the research. Books provided a frame through which findings were assessed. Theses also proved to be useful in this research as they provided the researcher with ideas relating to the study. Credible internet sites, such as the government websites, provided information that was useful for the study. Credible internet sites also provided recent data which were not obtained through books and this was useful since this complimented findings and the objectives of the study. Furthermore, these types of secondary data were used to build the theoretical framework of the research.

Data were collected on the basis of the research topic in order to arrive at concrete conclusions and recommendations. The conceptual framework for this research was derived from a range of literature on concepts such as social justice, sustainable development, social sustainability, vulnerability and well-being as well as public participation. This was done in order to frame the research and create a greater knowledge of the topic being researched. The diversity of sources also allowed for the research to be exciting, as well as informative. The first stage of the study was to examine and investigate all the relevant literature that were applicable and appropriate to the study. A literature

review enables the researcher to illustrate and expand their knowledge with regards to the topic undertaken (Flowerdew and Martin, 1997). The conceptual framework for this research was developed through the use of variety of literature so as to address issues that were overlooked in the past.

The literature used in the conceptual framework showed knowledge of the subject and provided a structure, by introducing key concepts that shape the framework (Johnston *et al.*, 2000). Thus literature provided a logical explanation that was based on observation, and this allowed the researcher to provide a hypothesis. The conceptual framework in this research only used information that was relevant to the study and ignored frivolous ones (Sayer, 1984; Flowerdew and Martin, 1997; Johnston *et al.*, 2000). The literature used in the research allowed for data to be analysed in order to explain events (Sayer, 1984; Johnston *et al.*, 2000).

The conceptual framework in this research demonstrated an understanding of research issues related to the study area (Sayer, 1984). Concepts do not exist in a vacuum and are never static (Pryke, 2003). The concepts used in this research defined the research methodology as the researcher collected data from secondary and primary sources. Thus the concepts used in this research were important as it defined the methods and thereby provided greater understanding of the results obtained in the research. Following this, an explanation of primary data is presented.

4.4.2 Primary data collection

In a qualitative context, primary data consists of obtaining information through interaction with the subject (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). This can be done through observations, obtaining information from audiotapes, maps, formal and informal meetings as well as interviews (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). In this research data were primarily collected through interviews and site visits. These will be discussed below.

Primary data collected for this research were obtained through in-depth interviews, as well as personal observations with relevant individuals participating in the discussion forum and social upliftment programmes. The interviews were conducted from the 4th November 2008 till 20th February 2009 and were based on a semi-formal structure. This type of process benefited the structure of the interview schedule as it allowed for relevant

individuals to be interviewed. Interviews consisted of telephonic as well as face to face interviews and where allowed, the use of a tape recorder was permitted. Individuals were interviewed on the basis of their relevance to the study. Primary data were assembled from interviews conducted with individuals participating within the discussion forum and social responsibility programmes, specifically the Lafarge Mining South Africa and its Ridgeview Quarry representatives as well as an eThekwini municipal official and the community members. The discussion forum held at the Ridgeview Quarry was developed to ensure that community members as well as representatives from Lafarge Mining South Africa and its Ridgeview Quarry actively engaged in the public participation process (refer to Chapter Five, where a background on the discussion forum is provided). The social upliftment programmes provided by Lafarge Mining South Africa were initiatives that were developed in order to contribute to corporate social responsibility (refer to Chapter Six, where discussion of these programmes are provided). Site visits, observations and photographs were used in the study and are discussed below.

4.4.2.1 Site visits, personal observations and photographs

Site visits were conducted at the outset of the study. These site visits were conducted at the Ridgeview Quarry in order to understand processes that were implemented with respect to corporate social responsibility and the general quarrying activities being undertaken. The site visit, with regards to the Quarry took place on the 13th November 2007, during which a technical assistant informed the researcher of the daily processes of the Quarry. Site visits that were conducted with regards to this research were arranged telephonically, prior to the visit, thus making access to the Quarry and Lafarge Mining South Africa head offices unproblematic.

Photographs were taken of the Ridgeview Quarry and its surroundings on 13th November 2007, which is provided in Appendix E. Photographs were also taken of those that participated within the social upliftment programmes as well as their surroundings, during the period of 24th January 2009 until 20th February 2009.

Personal observations assisted the researcher in obtaining information, as certain information was structured around observing the surroundings. However, the study used interviews as a form of primary data and will be explained below.

4.4.2.2 Interviews

Primary data were predominantly collected by conducting in-depth interviews. This method of using interviews aided the research in a practical way so as to allow the researcher to be included within the research and prevent any form of detachment with its subjects, which is imperative for a qualitative research (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004). In-depth interviews allowed the researcher to obtain important information with regards to the research. The interview method further allowed the researcher to obtain detailed and in depth information and knowledge with regards to peoples experiences and further interpret meaning of those experiences with the aid of theories (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004).

The interview method was favoured over a questionnaire method, since questionnaires limit a respondent's answers and reactions, whereas interviews, and in this case open-ended questions, allowed for the interviewees to respond without any limitations or constraints (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004; Valentine, 2005). Cloke *et al.* (1991; 1999; 2004) and Valentine (2005) further explain that questionnaires do not provide as much detail as interviews, as most questionnaires are developed on the basis of closed-ended questions, therefore limiting an individual's response to an issue. Data collection, through interviews, creates an environment that is 'free' or 'open' for the respondent to act within and comment, as the respondent is able to freely participate in which ever way they feel comfortable. This preserved the data from being tampered with and further allowed for comprehensive information to be gathered within a transparent environment (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004; Valentine, 2005).

Collecting data based on interviews allowed the researcher to gain information on how individuals interpret and experience their everyday surroundings, which is incumbent in a qualitative research. With respect to qualitative data, where data is understood as not uniform and constantly changing, collecting data from individuals is also viewed as something which cannot be duplicated as individuals are not uniform beings. Collecting data from a variety of people, allowed the research to be thorough and allowed the researcher to gain in-depth knowledge and provide meaning to the data collected (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004; Valentine, 2005).

The interview questions were structured in order to obtain information that was fair, therefore adding to the credence of the research. These interview questions were

constructed to gain information about discussion forum and the social upliftment programmes and to determine the degree of social sustainability being achieved. With regards to the discussion forum, questions were formulated in order to gain information about the: public participation process; outcomes resulting from the discussion forum and recommendations for further contribution to social sustainability. With regards to the social upliftment programmes, questions were formulated in order to gain information about the: description and operation of the programmes; outcomes resulting from the programmes and recommendations for further contribution to social sustainability. All interviews conducted were made possible with consent from each individual that participated. Interviews were arranged telephonically or via email and took place mostly on a face to face basis. Interview questions were conducted on the initial process of meeting with the interviewees, this was done so that respondents did not prepare answers before the interviews.

An interview schedule proved to be useful in this research and was developed as a result of the objectives of the study. The interviews were designed to be semi-formal and open-ended, where questions regarding the research were planned before the interviews were conducted (see Appendix F). Appendix F presents the interview schedule used in the study. Open-ended questions allowed for more detail in the study, since the interviewees were not limited to the questions developed prior to the interview. Using open-ended questions allows for questions to be adjusted during the course of the interview, therefore allowing the researcher to overlook any insignificant and irrelevant information (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004; Crang, 2005). Furthermore, the interview design allowed for the respondents to be 'open' within the process. It must be noted that at times the questions for individuals varied as different information was needed from different stakeholders. Thus, three different schedules were developed for this study. This allowed for different perspectives to be highlighted and understood and furthermore allowed for the researcher to gain a broad insight into the research. This further allowed for a more detailed and coherent understanding of the topic.

The participants were interviewed at their convenience. The interviews with the managers of Lafarge Mining South Africa and its Ridgeview Quarry were conducted at their offices during office hours. Interviews with the individuals from the community, who participated in the social upliftment programmes, were conducted at the school, car and their homes. In addition, interviews with the eThekwini municipal official were conducted at his office,

while the Pottery teacher and the Pottery assistants were interviewed at the craft studio. The duration of the interviews ranged from 45 minutes to an hour. A letter of consent guaranteeing anonymity (see Appendix G, showing the letter of consent), was provided to each participant. In addition, participants were provided with the opportunity not to participate if they changed their mind (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004; Dowling, 2005; Silverman, 2005).

Recording of interviews was preferred and where possible, interviews with respondents were tape-recorded. Recording allows the researcher to be more engaged and involved within the process and allows for the researcher to listen carefully to the respondent (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004; Valentine, 2005). Key points were written concurrently with the tape-recordings in case of a technical mishap. To allow for greater understanding, after each interview, tape-recordings were transcribed so that information that was gathered from the interview process was fresh in the researcher's mind (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Cloke *et al.*, 2004; Valentine, 2005). This method of collecting data, allowed the researcher to be more relaxed and less worried about writing information which could have affected a participants response. Tape-recording an interview further allows for a great amount of detail to be accurately collected within a qualitative research process (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Crang; 2005; Cloke *et al.*, 2004; Silverman, 2005).

Nevertheless, most of the interviewees preferred to be interviewed without a recorder and in this case notes were manually written by the researcher, but this was not considered a problem as interviewees took their time for the researcher to write their responses accurately. The use of a tape-recorder may create fear in some participants, influencing their responses, which affects the research process (Cloke *et al.*, 1991; Cloke *et al.*, 1999; Crang; 2005; Cloke *et al.*, 2004; Silverman, 2005). One of the advantages for not using a tape recorder is that it eased the interview process and interviewees felt less threatened and were willing to participate more freely in the process. However, without the use of a tape-recorder the researcher was placed under significant pressure to ensure that important information was not left out. Hand writing notes without a tape-recorder was difficult as it was tedious and made the interview process longer than with a tape-recorder.

Before any interview was conducted, the researcher introduced the aims and objectives of the study in order to ensure that respondents knew what the research entailed. The

researcher further attempted to create an environment that was not seen as aggressive and spent a couple of minutes talking about general matters before conducting intensive interviews (Cloke *et al.*, 1991; Valentine, 2005). This type of method allows for participants to feel comfortable within the interview process and therefore allows for comments not to be restricted or controlled (Cloke *et al.*, 1991; Valentine, 2005). Below an explanation of how documents and texts were used as a form of primary data is presented.

4.4.2.3 Documentary evidence

This section examines the importance of using documents and texts in this research. Documents and texts are vital for any research, as these provide the researcher with added knowledge. According to Winchester (2005), there are three categories: documentary sources, creative texts and landscape sources. Documentary sources consist of planning documents, newspapers and maps (Winchester, 2005). In this regard the researcher used planning documents, maps and minutes from the previous discussion forum (before the commencement of the research) were provided by Lafarge Mining South Africa. These minutes were old and undated and provided little information. However, when the study was conducted, meetings were inconsistently held and minutes from the present discussion forum were non-existent.

With regards to creative texts, Winchester (2005) explains that creative texts encompass books, poems and films. Creative texts used in the compilation of this research came from adverts and a mini documentary, which contained information based on corporate social responsibility. A documentary, previously aired on SABC 2 was watched by the researcher. This documentary was informative as it showed companies and businesses that were engaged in corporate social responsibility initiatives (Kaelo Worldwide Media: Stories of Hope, 2008). Winchester (2005) explains that landscape sources involves analysing the landscape. In this regard photographs were taken and this helped in interpreting data collected with respect to the interviews with individuals participating in the social upliftment programmes. This research thus used a variety of texts and documents. The following section provides the sampling methods that were used in the study.

4.5 Sampling

This section provides the sampling methods that were used in the research. A sample is used in order to predict and determine results. A sample provides characteristics of a

population (Flowerdew and Martin, 1997). Sampling was solely based on community members involved with the social responsibility programmes and discussion forum as well as the managers, engineers and municipal members. The research was extended to a variety of age groups. Non-probability sampling was preferred over probability sampling, as this research favoured qualitative methods. Probability sampling is based on quantitative techniques, whereby individual members in a society have a non-zero chance to be selected, whereas non-probability sampling is where there is no standard way to select a sample which is based on human judgement (Flowerdew and Marin, 1997).

The aim of this study is to evaluate social responsibility activity in the resource extraction industry in terms of its contribution to social sustainability. The use of purposive sampling proved to be useful in this respect. However, when undertaking a purposive method, one must note that convenience and snowballing are critical techniques that were used, since, convenience was a deciding factor in purposive sampling and snowballing allowed for purposive selection of some participants. Purposive sampling was used for this study, as the study was concerned with individuals involved with the discussion forum as well as the social responsibility programmes. Purposive sampling can be explained as particular individuals chosen based on the study (Flowerdew and Martin, 1997; Robinson, 1998). A purposive sampling method was therefore used to identify women who were involved in the skills-related social upliftment programme; as well as to identify the principal and teacher involved in the education-related social upliftment programme and the Minerals manager from Lafarge Mining South Africa. Purposive sampling also proved to be useful in identifying individuals participating within the discussion forum which included the community members as well as the manager from Ridgeview Quarry.

For this research individuals were chosen based on convenience, as some interviewees were busy and elected not to participate within the research. Convenient sampling can be explained as the availability of people to be interviewed (Flowerdew and Martin, 1997; Robinson, 1998). Snowballing was also useful in purposively selecting the sample. This type of method was based on trust, as the researcher had to gain the trust of respondents (Flowerdew and Martin, 1997; Valentine, 2005), specifically the women who participated in the skills-related social upliftment programme and the principal and teacher who participated in the education-related social upliftment programme. The researcher relied on these individuals in order to gain information and recommendations on the next respondent to interview. With respect to the snowballing technique, the researcher was provided with a

list from the Minerals manager of Lafarge Mining South Africa and the Ridgeview Quarry secretary. This list helped the researcher to contact women that were involved in the skills-related social upliftment programme as well as respondents involved with the education-related social upliftment programme as well as the discussion forum. Thereafter, respondents that were interviewed referred the researcher to other individuals who were relevant to the research and this therefore aided the research. Furthermore, the municipal official was recommended by the Minerals manager to interview and this was also based on a purposive technique.

Overall, 17 open-ended interviews were conducted with individuals involved with the social upliftment programmes as well as the managers of Lafarge Mining South Africa, its Ridgeview Quarry and a representative from the eThekwini Municipality (see Table 4.1 below). Table 4.1, presents information regarding, respondents participating in the interview, the date of the interviews, the organisation for which the respondents represented and the place where the interviews were conducted. It was essential and crucial for the study to keep a record of all the respondents in order to analyse the data that was collected during the interview process.

These 17 open-ended interviews were done in order to obtain different perceptions and information regarding the research. Thus interviews were solely based on the research objectives of the study. Primary data, in this study were obtained through interviews and observations. Nine of the interviews consisted of individuals who participated within the skills-related social upliftment programme, which was the pottery project that mainly involved women, and two interviews consisted of interviewing the principal and a teacher who were involved with the education-related social upliftment programme.

The interviews conducted with participants of the social upliftment programmes provided comprehensive information about corporate social responsibility and more specifically social sustainability. Three interviews consisted of community representatives who participated within the discussion forum that took place at Ridgeview Quarry. The remainder three interviews consisted of the engineer and the manager of Lafarge Mining South Africa and its Ridgeview Quarry and lastly the eThekwini Municipal representative.

Table 4.1: Interviews conducted with different stakeholders

Respondent	Date	Organisation	Place
Minerals manager at Lafarge Mining South Africa	04/11/2008	Lafarge Mining South Africa	9 Derby Downs, University Road, Westville
eThekwini municipal official	20/11/2008	Municipality	Intutuhuko Junction, 750 Francois Road, Cato Manor
Quarry Manager at the Ridgeview Quarry	28/11/2008	Ridgeview Quarry	1 Dennis Shepstone Road, Cato Manor
Pottery teacher	20/02/2009	Tholubonge Pottery & crafts manufacturers	TBDC Building, 127 Alice Street, Durban
Pottery assistant 1	20/02/2009	Tholubonge Pottery & crafts manufacturers	TBDC Building, 127 Alice Street, Durban
Pottery assistant 2	20/02/2009	Tholubonge Pottery & crafts manufacturers	TBDC Building, 127 Alice Street, Durban
Respondent 1	19/01/2009	Participants	Telephonic Interview
Respondent 2	15/12/2008	Participants	Chesterville Extension
Respondent 3	13/01/2009	Participants	Car
Respondent 4	29/01/2009	Participants	Chesterville Extension
Respondent 5	29/01/2009	Participants	Chesterville Extension
Respondent 6	24/01/2009	Participants	Chesterville Extension
Respondent 7	24/01/2009	Participants	Chesterville Extension
Respondent 8	10/02/2009	Participants	Chesterville Extension
Respondent 9	10/02/2009	Participants	Chesterville Extension
Respondent 10	10/02/2009	Participants	Chesterville Extension
Respondent 11	20/02/2009	Participants	Chesterville Extension

The research therefore used a non-probability sample as qualitative methods were preferred over quantitative methods. Purposive sampling proved to be useful and beneficial as specific individuals were chosen based on the study. Following this section, the research offers insight as to how data was interpreted.

4.6 Data interpretation

This section describes how data collected for this research was analysed and interpreted. The data analysis for any research is important as it provides the researcher with an opportunity to present meanings and understanding of the data collected. Data collected for this research were analysed through a qualitative approach so as to provide meanings to the data collected (Cloke *et al.*, 1991; Flowerdew and Martin, 1997; Cloke *et al.*, 2004; Silverman, 2005). Interviews that were conducted in this research were recorded and transcribed. Thereafter, data was categorised in themes in order to allow for a detailed analysis of data collected, which will be explained in detail in following paragraphs (Jackson, 2001; Crang, 2005; Silverman, 2005).

Dey's (1993) approach was used in the process of data analysis (cited in Kitchen and Tate, 2000). The research analysis further draws on Silverman's (2005) and Robinson's (1998) approaches in analysing qualitative data. Dey (1993, cited in Kitchen and Tate, 2000) explains that with respect to analysing qualitative data, data goes through a ladder or chain process. These processes involve description (collection of primary data), classification (developing and categorising themes with regards to theories) and connection (where an interpretation is provided by correlating with theories and the data collected) (Dey, 1993, cited in Kitchen and Tate, 2000). Robinson (1998) similarly maintains that in order to interpret qualitative data, one must be required to read, construct themes and thereafter interpret the information gathered from the data collection process.

Dey (1993, cited in Kitchen and Tate, 2000) explains that the researcher moves from description to that of classification and lastly connection, however, Dey (1993) further states that the researcher is not compelled to follow this ladder as the researcher can follow any step without a sequence (cited in Kitchen and Tate, 2000). The use of describing, classification and connection allows for data to be disassembled so that the researcher is able to understand certain aspects easily and therefore provides the researcher with deeper knowledge (Dey, 1993, cited in Kitchen and Tate, 2000). This can be explained with regards to a puzzle, which has so many pieces, however, when the pieces are connected, a picture is produced and like this Dey (1993, cited in Kitchen and Tate, 2000) explained that by piecing data or by arranging data into categories, this allows for greater understanding to be produced. According to Dey's (1993) first approach which is description; primary data is collected at the initial stage of the data collection process (cited in Kitchen and Tate, 2000). Robinson (1998) makes reference to it on the other hand as

reading, whereby data is collected on the basis of theories and objectives used in the research. Data with regard to this study, were collected with the use of a tape-recorder and where participants elected not to use the tape-recorder, interviews were manually written. Data was transcribed as soon as the data was collected in order to prevent any loss of ideas during the qualitative process (Crang, 2005; Silverman, 2005; Valentine, 2005), this was explained in Section 4.4.2 of the study. Comments and annotations were made and were used in order to assist in the interpretation of data collected (Crang, 2005; Silverman, 2005). This enabled the researcher to retain any relevant information during the interview process (Crang, 2005; Silverman, 2005; Valentine, 2005). The interviews were then read again and notes were made on the transcribed material. Thereafter data were safely stored thus preserving anonymity and dispelling ethical concerns.

Secondly, data needs to be classified and categorised into different themes where codes are allocated to data in order to interpret and understand the data (Dey, 1993, cited in Kitchen and Tate, 2000; Robinson, 1998). Robinson (1998) argued that themes allow for the researcher to regularly make reference to theory when interpreting data. This can be explained in terms of Robinson's (1998) approach in interpreting qualitative data. In this study data collected were organised and categorised into themes, whereby similar themes were grouped together, so as to allow for greater understanding and detail. Data for this study were collected by interviewing relevant participants who were involved with the social upliftment programmes and the discussion forum. Kitchen and Tate (2000) elucidate that themes for a research are based on theories. Themes that were developed in this research were identified from the literature and objectives that were prevalent in this research. This approach was evident in this research, as the researcher was required to collect concepts that were relevant to the study and thereafter analyse the data with the use of themes. By developing themes in a study, analysis of data is made understandable and the researcher is able to confer meaning to the data collected (Crang, 2005; Silverman, 2005). It provides the researcher with an understanding as to what subject matters are more paramount than others (Crang, 2005; Silverman, 2005).

The process of developing themes involved a technique such as coding. Developing and coding themes proved to be a time consuming process, however, each theme and code was safely recorded. In the research, data were thoroughly and carefully analysed and interpreted thereby providing the researcher with an opportunity to understand the relationships and connections between the themes collected. The process of creating

themes allowed the researcher to develop sub-themes which further allowed for deeper understanding with regards to the research. With the use of this method the researcher was able to expand their knowledge and leave room for other explanations.

The third stage is connection as Dey (1993, cited in Kitchen and Tate, 2000) explains and where Robinson (1998) refers to as interpretation of information. This stage is linked to the previous stage, where themes were developed. By identifying themes within this research, the researcher was able to understand relationships and links between certain themes. This process allowed for the researcher to acquire a deeper and richer understanding of the research topic as well broaden the researcher's knowledge. Finding connections between certain data is vital in a qualitative research as, qualitative data is interpretative data and has many meanings and understanding (Crang, 2005; Silverman, 2005).

Lastly, a research book was kept, where hand written notes and other information pertaining to the research was recorded. The research book proved to be a valuable tool as it contained constantly updated notes, important references for the research and contact details. This allowed for a consistent and structured study with regards to the objectives of the research.

This research was based on an interpretive study. It must be concluded that when undergoing a qualitative research, one must acknowledge that interpretation is individualistic, as meaning cannot be considered as constant and is constantly evolving in order to obtain greater knowledge. Responses provided by the interviewees were a vital component in obtaining and interpreting data collected and validating the research. Thus the research was solely focused on understanding relationships that were formed as well as interpreting an individual's experiences. Thus the limitations to the study are presented below.

4.7 Limitations

Understanding limitations to any study is important and it must be emphasised that although there were limitations to this particular study, these limitations were largely overcome. This part of the research attempts to explain what difficulties the researcher underwent in obtaining data.

