



An Assessment of the Green Zone Partnership Model (GZPM) as a solution to the problem of littering and dumping in the Bonteheuwel community, City of Cape Town, South Africa

By

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DECLARATION

I, Leander Van Oordt declare that the contents of this dissertation/thesis represent my own unaided work, and that the dissertation/thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed

Date

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ABSTRACT

This study focuses on the assessment of the Green Zone Partnership Model (GZPM), which is a partnership project that was initiated by the City of Cape Town and Bonteheuwel community as a solution towards littering and illegal dumping in public open space areas. It is reported that the City of Cape Town is spending about R350 million year to remove waste illegally dumped in public open spaces around the city. In an attempt to assess the GZPM, the study has been used the environmental partnership theory as an approach to analyse the nature and significance of this partnership project. Over the last 20 years, following the emergence of the concept of sustainability, various organisations including governments are moving towards partnerships with various stakeholders as tools to finding solutions to environmental facing the planet (Long & Arnold, 1995). The emergence of this approach was the catalyst for a partnership formation to address the waste problem within the case study area (Ibid, 1995:34).

To locate the study within the broader theoretical debate, the study draws on the theory of environmental partnership. Environmental partnership refers to the partnership formed to engage stakeholder partners in order to solve specific environmental problems. Similarly, Emas (2015:2) argues that partnerships encourage participatory decision making regarding the identification and solution of the current environmental problem. They are, to a larger extent, key to achieving the vision of sustainable development. In the South African context, the popular rise of a democratic system since 1994 has coincided with the escalation of various partnership projects, specifically formed to improve environmental quality. While there is a plethora of partnerships of this nature, with some initiated by the World Bank, IMF, and European Union; there is still a need to assess whether or not these partnership initiatives attain the desirable outcome(s). It is from this backdrop that this research seeks to assess the green zone partnership to establish whether or not it has improved environmental quality with specific reference to littering and illegal dumping in Bonteheuwel community

The study used qualitative research design to answer the question raised in this research. Community survey and Face to face in-depth interviews with key stakeholder partners were conducted to collect data that which helped to answer the research question. This data was triangulated with other type of data collected from a household survey conducted within the study area. The data collected revealed how the partnership arrangement (GZPM) has improved the environmental and waste conditions in the communities. The results of the study will be crucial to the environmental health practitioners and managers dealing with

waste related problems at local government level. The study has contributed to the existing knowledge in the field of environmental management, environmental health, waste management and natural resource management.

Finally, the study concluded that partnership of this nature should be driven by champions from the communities to ensure that the environmental solution is sustainable for the benefit of the future generation. The fact that the partnership project was initiated and funded by the City of Cape Town does not guarantee as sustained solution toward a specific environmental problem (e.g., illegal dumping in public open space areas).

ABBREVIATIONS

CCT	City of Cape Town
EPM	Environmental Partnership Map
GZP	Green Zone Partnership
GZPM	Green Zone Partnership Model
ISWM	Integrated sustainable waste management
IUCN	International Union for Conservation of Nature and Natural Resources
NEMWA	National Environmental Management Waste Act
NGO	Non-Governmental Organisation
NPO	Non-profit organisation
NWMS	National Waste Management Strategy
PLC	Partnership Life Cycle
PLCM	Partnership Life Cycle Model
RDP	Reconstruction and Development Programme
SA	South Africa
SPSS	Statistic Product and Service Solution
SWM	Solid Waste Management
UNCED	United Nations Conference on Environment and Development
WCE&D	World Commission on Environment and Development
WCS	World Conservation Strategy
CPUT	Cape Peninsula University of Technology
EMP	Environmental Partnership Map
GZ	Green Zone

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 STATEMENT OF THE RESEARCH PROBLEM

There has been a constant removal of large amounts (tons) of waste materials from illegal dumping and littering in various open space areas within the City of Cape Town. The handling of this waste has consequently cost the city an amount of R350 million over the last few years (De Lille, 2015). The Bonteheuwel area, located in the City of Cape Town, has experienced large amounts of this waste with direct negative impact on the storm water system due to continuous blockage of the storm water pipes and natural watercourse. Consequently, the health and wellbeing of the community have been seriously compromised following reported outbreaks of diarrhoea and the occurrence of pests such as rats and flies. In response to this problem, the City of Cape Town established a partnership called the Green Zone Partnership Model (GZPM) with the community of Bonteheuwel in order to address this issue by involving various stakeholders. It was thus hoped that the GZPM would lead to a joint partnership in order to find a mutual sustainable solution. As a sustainable waste management tool, the GZPM was conceived as a participatory process that would create synergies, interest and partnerships to resolve the problem of illegal dumping of waste and littering. However, what was not known thus far is whether or not the Green Zone Partnership Model has improved environmental quality by reducing the illegally dumping of waste. Thus, it is within this background that the study was located.

1.2 BACKGROUND TO THE STUDY

The main aim of this study was to assess the GZPM partnership arrangement that was established by the City of Cape Town with the Bonteheuwel community to ameliorate environmental problems or improve the environmental quality with specific reference to waste littering and illegal dumping in public open spaces or areas. Historically, the waste management approach in South Africa and elsewhere has narrowly focussed on the collection, transportation, disposal and treatment of waste from a public health and service delivery perspective (Davies, 2009:159). As Davies (2009:159) notes, "this waste management's paradigm was dominated by local government legislative or policy framework with a myopic focus on collecting and disposing of waste without addressing waste from the source." According to Marshall and Farahbakhsh (2013) this type of waste management was informed by the advent of mass production on the modern economy (second wave of the

industrial revolution) that further induced waste generation particularly in urban areas. It is thus from this background that a greater need for a more organised waste management system, based on modern engineering and technical administration, was required to ameliorate environmental and health problems emanating from littering and indiscriminate dumping of waste in the municipal public open spaces. This type of waste management system was characterised by high bureaucracy and technical inputs with little involvement of local communities (Scott, 2003 and Wilson 2007).

The top-down and technical approach to waste management came with a number of environmental, social and economic challenges. For instance, a country such New Zealand were confronted with the cost and environmental effects associated with identifying suitable sites for waste disposal (Davis, 2009:159), a problem that has increasingly affected South Africa over the last 30 years. This is due to the fact that waste management in general and municipal waste management approach in particular, has not yet paid attention to addressing waste from the source (Ibid, 2009).

In the case of South Africa and in particular Cape Town, waste generation has resulted in a serious shortage of suitable land for waste disposal. The problem is more acute in the City of Cape Town, having only three landfill sites to accommodate the growing waste in the city. The growing pressure on landfill sites has culminated in the indiscriminate dumping of domestic and building rubble waste materials in open public spaces.

Following the emergence of sustainable development during the Earth Summit in 1992 (O’Riordan, Preston-Whyte, Hamann & Manquele 2000), the pursuit to address former failures within an old waste management paradigm has led to an increased need to move towards the Sustainable Waste Management (SWM) approach. Sustainable development calls for the management of land and its resources to secure the needs of the future generation. Key to the underpinning philosophy of sustainability is the notion that waste management should encompass social, economic and ecological equity (O’Riordan, Preston-Whyte et.al. 2000). In South Africa (SA), the response to such a shift resulted in the formation of a National Waste Management Strategy (NWMS) and a plan to address the numerous challenges the country is facing with regard to waste management. From a social sustainability perspective, it is envisaged that waste management, under the banner of sustainability, should engage all stakeholders but in particular those who are generating waste.

It is thus within this context that environmental partnerships, as stakeholder participatory tools, emerged to engage stakeholders in decision-making initiatives in order to achieve the values of sustainable waste management.

This means that sustainable waste management should ensure that the interests of different affected interested groups are met by means of building or creating synergies as well as partnerships towards finding sustainable waste management solutions (Büchl-Krammerstätter in Salhofer, Wassermann, & Binner, 2004). While these partnership arrangements have been formulated to deal with a range of waste related problems at municipal level, a critical assessment of their success is required. How environmental partnership arrangement improves waste management at a local level is the question which the current study seeks to address.

According to Long and Arnold (1995), “environmental partnerships” are formed wherein participating stakeholders create a dialogue to engage and work towards resolving an environmental issue (Ibid, 1995:4). In this study, an attempt is made to assess whether or not the green zone partnership model adopted by the City of Cape Town in Bonteheuwel in the Cape Flats addressed the issue of waste in the area. Particular attention was paid to the extent to which this partnership arrangement achieved the vision of sustainable waste management as stated in the National Waste Management Strategy (NWMS). In this framework it states that waste needs to be managed in a social, economic and ecologically sustainable manner.

1.3 BACKGROUND TO THE STUDY AREA

The study area for this research is the Golden Gate community located in the Bonteheuwel suburb of the City of Cape Town. This area is also known as sub-council five. The population size of Bonteheuwel was recorded during the 2011 census at 52 956 people with a formal household number of 11 037. Key results from the 2011 census revealed the population is predominately Afrikaans speaking Coloured community. According to census 2011, 23% of those aged 20 years and older have completed Grade 12 or higher. Figure 1.1 provides an aerial view of the Bonteheuwel Suburb and the location of the study area.



Figure 1.1: Location of the Study Area

(Source: City of Cape Town Geographical Information Services, 2018)

Thus, the information is indicative of a young population found in the area (Waste Wise Status Quo Report, 2011; SA Stats, 2000). Demographically, the area is predominately an Afrikaans speaking Coloured community. The case study area is geographically far from the rest of Bonteheuwel and surrounded by structural boundaries including a national road (N2 Settlers Way), a railway line and a bridge (Waste Wise Status Quo Report, 2011). The area also holds a very precious environmental asset, the Cape Flats aquifer situated beneath the area. This aquifer has not yet been exploited. Although the quality of the water is unknown, littering and illegal dumping of waste from industrial and building sites throughout the Cape Flats pose a threat to it. With the need to address dumping and littering, the formation of a partnership emerged with members being non-political, locally based community individuals and some other stakeholders from schools, businesses and various city departments. The Green Zone Partnership (GZP) was seen as an environmental phenomenon which would integrate various sectors and communities to address dumping and littering sustainably.

1.4 RESEARCH QUESTIONS

Central to the study is to assess the exploratory partnership presented in the thesis and the values it hold when seeking solutions and addressing environmental problems. In conducting the assessment, the study engaged with pertinent research questions which were:

- What are the circumstances that led to the establishment of the Green Zone Partnership between the City of Cape Town and the Bonteheuwel community?
- Has the Green Zone Partnership improved environmental quality with reference to reducing littering and illegal dumping in the area?
- Where is the Green Zone Partnership located in terms of the Partnership Life Cycle Model and Environmental Partnership Map provided by Long and Arnold?
- What are the benefits of the Green Zone Partnerships towards the partnership stakeholders and the community?
- What are the views of the community and stakeholders partnership towards the Green Zone Partnership project?

1.5 AIM AND OBJECTIVES

The main aim of the research was to assess whether or not the Green Zone Partnership is a solution to the problem of littering and illegal dumping of waste in the Bonteheuwel community. To achieve the aim of the study, the following objectives were formulated.

- To determine the circumstances that led to the establishment of the Green Zone Partnership between the City of Cape Town and Bonteheuwel community;
- To investigate whether or not the Green Zone Partnership has improved environmental quality by reducing littering and illegal dumping in the area.
- To locate the Green Zone Partnership within the Partnership Life Cycle Model and Environmental Partnership Map provided by Long and Arnold's Environmental Partnership Theory.
- To identify the benefits of the Green Zone Partnership towards the stakeholders partnership and the community.
- To establish the views of the community and stakeholders partnership stakeholders are towards the Green Zone Partnership project.

1.6 SIGNIFICANCE OF THE STUDY

Partnerships are used at many levels as a mechanism to address various challenges on a social and economic development arena both locally and abroad. Since public participation is one of the key pillars of the social aspects of sustainable development, it is thus argued that partnerships are crucial in engaging local communities in environmental decision making. While there is an increasing use of partnership arrangements as panacea to improving environmental quality with reference to river water quality, storm water and catchment areas, beautification of open spaces in communities to prevent dumping on a site, more research needs to be conducted to provide evidence that partnership arrangements actually achieve their desirable outcomes. Therefore, the study provided insight on how the partnership arrangement worked its effectiveness with reference to waste management to improving environmental quality in communities. Significantly, the research provided a framework and understanding for future projects, especially in the field of environmental partnerships as a tool for sustainable waste management.