The first and foremost limitation was because of a change of supervision. The researcher was registered in January 2007 with one supervisor and changed supervision in early November 2007 to a new supervisor. The change in supervision was in no way the fault of the researcher, as the researcher was consistent in presenting work and even a formal proposal to the previous supervisor. However, proper research only began in January 2008 with the new supervisor Ms Jennifer Houghton. Obtaining new supervision was a relief, but placed a huge amount of stress on the researcher as the researcher practically had to disregard 11 months of hard work and start with a new topic. However, the researcher realised that there are obstacles to many studies and decided to overcome this issue.

The other significant limitation was trying to set up interviews for the data collection process. The sample for the study was limited to that provided by Lafarge Mining South Africa and its Ridgeview Quarry. Lafarge Mining South Africa and its Ridgeview Quarry provided a list of individuals involved within the social upliftment programmes and the discussion forum, however, the list that contained the individuals for the skills-related social upliftment programme was misplaced and could not be found. Thus interviews with the women who participated in the skills-related social upliftment programme would have been made easier if the list was found. The researcher overcame this by snowballing, whereby individuals that were interviewed recommended relevant individuals for the researcher to interview.

Another limitation was that some individuals did not want to be interviewed. One being the previous Quarry manager, who initially agreed to the interview then decided not to participate. Interviewing this manager would have been beneficial to the research as the current Quarry manager was new did not have much knowledge concerning the discussion forum at the Ridgeview Quarry. The other individual that also agreed to an interview, but kept on saying he was busy was the Chairman of the Cato Manor community Mr Cyril Magwaza. Contacting Mr Cyril Magwaza was very costly as he kept saying to phone back and in the end resulted in no interview. Thus the researcher was unable get their views which would have been beneficial in the study and therefore had to rely on other participants that were interviewed in the research.

Minutes of the discussion forum which occurred prior to the research proved not to be of value as they were outdated and disorganised and some information was missing. However, this was overcome as information was obtained through the Ridgeview Quarry's

manager, Minerals manager of Lafarge Mining South Africa, and the community members that participated within the discussion forum.

The use of the tape-recorder created a problem, as most of the individuals that participated within the research elected not to be tape-recorded. A tape-recorder creates fear in certain participants as some think that by being taped allows for some form of victimisation (Crang, 2005; Silverman, 2005). Not being able to use the tape-recorder slowed the process of data collection. However, interviews where the tape-recorder was not used, notes were manually written for the researcher to obtain data.

Another aspect was that certain individuals who participated within the research more specifically the women that participated in the skills-related social upliftment programme did not complete secondary school education. Some of the residents did not fully understand questions and they diverted from the questions at times. Thus certain concepts and questions were difficult for them to understand and had to be simplified to a great degree by the researcher. Interviewees especially the women were irritable when interviews took longer than expected, since a majority of them were unemployed and were housewives and had to prepare food for when their families got back from school or work. In this case the researcher tried to accommodate the women and allowed the women to carry on with their household activities whilst conducting the interview process.

4.8 Conclusion

This research evaluates social responsibility activity in a resource extraction industry in terms of its contribution to social sustainability. The methodology chapter explained how data was collected in the study.

The study favoured a qualitative research approach, since information was gathered from interviews held with individuals participating within the discussion forum, social upliftment programmes and observations made during site visits. This approach proved to be beneficial in this study, as it allowed for multiple interpretations and meanings of the data collected. The study also included deductive and analytical inductive approaches. This research further encompassed aspects of evaluation research, in order to assess the value the social upliftment programmes initiated by Lafarge Mining South Africa and its Ridgeview Quarry.

Data sources used in the study comprised of secondary data and primary data. A non-probability sampling method was favoured in this research, as the researcher used three sampling methods; convenient sampling, purposive sampling and snowballing. Purposive sampling was used to identify relevant stakeholders for the research. Convenient sampling was adopted, as it depended on the availability of people to be interviewed. Lastly, snowballing allowed for additional stakeholders to be identified and interviewed.

The data interpretation section examined how the interviews obtained from the study were analysed. This section allowed for the development of themes and codes, which were useful to understand the correlation between data as well as the interpretation of data. Constraints that the researcher faced were also highlighted but were overcome in the research. Thus the methodology was essential in the research as it provided a framework for the assimilation of data. The methods for collecting data were useful, as it allowed for data to be analysed and presented in the following chapter. The following chapter presents the results that were found in the research and their interpretation.

CHAPTER FIVE
PUBLIC PARTICIPTION AT
RIDGEVIEW QUARRY

5.1 Introduction

The aim of this study was to evaluate corporate social responsibility in the resource extraction industry in terms of its contribution to social sustainability. The chapter examines the nature of public participation with respect to the discussion forum that initiated by Lafarge Mining South Africa and more specifically its Ridgeview Quarry within the context of social sustainability. The research was focused on explaining the social aspect of sustainable development, more specifically social sustainability and attempted to understand the degree of sustainability being practiced in a resource extraction industry. This discussion chapter therefore provides an understanding as to how businesses engage with citizens in order to implement corporate social responsibility initiatives and furthermore, interprets the results through the application of theories presented in Chapter Two.

This chapter of the dissertation provides an assimilation and interpretation of data that was collected during the research. With respect to investigating the discussion forum of Lafarge Mining South Africa and its Ridgeview Quarry, qualitative methods were used to collect and interpret findings regarding the study. The evidence offered in this chapter was obtained through in-depth interviews conducted with three respondents, who were representatives from the area committee of the community, the Quarry manager and the Minerals manager from Lafarge Mining South Africa and its Ridgeview Quarry.

The discussion consists of two chapters, Chapter Five and Chapter Six. Chapter Five presents Section 5.2, which examines public participation at the Ridgeview Quarry. This section discusses the process of the discussion forum; and further illustrates the outcomes of the discussion forum. Section 5.2 also provides recommendations for further contribution to social sustainability through those involved in the discussion forum. Lastly, a conclusion is offered in Section 5.3. This discussion chapter therefore provides a comprehensive analysis of key themes and ideas that are imperative for understanding the level of corporate social responsibility in the resource extraction industry in relation to social sustainability. The next section examines public participation at the Ridgeview Quarry.

5.2 Public participation at the Ridgeview Quarry

As a result of a globalised world and the increased awareness of society to adopt sustainable measures, much emphasis has recently been placed on the notion of public participation (Choguill, 1996; Wondolleck *et al.*, 1996). Public participation has become a fundamental concept in encouraging society to become active participants with respect to decision-making as this affects their lives and well-being. Public participation plays a central role with regards to facilitating issues around a development, especially a quarry. Furthermore, public participation allows for the concerns of interested and affected parties, regarding the proximity of the quarry to residents and the problems arising from quarry activities, to be heard (Wondolleck *et al.*, 1996). Many definitions of public participation, were provided and explained in detail in Chapter Two of the research. Public participation is an important process when a development occurs, however, many stakeholders are not actively engaging in issues that affect their social, political, economic and biophysical environments (DEAT, 2004). Businesses have therefore engaged in practices that encourage public participation so as to promote corporate social responsibility (Gouldson, 2006; Welford *et al.*, 2007; Siegele and Ward, 2007). The following section addresses the degree of participation and the level of inclusivity of the participation process in the Ridgeview Quarry's discussion forum.

Lafarge Mining South Africa and its Ridgeview Quarry attempted to hold meetings in order to provide the Cato Manor community with an opportunity to be heard. Interviews were conducted with those involved in the discussion forum, namely; the three members of the area committee (Respondent 1; Respondent 2; Respondent 3), the Quarry manager and the Minerals manager of Lafarge Mining South Africa and its Ridgeview Quarry. The discussion forum provided members of the community with an opportunity to participate within the decision-making process. Aspects that dealt with the discussion forum are explained in detail in following sections of this study. The discussion forum revolved around issues relating to the operational activities of Ridgeview Quarry. The first objective of the study was to investigate the nature of public participation with regard to the discussion forum. The objective was developed to understand the effectiveness of the discussion forum and assess the level of public participation. This section will first examine the process of the discussion forum and will thereafter explain the benefits and the challenges experienced from the outcomes of the discussion forum.

5.2.1 Public participation process in the discussion forum

In order for public participation to be fully understood, the operation and the process of representation with regards to the decision-making process must be explained. In this instance, themes that were obtained from the in-depth interviews with participants within the discussion forum were analysed. These themes were chosen as they provided a thematic cohesion to the analysis of the discussion forum. Themes prevalent in this study were individual involvement in attending meetings, roles and responsibilities of stakeholders, representation of information, regularity of meetings, leadership skills and issues regarding the Ridgeview Quarry.

All the interviewees were uncertain as to the date of commencement of the discussion forum (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009; Quarry manager, 28 November 2008; Minerals manager, 4 November 2008). The Minerals manager (4 November 2008) and Quarry manager (28 November 2008) indicated that the discussion forum was established during the development of the Ridgeview Quarry. The Minerals manager (4 November 2008) and the Quarry manager (28 November 2008) further stated that the convening of a discussion forum was a legal requirement for all resource extraction industries. The Minerals manager, the Quarry manager from the Ridgeview Quarry division of Lafarge Mining South Africa, as well as the area committee, comprising of representatives from the community, facilitated the discussion forum. The overall aim of the discussion forum was to ensure that individuals in the community were provided with an equal opportunity to resolve pertinent issues concerning them. Furthermore, the benefit of a discussion forum was to ensure that all issues arising from the Ridgeview Quarry's operation were properly mitigated. Subsequent to this, the involvement, roles and responsibilities of individuals participating within the discussion forum is provided below.

a) Involvement, roles and responsibilities in the discussion forum

Involvement is an important theme in determining the level of participation. This section will further examine the roles and responsibilities of individuals in the discussion forum in order to determine the degree of involvement.

All the interviewees involved within the discussion forum articulated that involvement within the forum was important in order to address issues relating to the Ridgeview Quarry (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13

January 2009; Quarry manager, 28 November 2008; Minerals manager, 4 November 2008). Following this discussion, the roles and responsibilities of individuals that participated within the discussion forum were assessed. It has been determined that not all individuals living in the Chesterville Extension situated in Cato Manor attended the meetings held by the Ridgeview Quarry; as certain members from the community were elected to represent the community.

The roles and responsibilities of these community representatives within the discussion forum, were imperative to determine the degree of participation within the discussion forum. Respondent 1 (19 January 2009), the deputy chairman of the community organisation of Cato Manor explained, "I participated in all the discussion forums that were held...I am part of the area committee for the community". This respondent stated that they were part of the area committee and participated in all of the meetings that were held. Whereas, Respondent 2 (15 December 2008) and Respondent 3 (13 January 2009) also representatives from the community explained that their responsibility was to inform and notify the community. With regards to the time of their involvement, Respondent 1 (19 January 2009) expressed that his involvement dates far back to 1996, whereas Respondent 2 (15 December 2008) and Respondent 3 (13 January 2009) explained that their involvement started from 2007 and 2006 respectively. Regarding the issue of responsibility, all three respondents from the community explained that their participation within the forum was to obtain information regarding issues put forward by the community and would relay that information to the discussion forum and would further relay feedback, regarding those issues, to the community (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009).

The Quarry manager of the Ridgeview Quarry explained, "I am basically the quarry manager and looking after various issues from environmental, health and safety obviously production and the day to day running of the operation" (Quarry manager, 28 November 2008). It must be noted that the Quarry manager was a newly appointed manager of the Ridgeview Quarry and began his post in October 2008. The Minerals manager explained that she has been employed since August 2006 and that her role involved enforcing legislative requirements and regulations. She further explained that her role was to care for the environment and to facilitate relationships between the community and the operation, in so doing allowing for equal and fair representation as well as caring for the environment (Minerals manager, 4 November 2008).

During the apartheid era, poor individuals, mostly black individuals were disadvantaged and located in areas close to developments (Peffer, 1990; Isaacs, 1997; McDonald, 2002; Bond, 2008). These individuals as a result of apartheid were not allowed to participate in the decision-making process and were ignored. These effects are still felt presently and many individuals who are located near developments are still marginalised in terms of participating in the decision-making process. With regards to this case study, participation was to an extent active, as relevant members of the area committee participated in the decision-making process. Participation in this respect, as understood in a sustainability context, enabled participants to interact within the decision-making process (Arnstein, 1969; Cole, 1975; Campbell and Marshall, 2000; Kasemir *et al.*, 2003; Bond and Thompson-Fawcett, 2007). In this case, respondents were allowed to participate, thereby facilitating the decision-making process (Arnstein, 1969; DEAT, 2002; Kasemir *et al.*, 2003).

For participation to be considered to its fullest extent, White (1996) explains that there are two components with regards to the politics of participation; firstly 'who participates' and secondly the 'level of participation'. In terms of 'who participates', individuals are not considered as uniform beings and are encouraged to participate and voice their opinions. In the case of Ridgeview Quarry, participation within the discussion forum was not confined to a specific group of individuals, as all members within the community were encouraged to participate. An area committee regularly attended meetings and relayed information back to the community. Secondly, 'level of participation' explains that individuals are provided with an opportunity to be involved within the implementation and management process (White, 1996). This can be observed with regards to the discussion forum at Ridgeview Quarry as individuals were provided with the opportunity to discuss issues relating to the Quarry. It is for this matter, that public participation was understood as a bottom up approach, since it is focused on allowing individuals to become active participants in the decision-process, thereby enhancing citizen power (White, 1996; Arnstein, 1969).

However, although Ridgeview Quarry promoted participation, most respondents expressed that the problem was trying to encourage the rest of the community to participate within the decision-making process. Respondent 3 (13 January 2009) expressed, "Challenges come from the community". Respondent 3 (13 January 2009) went on to explain that the challenge was making the community proactive and participative within the decision-

making process, as certain members within the community were not interested in participating but wanted rewards from the process. Furthermore, they indicated that there were no issues with the management aspect of the quarry (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). The Quarry manager (28 November 2008), explained that there should be a, "two-way street", he highlighted that in order to overcome challenges associated with the discussion forum, community and management needed to work together and that solutions cannot always be sought from management. The Minerals manager (4 November 2008) further expressed, "Participants must be more proactive". It was emphasised that not all of the community members participated as most relied on the area committee. However, in order to achieve total social sustainability, all relevant stakeholders should be more committed and involved in the process.

Nevertheless, it is not always developments like the Ridgeview Quarry that are responsible for encouraging public participation. In some cases with respect to collective and cooperative responsibility, it is an individual's responsibility to actively engage within the decision-making process (Arnstein, 1969; Campbell and Marshall, 2000; Kasemir et al., 2003). The Quarry manager (28 November 2008) previously expressed that, there should be a two-way process and this was further highlighted by Canter (1996, cited in DEAT, 2002), who defined public participation as a constant, two-way communication process which ensures that the public is provided with the opportunity to understand and participate in the process thereby enhancing corporate social responsibility. Additionally, public participation is characterised whereby power is given to the public to proactively participate in the decision making process, which forms the basis for mobilisation and empowerment (Arstein, 1969; Choguill, 1996; Wondolleck et al., 1996; Head, 2007; Paterson, 2008). In the case of Ridgeview Quarry individuals were encouraged to proactively participate, thereby contributing to 'citizen power' (Arstein, 1969; White, 1996; DEAT, 2002). However, problems arose as the community primarily relied on an area committee. Issues arose from encouraging the rest of the community to participate in the decision-making process, and this, sometimes referred to as collaborative participation, was vital for considering the collective interest of individuals as well as the degree to which social sustainability is achieved (Godschalk et al., 2003; Innes and Booher, 2004). If one individual is faced with an issue, the individual's view is taken into consideration and is acted upon with respect to the decision-making process (Godschalk et al., 2003; Innes and Booher, 2004). In the case of Ridgeview Quarry, an issue arose in encouraging the

community to be proactive, as the community relied on community representatives, thereby impacting on achieving total social sustainability. It is therefore recommended, in this study, that all individuals are encouraged to participate in order to ensure that all views are taken into consideration, thereby increasing social sustainability.

Furthermore, Wondolleck (1996) explains participation does not always result in benefits. These concerns are important, since access to a discussion forum impact on the degree of social sustainability of a certain operation and in this case a quarry. Thus, if access is inhibited, stakeholder's participation in decision-making is limited thereby decreasing sustainability. The Minerals manager (4 November 2008) explained that greater involvement by the community would have assisted in overcoming certain challenges. Although, Ridgeview Quarry attempted to encourage participation, only a selected group (area committee) were actively involved in the decision-making process. Steps should have been implemented in order to encourage active participation from other community members. With regards to social sustainability, the greater the participation of individuals in the decision-making process, the easier it is to achieve equity (White, 1996; Arnstein, 1969). In addition, the representation of information and the convening of regular meetings are imperative and will be discussed below.

b) Representation of information and the regularity of the discussion forum
To fully understand the process of the discussion forum and its contribution to encouraging public participation and promoting social sustainability, the themes of representation of information and the regularity of the discussion forum become important to discuss in this section.

With regards to representation of information, both Respondent 2 (15 December 2008) and Respondent 3 (13 January 2009) who were representatives of the community explained that information was obtained in the form of minutes. These respondents further stated that the information was easily available and the adequacy of information provided was sufficient (Respondent 2, 15 December, 2008; Respondent 3, 13 January 2009). This was highlighted in Respondent 3's (13 January 2009) response, "Minutes were provided". One respondent expressed that although minutes were provided, information and organisation was not adequate, "I don't think there was adequate information and organisation was not well....they provided us with minutes" (Respondent 1, 19 January 2009). Respondent 1 (19 January 2009) expressed his discontent regarding the availability of information. The

Quarry manager and Minerals manager explained that representation of information involved an open process and that the minutes were provided in English. As expressed by the Quarry manager (28 November 2008), "We do keep the minutes of the meetings and this gets distributed to the community and to their committee". The Quarry manager explained that the community were provided with minutes from the meetings. However, with regards to the representation of information, respondents expressed their dissatisfaction that meetings, with regard to the discussion forum, were not regularly convened (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009).

Individually, concerns stemmed from the regularity of the discussion forum to the management of the Quarry. All three respondents who were representatives of the area committee expressed that the convening of the discussion forum, held by the Ridgeview Quarry, had become erratic (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). Respondent 1 (19 January 2009) expressed that, "Under normal circumstances, under different management, meetings were held consistently and took place at five o'clock on a monthly basis, but now we have not had a single meeting". Respondents were concerned with the irregular convening of the discussion forum. This was further highlighted in Respondent 3's (13 January 2009) response, "Last year we use to have meetings on a monthly basis…unfortunately we have been having a break, have not had any meetings". Respondent 2 (15 December 2008) explained that meetings were previously held once a month had abruptly ended. The Quarry manager (28 November 2008) explained that the discussion forum was held twice a month, whereas the Minerals manager (4 November 2008) expressed that meetings were held once in every three months. Hence, there is a discrepancy as to how often the discussion forum was convened.

However, Respondent 2 (15 December 2008) expressed that when the discussion forum was held, the discussion forum was "very helpful" and Respondent 3 (13 January 2009) explained that when the meetings took place that the discussion forum discussed "issues relating to employment and education". It can be noted that the benefit of the discussion forum was to provide the community with an opportunity to participate. The Minerals manager (4 November 2008) explained that the discussion forum was not only implemented for uplifting communities presently, but was also aimed at providing benefits for future generations. The Quarry manager (28 November 2008) explained that the

discussion forum was a requirement from the Department of Minerals and Energy and that meetings were held twice a month, however, being a new manager that the process of having these meetings within the discussion forum were still underway. This was highlighted by the Quarry manager's (28 November 2008) response, "We have not had a meeting, think the only meeting is next year". Holding the discussion forum was not only a social requirement but it is also a legal requirement. Considering the statements by both the Minerals manager and the Quarry manager one wonders about how committed they really are to social sustainability of the present and future generations that will be impacted upon by the quarry activities. The Minerals manager (4 November 2008) stated that meetings were held every three months, whilst the Quarry manager (28 November 2008) stated that meetings were held twice a month. Their contradictory statements, with respect to this important issue, clearly indicated that they were not truly committed to the regular convening of the discussion forum. It was unreasonable for the new manager to be unaware of when the next discussion forum will be convened. Furthermore, the fact that the discussion forum was made mandatory by the Department of Minerals and Energy, seems to have had no impact in reinforcing the importance of these meetings to the management staff of Lafarge Mining South Africa and its Ridgeview Quarry. It seems that statements made by management, which constantly emphasise Lafarge Mining South Africa and its Ridgeview Quarry's commitment to social sustainability, are more for good public relations purposes rather than to actually uplift the community.

Public participation is considered as one of the principles of sustainable development, thus if involvement is not at its fullest, then the decision-making process is considered as being flawed. It is understood that in most cases, individuals situated in areas that are in close proximity to a development are those who are considered to be disadvantaged and subjected to unfair treatment (Cutter and Solecki, 1996; Coetzee and Nomdo, 2002; Hogan and Marandola, 2005; Hardoy and Pandiella, 2009). With reference to the study, understanding how information has been presented in the discussion forum, in terms of materials, provision of information in a language understood by those present and adequacy of the information and organisation, becomes vital in determining the level of sustainability being achieved. It can be understood that representation of information, with regards to the discussion forum, was not considered much of an issue. However, individual's access to information at the Ridgeview Quarry was negatively impacted upon due to the erratic nature with which the discussion forum meetings were convened.

Issues relating to the regular convening of the discussion forum proved to be a major problem, and numerous members of the community expressed their concern regarding this issue. It can be understood that under the new management the discussion forum was a problematic issue. For participation to be considered as a process of information exchange, collaborative exchange and empowerment of individuals, the public must proactively participate in the decision-making process (Arnstein, 1969; Choguill, 1996; Wondolleck *et al.*, 1996; DEAT, 2002). With regards to the Ridgeview Quarry, if the discussion forum was regularly convened, participants would be able to proactively participate in the decision-making process. Society only derives benefits if participation results in a positive outcome. Nonetheless, public participation is not something that is on the main agenda of many businesses (DEAT, 2002). This is clearly evident in the study since, although information was provided to the community, the challenge that arose was that meetings were not regularly convened, thereby impacting on social sustainability. The irregular convening of the discussion forum, highlighted the flaws within the decision-making process, this impacted on the degree to which social sustainability was achieved by Lafarge Mining South Africa and its Ridgeview Quarry.

Selman (2001) explained that discussion forums allow for the development of social interactions, maintainance of shared values and consideration of interests of individuals within the decision-making process. However, in this study with regards to Lafarge Mining South Africa and its Ridgeview Quarry, this was difficult to achieve, since, meetings were not regularly convened, thereby contributing to a weak sustainability ethic (Daly and Cobb 1989, cited in Palmer *et al.*, 1997). In view of this, the irregular convening of the discussion forum has impacted on the quality of life of individuals' located in close proximity to the quarry, since they are unable to proactively participate and express their concerns (Daly and Cobb 1989, cited in Palmer *et al.*, 1997). Thus it is the responsibility of Lafarge Mining South Africa and its Ridgeview Quarry to ensure that meetings are convened regularly. The following section provides information regarding leadership skills and issues with regards to the discussion forum.

c) Leadership skills and issues addressed with regards to the Ridgeview Quarry
As discussed previously the discussion forum was important as it allowed for interests and values to be expressed. In order to determine whether the discussion forum played a significant role in changing individuals' lives, one has to determine whether issues and

leadership skills were addressed within the discussion forum, as this was vital in establishing the level of sustainability of the decision-making process.