1.7 DELINEATION OF THE RESEARCH

The research was limited to the Bonteheuwel area located within the Municipality of Cape Town in the Western Cape South Africa. The point of departure was the assessment of waste management partnerships adopted for in the Bonteheuwel area as a catalyst towards the improvement of environmental conditions with particular reference to waste in the area. Thus the research study was limited to the analysis of partnerships on illegal dumping and littering as an environmental management strategy.

1.8. THESIS STRUCTURE AND OUTLINE

Chapter One: Introduction and Background to the Study

Chapter one introduces the statement of the research problem, background to the study and the background to the study area and location. The chapter also provides the research question, the aim and objectives, the significance of the study as well as the delineation of the research.

Chapter Two: Literature Review: The Origin and Evolution of Waste Management

Chapter two reviews the literature relevant to the study. The chapter is divided into two parts of which the first part outlines the historical context with specific reference to origin and development of waste management practices over time from pre-modern times to the present. The second part deals with how it evolved to the integrated waste management paradigm shift.

Chapter Three: Theoretical Framework

The issue of partnership as a waste management approach is located within the broad theoretical debate of environmental partnerships. In this chapter the researcher introduces the theory of environmental partnerships provided by Long and Arnold. This has allowed the researcher to analyse the nature and the significance of the Environmental Partnership Theory regarding the value of Environmental Partnership, the classifying tools, the life cycle it holds and the degree of conflict in the partnership. In addition, the benefits associated with such a partnership and the sustainability thereof are discussed.

Chapter Four: Research Methodology and Design

This chapter introduces the research design and methodology adopted in this study. In this study the researcher describes the qualitative methodological design adopted and the nature of the sampling strategy for that purpose. In addition, the chapter discussed a range of data collection techniques such as the community survey and the face to face in-depth interviews with key stakeholder partners. Finally the data analysis and ethical standards adopted in this study are also discussed.

Chapter Five: Results

Chapter Five presents the results found and analysed to answer the research question of whether or not the Green Zone Environmental Partnership addressed the littering and dumping as a waste problem. The results also addressed the benefits received through the Green Zone Partnership and the various views of key stakeholders regarding this partnership.

Chapter Six: Analytical Discussion

This chapter presents the synthesis of the findings based on collected data. It is within this chapter that the theory of Environmental Partnership is analysed and the Green Zone Partnership Model is unpacked drawing attention to the involvement of people and the impact on the Waste Management challenge. In this chapter the researcher demonstrated the extent to which the aims and objectives have been achieved.

Chapter Seven: Key Findings and Concluding Remarks

Within this chapter, the findings of the study and contributions to the existing body of knowledge are presented. This chapter also demonstrates how this study fits into the scholarly literature in the arena of participatory Environmental Partnerships with specific reference to Waste Management. The chapter closes with final concluding remarks.

CHAPTER TWO LITERATURE REVIEW

THE ORIGIN AND EVOLUTION OF WASTE MANAGEMENT

2.1 INTRODUCTION

This chapter aims to locate the research topic within the broader literature relevant in analysing the nature of Waste Management practices, not only in South Africa but from an international perspective. As stated in the introduction of chapter one, the point of departure for this study a particular focus is on the involvement of the people in managing or handling waste, for example general waste¹. To achieve this, the chapter aims to outline an historical context with specific reference to the origin and development of Waste Management practices over time. The chapter posits that waste management ought to be studied from pre-modern times to the present to understand people's involvement in Waste Management.

The chapter begins with the history of Waste Management from the Stone Age, where the aristocracy determined the notion of human involvement in Waste Management through command and control. This section also highlights how the level of citizens' participation in political affairs had effects on the manner in which they managed waste. As Lemann (2008) states in his book called *Waste Management*, there was a somewhat dualistic conception of waste as some conceived of it as not being an integral part of society. Thus rules, albeit traditional, were codified to identify and define spaces of waste disposal often located in remote areas. These spaces were essentially what Michel Foucault (1971)², human geographer referred to as heterotopic spaces³. This historical narrative signifies that Waste Management took place without the involvement of the people, perhaps until the emergence of environmentalism in the 1970s.

¹ REF: No. 59 of 2008: National Environmental Management: Waste Act, 2008.

"general waste" refers to waste that does not pose an immediate hazard or threat to health or to the environment, and includes—

(a) domestic waste;
(b) building and demolition waste;
(c) business waste: and
(d) Inert waste.

² Foucault, Michel (1971). *The Order of Things*. New York: Vintage Books. ISBN 978-0-679-75335-3.

³ Heterotopias refer to spaces or places of non-hegemonic conditions but which serve as important places in a particular social context.

It is within this background that the second part in the chapter deals with Waste Management during the early 1800s, which signified the emergence of modernism, driven by Science and rationality.

In this period, Science sought to define all aspects of human life, in a way that saw that Waste Management did not escape the hegemonic tendency of Science. Therefore, the public health sector emerged as the driving force for Waste Management, in tandem with the scientific thought of this modern age. Central to this modern age was the emergence of the technocratic view of Waste Management based on the notion that technology and engineering provided solutions to the waste and associated environmental health problems.

However, a significant shift occurred from about the 1970's with the emergence of environmentalism as a critical driving force of Waste Management. This chapter thus provides clarity on how people were included in Waste Management from the pre-modern age up until contemporary times. Over the last 30 years, there has been a transition towards a sustainable Waste Management paradigm, where waste should ideally be addressed from its source. This idea was heralded by the advent of sustainable development, which emphasises concepts such as public participation and environmental stewardship. This chapter seeks to deepen the understanding of how people were involved in managing their environment as an approach to locate Waste Management practices within the broader concept of Environmental Partnership; the involvement of the people in solving specific environmental problems.

2.2. HISTORICAL ANALYSIS OF WASTE MANAGEMENT

To understand contemporary Waste Management practices, it is crucial to trace where and when people socially began to interact with waste more precisely from the Stone Age to the modern industrial epoch. For instance, Wilson (2007:198) in his article entitled: *Development Drivers for Waste Management*, is among the few scholars who have developed a systematic historical development of Waste Management. For him, public health rather than environmentalism led to the emergence of formalised waste collection systems in the early nineteenth century. It is crucial to note that Wilson's historical analysis moves beyond merely focusing on Waste Management and links it with how humans and their traditions contribute to the development of Waste Management over time (Wilson, 2007:199).

While Wilson's (2007) historical analysis of Waste Management is illuminating, it is however limited to the events dating back from the early 19th century, without looking at how

humanity dealt with waste before the industrial revolution. The notion of the public health sector as a primary driver of waste management systems is traceable to the early 1800s (Wilson, 2007). Thus, this pattern of Waste Management historiography is limited in providing a broader socio-historical context of the development of Waste Management. The primary question is how humans were related to waste in the period before the 19th century? This question is critical given the fact that the focus of the study is centred on the involvement of people in Waste Management.

2.2.1 Waste Management in the Pre-Modern Era

The interaction between humans and waste was an old phenomenon that was recorded before the modern era. For instance Millard (1985) first postulated the notion of the involvement of people in managing waste in his book entitled: *“Discoveries from Bible Times: Archaeological Treasures Throw Light on the Bible”*. In this distinguished scholarly contribution, Millard provided a systematic pre-modern historical analysis of how humans dealt with waste as something that was not part of, and generated by people. For him, there was a broad sense of euphoria that was somehow attached to the notion of duality between spaces reserved for waste and those which were codified as places of human habitation (ibid, 1985). During biblical time, the notion of “hell” was conceived as space where waste was deposited.

The idea of seeing waste as something that could not be transformed into some useable products was centred on the Waste Management practices that prevailed during this period. The nature of how the society of this historical time handled waste reflects the manner in which these people used natural resources to sustain their day to day living. For instance, the pre-modern society, particularly of the biblical origins, used a range of natural resources (such as stones, sand or soil, grass and woods) to build both public (for example temples) and residential settlements, often in semi-structured and informal patterns in various locations (Burcea, 2015).

This spatial pattern of settlement reflected the kind of society that prevailed during that time where spaces of waste were detached and isolated from humans, highlighting the belief that anything that was “unwanted” or not of “public good” ought to be discarded from the public eye. As Dyck, Starke and Weimer (2012:144) note, the socio-political systems driven by the aristocracies were central in defining the social relations of Waste Management. They decided where waste should be disposed of or treated (often burnt) with strict rules enforced

by those in the highest level of authority such as the Roman Emperor supported by the aristocracy (ibid). This rigid “command and control” type of Waste Management system was firmly based on the authoritarian system, which viewed people as not being an integral part of managing waste produced by the society. Similarly, Wilson (2007) and Dyck, Starke and Weimer (2012) argue that the leadership at the time viewed the relationship with its citizens and the households as a mere tool to uphold the aristocratic power. The influence of the pre-modern hierarchical power systems on Waste Management was manifested when a waste disposal site known as the Valley of the Sons of Hinnon⁴ was identified and imposed by the authority as a place where everything unwanted was disposed of. It was also known as the Valley of Hinnon in Jerusalem where horrific acts of human sacrifice were performed by burning those who would betray the faith (Millard, 2007). From the Hebrew word *Sheol*, the same site was later to be called *Gehenna*⁵, the Greek word for “hell” (Millard, 1985:198). The Gehenna site conjures up significant spiritual connotation as a sacred place of dumping and punishment of all that was believed to have socially pathological attributes. The site was also a common dumping ground for unwanted human bodies and babies, as well as general waste materials such as food and dead animals (Millard, 2007). As Millard (ibid) notes, the site was spatially and socially isolated from the people. Hence people were not involved in the management of waste at that time (see Photo 2.1).

⁴ The word Gehenna is the Greek transliteration of the Hebrew ge-hinnom, meaning “Valley of [the sons of] Hinnom.” This valley south of Jerusalem was where some of the ancient Israelites “passed children through the fire” (sacrificed their children) to the Canaanite god Molech (2 Chronicles 28:3; 33:6; Jeremiah 7:31; 19:2–6).

⁵ Gehenna: The Gehenna Valley was thus a place of burning sewage, burning flesh, and garbage. Maggots and worms crawled through the waste, and the smoke smelled strong and sickening (Isaiah 30:33).

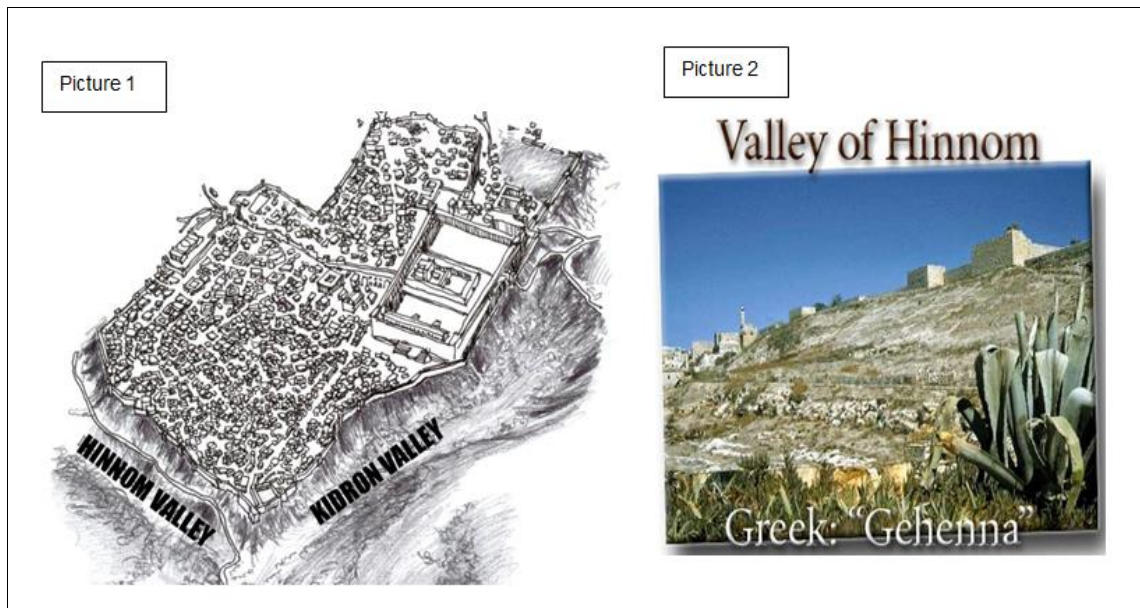


Photo 2.1: The picture no 2 above shows a wall symbolising the separation of people and the area where waste was dumped and bodies burnt.