One of the key concerns for sustainability is focused on future preservation. Discussion forums are aimed at providing society with the opportunity to succeed in the future. Thus, a key aspect in determining whether the discussion forum was beneficial to the community, centred on whether or not individuals gained anything of value from the decision-making process. Respondent 1 (19 January 2009) firmly explained that he gained no skills from the process, whereas Respondents 2 (15 December 2008) and Respondent 3 (13 January 2009) explained that they gained leadership skills that helped them with regards to business. These respondents felt that, when the discussion forum was held it alleviated their concerns and assisted in the development of leadership skills (Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). These respondents explained that participating in the discussion forum allowed them to be confident when carrying out personal matters. The Minerals manager (4 November 2008) stated, "So that the main thing that drives us and the main thing that we want to achieve and also the one thing that we look at is skills transfer". The Minerals manager further explained that their operation was focused on providing the community with an opportunity to sustain itself. Thus on the face of it, by providing the community with leadership skills, that may benefit them in the future, Lafarge Mining South Africa and its Ridgeview Quarry can be seen as making an attempt in contributing to sustainable development.

Furthermore, with regards to the discussion forum, many of the respondents explained that issues relating to dust, noise and the speeding of trucks were the issues that were put on the agenda (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009, Quarry manager, 28 November 2008). These issues concerned the operational activities of the quarry. Developments such as quarries impact negatively on both the social and bio-physical environment (Blodgett, 2004; Gosar, 2004; Aigbedion and Iyayi, 2007). These negative impacts hinder an individual's livelihood, thereby impacting on the degree to which sustainability is achieved.

Sustainable development and more specifically social sustainability are very important in determining whether certain efforts made by developments, in this case the provision of a discussion forum are considered to be sustainable, since benefits must extend to the future (Palmer et al., 1997; Marcuse, 1998; Hamilton, 2002; Soppe, 2004; Lawrence et al., 2005;

Bell and Morse, 2007; Morse, 2008). It must be understood, that it is mostly the disadvantaged individuals that bear the brunt of negative consequences brought on by development. Additionally, in order to determine if the issues such as those listed above were dealt with in a sustainable manner, acknowledgment must be given to the idea of vulnerability and well-being. Individuals in close proximity to a particular development are vulnerable to exposure to fumes (toxic and non- toxic), noise and dust (Cutter and Solecki, 1996; Blodgett, 2004; Gosar, 2004; Hogan and Marandola, 2005; Aigbedion and Iyayi, 2007; Horn, 2007; Hardoy and Pandiella, 2009). These issues can impact on the individual socially, economically and politically (Coetzee and Nomdo, 2002). It is mostly the poor and marginalised groups that are at greater risk (Coetzee and Nomdo, 2002; Blowers and Hinchliffe, 2003).

Thus, the level of sustainability is also determined by the degree to which a society as a whole can withstand or recover from a particular risk. Social and bio-physical risks posed by a certain development can in fact lead to mobilisation of citizens within a community to participate within the decision-making process (Chechile and Carlisle, 1991). In this instance, the discussion forum was developed to help rectify issues arising from the operation of the quarry by allowing individuals to express their concerns with regard to these operational activities. When the discussion forum was regularly convened it encompassed aspects of social sustainability. In order to enhance social sustainability importance is placed on creating a social environment in which individuals improve their quality of life presently and in the future (Hill and Bowen, 1997; Newman, 2006; Swilling and Annecke, 2006). Hermans and Knippenberg (2006) further explain that social sustainability is explained as providing equal opportunities, shared values and cohesion of social capital. However, although the Ridgeview Quarry provided a platform for individuals to express their concerns, the problem as explained previously, was that meetings were not convened regularly for individuals to express these concerns. These issues, with regard to the study, have therefore impacted considerably on the achievement of social sustainability.

Addressing the themes presented in this section such as involvement, roles, responsibilities, representation of information, regular meetings of the discussion forum, leadership skills and issues, it is important to understand that the discussion forum with respect to Lafarge Mining South Africa and its Ridgeview Quarry significantly impacted on the lives of individuals. Even though involvement in the discussion forum was not

restricted, a common concern was trying to encourage the rest of the community to participate. Another important challenge centred on the need for the discussion forum to be regularly convened. Following this, the outcomes of the discussion forum will be described below.

5.2.2 Outcomes with regards to the discussion forum

It is essential to understand the relationship that existed between community members and the managers from Lafarge Mining South Africa and its Ridgeview Quarry in order to determine the level of social sustainability. Themes that surfaced from this were inclusiveness and transparency, relationship and the level of participation within the discussion forum, which will be discussed below. It must be noted that these themes were prevalent when the discussion forum was regularly convened at the Ridgeview Quarry. The next section describes the level of inclusion and transparency within the discussion forum.

a) Inclusiveness and transparency within the discussion forum

Inclusiveness and transparency are essential components in order for participation to be considered as contributing to social sustainability (DEAT, 2002; Goodland, 2002). This section provides an interpretation of data in order to determine whether the discussion forum was inclusive of individuals and transparent.

All three respondents from the community explained that they were not restricted from participating within the decision-making process (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). A key response from all three respondents was that it was the community that prepared the agenda and that it was the community in conjunction with the Ridgeview Quarry that raised issues (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). This was highlighted by Respondent 2's quotation; "We the community bring up issues". The community in this instance was provided with the opportunity to display their concerns. The Quarry Manager (28 November 2008) explained, "All our paper work and everything is kept here and it is free for anybody to come see". The Quarry manager (28 November 2008) and Minerals manager (4 November 2008) further explained that the community was responsible for raising issues, however, the Minerals manager (4 November 2008) further explained that the discussion forum was very inclusive, since it allowed for an open forum where the community was provided with the opportunity to

voice their opinions. However, one must note that inclusivity with this respect, was only limited to those individuals who were members of the Cato Manor community, "It is only the community living near the quarry who are the ones that raise issues in conjunction with the quarry" (Respondent 1, 19 January 2009).

As explained in previous sections, the needs of poor and marginalised individuals are still not taken into consideration and many of these poor individuals are not included within the decision-making process. However, with regard to Lafarge Mining South Africa and its Ridgeview Quarry, respondents from the community were provided with the opportunity to be involved within the process (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). This inclusivity, as expressed by the respondents was a result of the decision-making process being open (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). Participation in the decision-making process is imperative, since this encourages individuals to be involved and active and this also ensures that the process is transparent (Arnstein, 1969; DEAT, 2002). Inclusivity within the discussion forum concentrated on who formulates the agenda within the forum and what issues were given prominence over others. As understood from the respondents, it was the community and the quarry that were responsible for decisions made in the discussion forum (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009).

It was evident from the information provided above, that the decision-making process at the Ridgeview Quarry was viewed as a 'bottom-up' process, since the community members who were involved, were empowered from local level and included within the agenda setting process (White, 1996). The 'bottom-up' perspective allows participants to evaluate their roles in the participation process and allows them to examine outcomes that may arise form this process (White, 1996). Inclusion ensures that all stakeholders especially the community are provided with an equal chance of participating in decision-making (White, 1996). This can be observed with respect to the Ridgeview Quarry, as all relevant stakeholders were provided with the chance of being included, therefore ensuring that the community members were not excluded from the decision-making process.

When meetings were regularly convened the decision-making process, with regards to the Ridgeview Quarry was considered as being transparent, since engagement of the community members within the decision-making process was enhanced (DEAT, 2002). In

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order for the public to be included within the decision-making process and for its participants to actively participate, the decision-making process must be inclusive. Canter (1996, cited in DEAT, 2002) explained that communication between its individuals must be properly facilitated, so as to ensure that the participants are fully involved and completely understand the processes regarding management of decisions. The inclusion of individuals within the decision-making process, allows for the ability of individuals to improve their livelihood, thereby enhancing social sustainability (Dudziak, 2007). Even though Lafarge Mining South Africa and its Ridgeview Quarry are of the opinion that they encourage equal opportunity and participation, it is clear from the case study that the failure to regularly convene the discussion forum has affected the degree to which social sustainability was achieved. Following this argument of inclusiveness and transparency, an understanding of whether the discussion forum was fair and equal, with regards to the relationship will be explained below.

b) Relationship within the discussion forum

The inclusiveness of a discussion forum determines the type of relationship formed between individuals and in this case between Lafarge Mining South Africa, its Ridgeview Quarry and the community. In order to understand the type of relationship that exists within the discussion forum, it is important to understand whether the process was free and fair.

In order for the decision-making process to succeed, it is understood that the process within which it exists should be fair and equal. This topic is very important for sustainability to exist, as the degree to which aspects are considered fair and equal allow for transparency of the process. All three respondents from the area committee explained that the level of participation was fair and that it was an open process, where members from the community were heard and acknowledged (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). Respondent 1 (19 January 2009) stated, "Yes my voice was heard and it was an equal process. I think it was a fair process". The success of the relationship between the community and Lafarge Mining South Africa and its Ridgeview Quarry depended on the transparency and fairness of the discussion forum.

When a process resulting from a discussion forum is considered to be transparent and fair, the relationship formed between individuals is considered to be good. It is understood that

participating within a discussion forum results in individuals establishing relationships with one another. Respondent 2 (15 December 2008) and Respondent 3 (13 January 2009) from the area committee explained that the relationship formed between the Ridgeview Quarry and the community was good and it was an open relationship. Respondent 2 expressed that there was a good and open relationship formed between Lafarge Mining South Africa, its Ridgeview Quarry and the community. Whereas Respondent 1 (19 January 2009) from the area committee explained, "No relationships, we just meet at the meeting and discuss our issues, but we had an open relationship with Lafarge". All three respondents emphasised that the relationship formed between Lafarge Mining South Africa and its Ridgeview Quarry was based on an equal and open relationship (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). The Quarry manager (28 November 2008) explained that since the operation emphasised an open discussion forum and transparency, a good relationship was formed between the community members and the quarry. This is highlighted by the Quarry manager's (28 November 2008) quotation; "We have a good and open discussion forum…they are free to lodge complaints with us and their complaints get dealt with". The community was provided with the opportunity to engage with the managers and express their concerns regarding the operational activities of the quarry. The Minerals manager (4 November 2008) stated, "We have a good relationship… We have a good relationship because…if you look at the community forum… I mean it is an open forum". Thus all the respondents expressed that the relationship was a good relationship (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009; Quarry manager, 28 November 2008; Minerals manager, 4 November 2008).

All three respondents from the area committee felt that when the discussion forum was regularly convened, that the facilitation of the process was equal and did not disadvantage any participant (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). Whereas, the Quarry manager (28 November 2008) explained that all their documents and minutes were kept safely and were free for the public to view. The Minerals manager (4 November 2008) expressed that the discussion forum was an equal and fair process and further stated, "They are not manipulated in any way". Thus the process of the discussion forum at Ridgeview Quarry was not controlled or influenced by a particular stakeholder and therefore allowed for the process to be equally facilitated by all the stakeholders.

In order for the relationship to be enhanced between all stakeholders, the decision-making process needs to be fair, equal, transparent and inclusive (DEAT, 2002). Communication between its individuals and officials must be properly facilitated, so as to ensure that the participants are fairly involved in the decision-making process. This was evident in the relationship between the community, Lafarge Mining South Africa and its Ridgeview Quarry, as all the respondents replied positively. The concept of social justice was important in understanding the relationship between the community, Lafarge Mining South Africa and its Ridgeview Quarry. This concept was useful to evaluate whether practices produced by the Ridgeview Quarry were socially 'just'. In addition, social justice encompasses three types of equality, namely; formal, legal and substantive equality. For this research, formal equality was experienced by the respondents, since the community were treated equally by rules of social practices (Heywood, 1999). Although formal equality was experienced by the members of the area committee and the relationship formed between Lafarge Mining South Africa, its Ridgeview Quarry and the community was good, the degree to which social sustainability was achieved was significantly impacted on as a result of the irregular convening of the discussion forum.

All three respondents (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009) highlighted this idea, as they felt that they were fairly treated and that their voices were heard when the discussion forum was regularly held (Heywood, 1999). Social justice attempts to create a 'common ground' for every individual in society, by promoting equality and thereby contributing to social sustainability (Heywood, 1999). The community members and managers from Lafarge Mining South Africa and its Ridgeview Quarry are all provided with an equal opportunity to express their concerns. Thus by creating an environment that is fair and equal, this allows for participation process to be less problematic. By creating an equal and fair discussion forum, an individual's social environment and quality of life is improved. In this study, the discussion forum was used as an opportunity to bring about change and improve the quality of life for individuals located in close proximity to the Ridgeview Quarry.

The discussion forum when convened regularly, was not only considered as an open forum where all stakeholders were allowed to participate, but was also considered as generating positive outcomes. Thus, this forum encouraged participation and therefore enhanced citizen involvement, whereby citizens have an equal opportunity with respect to the decision-making process (White, 1996). Furthermore, because the discussion forum was

inclusive of participants from the community, this resulted in an equal and fair relationship between participants from the community and the managers of Lafarge Mining South Africa and its Ridgeview Quarry. This therefore relates to procedural equity whereby regulatory systems are put in place, which encourages fair and open representation of all people (Heywood, 1999; Haughton, 1999). This type of equity embraces the concept of public participation, as it ensures for equal access to information as well as fair representation (Heywood, 1999; Haughton, 1999).

When the discussion forum was regularly convened, individuals from the community who participated within the discussion forum explained that there was an open relationship between Lafarge Mining South Africa and the community, thereby enhancing an individual's social capital. Thus with regards to the discussion forum, fair representation and an open relationship of shared interests, encourages people to become active in their everyday lives (Selman, 2001; Goodland, 1995; Goodland, 2002). Taking into consideration the inclusivity, transparency and the relationship within the discussion forum, the level of participation within this discussion forum will be discussed below.

c) Levels of participation within the discussion forum

The degree to which individuals were involved in the discussion forum, their roles and responsibilities therein and the degree to which they were included and represented, indicates the level participation.

All three respondents from the area committee expressed contentment with regard to the decision-making process (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). These three respondents expressed that Lafarge Mining South Africa and its Ridgeview Quarry attended to the needs of people and that the interest of the community was taken into consideration (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). This was evident in a response made by Respondent 1 (19 January 2009), "Our needs have been addressed, but the quarry must tell us right away if they can solve our problems". The needs of individuals located in close proximity to the Ridgeview Quarry was an important issue, since when needs are addressed, individuals are satisfied. The Quarry manager (28 November 2008) explained, "Basically we abide by the rules and regulations, by all the laws set in place by the government and the department of minerals and energy, help to keep us in check if there is transgressions. It's very much a one way street". It was the

opinion of the Quarry manager (28 November 2008) that their operation was very active in sorting out certain issues and that the process should be more open; where there is better communication between the quarry and community members. Whereas, the Minerals manager (4 November 2008) stated, "They have been taken into account". According to the Minerals manager the needs of the community members had been addressed.

White (1996: 7) categorises four types of participation in decision-making, namely: Nominal, Instrumental, Representative and Transformative. However, with regards to this study, participation falls between representative and transformative, since individuals were provided with the opportunity to participate and were therefore empowered. With regards to representative participation, the Cato Manor community elected members of the area committee in order to enhance their rights and responsibilities (White, 1996). The function of this participation provided the community with a 'voice', therefore contributing to social sustainability (White, 1996). In conjunction with representative participation, the Cato Manor community also experienced some form of transformative participation. This participation empowered the community as it provided them with a chance to develop practical knowledge within the decision-making process (White, 1996). Thus, public participation allows for the empowerment of individuals to interact in the decision-making process, especially in the context of social vulnerability (Arnstein, 1969; Kasemir et al., 2003). This can be explained with regards to Ridgeview Quarry and Lafarge Mining South Africa, since individuals were given the opportunity to participate, however, when individuals are not provided with the opportunity to interact or if their voices are not heard then individuals become vulnerable in a social context. In this study, community members are not fully at the stage of transformative participation, since they do not hold the most power with regards to the decision-making process and managers of Lafarge Mining South Africa and its Ridgeview Quarry still have a greater say in decisions.

It can be understood that public participation was considered as a critical component to the individuals interviewed. Public participation, with regards to Lafarge Mining South Africa and its Ridgeview Quarry, was not restricted as individuals living in the community were encouraged to participate within the decision-making process. Drawing from this, DEAT (2002) explained that public participation occurs as a spectrum of levels of decision-making and exemplified that engagement between stakeholders increases along this spectrum (DEAT, 2002). The levels of the stakeholder engagement spectrum are protest, inform, consult, involve, collaborate and empower. These levels are evident in the

research. For this study, it was understood that the level of engagement of participants at the Ridgeview Quarry has shifted from the level of inform to that of empower. It can be explained that the participants of the Ridgeview Quarry are involved in an inclusive process with regards to decision-making. Individuals participating in the discussion forum were provided with an opportunity to participate in the decision-making process through understanding and discussing relevant issues.

It is further explained that the individuals participating in the discussion forum were further provided with the ability to be actively involved within the decision-making process and this is evident in the 'involve and collaborate' phase (DEAT, 2002). The last phase, 'empower', which was evident with respect to the Ridgeview Quarry, allowed for the community's concerns and opinions to be considered. This phase, 'empower' is also explained by Arnstein (1969) as where individuals within a community are given the power to be active citizens when decisions are made. Equally, Arnstein (1969), commonly refers to this as 'citizen power', whereby those that were regarded as 'powerless' are now provided with the opportunity to participate so as to ensure for equality and sustainability. This can be observed with regards to Lafarge Mining South Africa and its Ridgeview Quarry as individuals from the community were given power to actively participate with respect to resolving issues on the agenda.

In addition, Arnstein (1969) makes reference to eight rungs of participation on a Ladder of Citizen Participation, ranging from manipulation, therapy, informing, consultation, placation, partnership, delegated power, to that of citizen control. However, for a greater understanding, Arnstein (1969) further divides these rungs into three groups, namely non-participation, tokenism and lastly citizen power. In this study, citizen participation was at the group of tokenism and citizen power. With regards to tokenism, individuals participating in the discussion forum were provided with the opportunity to understand and discuss information, however this did not guarantee that their voices were heard (Arnstien, 1969). With respect to citizen power, the Ridgeview Quarry allowed for the community to actively participate, however, this did not ensure that these individuals had the most power when decisions were made.

With respect to this study, the level of participation was not as intense as described in citizen power, however, even though the Ridgeview Quarry provided individuals with the power to participate in the decision-making process, it was established that the monopoly

of power lay with the managers of the Ridgeview Quarry. It is therefore concluded that the participation process with regards to the Ridgeview Quarry fell between two phases, namely tokenism and citizen power. Participation in this study was to an extent considered as contributing to social sustainability, as individuals within this discussion forum were empowered and encouraged to participate within the decision-making process.

In conclusion, with regards to the themes presented in this section, such as, inclusiveness, transparency, relationship and levels of participation, individuals' participation within the discussion forum held by the Ridgeview Quarry was considered to be free and open. When the discussion forum was regularly convened, the forum was inclusive of all individuals within the community as it did not restrict anyone and this further promoted a fair and open relationship with those involved. The discussion forum was also considered to be transparent as the community members were provided access to information. Furthermore, although participation was encouraged, the community members were not in full control of the discussion forum, as the managers of Lafarge Mining South Africa and its Ridgeview Quarry had the most control. The following section provides recommendations for further contribution to social sustainability through those involved in the discussion forum.

5.2.3 Recommendations for further contribution to social sustainability through those involved in the discussion forum

Themes that arose from this were attendance, active participation and regular discussion forums. All three respondents from the area committee who attended the discussion forum emphasised that one of the ways to improve social sustainability through social responsibility programmes was to encourage members of the community to actively participate within the decision-making process (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). As stated by Respondent 1 (19 January 2009), "Attendance of meeting by all those that are affected...managers of the quarry must be there to provide answers...community must be active and meetings must be held on time". In this aspect, all stakeholders must be actively involved, from the managers to the community. This was further emphasised by Respondent 2's (15 December 2008) quotation; "All members should be involved". Emphasis was placed on individual motivation, more specifically emphasis was placed on encouraging community members to be active participants within the decision-making process. Furthermore, Respondent 3 (13 January 2009) explained that it was the

responsibility of Lafarge Mining South Africa and its Ridgeview Quarry to encourage the community to actively participate.

Furthermore, all of the respondents felt that it was a challenge to encourage the rest of the community to participate (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009; Quarry manager, 28 November 2008; Minerals manager, 4 November 2008). The Quarry manager (28 November 2008) expressed, "The community should come up with more positive suggestions". Whereas, the Minerals manager (4 November 2008), felt that management was an issue, "I think if all the relevant stakeholders can always be party to this and make sure that proper follow-ups are done and all the issues by the forum are taken seriously". Thus the issue of concern was that, management should be efficient and effective in order to avoid inadequacies in the future. Another main concern, with regards to the discussion forum, and which is emphasised in this chapter, was that meetings were not convened on a regular basis. This was expressed by all three community respondents (Respondent 1, 19 January 2009; Respondent 2, 15 December 2008; Respondent 3, 13 January 2009). In order for public participation to be considered as contributing significantly to social sustainability, meetings needed to be convened regularly, so as to ensure fair and active participation of those who are affected with respect to a development, and in this case a resource extraction industry.

The concept of sustainable development has become a very important concept when dealing with issues that surround resource extraction industries and their contribution to the community. Public participation should be more inclusive and citizens should be more aware of their roles and responsibilities. With regards to Lafarge Mining South Africa and its Ridgeview Quarry, there needs to be more emphasis on promoting equity throughout society in order to maintain a balance between social, political, economic and biophysical aspects. The level of sustainability is determined by the degree of participation of individuals in the decision-making process. Businesses, more specifically Lafarge Mining South Africa and Ridgeview Quarry believe that they embody the new generation of business ethics; however, this research showed that inadequacies, such as, not regularly convening the discussion forum and not receiving full participation from the community, impacted on the nature of participation. The following section, presents the conclusion of the chapter.

5.3 Conclusion

Many developments and organisations play a significant role and have a considerable influence on the livelihoods of many people. This chapter of the research dealt with the nature of public participation with regard to the discussion forum related to the Ridgeview Quarry activities.

An important issue, raised by community members, was that the discussion forum was not regularly convened, thus affecting the degree to which social sustainability is achieved. This is in direct contrast with information obtained from interviews done with the Quarry manager and Minerals manager who both explained that the discussion forum was held on a regular basis. The regularity of the discussion forum affected the degree to which social sustainability was achieved by Lafarge Mining South Africa and its Ridgeview Quarry. The issue of regularity of the discussion forum was considered as a major issue. Challenges are now placed on management to improve their social sustainability strategies so as to allow for equitable operation and management.