(Source: Waren, 2016, *Fountain of life teaching Ministries* & Image by Dr Benjamin L. Corey)

Likewise, in his book” *Garbage in the Cities: Refuse Reform, and the Environment*” Melosi (2005) pays attention to the phenomenon of social exclusion practised by the Roman people in the decision making process regarding the management of waste. Melosi argues that people had no authoritative powers to decide when and where to dump or treat their waste. As depicted in Photo 2.1 picture no.2 above, a highly regularised approach to Waste Management emerged when wastes were collected, transported and dumped on the outskirts of settlements. Indeed, this approach to Waste Management culminated in severe environmental health effects on the population (Millard, 1985), which resulted from the cumulative effects associated with several waste materials dumped on uncontrolled open spaces. This practice further compounded rot and decay, and the spread of various pathogenic organisms, which harboured deadly diseases.

Thus, the period from the Stone Age to the Middle Ages was epitomised by a series of inconceivable filth emanating from waste being dumped in the streets, to wastewater being visible in the city’s public spaces (Burcea, 2015). This was also the era (between the Eleventh and Fifteen Centuries) of the terrible plague, commonly known as the “Black Death”, which killed thousands of people (Melosi, 2005). The plague arose mainly because of the accumulation of filth, which resulted in the harbouring of the killer parasite, *Yersinia*

*pestis*⁶, carried by rodents and fleas. However, with the advent of the industrial revolution followed by intense urbanisation in the mid-1800s; and also at the turn of the century, there was an intensification of trade exchanges followed by the invention of the motor vehicle in North-Western Europe (see Wilson, 2007:199; Burcea, 2015).

2.2.2 Waste Management in the Modern Era from the Early 1800s

The early 1800s was the period of enlightening in which Science permeated all aspects of life. This included the manner in which the environment and health were understood. In essence, science in the early 1800s was dominated by a philosophy of dualism conception of reality that emphasises understanding nature and society by binary (Scott, 2002). According to Scott, the modernist dualistic conception was underpinned by Science, which created spaces of “otherness” as conceptualised by Michel Facault (1971) in his article entitled: *The Order of Things*.

It was from this context that the public health sector, particularly during the industrial revolution of the early 19th century, emerged as a critical driver of the Waste Management regime. It was also the period in which citizens’ interest in their garbage problem heightened, linking part to the European experience of a wasteful society whose material progress became the greed of the world (Melosi, 2005). This resulted in the physical environment being neglected as societies’ priorities were shaped around an industrial discipline (ibid, 2002). This era of modernisation heralded the birth of the first technical solutions concerning Waste Management (Burcea 2015), underpinned by the principles of Science and Engineering throughout North America and Europe. The era also signalled the movement towards Public Health Science as the primary driver in the management of waste disposal for improved public health and sanitation (Marshall & Farahbakhsh, 2013). Alexander (1993:3-4) argue that President Benjamin Franklin may have introduced in 1795 the idea to use Science for an urban sanitation system through the First Ordinance law as a mechanism to control garbage in the United States of America.

Within this context, the leadership thinking signified an institutional attitude towards waste informing how science and technology would be applied (Wolsink, 2010). However, this notion failed to connect the Science with the ordinary people and their environment. This essential element is confirmed by Scott and Barnett (2009) in their work on Civic Science in

⁶ *Yersinia pestis* is a Gram-negative, rod-shaped coccobacillus, a facultative anaerobic organism that can infect humans via the oriental rat flea. It causes the deadly disease called bubonic plague.

an article called "*Something in the Air: Civic Science and Contentious Environmental Politics in Post-apartheid South Africa*". By the 19th century, great advancements and the subsequent enactment of public health laws marked the great "Sanitary Awakening"⁷ of the time (Melosi, 2005). This awakening argued that the pathological composition of the waste has a direct relation to disease and filth caused by an ineffective Waste Management system (Worrell & Vesilind, 2011).

The epoch signified the emergence of modernist influence into the manner in which waste was handled, especially in urban areas which led to the reduction of urban diseases (Melosi, 2005). Apart from this, it was an era which marked a turning point in the modern history for cleansing and sanitation, whereby various engineering and scientific measures for waste processing were introduced to manage municipal hygiene, such as keeping urban spaces clean from waste (Melosi, 2005). The notion of an organised bureaucratic structure emerged as a form of intervention to take control of waste emanating from the growing urban population of this industrial epoch (see Scott, 2003). This period beckoned the production of high ash content from households, which created a lucrative market for waste collection and the manufacturing of bricks (Wilson, 2007:199).

As the dust trade declined during the 1840's to the 1900's (Wilson, 2007), public health once again emerged as a concern and driver during this time. The development of the Science of Bacteriology would form part of managing infectious diseases such as cholera and poor sanitary conditions (Melosi, 2005). The advent of the industrial revolution in the 19th century, both European and American Cities experienced vast expansion (Marshall & Farahbakhsh, 2013). This industrial expansion led to urban development which further attracted many people to migrate into cities which further exacerbated the austere of garbage production and as a consequence of this rapid urbanisation. Slums proliferated at the same time considerable high volumes of waste augmented so is the filthy conditions favourable for disease outbreaks (Melosi, 2005).

⁷ The Nineteenth Century: The Great **Sanitary Awakening**. "The great **sanitary awakening**" (Winslow, 1923)—the identification of filth as both a cause of disease and a vehicle of transmission and the ensuing embrace of cleanliness—was a central component of nineteenth-century social reforms.

The subsequent conditions demanded for a modern refuse management system, which would take into account the social, political and economic considerations as well the technical and organisational improvements; (Melosi 2005). This modernist ideology lacked the involvement of people's voices critical for a Waste Management process.

The dominance of public health as a driver of Waste Management was manifested by the promulgation of the International Public Health Act of 1848 followed by the Public Health Act of 1875. These provisions drew attention to sanitation as a societal goal, which called for state intervention to enhance the health wellbeing of citizens (Melosi, 2005). This required households to keep their waste in a movable receptacle and for the accountable and responsible municipality to collect the waste (Wilson, 2007:199) to ensure improved Solid Waste Management practices (Lafrano & Brown, 2010:989). This resulted in the development of rudimentary works and public health agencies or departments (Melosi, 2005) forbidding the practices of waste being dumped or thrown on streets. The new public health laws became an essential element in the cleanliness of streets and to the reduction of sanitary diseases (Melosi, 2005) placing the responsibility on the individual homeowner (Worrell & Vesilind, 2011). This institutionalised system followed by compliance ordinances and controls were indicative of a system in which people had no say on how their refuse must be managed. As public health remained a concern even during the 1900 to 1970's. This new innovative technical interventions culminated in the development of the widespread use of landfill sites as the only means to deal with environmental and health problems associated with waste generation (Wolsink, 2010). As Burcea (2015) argues, this was the latest waste management law passed in 1965 in the United States of America to date. These waste management laws and ordinances were transmitted into colonised countries and other developmental countries.

2.2.3 Period from 1950s to 1970s

It is important to mention that most historical periods that influenced the waste management approach is the post-industrial era, from 1950's to 1970s. During this period, the Green Revolution played a vital role in influencing how humans should interact with nature. Indeed, the period prior to the 1970's was marked by the shift towards landfilling of waste (Melosi, 2005: 230). However, in the 1960's the first trip to the moon, took place and the first picture of the earth was published for the first time during this period. It is from this period that societal attitude towards the environment changed. For instance, the intensification of landfill sites and technology was responded to through massive civic protests. This period also

brought the many campaigns from civil society centred on refuse management for cleanliness and sanitation which resulted in the development of laws, ordinances and technology. Thus, waste would then be dealt with through legislatively with a technical solution through the efforts of sanitary engineers who later on became environmental engineers⁸. By the mid-19th century this evolvement gained credibility of note as the voice of the environmental fraternity became louder and the environmental engineers assiduously attended to the effects of technological advances on the environment.

2.3 THE RISE OF ENVIRONMENTALISM IN THE 1970s

The rise of environmentalism in the 1970's saw an upsurge of environmental consciousness as people's thinking were geared towards environmental thinking (Beeman, 1995) started to change. Barlance (2003) notes, this period signalled the intellectual awakening of the people which led to widespread and ostensible environmental movements published at the time. The first Earth Day celebrated in the 1970's was seen as one of the many events that would unfold. Although many historical scholars provided a comprehensive portrait of the history of environmentalism as it unfolded, Beeman (1995) is of the opinion that knowledge of ecology- the Science of understanding on how the two interrelate with the human form, were crucial elements in the rise of environmentalism.

It is within this context that *Friends of the Land*, national conservation organisations and mouthpieces, were formed in the United States seeking to educate the general public on the interrelationships between the ecology, conservation, prosperity, food and the soil. As the association grew, their ideological contribution grew which was quickly recognised that people and civilisation had an important role to play within ecological interdependence as stewards and citizens of nature (Beeman, 1995).

Against this backdrop, the 1970's brought various drivers to the fore as Wilson (2007) in his article entitled, "Development drivers for waste management" highlighted. For Wilson public awareness was recognised and seen as such a critical driver for the environment. Another focus, taking waste to landfills (ibid). It was during the mid-80's that Environmental Education had a more clearly defined stance on mounting concerns over environmental and developmental problems (Tilbury, 1995). Tilbury (ibid) argues that this notion has a potential to educate people for sustainability as opposed to previous approach of the 70;s wherein the

⁸ The American Academy of Environmental Engineers

belief was that knowledge would empower people to address environmental and developmental issues. Within Waste Management, this notion was recognised as a shift towards a more sustainable approach (Wilson, 2007) which involved behavioural change for a sustainable future. As Desa, Kadir and Yusooif (2012) argue, in 1992 the World Bank found solid waste as one of the three major environmental problems affecting Malaysia. Furthermore, Desa *et al.* (2012), in their study, revealed the lack of understanding and knowledge among the Malaysian people about the Solid Waste Management problem contributed significantly to the waste and environmental problem they were experiencing. It is crucial to mention that the focus was on the disposal of waste and not the avoidance of waste. Also, education on waste was focussing on getting rid of waste to the landfill sites.

What was common to the periods in the 1970's, the 80s and early 90s, is that solid waste became an environmental problem for concern particularly littering. While the 1980's were characterised by the rise of education as a driver towards waste management, the 1990's is prominent for the emergence of the three R's (reduce, re-use, recycle) approach. Wilson (2007) argues that this attention became noteworthy because recycling programmes became prominent as it linked into the waste hierarchy and historical driver of waste as a resource value. As result of this there was an integrated policy approach for a more pro-environmental waste –related behaviour change notion using public awareness and education as a tool (NWMS, 2012). Further support was generated for the advancement of public awareness and the role it would play at the 1992 United Nations Conference on Environment and Development (UNCED), named Agenda 21 in Rio de Janerio ⁹. This became one of the focal points as the emphasis was placed on the importance of Waste Management and the pivotal role of public awareness and education as a promotional tool for environmental concerns. This approach would facilitate the importance of the environment and development problems and their solutions in an integrated manner. Public awareness would establish mechanisms to facilitate inputs and views from the people, the community and specialist groups on solutions to waste problems. It is within the National Environmental Management: Waste Act, 2008 (ACT No.59 of 2008) - National Waste Management Strategy, 2012 through which South Africa founded the tool as a driver to seek involvement and active participants in the implementation of waste and environmental solutions (NWMS, 2012). Scholars such as , Maddox, Doran, Williams and Kus (2011) argue the role of intergenerational influence also become imperative as they were of the view that human behaviour towards the environment should be cultivated at home and through

⁹ UNCED Sustainable Development Knowledge Platform

schools' environmental programmes. These were regarded as through the line communications and messaging for greater awareness, knowledge and skills development on environmental problems (Maddox *et al.*, 2011).