When the discussion forum was regularly convened a positive outcome presented was that participation was very active as relevant members associated with the discussion forum participated in some form. Participation in this respect understood in a sustainability context enabled participants to interact within the decision-making process, contributing to social sustainability (Arnstein, 1969; Cole, 1975; Campbell and Marshall, 2000; Kasemir et al., 2003; Bond and Thompson-Fawcett, 2007). Participants within the discussion forum felt that the decision-making process was transparent and inclusive, since engagement of individuals within the decision-making process was enhanced (DEAT, 2002). Furthermore, it was stated that the community members were provided with an opportunity to raise issues that were considered significant.

Individuals participating within the discussion forum felt content with the process, as they were of the opinion that their voices were heard. It is for this matter that participation with respect to this discussion forum fell between representative and transformative, since individuals were provided with the opportunity to participate and were therefore empowered (White, 1996). Thus the decision-making process was viewed as a 'bottom-up' process, since individuals were empowered and included within the agenda setting process (White, 1996). With regards to the study, citizen participation was at the group of tokenism and citizen power (Arnstein, 1969). Although these groups of participation

enabled and encouraged the community to participate within the discussion forum, the powerholders, who were the managers, were still in charge of the decision-making process (Arnstein, 1969).

However, it must be explained that the decision-making process was formed on the basis of inclusivity since individuals were not excluded from participating within the process. The evidence obtained from this chapter explained that participation with respect to the community members more specifically those belonging to the area committee was relative and consistent, however, issues that were brought to the forefront were that the rest of the community were not pro-active in the decision-making process, as they primarily depended on an area committee. Thus it can be concluded that in order to acquire these benefits and to achieve complete social sustainability, the discussion forum needs to be convened regularly and relevant stakeholders need to be actively involved within the decision-making process.

The next chapter, Chapter Six examines the social upliftment programmes adopted by Lafarge Mining South Africa and its Ridgeview Quarry; namely the education-related and the skills-related social upliftment programmes.

CHAPTER SIX
THE CONTRIBUTION TO SOCIAL SUSTAINABILITY BY SOCIAL UPLIFTMENT PROGRAMMES

6.1 Introduction

Developments and more specifically Lafarge Mining South Africa and its Ridgeview Quarry have begun to adopt sustainable measures so as to make a significant social contribution to society. The research focuses on specific corporate social responsibility initiatives adopted by Lafarge Mining South Africa and its Ridgeview Quarry and not the corporate social responsibility performance of the company as a whole. Lafarge Mining South Africa and its Ridgeview Quarry have engaged in establishing social upliftment programmes. This is the second results chapter and encompasses aspects of evaluation research, whereby summative evaluation and impact evaluation was used to summarise information and examine the outcomes of the programmes, namely; the education-related social upliftment programme and the skills-related social upliftment programme (Cook and Reichardt, 1979, Rowland, 2000; Wilkinson, 2000; Daponte, 2008; Smith and Brandon, 2008). Furthermore, this research was aimed at explaining the overall contribution to social sustainability by these social upliftment programmes.

The education-related social upliftment programme provided financial assistance to a school in order for the school to buy laboratory equipment and it also provided extra tuition in order to assist learners to improve academically. The skills-related social upliftment programme was initiated in order to assist women in acquiring skills with respect to pottery and crafting. These two programmes are a small part of a broader corporate social responsibility agenda and are analysed in detail in this chapter so as to understand the contribution to social sustainability.

Chapter Six presents two sections; 6.2 and 6.3. Section 6.2 and 6.3 explains the project description of the programmes, the outcomes of the education-related social upliftment programme and skills-related social upliftment programme associated with Lafarge Mining South Africa and its Ridgeview Quarry respectively. Lastly, recommendations for further contribution to social sustainability through interaction with those involved in the education-related social upliftment programme and skills-related social upliftment programme is also discussed in the above mentioned sections. In both sections, the social

upliftment programmes are described and examined so as to determine Lafarge Mining South Africa's and its Ridgeview Quarry's contribution to social sustainability.

6.2 Education-related social upliftment programme associated with Lafarge Mining South Africa and its Ridgeview Quarry and its contribution to social sustainability

Interviews were conducted with those involved in the education-related social upliftment programme, namely; the principal (Respondent 4) and science teacher (Respondent 5) of the Chesterville Extension Secondary School as well as the Minerals manager of Lafarge Mining South Africa. Analysis of these social upliftment programmes helps determine the degree of social sustainability being reached (see Appendix H, showing pictures of the school). This section provides an examination into the description and outcomes of the education-related social upliftment programme. Furthermore, recommendations for further contribution to social sustainability through interaction with those involved in the education-related social upliftment programme are examined.

6.2.1 Project description of the education-related social upliftment programme

This section describes the project operations and the relevant individuals involved within the education-related social upliftment programme. Themes such as motivation, operation, roles and responsibilities and involvement regarding the programme are important to discuss in this section.

The motivation of Lafarge Mining South Africa and its Ridgeview Quarry for undertaking the education-related social upliftment programme was to ensure that the individuals, specifically the learners of Chesterville Extension Secondary School, benefit in the future. The Minerals manager (4 November 2008) expressed that:

> "if you look at issues of the environment you must take care of them in the sense that they are the one's who suffer a lot because of whatever potential pollution that is there so they must as well benefit although we are doing our best to make sure that we mitigate whatever environmental impacts but at the same time we feel that we have a responsibility towards Cato Manor".

In terms of this statement, Lafarge Mining South Africa and its Ridgeview Quarry were seemingly committed to uplifting the community in which it is situated in, by providing opportunities to the learners to improve their social well-being. Concern for the environment has resulted in increased awareness and developments such as the Ridgeview Quarry seem to be focused on improving an individual's social well-being with respect to the pillars of sustainable development (Karake-Shalhoub, 1999; Lawrence *et al.*, 2005;

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Werther and Chandler, 2006). Following this, the operation of the programme is explained below.

a) Operation of the education-related social upliftment programme

By promoting education, it seemed that Lafarge Mining South Africa took the initiative to encourage corporate social responsibility. Lafarge Mining South Africa has contributed to the Chesterville Extension Secondary School by financially assisting the school with the acquisition of science equipment so as to increase education.

There was no specific way for this programme to operate, since it was based on educating children with the aid of the science equipment supplied by Lafarge Mining South Africa and its Ridgeview Quarry. There was no specific process for this programme to operate, since there were no classes or workshops held and the only people that participated were the children and teachers from the Chesterville Extension Secondary School.

Facilitation and organisation regarding the programme was not considered an issue, since Lafarge Mining South Africa and its Ridgeview Quarry provided financial aid for the learners to benefit (Minerals manager, 4 November 2008; Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). The Minerals manager, principal and teacher expressed that there was no specific time as to when this programme began as supporting the school financially was an on going process (Minerals manager, 4 November 2008; Respondent 4, 29 January 2009; Respondent 5, 29 January 2009).

The following section explains the type of involvement and the roles and responsibilities of participants with respect to the education-related social upliftment programme.

b) Roles, responsibilities and involvement with regards to the education-related social upliftment programme

Roles, responsibilities and involvement are important themes to discuss in order to understand the contribution made by the education-related social upliftment programme to social sustainability. This section attempts to discuss the roles, responsibilities and the level of involvement within this education-related social upliftment programme.

The roles and responsibilities with regards to the social upliftment programmes of individuals were analysed in order to determine the level of involvement within the

programme. Respondent 4 (29 January 2009) explained that his role was, "Attending to issues relating to the school" as he was the principal, whereas Respondent 5 (29 January 2009) explained that he was the science teacher and "taught the children physical and life sciences" at the Chesterville Extension Secondary School. The Minerals manager (4 November 2008) simply explained that, "I coordinate them. I do the consultation". The Minerals manager was involved in the organisation and held meetings that pertained to this programme.

Lafarge Mining South Africa and its Ridgeview Quarry provided financial assistance to the school. According to Lafarge Mining South Africa and its Ridgeview Quarry the provision of financial assistance to learners facilitated the improvement of learning conditions. This can be substantiated by Qizilbash's (1996a) statement that, businesses emphasise 'ethical development' in order to improve the quality of life of individuals and where certain limits are placed on economic development. The involvement of developments in uplifting society indicates that businesses recognise that they have an ethical responsibility toward society. Developments are engaged in providing individuals within society an opportunity, and in this study the opportunity was to educate learners at the Chesterville Extension Secondary School in order to benefit them in the future.

Understanding the roles and responsibilities of individuals participating within the programme was important, as this determined the degree of involvement. Involvement is determined by the degree of satisfaction. The respondents from the school were content with the outcomes of the programme as it provided the learners with an opportunity to improve their learning environment (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). This theme is discussed further in the following paragraph.

Involvement is a very important aspect when achieving or determining the level of social sustainability of a programme. Both respondents from the school were truly grateful for the efforts and contributions provided by Lafarge Mining South Africa and its Ridgeview Quarry (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). This was evident from the following statement, "... grateful for the assistance brought on by Lafarge, since helping the kids has made a tremendous change in their ability to learn and to know that I have been part of this process makes me feel happier" (Respondent 4, 29 January 2009). In this study, respondents were content with the programme which increased participation and involvement, as they felt that this programme benefited their learners.

Another response that emphasised this was expressed by Respondent 5 (29 January 2009), "I feel great that our kids participate and got the opportunity to learn". When there exists a high degree of contentment within a programme, participation of individuals is made easy. Respondent 4 (29 January 2009) further stated, "Everyone from the school, the kids and teachers participated, even with our kids, they seem to be more active with regards to participating in school discussions specifically in the science class". The financial assistance provided learners with science equipment, thereby facilitating the learning process.

Additionally, participation within this programme was effective as it was extended towards the learners of the school and teachers, thus there was no restrictions. Participation in this case provided the learners and teachers with equal opportunity to participate and benefit from this programme (Arnstein, 1969; Qizilbash, 1996a; White, 1996; Fraser, 1997; Palmer et al., 1997; DEAT, 2002; Lee, 2006). This can be linked to the concept of social justice, whereby there exists an equal distribution of benefits and burdens within society (Harvey, 1973; Miller, 1976; Robins and Kumar, 1999; Eade and Mele, 2002; McDonald, 2002; van Vliet, 2002; Scott and Oelofse, 2005; Smith, 2004; Gray, 2007;). Thus this programme aimed at promoting equity and welfare, embodying the ideas of social justice (Harvey, 1973; Miller, 1976; van Vliet, 2002; Scott and Oelofse, 2005; Gray, 2007). Lafarge Mining South Africa and its Ridgeview Quarry provided the school with financial assistance in order to allow the children to gain an opportunity to learn, thus empowering learners to a degree. Involvement within this programme was important to understand Lafarge Mining South Africa and its Ridgeview Quarry's contribution to social sustainability, since if individuals were unhappy with the programme, their level of involvement would have decreased. In this instance participation within the programme was described as collaborative involvement, whereby disadvantaged individuals were provided with the opportunity to participate in the programme (Innes and Booher, 2004).

Furthermore, as a result of good organisation and operation of the programme, involvement within the programme was active. Involvement provided the learners and teachers with equal opportunity to participate and benefit from this programme. The following section discusses the outcomes of the programme. Reasons for participants contentment with regards to participation within this programme is therefore elaborated in the next section.

6.2.2 Outcomes resulting from the education-related social upliftment programme

The following section describes the benefits and challenges that resulted from the programme. Prevalent themes were the skills transfer, change in livelihood and relationship formed with regards to the education-related social upliftment programme. Lastly, Lafarge Mining South Africa and its Ridgeview Quarry's contribution with respect to future generations is discussed.

a) Skills transfer with regards to the education-related social upliftment programme

One very important theme in achieving sustainability is skills transfer and knowledge development. This section examines skills transfer with regards to the education-related social upliftment programme.

The principal explained that the education-related social upliftment programme did not directly affect them, but allowed for their learners to gain skills (Respondent 4, 29 January 2009). This respondent further stated, "Kids gained skills that will prepare them for tertiary education" (Respondent 4, 29 January 2009). This response highlighted that learners were directly benefiting from this programme, as learners were provided with an opportunity to enhance or develop their skills. Respondent 5 (29 January 2009) expressed that his teaching was made easier and that, "Any science kid, experimentation is important, as they learn to explore and verify laws. Makes learning a pleasurable exercise and makes it easier for you as a teacher". Thus both respondents highlighted their contentment with the fact that the teaching process was made easier and that educators could focus attention on other areas that required attention (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). The Minerals manager stated, "Our main focus is that it must be educational, skills transfer and our main beneficiaries are the communities and then youth, women and mainly SDSA which means that we are looking at the previously disadvantaged people and who are our main beneficiaries, so we allocate funds every year and we look as to whether the type of whatever we need to sponsor forms part of the type of the people that we aim at assisting". The Minerals manager (4 November 2008) expressed that this programme had contributed significantly in changing the lives of many learners.

Thus the transfer of skills was based on a practical manner. The main themes that arose from this aspect were the benefits of teaching learners in a practical way, which uplifted the learners. Both respondents of the school felt that the programme directly benefited its learners in achieving a better education. Furthermore, one respondent explained, "Kids

learn in terms of a technical and practical basis not only theoretical" (Respondent 4, 29 January 2009). This is also evident in Respondent 5's (29 January 2009) statement: "It has helped us to teach some concepts in a practical and meaningful way". Teaching learners with the use of equipment proved to be beneficial since it allowed teachers to express thoughts and certain theories easily. Adding to this, Respondent 4 (29 January 2009) explained, "It helped the learners focus in class, as they remembered methods better". This form of teaching allowed for learners to easily grasp concepts and furthermore, allowed the learners to be taught in a practical way. The Mineral manager (4 November 2008) explained that the education-related social upliftment programme involved providing financial assistance as well as tuition classes. Lafarge Mining South Africa and its Ridgeview Quarry provided learners with the opportunity to obtain knowledge in a practical and theoretical manner, thereby enhancing skills and educational development. Thus one can conclude that Lafarge Mining South Africa and its Ridgeview Quarry have taken some positive steps in order to achieve a degree of social sustainability by embarking on educational initiatives.

Both the respondents from the school explained that the programme had a positive impact on its learners (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). Businesses at present are focused on protecting the rights and liberties of people. Thus with respect to social justice, Lafarge Mining South Africa and its Ridgeview Quarry have highlighted the need to encourage capacity building and skills development so that individuals benefit in the long-term (Hill and Bowen, 1997). As Hill and Bowen (1997) explain sustainable development allows for costs not to be passed onto future generations and this is eminent within this programme, as learners are provided with the opportunity to actively engage. By providing financial assistance, Lafarge Mining South Africa and its Ridgeview believed that their organisation was making individuals resilient to changes by decreasing vulnerability (Griffin, 1986; Coetzee and Nomdo, 2002).

With reference to the above; in most cases communities living in close proximity to developments such as these, are normally classified as being disadvantaged financially and socially (Cutter and Solecki, 1996; Coetzee and Nomdo, 2002; Hogan and Marandola, 2005; Hardoy and Pandiella, 2009). Lafarge Mining South Africa and its Ridgeview Quarry have attempted to reduce these levels of vulnerability by presenting opportunities. Lafarge Mining South Africa and its Ridgeview Quarry have provided the education-related social upliftment programme to these disadvantaged individuals, in order to

improve their living standards, which contributed to achieving some level of social sustainability.

In this study, Lafarge Mining South Africa and its Ridgeview Quarry emphasised the empowerment of individuals by providing practical assistance, but the responsibility rested with the community to utilise this opportunity in order to improve their well-being. This relates to social sustainability, as social sustainability is explained as that which empowers people to play an active role in enhancing and maintaining social capital (Hill and Bowen, 1997; Selman, 2001; Goodland, 2002; Newman, 2006; Swilling and Annecke, 2006; Devereux, 2008; Scheinsohn and Cabrera, 2009). Following this section, a discussion is offered on the contribution made by the education-related social upliftment programme towards a change in livelihood with regards to the community.

b) Change in livelihood with regards to the education-related social upliftment programme
This section examines the degree to which this social upliftment programme changed the livelihood of participants. Both respondents from the school explained that the programme did not change their livelihood directly, however, it has made a significant impact on the lives of its learners (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). They further explained that their learners are more enthusiastic in furthering their careers in the science discipline after matriculating (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009).

Both respondents from the school expressed that although the programme directly benefited the learners, benefits were also extended to the local community, as learners were provided with the opportunity to better their education and this would possibly lead to them securing better employment opportunities in the future, thereby allowing them to support their families (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). This explanation was evident in Respondent 4's (29 January, 2009) response; "Parents or grandparents benefit from this as their kids after schooling could be applying to universities after matriculating thereby making a career, which could help support their families". Thus it is possible that the local community may indirectly benefit at some stage in the future. This was further highlighted by Respondent 5's (29 January 2009) comment that the programme would benefit the learners, as well as indirectly benefiting their families.

Furthermore, Respondent 4 (29 January 2009) from the school stated that responsibility to improve livelihoods should not be dependent on a company, specifically Lafarge Mining South Africa or its Ridgeview Quarry and stated, "Most important we have to help ourselves to succeed". The idea put forward here is that, self-interest is a challenge as individuals need to be more involved and active in changing their lives. In relation to the previous statement, the Minerals manager (4 November 2008) emphasised that motivating individuals to become active was a challenge, "You have got to motivate them... you have got to reach them you know". The general idea put forward, was focused around encouraging and motivating individuals to create opportunities they could benefit from. This allows for learners to apply to tertiary institutions in order to embark on a career and which in turn could benefit entire families.

When individuals are content with an outcome of a programme, the level of social sustainability is increased, thereby improving their well-being. In order for individuals to improve their livelihoods, individuals must be provided with assets, in this study the asset was the provision of financial aid (Coetzee and Nomdo, 2002). It can therefore be explained that an individual's or a household's livelihood, determines the level of vulnerability, as different livelihoods cope differently with respect to the changes in the environment (Coetzee and Nomdo, 2002). Furthermore, vulnerability is decreased when households or individuals change their assets into a form of income, thereby sustaining their livelihood (Coetzee and Nomdo, 2002). In this study, individuals, more specifically the children from the school, were provided with the opportunity to learn and increase their knowledge; thereby creating opportunities in the future to further their education and increasing their prospects for employment. This programme, to an extent contributed to social sustainability, since individuals were empowered to improve their well-being (Hill and Bowen, 1997; Selman, 2001; Goodland, 2002; Newman, 2006).

Considering that sustainable development is a holistic process, one must keep in mind that benefits are extended throughout society as a whole. It can be concluded that benefits in this study were not only extended to learners within the programme, as the community in the long-term would benefit. Actions are considered to be just when they bring about just affairs or when outcomes are desirable (Harvey, 1973; Miller, 1976; Eade and Mele, 2002; van Vliet, 2002; Scott and Oelofse, 2005; Gray, 2007). Lafarge Mining South Africa and its Ridgeview Quarry seemingly attempted to promote equitable distribution of benefits

throughout society, thereby allowing for fairness (Pearce and Vanegas, n.d.; Beder, 2000; Oelofse, 2001; Thompson, 2003).

The concept of social justice was very important to understand the degree of social sustainability being achieved in this study, since individuals located in close proximity to the Ridgeview Quarry experience negative impacts. It appeared that the level of commitment by Lafarge Mining South Africa and its Ridgeview Quarry, with regards to the education-related social upliftment programme, concentrated on developing and improving academic growth. The subsequent section explains the type of relationship formed.

c) Relationship with regards to the education-related social upliftment programme
Understanding the relationship with regards to the education-related social upliftment programme is important as a good relationship results in equal and fair opportunities. This section examines the type of relationship in order to determine the level of social sustainability being achieved.

Both respondents from the school explained that their relationship with the Ridgeview Quarry was based on an equal and fair process (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). Respondent 4 (29 January 2009) commented; "We have formed a good relationship with Lafarge and the quarry and hope this relationship only gets stronger in time". It was further observed that respondents from the school wanted to continue this relationship with Lafarge Mining South Africa and its Ridgeview Quarry. To emphasise this, Respondent 5 (29 January 2009) expressed, "We have formed a good bond". There was a good relationship formed between Lafarge Mining South Africa, its Ridgeview Quarry and the school. Furthermore, Respondent 4 (29 January 2009) explained, "We were all included and it was an equal relationship". Thus the relationship formed in this instance, describes one that was based on trust and equality.

In this instance, it was evident that there existed a good relationship between Lafarge Mining South Africa, its Ridgeview Quarry and the school. Furthermore, the success of a business, specifically Lafarge Mining South Africa is dependent on its relationship with society (Lawrence *et al.*, 2005; Werther and Chandler, 2006). Understanding the types of relationship formed was very important with this study, since relationships can be beneficial or create an environment that is hostile. Furthermore, to highlight this, Lawrence

et al. (2005) explained that good business takes into account the well-being and needs of society.

With regards to this education-related social upliftment programme, an equal relationship was formed between Lafarge Mining South Africa, its Ridgeview Quarry and the school. This type of relationship was inclusive, as all individuals were included and encouraged to participate. Inclusion ensures that all stakeholders especially the community are provided with an equal chance of participating (White, 1996). This type of equity embraces the concept of public participation, as it ensures equal access to information as well as fair representation (Haughton, 1999; Heywood, 1999). In addition, this programme embraced the concept of formal equality since individuals were treated equally (Heywood, 1999). With regards to this programme it appeared that Lafarge Mining South Africa and its Ridgeview Quarry was focused on promoting social justice, by encouraging fair and just relationships.

This programme had a positive impact with regards to the individuals participating within it, as there was no negative feedback. Keeping in mind the idea of social justice, this programme created an equal opportunity for every individual in society, by promoting equality and thereby contributing to social sustainability (Scott and Oelofse, 2005). Following this section, the contribution made to the education-related social upliftment programme by Lafarge Mining South Africa and its Ridgeview Quarry will be examined.

d) Lafarge Mining South Africa and its Ridgeview Quarry's contribution to education-related social upliftment programme and assistance to future generations

It is essential to analyse the contribution made by a development to society, specifically Lafarge Mining South Africa and its Ridgeview Quarry, in order to determine the degree of social sustainability being achieved. Themes that become prevalent are whether the needs of individuals participating within this programme are met and the whether this programme will benefit future generations.