It is within this context that Kollmus and Agyeman (2002) in their article entitled; *Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behaviours*, which revealed the complexity associated with this notion of public awareness alongside to environmental knowledge, environmental awareness and displaying positive behavioural change. Therefore, Kollmus and Agyeman (*ibid*) argue that, various education-behaviour models showing fundamental flaws related to the whole idea of knowledge which cannot influence and shape pro-environmental behaviour and attitude change on its own. On the contrary, we know changing behaviour is a challenging thing to do. Kollmys and Agyeman (*ibid*) identified barriers that played a significant role that were the correlation between the person, responsibility and practicality. For example, the need to fly and visit family more than once a year would override the feelings of being responsible for keeping the carbon footprint low and minimise global warming. Within the City of Cape Town Municipality, Environmental Education and similarly experience considerable challenges as highlighted by these scholars. Limitations faced by this municipality in Environmental Education were:

- Insufficient training budget allocation for all the Environmental Education needs.
- The timeous re-allocations of the budget during the bi-annual adjustment of the budget period were infrequent;
- Environmental Awareness and education were often undervalued, misunderstood and under-supported.
- Challenges with staff shortages and insufficient training of staff hindered the implementation of Environmental Education programmes.
- Environmental Awareness Education and Training activities were not always strategically planned and did not necessarily align with the strategic objectives.
- The need to assess the effectiveness of environmental awareness, education and training programmes were lacking.

(Source: *City of Cape Town Environmental Awareness, Education and Training Strategy, Environmental Resource Management Department, August 2011*)

Like many scholars, Agyeman and Angus (2003) argue for more sustainable communities, that Environmental Education and awareness are not the means to an end and would require moving beyond information and knowledge. This position became clear as Agenda 21 – Chapter 8 emphasised the importance of the various based actions required. From a Waste Management perspective, the NWMS (2012) recognised the need for an inclusive process if sustained Waste Management processes were to be attained. Inclusivity and coordinated efforts were critical to the process when engaging with various actors. This shift would signal the emergence of a partnership approach with various players (such as the people, the communities, NGO's, private and business entities) of which public awareness would be seen as an aid to promote Waste Management issues and to augment practical waste projects within the primary education curricula. Therefore, public awareness was now seen as an integral aspect to a partnership approach other than the linear models of the early 1970's which only placed emphasis on Environmental Knowledge, Environmental Attitude and Pro-Environmental Behaviour, which was proven to be wrong Kollmus and Agyeman (2002).

2.4 THE EMERGENCE OF SUSTAINABLE WASTE MANAGEMENT

As industrial production became a priority to serve the needs of the growing population, another debate arose in the late 80's and early 90's . This was the argument over natural resource utilisation and the existence thereof. Renewable resources such as forests or the overharvesting¹⁰ of fish for economic growth and gains were the context in which the concept of sustainability originated (Lélé, 1991) and broadly adopted by the environmental movement (ibid). By 1980, the International Union for Conservation of Nature and Natural Resources (IUCN) presented the World Conservation Strategy whereby the term sustainable development became more prominent (ibid). Lélé (ibid) argues that the concept of sustainable development would be seen as the tool to conserve living resources while the ecological conditions would support human life and wellbeing. As Emas (2015) argues, the utilisation of economic tools for sustainability could be a means to encourage innovation and profit growth while not compromising the environment.

In 1987 when the Brundtland Commission published a report called, *Our Common Future* in an effort to link the issues of economic development with environmental stability (Emas, 2015), Redcliff (2007) in his article entitled, Sustainable Development (1987-2005) – AN OXYMORON COMES OF AGE, gives eminence to the term sustainable development as it

¹⁰ Overharvesting refers to the harvesting a renewable resource to the point of diminishing returns.

came in use within the policy fraternity. Significant to Redcliff's findings with regards to the report, were the omission of the non-human species and their rights. This is an issue that received substantial attention over the past few years. It is within this context that Redcliff (2007) draws our attention to the definition of sustainable development stated within the Brundtland Commission's Report of 1987, which defines sustainable development in the following way:

“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

For Emas (2015), the concept presented some vagueness although sustainable development aimed to maintain economic growth and progress while protecting the long-term value of the environment. However, Lélé (1991) argues that this notion as a bundle of neat fixes for various industrialisation production processes to minimise or to prevent pollution. As Emas and other scholars contend, this would require some trade-offs between environmental sustainability and economic development (Emas, 2015). Another feature to the complexity and dynamic nature of this notion was the involvement of people to the common interest as stated in the *Report of the World Commission on Environment and Development (WCE&D): Our Common Future (1987)*. This report would place particular importance on resource depletion and environmental stress which arose from political and economic power. A significant result was the people that would bear the brunt from these activities (World Commission on Environment and Development, 1987). For example, the efficiency of a factory boiler determines its rate of emission of soot and noxious chemicals and affects all who live and work around it (ibid, 1987). Therefore, the WCE&D (1987) maintains that social interaction and interdependency by individuals to take ownership and responsibility for their natural environment, the so-called universal interest, lies at the heart of most environmental and development challenges. It is within this conceptual thinking that attention is drawn to the way in which people got involved in managing natural resources through their participation and involvement (Redcliff, 1992).

It is within this context that Redcliff in the book called, *Grassroots Environmental Action: Peoples Participation in Sustainable Development (1992)* draws our attention to the importance of the human agency in sustainable development and environmental management at the local level. As well as by giving cognisance to the relationship between implementation strategies, their success and sustainable development. In an attempt to address the sustainable challenge, Redcliff (1992) describes the dimensions required for Oelofse in Zungu (2003) Figure 2.1. According to Redcliff, there are three facets required for

sustainable development which require equilibrium to be struck between social, political and the economic environment if the quality of life is to improve and the environment is to be preserved. Therefore, Redclift is of the opinion that the primary challenge lies in the integration of the circles and how to overcome potential barriers which include the involvement of people in sustainable development (ibid).