Respondents 4 (29 January 2009) and Respondent 5 (29 January 2009) from the school felt that Lafarge Mining South Africa and its Ridgeview Quarry contributed significantly in uplifting the children of the Chesterville Extension Secondary School. One of the respondents from the school articulated that Lafarge Mining South Africa and its Ridgeview Quarry provided them with "equipment for the learners" (Respondent 5, 29

January 2009). It can therefore be understood that Lafarge Mining South Africa and its Ridgeview Quarry helped by donating science equipment in order to benefit the learners. Furthermore, to highlight this, Respondent 4 (29 January 2009) explained, "Since I have been here, whenever I need sponsorships I can trust Lafarge will contribute. Today I was negotiating bursaries to give to two of our best learners, they gave one learner up to R10 000". Lafarge Mining South Africa and its Ridgeview Quarry seemed to be involved in uplifting children by providing academic support, through financial assistance. Furthermore, the Minerals manager (4 November 2008) expressed that looking after the environment did not only encompass one aspect, rather it involved looking at the social as well as the biophysical aspects of the environment to achieve complete sustainable development.

The respondents further stated that Lafarge Mining South Africa's and its Ridgeview Quarry's contribution provided children with the opportunity to learn (Respondents 4, 29 January 2009; Respondent 5, 29 January 2009). This was evident with the following statement, "Help give disadvantaged kids the opportunity to learn and aspire to greater things" (Respondent 4, 29 January 2009). In this case, the education-related social upliftment programme was focused solely on providing benefits to learners from the Chesterville Extension Secondary School. In addition, Respondent 5 (29 January 2009) stated, "Provide children with the opportunity to learn". The main focus of this programme was to provide the learners with the means to improve their education. The Minerals manager explained that this programme uplifted the learners so that in the future their livelihoods would be improved. For this matter the needs of the learners were the main focus of Lafarge Mining South Africa and its Ridgeview Quarry. Both respondents from the school explained that there were no major problems associated with the programme (Respondents 4, 29 January 2009; Respondent 5, 29 January 2009). However, a challenge arose, where one of the respondents from the school elucidated that the only problem was based on the adequate amount of equipment (Respondent 5, 29 January 2009). Here, the challenge was based on a technical component, as education was dependent on a sufficient supply of equipment to the school.

Thus both the respondents from the school explained that the needs of its learners were addressed, in terms of Lafarge Mining South Africa and its Ridgeview Quarry providing science equipment for its learners to learn from (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). Furthermore, understanding how this contribution

benefited future generations was essential in understanding Lafarge Mining South Africa and its Ridgeview Quarry's contribution to social sustainability. Education is a very important aspect, since it is considered as having a ripple effect on individuals. Creating areas or providing instruments that promote education is imperative in achieving sustainable development. Both respondents from the school explained that by providing learners with the opportunity to further their education, benefits would be extended throughout society. This was evident by the principal of the school, who stated: "Yes, because it will aspire these kids to obtain a tertiary education" (Respondent 4, 29 January 2009). By providing learners with financial assistance in terms of the supply of equipment, learners were presented with the prospect of expanding and developing their knowledge. This was further stated by Respondent 5: "It will have a great impact on the future, since the learners will be given and opportunity to study further and therefore develop a career" (Respondent 5, 29 January 2009). Learners were not only provided with the ability to increase their knowledge with regards to secondary education, but were also encouraged to do better in order to pursue tertiary education. Learners in this study were motivated through the education-related social upliftment programme to grow and excel academically.

For a business to be considered as socially responsible, its social contribution towards society must be sustainable. Decreasing vulnerability and improving well-being was addressed in this programme. Developments, such as quarries even though they provide a service to society cannot be explained without consequences, as in some cases costs outweigh the benefits. However, with regards to this study, Lafarge Mining South Africa and its Ridgeview Quarry seem to practice distributive principle of justice, since a 'good' is enjoyed by every member of the group and in this case the group was the learners in the Chesterville Extension Secondary School. With regards to social justice benefits were distributed evenly within the school (van Vliet, 2002; Winton, 2004; Oelofse *et al.*, 2005; Kjellstrom and Mercado, 2008).

Understanding the degree to which businesses, such as Lafarge Mining South Africa, become responsible was very important in order to determine the degree of social sustainability being achieved. A key idea here, is that of corporate social responsibility; whereby businesses, such as Lafarge Mining South Africa attempt to incorporate social and environmental issues into their working practices, whilst at the same time allowing for the public to interact within the decision-making processes (Gouldson, 2006; Siegele and

Ward, 2007). Thus with regards to the statement above, focus was placed on ethical responsibility, fairness and improvement of human well-being (Carroll, 1979; Kotler and Lee, 2005; Siegele and Ward, 2007). This type of responsibility or contribution was observed in this programme initiated by Lafarge Mining South Africa and its Ridgeview Quarry. All individuals within this programme were fairly represented and were encouraged to participate, which therefore contributed to social sustainability. Thus the type of equity dealt within this programme was inter-generational equity, since equity was between generations (Pearce and Vanegas, n.d.; Haughton, 1999; Heywood, 1999; Beder, 2000; Oelofse, 2001; Thompson, 2003).

For a programme to be sustainable, benefits must be long-term, thus sustainable development and more specifically social sustainability were important concepts used in the study to assess certain programmes, specifically the education-related social upliftment programme (Palmer *et al.*, 1997; Marcuse, 1998; Hamilton, 2002; Soppe, 2004; Lawrence *et al.*, 2005; Bell and Morse, 2007; Morse, 2008). It was evident within this programme that the teachers and all its learners were provided with an equal opportunity to benefit, thereby contributing to the degree to which social sustainability was achieved. However, although the programme was considered as encompassing aspects of social sustainability, if corporate funding were to be withdrawn, serious difficulties would be faced by the teachers and learners of the school (Hill and Bowen, 1997; Newman, 2006; Swilling and Annecke, 2006). It is common in most cases that businesses provide financial assistance to a community to a certain extent but when the initiative concludes, most individuals, specifically the poor are affected. Recommendations are offered in the next section in order to improve the programme so as to enhance social sustainability.

6.2.3 Recommendations for further contribution to social sustainability through interaction with those involved in the education-related social upliftment programme

Recommendations to the education-related social upliftment programme are offered in this section. Although Lafarge Mining South Africa contributed to social sustainability, challenges were experienced with regard to this programme.

With respect to this aspect, issues that arose were extra tutors for education development as well as educating students from primary school level. Respondent 4 (29 January 2009) from the school stated, "More tutors should come and provide assistance". Issues did not arise with the management or the contribution aspect relating to Lafarge Mining South

Africa and its Ridgeview Quarry, however, the concern was that insufficient educators could pose a problem for the future development of learners. However, Respondent 5 (29 January 2009) stated, "Benefits could be maximised if this could be extended to primary school. Cannot start at only high school got to be skilled and polished at primary school level. Working on foundation that is cemented". In the context of social sustainability, emphasis was placed on providing opportunities to learners at primary school level. Here, respondents from the school felt that in order for learners to benefit in the long-term, individuals needed to be uplifted from an early stage rather than a later stage (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009). The Minerals manager (4 November 2008) explained that collaboration was important in achieving sustainable development, "... social project would need us, local municipality representatives and the Department of Minerals and Energy. There needs to be some synergy so things can work better". The idea put forward here, was that it was imperative for partnerships and alliances to be formed between many organisations in order to promote total social sustainability. An eThekwini Municipal official (20 November 2008) further stated that total social sustainability could only be achieved once all members in the programme are proactively involved.

Thus in order to achieve complete sustainability, learners must be involved from a young age, thereby allowing for generations in the future to benefit. Here, emphasis is placed on businesses to engage in bottom-up approaches so as to ensure for sustainable development (Newman and Kenworthy, 1999; Qizilbash, 2001). Furthermore, the concept of empowerment was accentuated, since learners were provided with the opportunity to develop practical knowledge (White, 1996). The level of social sustainability was to an extent improved, since learners were empowered and encouraged to participate within the programme.

In conclusion, the education-related social upliftment programme encompassed aspects relating to social sustainability, as focus was placed on providing opportunities to learners presently in order to benefit them in the future. The programme centred on improving an individual's well-being, whereby Lafarge Mining South Africa and its Ridgeview Quarry took the initiative to improve educational needs of the society (O'Niell, 1993). Developments that are engaged in corporate social responsibility are described as having an 'active involvement'. In order to achieve complete social sustainability, participation must be considered as fair and inclusive in all aspects (Arnstein, 1969; Choguill, 1996; DEAT, 2002; Kasemir *et al.*, 2003; Bond and Thompson-Fawcett, 2007). In this study

individuals were content with the programme, which increased participation. The respondents from the school felt that participating benefited its learners, thus this contributed to social sustainability to an extent (Respondent 4, 29 January 2009; Respondent 5, 29 January 2009).

It is in most cases that communities living within close proximity to developments such as these are normally classified as being disadvantaged financially and socially (Cutter and Solecki, 1996; Coetzee and Nomdo, 2002; Hogan and Marandola, 2005; Hardoy and Pandiella, 2009). Lafarge Mining South Africa and its Ridgeview Quarry have attempted to reduce the level of vulnerability by presenting opportunities. Another way in which the programme contributed to social sustainability was by providing the learners with the opportunity to develop skills with respect to long-term benefits. Hill and Bowen (1997) explained that by encouraging capacity building and skills development, individuals benefit in the long-term. Thus the concept of futurity was important with regards to this programme, as emphasis was placed on extending benefits to future generations (Rees and Wackernagel, 1996; Palmer *et al.*, 1997; Coetzee and Nomdo, 2002). In the case of Lafarge Mining South Africa and its Ridgeview Quarry, adequate education of learners would afford them the opportunity to persue tertiary education thereby allowing them to provide economic support to their families and thus enhancing social sustainability. However, in order to achieve social sustainability, one of the challenges was to uplift learners from grassroots level, whereby primary school learners would also receive the benefits.

Section 6.3 presented below, explains the skills-related social upliftment programme associated with Lafarge Mining South Africa and its Ridgeview Quarry, in terms of its contribution to social sustainability.

6.3 Skills-related social upliftment programmes associated with Lafarge Mining South Africa and its Ridgeview Quarry and its contribution to social sustainability

Interviews were conducted with those involved in the skills-related social upliftment programme. Individuals who were included in this programme were the women participated in the pottery and craft classes in Cato Manor (Respondents 6, 7, 8, 9, 10, 11), the Minerals manager of Lafarge Mining South Africa, the Pottery teacher and two assistants of the pottery and crafting project. Furthermore an eThekwini Municipal official was interviewed, in order to provide recommendations for the programme. Lafarge Mining

South Africa has adopted this skills-related social upliftment programme as an initiative to enhance social sustainability. This section provides an examination into the description and outcomes of the skills-related social upliftment programme. Furthermore, recommendations for further contribution to social sustainability through interaction with those involved in the skills-related social upliftment programme are examined.

6.3.1 Project description of the skills-related social upliftment programme

The following section illustrates the project operations and the relevant individuals involved within the skills-related social upliftment programme. Themes such as motivation, operation, roles and responsibilities and involvement regarding the programme are important to discuss in this section.

The motivation of Lafarge Mining South Africa and its Ridgeview Quarry for undertaking the skills-related social upliftment programme was to ensure that the individuals, specifically the women from the Cato Manor community, benefit by obtaining and developing skills that would assist them in the future. The Minerals manager (4 November 2008) and the Pottery teacher (20 February 2009) explained that the programme was aimed at uplifting women, as it helped them to gain skills. The Minerals manager further stated that developing skills therefore created an opportunity for employment in the future.

With regard to corporate social responsibility, emphasis is placed on present actions and commitment. Lafarge Mining South Africa and its Ridgeview Quarry have attempted to promote corporate social responsibility, by implementing social responsibility programmmes. Following this, the operation of the programme is explained below.

a) Operation of the skills-related social upliftment programme

Lafarge Mining South Africa has seemingly made attempts to contribute to social sustainability, by assisting individuals, especially women living within the Cato Manor area, with pottery lessons.

With regards to this social upliftment programme, there were classes held for women to obtain knowledge about making pottery and the only people that participated were the women from the Cato Manor community. All six respondents who participated in the programme explained that Lafarge Mining South Africa and its Ridgeview Quarry offered pottery lessons and provided bus fare to the women to attend the pottery lessons

(Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). It was further explained that these classes operated for six weeks (Respondent 6, 24 January 2009; Respondent 10, 10 February 2009). The Minerals manager (4 November 2008) explained that the pottery class started in November 2007 and is no longer in operation, as there was a time frame. Furthermore, three respondents stated that Lafarge Mining South Africa and its Ridgeview Quarry provided them with financial assistance to attend the classes that were held in town (Respondent 7, 24 January 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009). Respondent 9 (10 February 2009) indicated, "They gave us money every week about R60 for bus fare to attend these classes". Thus Lafarge Mining South Africa and its Ridgeview Quarry were active in this programme as they provided financial assistance to the women. The Pottery teacher (20 February 2009) explained that no workshops or meetings were held and the classes were provided for the women to obtain skills (see Appendix I, showing the venue for classes and the assistants that taught them).

All six of the respondents happily expressed that the classes were presented in an understandable manner. One respondent was content with the way the classes were held and stated, "Yes, was nice, it was a Zulu lady teaching us in our own language" (Respondent 6, 24 January 2009). Participants generally felt that because the lessons were conducted in a language they understood the process of learning this new skill was made easier. The Pottery teacher (20 February 2009) as well as the assistants (Pottery Assistant 1, 20 February 2009 and Pottery Assistant 2, 20 February 2009) explained that lessons were presented in an understandable manner, "We spoke in Zulu at times so they could understand" (Pottery teacher, 20 February 2009). Teaching participants in this regard made the operation of the programme easy and understandable for participants to benefit.

The organisation and facilitation process was critical for the good functioning of the programme. The Pottery teacher and both assistants were of the opinion that the lessons were well organised (Pottery teacher, 20 February 2009; Pottery Assistant 1, 20 February 2009; Pottery Assistant 2, 20 February 2009). Furthermore four of the six women interviewed, who participated from the community explained that the process was organised well. This was evident from the following statement, "Yes they were organised" (Respondent 6, 24 January 2009). Most of the respondents who participated in this programme, felt that the learning process was well facilitated because the teacher was

properly qualified and experienced (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009). Another respondent who participated explained that, "It was reasonably organised" (Respondent 8, 10 February 2009). The Minerals manager with regards to the organisation of the programme explained that the women who participated were encouraged to contact Lafarge Mining South Africa and its Ridgeview Quarry if problems arose. In contrast to the above responses, two out of six women interviewed expressed that they were not organised well (Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). Thus it can be deducted from the above responses that the majority of the women interviewed felt that the programme was planned and structured well.

With respect to the above responses, participation was classified as a bottom-up process, since the women were encouraged and empowered to participate (White, 1996). Furthermore, Lafarge Mining South Africa and its Ridgeview Quarry provided financial assistance and lessons to the women involved in the skills-related social upliftment programme in order to improve their livelihoods. Respondents, who participated in this programme, were not only provided with the opportunity to gain skills but were provided with the opportunity to participate and learn in their mother-tongue. Thus individuals were included and empowered to learn in an environment that was made easy (White, 1996). Resulting from this the roles, responsibilities and level of involvement of individuals within the programme becomes important to discuss and will be explained in the next section.

b) Roles, responsibilities and involvement, with regards to the skills-related social upliftment programme

Roles, responsibilities and involvement are important themes to discuss in order to understand the contribution made by the skills-related social upliftment programme to social sustainability. This section attempts to discuss the roles, responsibilities and the level of involvement within this skills-related social upliftment programme.

The roles and responsibilities of individuals with regards to the skills-related social upliftment programme were examined in order to determine the level of participation or involvement within the programme. Furthermore, an understanding of the skills-related social upliftment programme with regards to its contribution to social sustainability is provided in this section. All of the six women interviewed, who participated within this

programme explained that their role within the skills-related social upliftment programme was to gain knowledge on pottery and crafting (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). This perception was evident with the following quote, "I was taught how to make a pot" (Respondent 7, 24 January 2009). The respondents who participated in this programme obtained skills on pottery and crafting. The Pottery teacher and her two assistants provided pottery lessons to the women (Pottery teacher, 20 February 2009; Pottery Assistant 1, 20 February 2009; Pottery Assistant 2, 20 February 2009). The Mineral manager (4 November 2008) stated that Lafarge Mining South Africa's role was to provide assistance in starting up the programme.

Thus Lafarge Mining South Africa and its Ridgeview Quarry provided a platform for the women to develop a specific skill that could, in the future, contribute to them generating an income. Previously the majority of businesses were only focused on increasing profits with disregard to the social environment; however, presently many businesses are becoming more focused on implementing sustainable programmes in order to improve their operational activities and role within society (Farmer and Dickerson-Hogue, 1973; McIntosh et al., 2003; Kotler and Lee, 2005). The skills-related social upliftment programme undertaken by Lafarge Mining South Africa and its Ridgeview Quarry was one way of encouraging corporate social responsible behaviour. Understanding the roles and responsibilities of individuals participating within the programme was important, as this determined the degree of involvement. This theme is discussed further in the following paragraph.

Involvement is an important concept when discussing the degree of social sustainability being achieved. Three out six respondents explained that they regularly attended classes, whereas the other three explained they did not participate in all the classes as they felt it was not beneficial in terms of them securing employment (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). Furthermore, all six women interviewed, felt that participation was equal but further expressed that their participation in the programme did not help them, as they were unable to secure future employment (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10,

10 February 2009; Respondent 11, 20 February 2009). This was expressed by Respondent 6 (24 January 2009), "I attended all the classes that were held, all the women were allowed to attend, but we gained nothing from it and some ladies just stopped coming". This respondent emphasised that although inclusion was not restricted, some of the women felt that the programme was not beneficial.

It was further stated by Respondent 7 (24 January 2009) that, "Everyone was allowed to attend, I attended some of the classes but not everyone continued to attend the classes as people including myself became unhappy". Respondents who participated in this programme felt that participation in this project was flawed, as the women who participated were unable to secure future employment. Another respondent further expressed that this programme did not help black people, "Being a black person, I felt that by being involved in this project did not help" (Respondent 6, 24 January 2009). Gathering from this, the issue of race plays a significant factor in achieving social sustainability as it is the majority of black South Africans that are poor and disadvantaged. Thus even though participation was not restricted, involvement within this programme by certain participants decreased. The reason for a decrease in participation within this programme was that the women who were interviewed, felt that although they obtained practical skills, securing employment after completing this project was very difficult.

South Africa's spatial arrangement in the past, resulted from apartheid policies, whereby there was an uneven distribution of resources to different race groups (Hamann, 2004; Lund-Thomsen, 2005). Black South Africans were provided with substandard services, which created many inequalities (Hamann, 2004; Lund-Thomsen, 2005). Due to South Africa's transition to a democratic government, emphasis is currently placed on providing services to the poor and marginalised (Hamann, 2004). Lafarge Mining South Africa and its Ridgeview Quarry believe that they are one of the many developments that are aimed at trying to provide opportunities to disadvantaged individuals, however, although this programme centred on skills development it was not a means to achieve total social sustainability as respondents who participated in this project were left feeling discontent.

Participation in this study provided the women with equal opportunity to participate and benefit from this programme (Arnstein, 1969; White, 1996; Qizilbash, 1996a; Palmer *et al.*, 1997; Lee, 2006). The programme was aimed at promoting equity and empowerment which embodied the ideas of social justice (Harvey, 1973; Miller, 1976; van Vliet, 2002;

Scott and Oelofse, 2005; Gray, 2007;). Lafarge Mining South Africa and its Ridgeview Quarry provided the women with the opportunity to gain skills and learn thereby contributing to empowerment. It must be understood that even though Lafarge Mining South Africa and its Ridgeview Quarry provided women with skills development this did not lead to an improvement in their social well-being. On going discontent with the programme resulted in numerous women dropping out of the skills-related social upliftment programme. It can be understood that when individuals are unhappy with a programme, the level of involvement decreases. Reasons for the decrease in participation amongst the women and their discontent with the programme are elaborated in the next section. The next section provides an understanding of the outcomes of the programme.

6.3.2 Outcomes resulting from the skills-related social upliftment programme

The following section describes the benefits and challenges that resulted from the programme. Prevalent themes were the skills transfer, change in livelihood and relationship formed with regards to the skills-related social upliftment programme. Lastly, Lafarge Mining South Africa and its Ridgeview Quarry's contribution with respect to future generations is discussed.

a) Skills transfer with regards to the skills-related social upliftment programme

Social sustainability is not only considered in terms of benefiting individuals at present but it is also focused on enabling individuals to benefit in the future, such as developing skills. This section examines skills transfer with regards to the skills-related social upliftment programme.

All six women (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009) interviewed, felt that this programme provided them with the opportunity to gain knowledge and skills (see Appendix J, showing the pots and crafts that the women made). This was apparent in the following statement: "I learnt my own skills to start my own business" (Respondent 6, 24 January 2009). Another respondent stated, "It helped me with gaining knowledge about different techniques about making pottery" (Respondent 11, 20 February 2009). The common idea put forward is that this programme helped in uplifting individuals in one aspect, which was skills development. Furthermore, to highlight this, another respondent explained, "The only benefit is getting skills" (Respondent 8, 10 February 2009). As elucidated by all the

women who participated in this programme, the sole benefit of the project was to gain skills, however, the respondents further expressed their discontent for the project as they felt that by gaining skills, it did not benefit them with regards to employment (see Section 6.3.3 c).

The Pottery teacher (20 February 2009) explained, "The benefit of these classes was to enrich individuals and in this case woman with the knowledge to start their own business". By providing the women with the skills, it was felt that they would use this to their advantage in the future, in terms of job creation. Both the Pottery assistants (20 February 2009) and the Minerals manager (4 November 2008) explained that the pottery project provided training for its participants. The Minerals manager (4 November 2008) further explained that this programme allowed the women to gain a new skill, since these women were never exposed to pottery and crafting before. Thus the basic outcome of the pottery programme was skills development. However, providing a skill does not necessarily lead to social or economic improvement, as skills development is merely a step towards creating a better future. The challenge observed here, is that although Lafarge Mining South Africa and its Ridgeview Quarry provided opportunities that may have theoretically led to income generation, these opportunities were not viable or sustainable in the long-term.

Although this programme provided women with skills development, the question of critical concern was whether these skills helped women develop their social environment in terms of the future. All six of the women interviewed explained that it was difficult to start a business on their own, since the equipment was too expensive (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). Respondent 11 (20 February 2009) stated, "The equipment is too expensive to buy and we can't make a living from this". Although Lafarge Mining South Africa and its Ridgeview Quarry provided an opportunity for the women to obtain skills, this was insufficient, as provision of skills alone does not always improve social development. Another respondent emphasised, "Also for us to start our own business we would have to buy equipment, this was very expensive and I couldn't do this, but I have the skill" (Respondent 6, 24 January 2009). In order for the women to improve their social well-being, they needed to purchase expensive equipment. In this regard, this was not considered a viable programme to uplift the women. Other crucial responses were: "We have the skill but now we can't make

money, because we don't have the means" (Respondent 8, 10 February 2009). In the opinion of most of the women interviewed the fact that they were from a disadvantaged background affected their ability to improve their social well-being. Furthermore, Respondent 10 (10 February 2009) stated, "There is nothing more we gained from there but skills, kids still hungry". Although a clear benefit was obtaining a skill, women expressed their discontent with being unable to use the skills to generate income and securing employment in the future.

All six women interviewed explained that there were broken promises, since although they completed the course the promise of obtaining a certificate was reneged on (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). This was highlighted by Respondent 6 (24 January 2009) who stated, "They promised us a certificate after the course was done but we did not get it". The women interviewed explained that although Lafarge Mining South Africa and its Ridgeview Quarry helped in uplifting women, there were also negative outcomes as certain promises were not followed through. Another similar response was, "The course was unfinished, we did not get a certificate and the minister of arts and culture was suppose to see us but this didn't happen" (Respondent 7, 24 January 2009). Obtaining a certificate was considered a main concern with regards to the programme. Furthermore, Respondent 11 (20 February 2009) stated: "Without the certificate we cannot do anything" (Respondent 11, 20 February 2009). The women interviewed felt that although Lafarge Mining South Africa and its Ridgeview Quarry provided them with a skill, a nationally accredited certificate would improve their chances of employment. The Pottery teacher (20 February 2009) was uncertain about the challenges associated with the project. However, the Minerals manager (4 November 2008) stated: "We have got to motivate them to take these projects seriously" and further explained that issues arose from social dynamics of different cultures rather than the process of the programme. Even though Lafarge Mining South Africa and its Ridgeview Quarry created an opportunity for women in terms of skills development, many of the women's issues were not solved and their livelihoods were not improved.

With respect to sustainable development and more specifically social sustainability, an understanding of how this programme contributed to the development of society was important. For benefits and equity to be distributed evenly in society, businesses must

adopt sustainable methods (Miller, 1976; Scott and Oelofse, 2005). The concept of social justice becomes very important to discuss with respect to this issue. Lafarge Mining South Africa and its Ridgeview Quarry seemingly attempted to promote equal distribution of benefits in the area in which it operates, as it provided the women with a pottery project (Hallowes and Butler in McDonald, 2002). In this regard, people living within these communities are considered to be more disadvantaged than others and are therefore dependent on certain projects or programmes provided by developments, so as to improve their living standards. Moser in Coetzee and Nomdo (2002) explain that changes to an individual's environment can affect an individual's well-being in many ways. However these changes be it social, bio-physical, economical or political can affect an individual's well-being on a long-term or short-term scale. Thus an individual's response and inclusion within these social upliftment programmes determine the degree of vulnerability and well-being. An individual's ability to cope is dependent on building capacity through social responsibility programmes, which assist in decreasing vulnerability and thereby enhancing social sustainability. As explained before participation within this programme allowed for skills to be transferred thereby providing the community with the chance to be empowered (DEAT, 2002). By promoting well-being, businesses are considered to be promoting the concept of sustainable development and corporate social responsibility.

Although, providing the women with the opportunity to develop their skills was considered a step towards achieving social sustainability, in this study, even though the women gained a skill the fact that they were from a disadvantaged background and did not have the financial resources to set up a business utilising that skill, hampered social sustainability. The reason for this was that the women felt that the equipment used in sustaining this pottery skill was too expensive, thereby affecting their opportunity to create a livelihood from this.

Thus, this programme to an extent contributed to social sustainability, in a sense that it provided women with skills. However, failure to provide the women with the ability to support themselves in the long-term and false promises of a certificate, impacted on the degree to which social sustainability was achieved. The concept of 'sustainable' or 'sustainability' becomes important to discuss as it could mean; something that is able to be sustained within a long period of time (Cairns, 1997; Fergus and Rowney, 2005; Nilsson, 2006; Swilling, 2006; Davies, 2008; Mannberg and Wihlborg, 2008). Women in this instance can only use the skill if they had the finance to sustain it in the future, however,

presently this option is not viable, thereby impacting on the degree to which social sustainability was achieved. The next section discusses the degree to which the skills-related social upliftment programme contributed to a change in livelihood of individuals.

b) Change in livelihood with regards to the skills-related social upliftment programme

This section examines the degree to which this social upliftment programme impacted on the livelihood of participants. Determining the degree to which skills-related social upliftment programme impacted on the livelihood of individuals determines the level of social sustainability being achieved.

In this study, five out of six women interviewed explained that attending this social upliftment programme did not impact on their livelihood in anyway. This was evident in the response, "No it hasn't changed my life" (Respondent 7, 24 January 2009). The majority of the women felt that participation within this programme did not significantly change their livelihoods. Another response was; "It hasn't really, but this was my dream" (Respondent 11, 20 February 2009). Many women felt that by obtaining these skills, this would enable them to improve their livelihood, however, this was not realised in this study. The Pottery teacher (20 February 2009) explained that the pottery project did not affect her life directly but that it did benefit the women who participated: "No it hasn't affected my life in anyway, as I have my own business, however, it has changed some women's lives so that they can start their own business". It must further be noted that these individuals that participated within this programme came from disadvantaged backgrounds, where most of the women have not completed secondary education and accomplishing the aims of this programme was problematic.

Consequently, four of the six women that were interviewed were uncertain of the benefits of this programme, towards the local community (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). One of the common responses was: "Not really sure, only people involved in the project would benefit" (Respondent 7, 24 January 2009). Only the women involved within the programme, benefited by obtaining skills. However, two of the six women (Respondent 8, 10 February 2009; Respondent 9, 10 February 2009) interviewed felt that the project might benefit the local community with one response being: "It might create jobs, if we could afford the equipment" (Respondent 8, 10 February 2009). The two women who participated in the programme believed that it might benefit the local

community as it may contribute to employment creation. The Pottery teacher and the two assistants believed that these classes would allow women to gain skills, thereby allowing women to earn income and support their families (Pottery teacher, 20 February 2009; Pottery Assistant 1, 20 February 2009; Pottery Assistant 2, 20 February 2009). It is evident that, to an outsider, who is not affected by the challenges that apply to a person from a disadvantaged background; it would seem that the programme would benefit the women and their families by providing an extra source of income for them.

The greater the satisfaction of an individual's needs the greater the social sustainability with respect to well-being. For an individual or group to improve their living standards, individuals must be provided with assets (Coetzee and Nomdo, 2002). This is important to explain, as social responsibility programmes developed by the resource extraction industry may provide individuals with assets to improve their living conditions, thereby encouraging social sustainability. These assets can be education related, financial assistance and skills development. Thus in this study, an important asset would be the provision of equipment as well as skills development. For individuals to sustain their livelihoods, these assets need to be maintained (Coetzee and Nomdo, 2002). Thus if an individual does not have access to these assets, their livelihood is therefore affected.

Understanding the concept of sustainable development is very important, since sustainable development is focused towards providing benefits to every individual in society. This can be linked to the idea that individuals are provided with opportunities in order to increase or develop their personal or institutional capacities so as to mobilise and improve their social and economic environment (Carley and Christie, 1992; Fergus and Rowney, 2005). Thus with respect to this study, the women who participated were provided with the opportunity to grow and develop their skills, in order to enhance participation (Gardner, 1989; Goodland, 1995; Grosskurth and Rotmans, 2005; Lehtonen, 2004). However, this programme, did not contribute significantly to the social development of the women, as the women could not sustain the skills obtained from the programme. If equipment was provided to the women, then the women would be able to sustain their livelihood as a business would be developed.

Lafarge Mining South Africa and its Ridgeview Quarry are of the opinion that they are taking steps towards corporate social responsibility by adopting initiatives that are aimed at social upliftment. On closer inspection, some of these steps are flawed, because

consideration has not been given to the needs of the community that live in close proximity to the development. The following section describes the type of relationship within the skills-related social upliftment programme.

c) Relationship with regards to the skills-related social upliftment programme

Understanding the relationship with regards to the skills-related social upliftment programme is important as a good relationship results in equal and fair opportunities. This section examines the type of relationship in order to determine the level of social sustainability.

With respect to societal dynamics, engagement between individuals is important to determine the type of relationship. Thus understanding the relationship with regards to the skills-related social upliftment programme was important in assessing whether opportunities were equal and fair. All six women interviewed who participated within this programme felt that there were no relationships that were formed between the participants (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). This was further highlighted by Respondent 6 (24 January 2009) who stated, "We made no relationships, only interacted with the people there then got back to normal lives after". The programme did not enhance relationships between participants and interaction was primarily restricted to obtaining skills. In addition Respondent 11 (20 February 2009) stated: "I helped with this project, I formed no relationships, because people think I lied about Lafarge helping in giving us a certificate. People don't like me now". This respondent felt she was being ostracised, as she helped recruite participants on the basis of Lafarge Mining South Africa's promises to issue certificates, which was not carried out.

Furthermore, five of the six women interviewed, commented that there were no relationships formed between Lafarge Mining South Africa, its Ridgeview Quarry and the women (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). This was evident in one of the respondent's quotation: "No we had no relationship, when it finished Lafarge did not check to see how we were doing after the programme" (Respondent 7, 24 January 2009). Due to the lack of a relationship, most of the women felt that their concerns were not taken into consideration. Another response put forward by a

respondent, was: "No, there was nothing and the Quarry did not check up on us" (Respondent 8, 10 February 2009). The statements provided by the respondents highlighted that Lafarge Mining South Africa and its Ridgeview Quarry showed no interest in forming relationships with the participants. In addition to this, Respondent 6 (24 January 2009) stated, "All the women in the area were told to participate, but the project did not help us because Lafarge did not check up on us". The respondents also felt that Lafarge Mining South Africa and its Ridgeview Quarry had a moral obligation in terms of doing follow-ups, which was not done. Furthermore the Pottery teacher (20 February 2009) expressed that she did not know of any relationships that were formed as she was just a facilitator.

From the above evidence, the relationship between participants in the programme and the quarry was strained. As a result of a capitalist economy, the relationship between business or a development in relation to citizens is very important, as the success of a business is dependent on their relations with its stakeholders and its society (Lawrence *et al.*, 2005; Doh and Guay, 2006; Werther and Chandler, 2006). Good business ensures that equal consideration is given to the economic and social environment (Lawrence *et al.*, 2005). In this case, Lafarge Mining South Africa and its Ridgeview Quarry provided the opportunity for women to gain skills, however there were issues that arose from the programme. Issues, such as failure to provide the women with a certificate, failure to show interest in the women during and after the project and failure to assist the women with the purchase of the necessary equipment, has resulted in a strained relationship between some of the community members and Lafarge Mining South Africa and its Ridgeview Quarry. Although Lafarge Mining South Africa and its Ridgeview Quarry encouraged equal and fair participation, social sustainability was not completely met since there were many inadequacies that were associated with the programme (White, 1996; Haughton, 1999; Heywood, 1999). Following this section a discussion is provided on the contribution of Lafarge Mining South Africa and its Ridgeview Quarry with regards to the future generations.

d) Lafarge Mining South Africa and its Ridgeview Quarry's contribution to the skills-related social upliftment programme and assistance to future generations

Lafarge Mining South Africa and its Ridgeview Quarry have attempted to enhance the living standards of the community in which its quarry is situated, by introducing a skills-related social upliftment programme. The contribution of a development, specifically

Lafarge Mining South Africa and its Ridgeview Quarry, is essential to determine the degree to which social sustainability is achieved.

All six respondents from the community who participated within the skills-related social upliftment programme, explained that Lafarge Mining South Africa's and its Ridgeview Quarry's contribution to the skills upliftment programme was to provide the women with the opportunity to learn about pottery and crafts in order to allow them to develop skills and knowledge for employment creation (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). This was highlighted by Respondent 9 (10 February 2009), who stated: "Lafarge helped us with pottery classes". Lafarge Mining South Africa provided the women with pottery lessons. Another similar response was that, "Pottery classes where they had a teacher to teach us pottery" (Respondent 11, 20 February 2009). The programme only taught women how to make pottery and crafts with the aid of a teacher. The Pottery teacher (20 February 2009) explained, "They had approached us to helped with the teaching of a group of women with doing pottery and crafting so that the women can learn the skills and develop their own business". Lafarge Mining South Africa and its Ridgeview Quarry approached the Pottery teacher with a project to provide skills to the women located within the community.

All of the six respondents who were interviewed from the community believed that Lafarge Mining South Africa had a responsibility towards society in terms of upliftment and job creation and supplying of equipment (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). A common response that emerged from the women was that Lafarge Mining South Africa and its Ridgeview Quarry had the: "Responsibility to equip people in their everyday situations" (Respondent 9, 10 February 2009). The women felt that Lafarge Mining South Africa and its Ridgeview Quarry had a responsibility to help women in terms of providing women with equipment. The Pottery teacher (20 February 2009) stressed that attending these projects allowed for skills development and broadening of knowledge.

All six of the women who were interviewed expressed that their needs were not met (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009;

Respondent 11, 20 February 2009). All the respondents felt that their needs were not met, since it was a challenge to obtain equipment (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). A common response made by the women who were interviewed was: "Our needs are not met as we were not giving equipment to realise our dream" (Respondent 9, 10 February 2009). The vision that most respondents had was that their lives would change as a result of attending this programme, however, this was not the case. Another respondent stated: "Lafarge has not met the needs of us, we are women and we are poor, no one helps us" (Respondent 6, 24 January 2009). Here reference was made to the inability of Lafarge Mining South Africa and its Ridgeview Quarry to address the needs of the women.

In addition, understanding how this contribution benefits future generations is essential in understanding the contribution to social sustainability. Five of the six respondents felt that participation in this social upliftment programme did not contribute in helping future generations (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). One of the reasons for this was that the women who were interviewed from the community felt that since this programme did not help them directly, it would not benefit future generations. This was evident with regards to Respondent 9's (10 February 2009) statement, "No I don't think so, because no one cares". The women who were interviewed were of the opinion that future generations were not given much consideration as they felt Lafarge Mining South Africa and its Ridgeview Quarry showed no interest.

Adding to the above response, Respondent 10 (10 February 2009) stated: "No, because Lafarge is not helping us and have not checked on us after this project was finished". The respondents felt that since Lafarge Mining South Africa and its Ridgeview Quarry did not do any follow-ups, this negatively impacted on the benefits towards future generations. The women who were interviewed felt that if problems were not solved now, they would persist in the future, thereby hampering efforts to achieve social sustainability. However, one women who was interviewed, Respondent 8 (10 February 2009) felt that the project would benefit future generations; "Yes, I will teach my children how to do pottery". In this study, the programme did not benefit future generations directly, however, through the efforts made by this individual, her children would obtain skills from her teaching them. The Pottery teacher (20 February 2009) explained, "Yes, women were taught skills, they

could in the future teach their own kids and this will start a cycle as they will teach their kids". Benefits were not directly felt, however, by providing women with this opportunity of skills development, it could possibly contribute to their families gaining skills.

Responsibility was a fundamental concept in this study, since many businesses, specifically Lafarge Mining South Africa and its Ridgeview Quarry are now focused on engaging in methods that are considered as being socially responsible. Accordingly, emphasis was placed on social responsiveness, as this concept was considered to be pro-active and stressed the importance of ethical as well as discretionary (altruistic) responsibilities (Carroll, 1979). For a business to be considered as socially responsible, its social contribution towards society must be sustainable (Carroll, 1979; Kotler and Lee, 2005; Lawrence et al., 2005; Werther and Chandler, 2006). Many businesses tend to veer towards the idea that for a corporation to be considered as socially responsible, benefits need to be visible, however, this is not always the case as the practicality of certain practices may not be viable. This was clearly evident in this study as the respondents who participated in the pottery project were unable to derive maximum benefits because they could not afford the necessary equipment nor was it provided to them.

Marsh and Oelofse in Scott and Oelofse (2005) explained that social justice is about encouraging and supporting those who are vulnerable in society with regards to unjust treatment in the past. This can be further explained that people with low income, little education and little political power are regarded as more disadvantaged (Satterthwaite, 1999; Hardoy et al., 2001). Social space cannot be explained as uniform and certain communities in urban areas have different levels of living, resources, political power and different interests (Scott and Oelofse, 2005). It is understood that people living in disadvantaged communities, with respect to the study, are further impinged on as they lack the resources and opportunities to improve their living standards. Thus for this matter the concept of justice becomes important to unpack, it can encompass aggregative and distributive principles. However, with regards to this programme, Lafarge Mining South Africa and its Ridgeview Quarry seemed to practice an aggregative principle of justice, since a 'good' is enjoyed by a group and in this study, the group was the women living in the Cato Manor community.

Thus the overall contribution by Lafarge Mining South Africa and its Ridgeview Quarry to social sustainability was not at its peak, as benefits were not felt or distributed evenly to all

the individuals (Beder, 2000; Oelofse, 2001; van Vliet, 2002; Winton, 2004). In this study there needs to be a greater encouragement of equity in order to ensure that fairness and representation are equal (Beder, 2000; van Vliet, 2002; Muller, 2008). This skills-related social upliftment programme did not fully contribute to social sustainability, as a variety of factors relating to the community were not taken into consideration. Although Lafarge Mining South Africa and its Ridgeview Quarry provided pottery lessons and financial aid to the women in order for them to gain skills, the programme was flawed. The skills were not viable in the long-term, since it did not provide them with immediate employment nor did they have financial resources to facilitate the purchase of the necessary equipment to establish their own businesses. The relationship between Lafarge Mining South Africa, its Ridgeview Quarry and the women participating within the progamme were strained for a number of reasons. Lafarge Mining South Africa and its Ridgeview Quarry reneged on their promise to provide the women with certificates for completing the pottery course. They did not do regular follow-ups to establish the progress made by the women with regard to the pottery course. The women were further aggrieved that Lafarge Mining South Africa and its Ridgeview Quarry did not provide them with financial assistance to obtain the equipment. The following section provides recommendations from the individuals participating within the skills-related social upliftment programme.

6.3.3 Recommendations for further contribution to social sustainability through interaction with those involved in the skills-related social upliftment programme

Understanding the recommendations is important for better facilitation of a social upliftment programme in the future. Issues that arose from this aspect dealt with management and promises being fulfilled.

Four of the six respondents who participated within the skills-related social upliftment programme explained that Lafarge Mining South Africa should practice better management principles (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 9, 10 February 2009; Respondent 11, 20 February 2009). One of the comments were: "Lafarge must provide solutions" (Respondent 6, 24 January 2009). Most of the respondents felt that it was the responsibility of Lafarge Mining South Africa and its Ridgeview Quarry to provide solutions. In addition, all six women who were interviewed expressed their concerns with regard to the outcome of the skills-related social upliftment programme. This was expressed by Respondent 9 (10 February 2009) who stated: "The project should carry out what it stands for, everything must be carried out". The women

who were interviewed placed emphasis on the promises that were not carried out by Lafarge Mining South Africa and its Ridgeview Quarry. This was further emphasised by Respondent 11's (20 February 2009) response: "Lafarge must ensure that if it promises something then those promises must be fulfilled". Thus the women who participated within the programme felt the failure of Lafarge Mining South Africa and its Ridgeview Quarry to provide certificates, as promised, hindered their development. The women who were interviewed also felt that it was up to Lafarge Mining South Africa and its Ridgeview Quarry to provide solutions (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). Furthermore, these women believed that the facilitation of the programme needed to be improved, in order to achieve social sustainability (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009).

In addition to the above evidence, another concern, with regard to the programme, was that the level of participation needed to be improved. Participation with regards to a social upliftment programme is important, since increased participation ensures for a greater degree of social sustainability. Three of the six respondents who participated in this programme explained that participation was an essential component in improving the outcome of the programme (Respondent 6, 24 January 2009; Respondent 8, 10 February 2009; Respondent 11, 20 February 2009). Furthermore, the women who were interviewed emphasised that participation with regards to the programme was not active, since many of the women lost interest in attending the classes (Respondent 6, 24 January 2009; Respondent 7, 24 January 2009; Respondent 8, 10 February 2009; Respondent 9, 10 February 2009; Respondent 10, 10 February 2009; Respondent 11, 20 February 2009). This was evident in Respondent 6's (24 January 2009) statement: "Must be more active, like some of the ladies attended then dropped out three days later". In order to contribute to total social sustainability, individuals need to be committed to a particular project and participation needs to be active. Another woman who was interviewed expressed, "Women should be more active and have a say" (Respondent 8, 10 February 2009). With regard to this aspect the women acknowledged that there was inadequate participation by some women.

The Pottery teacher (20 February 2009) further highlighted this by stating: "Some ladies quit after a while, if they want to benefit they must complete the course". Thus in order to derive benefits from programmes such as these, social sustainability can only be achieved if all individuals participate consistently. The Minerals manager (4 November 2008) explained, "We also need to improve, if the community is pro-active. Because sometimes, as in the Ridgeview Quarry they are not active". One of the main issues was encouraging the community to be more pro-active. This was further emphasised in an eThekwini Municipal official's (20 November 2008) statement, whereby the encouragement of individuals to be proactive in the projects was vital in order to ensure for the achievement of social sustainability. The eThekwini Municipal official (20 November 2008) further stated that projects should be community driven, whereby the community should be offered a chance to enhance their own well-being in a sustainable manner.

In conclusion, the skills-related social upliftment programme was one initiative undertaken by Lafarge Mining South Africa and its Ridgeview Quarry to promote social sustainability and corporate social responsibility. Although this programme brought about benefits, there were many challenges that needed to be overcome in order to achieve total social sustainability. The programme's main focus was to encourage skills development so as to provide opportunities to women to benefit them in the future. The benefit of this programme was that it enhanced individuals from a bottom-up process, whereby individuals were encouraged to participate (White, 1996) and where women were taught in their native language. However, participation decreased as women felt that the programme did not benefit them. Issues such as broken promises, lack of follow-ups and the inability of women to secure a business in the future, hindered the social sustainability of the programme. The women who participated further expressed that the programme would not help them in the future because, regardless of the fact that they attained a skill, developing a career was not sustainable as equipment was too expensive. Thus in this study, the women who were interviewed came from a disadvantaged background, with little or no resources and therefore sustaining this project without any financial help from Lafarge Mining South Africa and its Ridgeview Quarry was virtually impossible. It is for this matter that the programme although encompassing some aspects of social sustainability by equally involving individuals and providing them with skills it was not practical as women could not sustain it, thus not contributing to total social sustainability. A conclusion of this chapter is presented below.

6.4 Conclusion

This chapter of the study explained that Lafarge Mining South Africa has attempted to adopt initiatives aimed at enhancing corporate social responsible behaviour. The education-related social upliftment programme proved to embody all the principles of social sustainability, since learners were provided with the opportunity to be empowered and develop their knowledge. The skills-related social upliftment programme proved to be ineffectual with regard to the women who were interviewed, as they expressed their unhappiness with inconsistencies in the management and operation of the project. Thus this programme did not contribute significantly to social sustainability. In contrast, the education-related social upliftment programme proved to be beneficial to those who participated as it allowed them to increase their well-being. The skills-related social upliftment programme proved to be disadvantageous to the women who were interviewed, since they felt that their livelihoods were not changed or improved. In order for social sustainability to be achieved, the quality of life of individuals must be improved (Hill and Bowen, 1997).

Urban environments result in a variety of multifaceted relationships and in order to address certain issues and provide solutions to manage these problems, consideration needs to be given to the well-being of society (Coetzee and Nomdo, 2002). In order to take into consideration the needs and well-being of society, businesses have attempted to promote social sustainability (Dudziak, 2007). Businesses, such as Lafarge Mining South Africa and its Ridgeview Quarry have begun to encourage the educational development of individuals within society, through initiating social upliftment programmes. Although Lafarge Mining South Africa and its Ridgeview Quarry attempted to contribute to corporate social responsibility by initiating social upliftment programmes, there were a number of weaknesses in their initiatives that prevented the achievement of total social sustainability.

The respondents from the education-related social upliftment programme, felt that Lafarge Mining South Africa and its Ridgeview Quarry contributed significantly to improving the well-being of learners. However, respondents from the school, highlighted that upliftment should start from primary school level, so as to increase social sustainability. Although the programme encompassed aspects of social sustainability, difficulties would arise if funding were withdrawn, since individuals from disadvantaged backgrounds become dependent on this aid, in order to improve their livelihood (Hill and Bowen, 1997; Newman, 2006;

Swilling and Annecke, 2006). With regards to the skills-related social upliftment programme the women who were interviewed explained that Lafarge Mining South Africa and its Ridgeview Quarry need to be more committed to promises and that follow-ups needed to be done. In light of the fact that the equipment, necessary to sustain the skills developed from the programme, was expensive, it is clear that the long-term viability of this programme needed to be given greater consideration by Lafarge Mining South Africa and its Ridgeview Quarry. Both the programmes encompassed aspects of social sustainability; however the skill-related social upliftment programme was more flawed in comparison with the education-related social upliftment programme. Overall, in this study the participants in the education-related social upliftment programme were pleased with the outcome of the programme, however, with regards to the skills-related social upliftment programme, the women who were interviewed emphasised that the programme did not enhance their living standards and well-being in anyway.

CHAPTER SEVEN
CONCLUSION

Corporate social responsibility has been in existence for a while but only recently has it been given importance in the decision-making process of businesses. Increased globalisation, the agglomerated power of multinational corporations, accelerated competitiveness between corporations, an increased awareness about sustainable development, together with the review of businesses activities, has resulted in companies conducting themselves in a more socially responsible manner (Carley and Christie, 1992; Meadowcroft, 1999; Meadowcroft *et al.*, 2005; Wolch, 2007). Corporate social responsibility is a concept that describes corporate activities beyond profit-making. The term is increasingly used to describe the role of business in society and was explored in the thesis.

Although industry is sometimes seen as a source of environmental degradation and social concerns, it is widely recognised that it is an essential part of development and wealth creation. Businesses today have gone from being understood as organisations with the sole aim of increasing profit, to becoming organisations which are necessary to fulfil the social requirements of society. Many businesses have thus become actively involved in the sustainability debate, by trying to identify ways to improve their triple bottom line and contribute to sustainable development.

The aim of this study was to evaluate corporate social responsibility activities in a resource extraction industry, namely Lafarge Mining South Africa and its Ridgeview Quarry, in terms of its contribution to social sustainability. Subsequent to this, the research objectives that underpinned the study were: 1. To investigate the nature of public participation with regard to the discussion forum related to Ridgeview Quarry activities. 2. To assess education-related social upliftment programmes associated with the Ridgeview Quarry, in terms of social sustainability. 3. To assess skills-related social upliftment programmes associated with the Ridgeview Quarry, in terms of social sustainability. 4. To evaluate the overall contribution to social sustainability by the social responsibility programmes. 5. To develop recommendations for further contribution to social sustainability through interaction with those involved in the social responsibility programmes.

This thesis sought first to understand the relevant literature that pertained to the research, such as sustainable development, social sustainability, well-being, social justice and public participation. The theoretical framework explored the concept of sustainable development in a broad context, whereby the pillars and principles of sustainable development were described. Underlying this concept was social sustainability, which is a critical pillar of sustainable development and was the main focus of this research. Social sustainability was broadly explained as that which empowers people to play an active role in the decision-making process, thereby enhancing and maintaining social capital (Hill and Bowen, 1997; Selman, 2001; Goodland, 2002; Newman, 2006; Swilling and Annecke, 2006; Scheinsohn and Cabrera, 2009). With this in mind, to achieve sustainable development a business has to ensure that it contributes to a better quality of life today without compromising the quality of life of future generations (Cairns, 1997; Meadowcroft, 1999; Meadowcroft *et al.*, 2005; Lee, 2006; Swilling, 2006). If business is to respond to this challenge, it needs to demonstrate an incessant improvement of its triple bottom line (Vanclay, 2004; Hermans and Knippenberg, 2006; Werther and Chandler, 2006). This general concept is commonly known as corporate social responsibility.

Many businesses have begun to respond to calls for greater social responsibility. Presently, issues that face society such as lack of jobs, poor education opportunities and inadequate infrastructure have placed enormous pressure on the social environment (McAulay, 1966; Blowfield, 2007; Jickling and Wals, 2007; Lawson, 2007; Welford *et al.*, 2007). Thus, these challenges have considerably impacted on the social development of many individuals and the idea of socially progressing in terms of improving one's quality of life becomes a significant issue. In order to address and limit these pressures, many businesses have begun to adopt principles and actions that are moral and sustainable, one such action is being socially responsible. Businesses are therefore encouraged to proactively engage within the social environment by promoting growth and development of society (McAulay, 1966; Kotler and Lee, 2005; Gouldson, 2006; Werther and Chandler, 2006). Ideally, corporate social responsibility should be ultimately practised and placed on the agendas of all businesses, whereby businesses employ ethical and legal standards to monitor their practices thereby attempting to create a sustainable future.

Government regulation cannot at all times guarantee that the way business is conducted is perceived as 'fair' or 'just' by society. As a result, a growing number of businesses operate under the guise of corporate social responsibility. Proponents of corporate social

responsibility argue that businesses that adopt socially responsible behaviour benefit in the long-term as a relationship of trust is created between business and the social environment (Hamann and Acutt, 2003; Lawrence *et al.*, 2005; Werther and Chandler, 2006). Proponents of corporate social responsibility further state that stakeholder relationships are improved. Even though some businesses are making genuine efforts to achieve sustainable development, some critics are still questioning the concept of corporate social responsibility. Critics argue that corporate social responsibility decreases the profitability aspect of many businesses and that it is merely a facade that many businesses are guilty of hiding behind in order to pretend they are doing something of benefit (Hamann and Acutt, 2003; Lawrence *et al.*, 2005). Although there are some arguments for and against corporate social responsibility, corporate social responsibility is very important to both society and business.

Social space is not homogenous and communities in urban areas have different levels of living, resources and political power (Brecher *et al.*, 2000; McDonald, 2002; Banerjee, 2003; Scott and Oelofse, 2005; Bond, 2008; McLennan and Farrelly, 2010). The reason for these different levels of living can be attributed to apartheid spatial engineering. Many black people suffered forced removals from their residential areas and were placed in inferior areas, close to industrial developments, thus further contributing to racial oppression (Peffer, 1990; Davenport, 1991; Hendler, 1991; Isaacs, 1997; McDonald, 2002; Bond, 2008; Matten and Crane, n.d). This thesis explored the concept of social justice and public participation, which are key principles in achieving social sustainability. It is the poor income groups who, as a result of residing in close proximity to these developments, are negatively affected. In principle, adopting social justice and encouraging participation is very possible, but in reality an individual's well-being is influenced by market forces (Lélé, 1991; Yanarella, and Levine, 1992; Doyle, 1998; Robinson, 2004; Smith, 2004). In light of this argument, businesses are encouraged to adhere to sustainable social and environmental policies when carrying out their activities, so as to ensure that their activities are not detrimental to all aspects of the environment and more specifically the social environment.

It was with this history in mind that the case study was analysed. The background of the study provided knowledge regarding the mineral resource extraction industry, specifically Lafarge Mining South Africa and its Ridgeview Quarry. The background to the study also provided insight into businesses, specifically in South Africa, that engage in corporate social responsibility. The background explained the relationship that existed between

business and society. At this point, business and society are understood as engaging in a mutual relationship, whereby the success of a business is dependant on its relations with its stakeholders and vice versa (Lawrence *et al.*, 2005; Werther and Chandler, 2006). Corporate social responsibility was further defined in this chapter and the development and the emergence of the concept was explained in this chapter. Corporate social responsibility is a controversial topic and the research further provided a critique of the concept. A brief discussion of corporate social responsibility in developing countries was further explained in order to understand its relevance in a South African context. Finally, the chapter provided the background to the study, namely Lafarge Mining South Africa and its Ridgeview Quarry whereby the history of the corporation, its goals and its contribution to corporate social responsibility was illustrated.

In essence, corporate social responsibility involves an extensive commitment by businesses to the social upliftment and the enhancement of the well-being of individuals. More specifically, it encourages businesses to get involved in the local community in which it operates. Thus corporate social responsibility encourages businesses to develop into good corporate citizens. The research focused on Lafarge Mining South Africa and its Ridgeview Quarry. In order to evaluate Lafarge Mining South Africa's and its Ridgeview Quarry's activities and provide a determination of its contribution to corporate social responsibility, more specifically social sustainability, a qualitative methodology was favoured in this study. The research favoured an intensive approach, where 17 in-depth interviews were conducted with stakeholders involved in the discussion forum and the social upliftment programmes. Furthermore the research used evaluation as a method in assessing the social upliftment programmes.

The first aspect of the analysis considered the extent to which public participation was incorporated into the decision-making process. On one level, when the discussion forum was regularly convened, participation was considered as active and inclusive as relevant stakeholders associated with the discussion forum participated and were included. Participation in this respect understood in a sustainability context enabled participants to interact within the decision-making process (Arnstein, 1969; Cole, 1975; Campbell and Marshall, 2000; Kasemir *et al.*, 2003; Bond and Thompson-Fawcett, 2007). As emphasised by White (1996), inclusion ensures that all stakeholders especially the community are provided with an equal chance of participating in decision-making. Participative structures within the discussion forum were established in order to provide participants with access to

the decision-making process and to promote opportunities for people to voice their concerns and opinions. The community members interviewed in the study, explained that the process was based on an equitable process and that their voices were heard. On a deeper level, this decision-making process was viewed as a bottom-up process, since participation was not restricted and was inclusive and fair, thereby empowering individuals (White, 1996).

White (1996) further explained that, the 'bottom-up' perspective allows participants to evaluate their roles in the participation process and allows them to examine outcomes that may arise from this process, which was demonstrated in this discussion forum. Furthermore, in this study, in light of the fact that the discussion forum was not regularly convened, citizen participation was viewed as Tokenism and Citizen Power, as many 'have-not' citizens were given the opportunity to be heard, however, there was no guarantee that their views were fully taken into account when decisions were made (Arnstein, 1969). With regards to Lafarge Mining South Africa and Ridgeview Quarry, community members and managers shared decision-making responsibilities, therefore providing the community with some degree of power (Arnstein, 1969). Notwithstanding these benefits, the challenge faced by Lafarge Mining South Africa and its Ridgeview Quarry, was that meetings were not regularly convened, this thereby affected the degree to which social sustainability was achieved in the decision-making process.

The study found that the information obtained from the interviews conducted with the Quarry manager and Minerals manager differed drastically from the information obtained from the interviews conducted with respondents from the community. The Quarry manager and Minerals manager stated that the discussion forum was regularly convened, whereas the respondents from the community stated the opposite, explaining that the discussion forum was not regularly convened. Evidence from the research clearly indicated that the convening of the discussion forum was irregular and was a pivotal issue in understanding the degree to which social sustainability was achieved. This therefore prevented Lafarge Mining South Africa and its Ridgeview Quarry's from achieving total social sustainability in the decision-making process. Lafarge Mining South Africa and its Ridgeview Quarry's management need to reassess their roles, principles and responsibilities towards the community in order to function in a social sustainable manner.

The second aspect of the analysis considered the social upliftment programmes adopted by Lafarge Mining South Africa and its Ridgeview Quarry, namely the education-related social upliftment programme and the skills-related social upliftment programme. The education-related social upliftment programme positively impacted on the individuals who participated. This programme provided opportunities to learners of the Chesterville Extension Secondary School. Lafarge Mining South Africa and its Ridgeview Quarry played an active role in this respect, as it financially assisted the school in purchasing laboratory equipment and providing extra tuition for its learners. Thus in this aspect, learners were socially uplifted, whereby individuals needs were satisfied due to the improvement of services (O'Niell, 1993). The programme contributed significantly to social sustainability as it provided the learners with the opportunity to develop skills with regards to education. As expressed by Hill and Bowen (1997) and Selman (2001), social sustainability is explained as creating a social environment for individuals to improve their quality of life. With regards to the education-related social upliftment programme, education was given a priority and further encouraged the social development of individuals in society (Dudziak, 2007). The respondents from the school further highlighted that Lafarge Mining South Africa's and its Ridgeview Quarry's contribution to the school allowed for the learners to benefit in the future, as it provided learners with the opportunity to receive a tertiary education. However, one of the challenges was to uplift learners from grassroots level, as financial assistance was only given to high school learners, ignoring primary school learners. Providing primary school learners with this opportunity would aid in achieving greater social sustainability. Another crucial issue was that if corporate funding were to be withdrawn, the teachers and learners of the school would be faced with serious difficulties, thereby affecting the long-term viability of the programme.

The skills-related social upliftment programme was the second initiative undertaken by Lafarge Mining South Africa and its Ridgeview Quarry in order to promote social sustainability and corporate social responsibility. The programme was aimed at providing skills and opportunities to the women in order for them to benefit from in the future. Lafarge Mining South Africa and its Ridgeview Quarry provided classes for women to develop their skills, in order to attempt to achieve social sustainability as well as attempt to promote corporate social responsibility. However, there were many challenges that needed to be overcome in order to achieve total social sustainability. The women who participated expressed that the programme would not help them in the future, even though they had

obtained skills, the sustainability of developing a career was questioned, as equipment was too expensive. Although this programme encompassed some aspects of social sustainability by equally involving individuals and providing them with skills, it was not practical, as women could not sustain it financially, thus not contributing to total social sustainability. The women, who were interviewed in the study, also expressed their unhappiness for inconsistency in the management and operation of the programme. These difficulties that were encountered with the skills-related social upliftment programme, significantly impacted on the degree to which social sustainability was achieved.

Thus Lafarge Mining South Africa and its Ridgeview Quarry need to address the short-comings in both the programmes in order to achieve total social sustainability. Firstly, with regards to the education-related social upliftment programme, Lafarge Mining South Africa and its Ridgeview Quarry need to ensure that both primary and secondary learners need to be taken into account since ignoring one can affect total achievement of social sustainability. Secondly, with regards to the skills-related social upliftment programme, Lafarge Mining South Africa and its Ridgeview Quarry need to be more dedicated to programmes of this nature, in terms of fulfilling promises, conducting follow-ups and examining the long-term viability of programmes.

The study defined and contextualised corporate social responsibility as a fundamental obligation for businesses to act responsibly and ethically and in a manner that does not harm both the social and bio-physical environment. Individuals within society have begun to mobilise and act against the inequitable practices of businesses. This has resulted in many businesses and corporations being forced to act responsibly by adopting corporate social responsible practices. By investing in corporate social responsibility, businesses are investing in sustainability and the enhancement of extensive social, economic, political and bio-physical goals. Corporate social responsibility remains a vehicle for improving the role of business in society. However, in this globalised era the challenge for many businesses, in order to maintain socially responsible behaviour whilst maintaining profits, is to be attentive and observant when carrying out their activities.

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In-depth Interviews

Interviews with municipal members and managers

eThekwini municipal official, 20 November 2008, Intutuhuko Junction, 750 Francois Road, Cato Manor.

Minerals manager at Lafarge Mining South Africa, 4 November 2008, 9 Derby Downs, University Road, Westville.

Quarry manager at Ridgeview Quarry, 28 November 2008, 1 Dennis Shepstone Road, Cato Manor.

Interviews with participants within the discussion forum from the community

Respondent 1, 19 January 2009, Telephonic Interview

Respondent 2, 15 December 2008, Chesterville Extension

Respondent 3, 13 January 2009, Car

Interviews with participants within the education-related social upiftment programme from Chesterville Extension Secondary School

Respondent 4, 29 January 2009, Chesterville Extension.

Respondent 5, 29 January 2009, Chesterville Extension.

Interviews with participants within the skills-related social upiftment programme

Pottery teacher, 20 February 2009, TBDC Building, 127 Alice Street, Durban.

Pottery Assistant 1, 20 February 2009, TBDC Building, 127 Alice Street, Durban.

Pottery Assistant 2 20 February 2009, TBDC Building, 127 Alice Street, Durban.

Respondent 6, 24 January 2009, Chesterville Extension.

Respondent 7, 24 January 2009, Chesterville Extension.

Respondent 8, 10 February 2009 Chesterville Extension.

Respondent 9, 10 February 2009, Chesterville Extension.

Respondent 10, 10 February 2009, Chesterville Extension.

Respondent 11, 20 February 2009, Chesterville Extension.

APPENDIX A

Businesses in South Africa practising Corporate Social Responsibility

In order to understand the relevance of corporate social responsibility in South Africa an idea as to how some businesses promote corporate social responsibility is provided.

Sony is one of many companies in South Africa that promote corporate social responsibility. Sony an international company, based in many locations around South Africa is considered as one of the leading suppliers of electronics, has adopted a corporate social investment programme, namely the 'Community Upliftment Program (CUP)', is aimed at upliftment members of the community through arts, education, health, science and environment (Sony, South Africa, n.d.). Sony has provided assistance to many schools one being in Alexandra, namely Emfundiweni Primary School, where children were taken on a fieldtrip to the zoo where they learnt about different animals (Sony, South Africa, n.d.). The other social responsibility project sony is involved with is the 'South Africa Mobile Library Project' where sony provided financial assistance in donating school books to teachers and children for educational purposes (Sony, South Africa, n.d.).

Other companies such as the Cape Town based company, 'Original T-Bag Designs' has created a card in support of breast cancer awareness, whereby proceeds from selling these cards are donated to organisations that deal with breast cancer (Bizcommunity.com, Africa's leading daily medical news, 2009a). Steak and Ale is another South African based organisation that as adopted 'Woman Against Rape' attitude, whereby concerts are held and proceeds are donated to women who suffer from abuse (Bizcommunity.com, Africa's leading daily medical news, 2009b). Vodacom and Nedcare are one of many companies that support corporate social responsibility initiatives, one example in which Vodacom and Nedcare contribute to social upliftment is by adopting the 'Nedcare Vodacom Sight For You Programme', whereby cataract operations are provided for disadvantaged people (Bizcommunity.com, Africa's leading daily medical news, 2009c).

Lexmark an international company that has business interests in South Africa, also engage in corporate social responsibility initiatives. Lexmark provides financial and volunteer assistance to disadvantaged communities (Lexmark., n.d.). Virgin Active another international company located in South Africa promotes corporate social responsibility by donating old gym equipment, but still in good condition to non-profit organisation, schools

and correctional facilities to improve their gyms, some of these being to the Johannesburg Society for the Blind, Cape Academy School, Alexandra Hospital etc (Virgin Active, Health Clubs, n.d.). It must be noted that these are some of many companies that are focused towards promoting corporate social responsibility.

APPENDIX B

Ridgeview Quarry in relation to surrounding residential areas
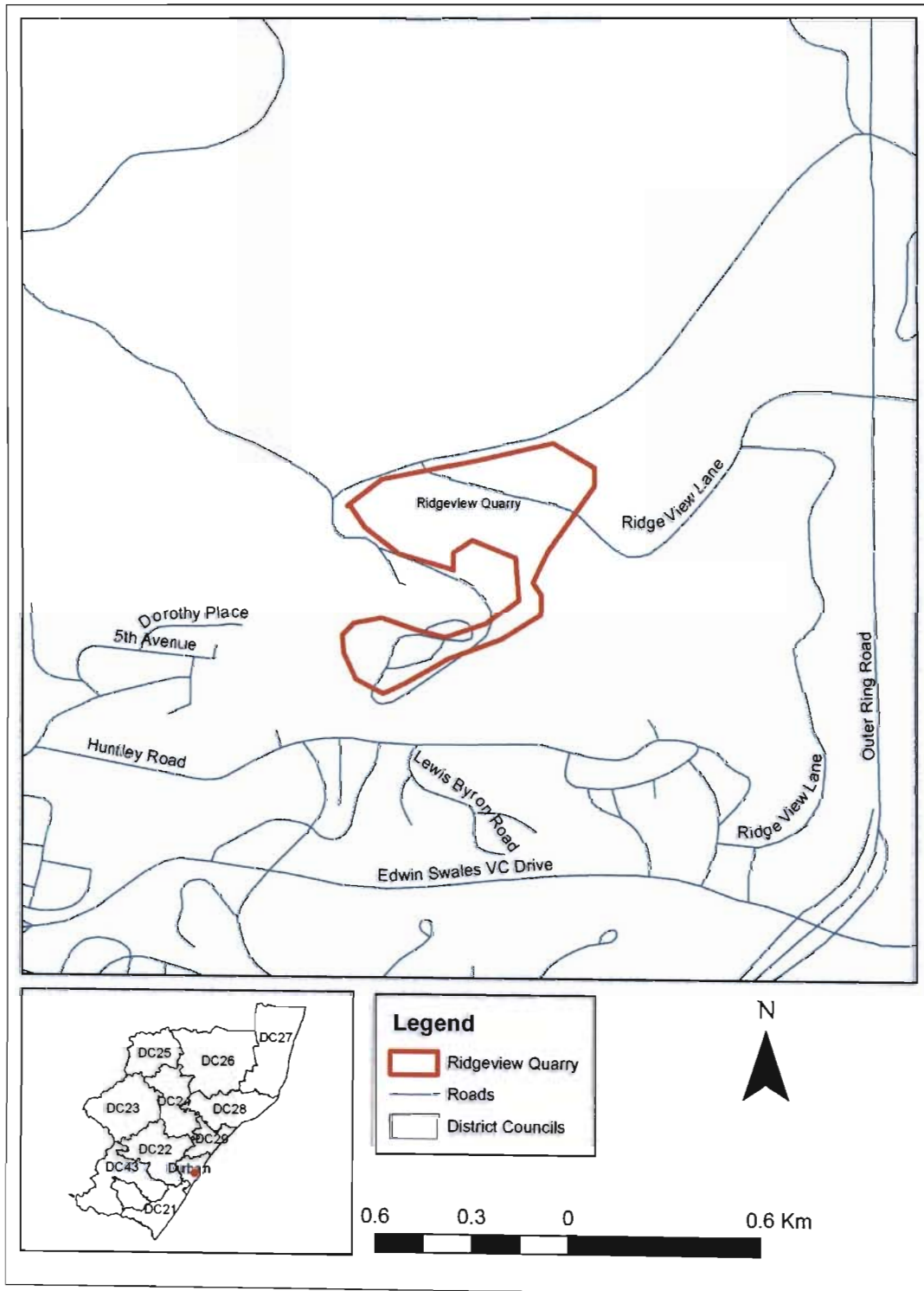
Source: (Kortenbout, 2009)

APPENDIX C

Letter of approval from Lafarge Mining South Africa on the proposed research

LAFARGE

CEMENT
AGGREGATES
READYMIX
GYPSUM

10 April 2008

School of Environmental Sciences
3rd Floor MTB
University of KZN
Howard College
Durban
4041

Attention: Jennifer Houghton

Re: Naadiya Nadasen's Proposed Research with Lafarge SA (Pty) Ltd

Your email dated 04 April 2008 has reference.

We confirm that Naadiya Nadasen may endeavour to pursue her case study with our
Ridgeview Quarry at Lafarge SA (Pty) Ltd.

It is kindly requested that all case study material be forwarded to this office for
vetting and approval before this information is included in the case study.

If you have any queries, kindly contact the undersigned.

Yours faithfully
LAFARGE MINING SA (PTY) LTD

THOLIE CIBANE
MINERAL RESOURCE MANAGER

FACSMILE NUMBER   :   031 2601391
NUMBER OF PAGES INCLUDING THIS PAGE   :   ONE

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APPENDIX D

Ethical clearance letter from the University of KwaZulu-Natal

UNIVERSITY OF
KWAZULU-NATAL

RESEARCH OFFICE (GOVAN MBEKI CENTRE)
WESTVILLE CAMPUS
TELEPHONE NO.: 031 – 2603587
EMAIL : ximbap@ukzn.ac.za

17 OCTOBER 2008

MS. N NADASEN (202516328)
ENVIRONMENTAL SCIENCES

Dear Ms. Nadasen

ETHICAL CLEARANCE APPROVAL NUMBER: HSS/0636/08M

I wish to confirm that ethical clearance has been approved for the following project:

"An examination of the contribution of corporate social responsibility in the resource extraction industry to social sustainability. A case study of Lafarge Mining South Africa (PTY) LTD and Ridgeview Quarry"

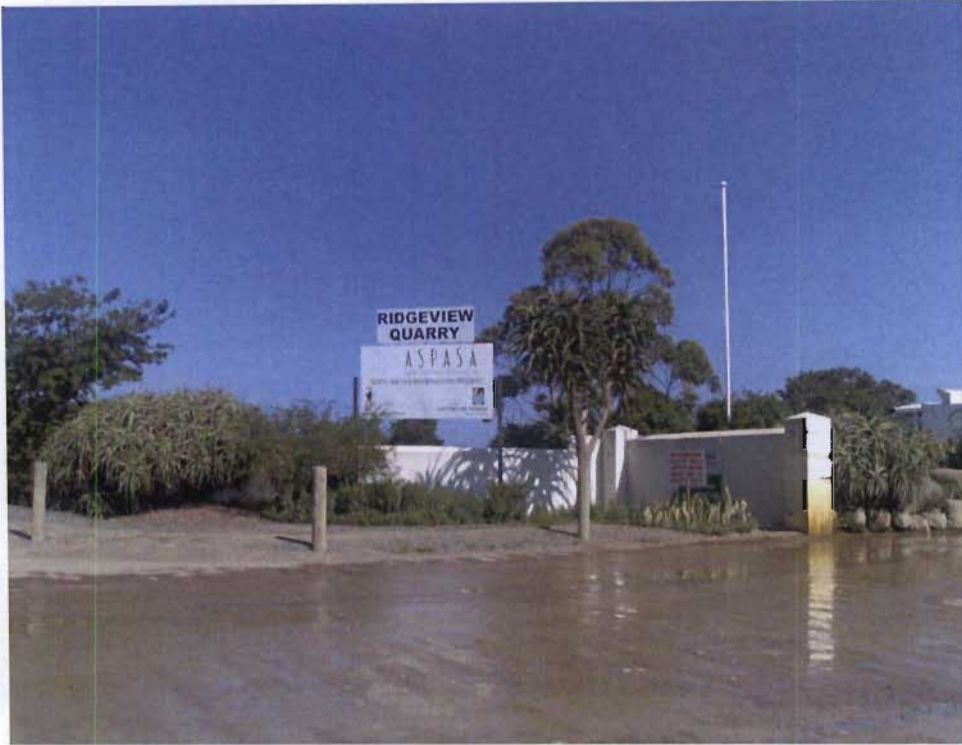**PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years**
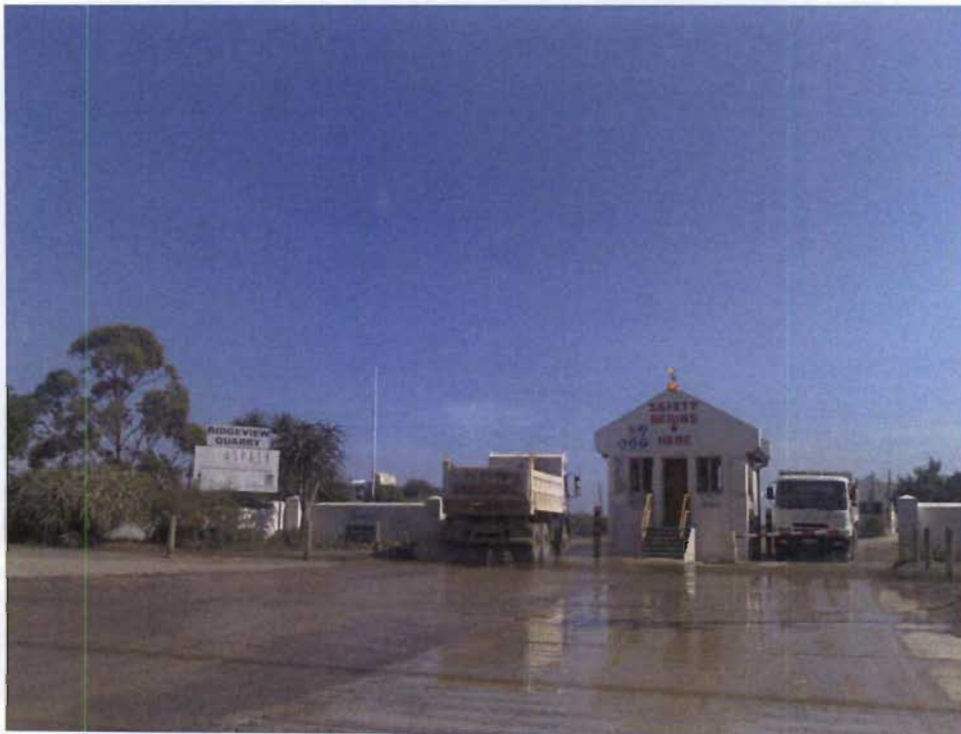
Yours faithfully

MS. PHUMELELE XIMBA

cc. Supervisor (Ms. J Houghton)
cc. Mrs. L Marriott

Founding Campuses: ▬ Edgewood   ▬ Howard College   ▬ Medical School   ▬ Pietermaritzburg   ▭ Westville

APPENDIX E

The Ridgeview Quarry

a) The entrance to the Ridgeview Quarry.

b) The entrance to the Ridgeview Quarry showing trucks entering and exiting.

c) A view of the Ridgeview Quarry.

d) A tractor carrying materials extracted from the Ridgeview Quarry after blasting, cutting and drilling.

e) Primary crusher, where the sorting out of rock occurs.

f) The view showing everyday practices of the Ridgeview Quarry.

APPENDIX F

The interview schedules used to conduct the interviews

- Interview A: Individuals involved in the discussion forum
- Interview B: Participants involved in the social upliftment projects
- Interview C: Interviews for engineers, manager and municipal member

Interview A: Interview questions for the individuals involved in the discussion forum

My name is Naadiya Nadasen and I am currently doing my Masters in Geography and Environmental Management at the School of Environmental Sciences, situated at the University of KwaZulu-Natal. My thesis is focused on evaluating the social responsibility programmes in the resource extraction industry and how their practices impact on communities. This research will examine current social responsibility programmes and will evaluate the degree of social sustainability, entailed in these programmes.

Your anonymity will be ensured at all times and personal details provided in the course of the study will be kept confidential. You are free to withdraw from the research at any time without any negative or undesirable consequences.

Section A: General Overview

1. Where do you live and how long have you been living in that area?

2. How many people live with you?

3. Do you like the area where you live? Explain?

4. Did the development of the quarry change your area in any way? How has it changed your area?

5. Has Lafarge Mining South Africa/Ridgeview Quarry started any initiatives to improve the quality of life in your neighbourhood/community?

Section B: Discussion Forums/Relationship

6. Do you know of any discussion forums held by Lafarge Mining South Africa in your area?

7. What role do you as an individual play with regards to the discussion forum held by Lafarge Mining South Africa in your area?

8. How long have you been participating in these discussion forums?

9. In your opinion, what purpose/benefit do these discussion forums play in addressing issues related to the quarry?

10. How do these discussion forums benefit you as an individual?

11. How do these discussion forums benefit the local community?

12. Are there any challenges that you think may be associated with these discussion forums, if so how would you improve these discussion forums?

Participation/Social Sustainability

13. Can you explain how these discussion forums operate?

14. Briefly describe in your own words the responsibility you think these discussion forums have?

15. Who are represented in these discussion forums and how is representation done?

16. Who do you represent at the discussion forums? (community, local authority, government, developer, yourself, etc)

17. How can one participate in these discussion forums?

18. How did you as an individual become aware of the discussion forums? (advertisement, neighbour, etc)

19. When are these discussion forums held and how often are they held?

20. How often do you participate in these discussion forums?

21. Is there anything inhibiting you from participating in these discussion forums? (Time, venue, etc)

22. What are some of the issues addressed in these discussion forums?

23. Who raises these issues in the discussion forums?

24. What are some of the concerns brought by individuals in these discussion forums?

25. Is there any material provided in these discussion forums? (Minutes, reports, etc)

26. Whilst attending these discussion forums, has the information presented at these forums been available and understandable in your own language?

27. Do you think these discussion forums provide you with enough information?

28. In your opinion, are these discussion forums well organized, with regards to time, venues and facilitation?

29. What is your opinion on the facilitation with regards to the discussion forums?

30. How do you think these discussion forums benefit individuals?

31. After participating in these discussion forums, are there any skills that you gained? If so, what are they?

32. What relationships have you formed in relation to these discussion forums?

33. Do you think after participating in these discussion forums, this has contributed to better management of the quarry? How has it?

34. After participating in the activities relating to these discussion forums do you relay information to others? Who and how so?

35. In your opinion, was your voice heard when decisions were made and was everyone provided with an equal chance to be heard? Do you feel you have any influence when decisions are made?

36. Do you think the decision – making process with regards to these discussion forums are fair?

37. How do these discussion forums benefit communities directly affected by the quarry?

38. Do these discussion forums benefit other communities or individuals not directly involved with the quarry?

39. How have your needs been addressed with regards to these discussion forums?

40. How has participating in these discussion forums made you feel?

41. Has your engagement in these discussion forums changed your life in any way?

Section C: Solutions and recommendations

42. What are some of your recommendations or solutions that could be used to improve the discussion forums initiated by the quarry?

43. How do you think participation with regards to the discussion forums could be improved?

44. Any further comments?

Interview B: Interview questions for the participants involved in the social upliftment projects

My name is Naadiya Nadasen and I am currently doing my Masters in Geography and Environmental Management at the School of Environmental Sciences, situated at the University of KwaZulu-Natal. My thesis is focused on evaluating the social responsibility programmes in the resource extraction industry and how their practices impact on communities. This research will examine current social responsibility programmes and will evaluate the degree of social sustainability, entailed in these programmes.

Your anonymity will be ensured at all times and personal details provided in the course of the study will be kept confidential. You are free to withdraw from the research at any time without any negative or undesirable consequences.

Section A: General Overview

1. Where do you live and how long have you been living in that area?

2. How many people live with you?

3. Do you like the area where you live? Explain?

4. Did the development of the quarry change your area in any way? How has it changed your area?

5. Has Lafarge Mining South Africa/Ridgeview quarry started any initiatives to improve the quality of life?

Section B: Programmes/Relationship

6. Do you know of any community development programmes associated with the quarry?

7. What type of social upliftment projects are you involved with?

8. What role do you as an individual play in this social upliftment project?

9. How long have you been involved with this project?

10. What are the aims and objectives of this project?

11. What are the outcomes of this project?

12. How do these projects benefit you as an individual?

13. How do these projects benefit the local community?

14. Are there any challenges that you think may be associated with these projects and if so how would you improve these projects?

Equity/Social Sustainability

15. Who are represented in these projects? Is there a group leader representing individuals or do people individually represent themselves?

16. How can one join/participate in these projects?

17. What are some of the activities that you are involved with in these projects?

18. Are there any meetings/ workshops/ classes held for these projects? If so, when are they held and how often are they held?

19. What do these meetings/ workshops/ classes consist of?

20. How often do you participate in the activities with regards to the social upliftment projects?

21. Is there anything inhibiting you from participating in these projects?

22. In your opinion, are these projects well organized, with regards to time, venues and facilitation?

23. What is your opinion on the facilitation with regards to the activities in the social upliftment projects?

24. How has participating in these projects made you feel?

25. After participating in these projects, are there any skills that you gained? If so, what are they?

26. What relationships have you formed with regards to these social upliftment projects? Explain.

27. Have these social upliftment projects contributed to a change in your livelihood? Explain.

28. Whilst participating in these activities related to the social upliftment projects, has information presented at these projects been available and understandable in your own language?

29. Do you think after participating in these social upliftment projects, this has contributed to better management of the quarry? How has it?

30. After participating in the activities relating to these social upliftment projects do you relay information to others? Who and how so?

31. What are some of the concerns brought by individuals regarding the social upliftment projects?

32. How have your needs been addressed with regards to these social upliftment projects?

33. Do these social upliftment projects benefit communities directly affected by the quarry? Explain.

34. Do these social upliftment projects benefit other communities or individuals not directly involved with the quarry? Explain.

35. Do you think this social upliftment project will benefit the future generations? Explain.

36. Briefly describe in your own words the responsibility you think these social upliftment projects have?

Section C: Solutions and recommendations

37. What are some of your recommendations or solutions that could be used to improve the social upliftment projects initiated by the quarry?

38. How do you think participation with regards to the social upliftment projects could be improved?

39. Any further comments?

Interview C: Interview questions for employees (managers, supervisors, etc.) of Lafarge Mining South Africa and Ridgeview Quarry

My name is Naadiya Nadasen and I am currently doing my Masters in Geography and Environmental Management at the School of Environmental Sciences, situated at the University of KwaZulu-Natal. My thesis is focused on evaluating the social responsibility programmes in the resource extraction industry and how their practices impact on communities. This research will examine current social responsibility programmes and will evaluate the degree of social sustainability, entailed in these programmes.

Your anonymity will be ensured at all times and personal details provided in the course of the study will be kept confidential. You are free to withdraw from the research at any time without and negative or undesirable consequences.

Section A: General Overview

1. How long has this organization been in operation for?

2. Can you briefly describe the corporation you are working for?

3. What is your role and responsibilities in this corporation?

4. How long have you been working here?

5. Do you have a corporate social responsibility policy? Describe and Explain.

6. Why has Lafarge Mining South Africa initiated corporate social responsibility projects in Cato Manor?

7. How does the quarry benefit the community?

8. How does the quarry impact on the community?

9. Do other companies in the resource extraction industry practice corporate social responsibility?

Section B: Management

10. How would you describe the relationship that Lafarge Mining South Africa and Ridgeview quarry have with the local community?

Social Upliftment Projects

11. Can you list the social upliftment projects that your company is involved with?

12. Can you provide an overview of these social upliftment projects? What are their objectives?

13. How long have these social upliftment projects been in operation for? When have they been initiated?

14. How many people are involved with these social upliftment projects and how can one join?

15. What role do you as an individual play in these social upliftment projects?

16. What has been your greatest success with regards to these social upliftment projects?

17. What are some of your biggest challenges experienced with regards to these social upliftment projects?

18. Are these social upliftment projects initiated in a participatory way? Explain.

19. How do these projects assist for the development of future generations?

20. Do you feel that your corporate social responsibility programme contributes to sustainable development?

21. What are some of the concerns brought by individuals regarding the social upliftment projects?

22. Do these social upliftment projects benefit communities directly affected by the quarry? Explain.

23. Do these social upliftment projects benefit other communities or individuals not directly involved with the quarry? Explain.

Discussion Forums

24. What strategies has Lafarge Mining South Africa and Ridgeview quarry adopted in achieving public participation with the community?

25. Are there any discussion forums related to the quarry which involve the community?

26. When are these discussion forums held?

27. What is your role with regards to the discussion forums?

28. How inclusive are these discussion forums?

29. How do these discussion forums operate?

30. What purpose/benefit do these discussion forums play in addressing issues related to the quarry?

31. Has information regarding the discussion forums been accessible and understandable to the public? How? (Minutes, reports, etc)

32. How do these discussion forums assist for the development of future generations?

33. Do you feel that your corporate social responsibility programme contributes to sustainable development?

34. What do you think could be put in place to improve these discussion forums?

35. Can benefits be achieved by communities and individuals not directly involved with the quarry, with regards to discussion forums? How?

36. How have the needs and rights of people been taken into account in these discussion forums?

37. Do you think there is fair and transparent representation with regards to decision-making process? Explain?

38. Have people been given opportunities to voice their opinions with regards to the quarry?

39. How are the public involved with regard to decision-making and the functioning of the quarry beyond the forums?

Section C: Solutions and Recommendations

40. What would you recommend in improving these social upliftment projects and the discussion forums

41. Do you think these social upliftment projects are sustainable? How are they sustainable?

42. How can the benefits/outcomes of these social upliftment projects benefit Lafarge Mining South Africa and those participating?

43. How do you think participation with regards to the discussion forums could be improved?

44. What further measures could be taken by Lafarge to enhance social sustainability?

45. How can social responsibility of Lafarge be further achieved through corporate social responsibility?

46. Any further comments?

APPENDIX G

Letter of consent to participate in the research

Consent to Participate in Research Project

Naadiya Nadasen is currently conducting her masters research through the University of KwaZulu-Natal. The research aims to evaluate social responsibility activity in the resource extraction industry in terms of its contribution to social sustainability. The research will examine current social responsibility programmes and will evaluate the degree of social sustainability, entailed in these programmes.

Participation in the study is undertaken with the understanding that:
- Participation is voluntary and a participant may withdraw from the study at any time
- Any data acquired from participants will be treated in a confidential manner and any limits imposed on confidentiality of materials will be complied
- The name and organisational association of respondents will be used only with their permission

I, …………………………………….., hereby consent to participate in the above mentioned research project conducted by Naadiya Nadasen.

Signed: ………………………………..   Date:…………………………

Please direct any queries regarding the study or participation in the study to the researcher or the supervisor of the project:

Naadiya Nadasen
School of Environmental Sciences
3rd Floor Memorial Tower Building
Howard College
University of KwaZulu-Natal
Durban
South Africa
202516328@ukzn.ac.za
0783479353 (tel)

Jennifer Houghton
School of Environmental Sciences
F Block
Westville Campus
University of KwaZulu-Natal
Durban
South Africa
houghtonja@ukzn.ac.za
031 2601444 (tel)
031 2601391 (fax)

APPENDIX H

The Chesterville Extension Secondary School

a) The Chesterville Extension Secondary School.

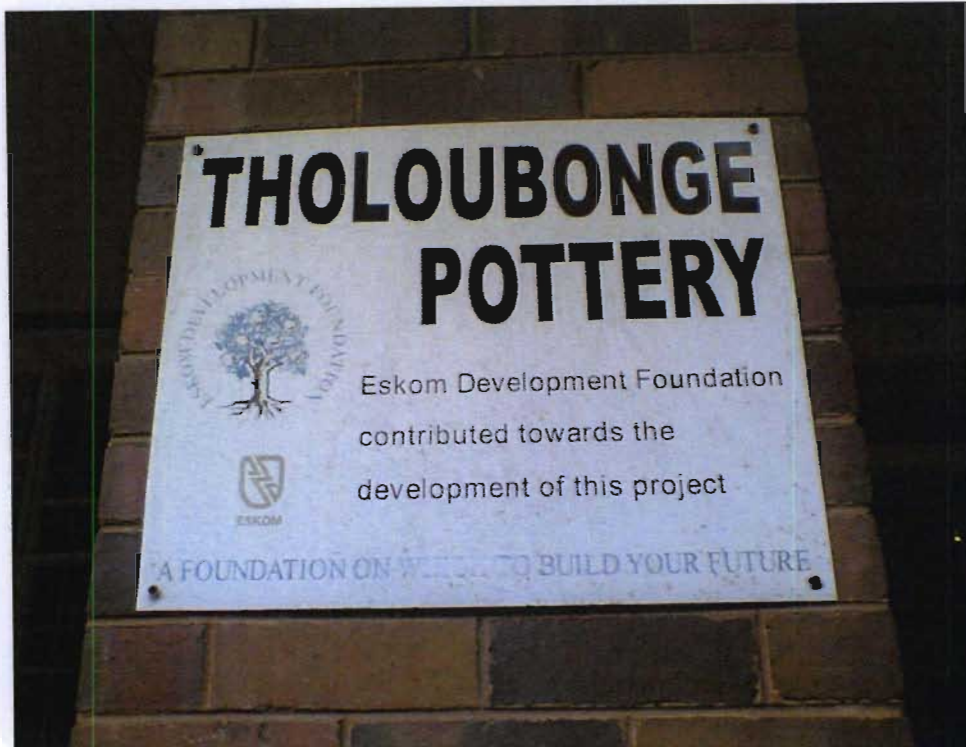b) Sign showing that the school is sponsored by Lafarge Mining South Africa.

c) The entrance to the Chesterville Extension Secondary School.

d) The assembly area of Chesterville Extension Secondary School.

APPENDIX I

The venue of the pottery classes

a) Entrance to the Tholoubonge Pottery establishment, where individuals are taught skills on pottery.

b) Assistants teaching individuals the skill of pottery.

APPENDIX J

Pottery and crafts made by the women

a) Pots made by individuals that participated in the pottery classes.

b) Pots and other crafts made by the women who attended the pottery classes.

c) A plate created by an individual who participated in the pottery classes.

d) A mug created by an individual who attended the pottery classes.

e) An ornament and a pot made by an individual who participated in the pottery classes.

f) A close up of the ornament that was made by the individual who attended the pottery classes.