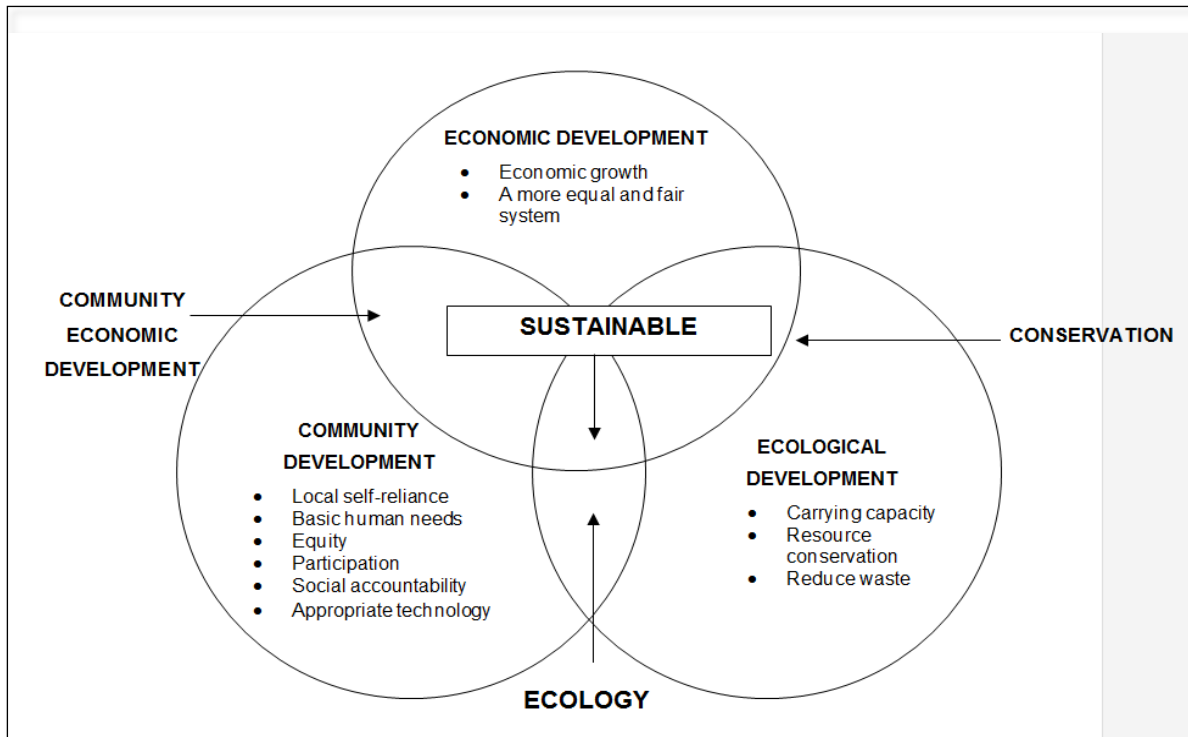


Figure 2.1: The Sustainable Development Challenge

(Source: Zungu, 2003)

As mentioned by Agyeman and Angus (2003) in their article entitled; *The role of Civic Environmentalist in Pursuit of Sustainable Communities*, many governments, Non-Governmental Organisations (NGO's), businesses and individuals have been striving towards adopting the principles of sustainable development as outlined in Agenda 21 which sets out how to move towards sustainable development.

2.5 SUSTAINABLE DEVELOPMENT AND WASTE MANAGEMENT

Over the last two decades the concepts of integrated waste management has taken centre stage. Like many other scholars, Redcliff provides a background to the notion of sustainable development and the challenges that go along with it to create the equilibrium required for this idea of sustainable development. It is within this context that Wilson (2007) provides the understanding on what drove development on Waste Management in the past and what the drivers were that provided meaningful insight to developments in Solid Waste Management for the future. As Wilson (2007) argues, over the last millennium Drivers for Waste Management varied from public health to environmental protection and to the recent environmental driver which is climate change. Therefore, it was the environmental driver that led the move away from landfilling to a renewed focus on a more integrated concept of resource management away from the 'end of pipe' concept in Waste Management (Wilson, 2007).

However, as the world's population grew and urbanisation escalated, a natural progression towards global growth, and economic development caused a gradual change in the waste composition of the world (Storey, Fraser, Aleluia & Chomchuen, 2015). Redcliff (1992) debates that although the waste composition changed, the one element that remained absent was the involvement of people as a critical aspect of the environmental management process for sustainability. As Storey, Santucci, Fraser, Aleluia and Chomchuen (2015) argue in their article, *Designing effective partnerships for waste-to-resource initiatives: Lessons learned from developing countries*, the notion of sustainable Waste Management came with various other challenges. These were the weak operations of waste initiatives, little community awareness, financial management challenges, poor waste separation at source, inadequate waste collection and limited engagement with the informal market. Wilson, Velis and Rodic (2013) take the debate further in their article entitled, *Integrated Sustainable Waste Management in Developing Countries*, arguing that more attention is now drawn to the term integrated within the context of sustainable Waste Management. As argued by Wilson et al., (2013), the whole debate received global prominence in 1987 when the Brundtland Report revealed a holistic, integrated system which would require all three composite parts of the circles (environment, economic and social) to integrate and work well with each other. This meant the involvement of people or stakeholders¹¹ in the system (Wilson, 2007)

¹¹ a person or group that has an investment, share, or interest in something, as a business or industry
<http://dictionary.reference.com/>

2.6 INTEGRATED WASTE MANAGEMENT SHIFT

Wilson, Velis and Rodic (2013) argue that the origin and shift to the integrated sustainable waste management system came during the early 1990s when various actors such as Non-Governmental Organisation's (NGO's) and various international bodies working in developing countries became disillusioned with the failures of the standard approach. This was called the technical fix (Wilson, 2007). Within this context, a more inclusive Solid Waste Management programme at the municipal level was required (Wilson *et al.*, 2013) which would give effect to a workshop convened in 1995 for the development of a conceptual framework for integrated municipal Solid Waste Management (*ibid*). This new kind of philosophy was characterised by the belief that the composite parts would intimately connect as a whole and on multiple levels (*ibid*).

It is within this particular situation that a shift came about from the engineering fraternity and other professionals alike embracing the notion of a “no waste” paradigm approach (Letcher & Vallero, 2011:11-12), thus managing waste from the onset. Further, Letcher and Vallero (2011) contend that with urbanisation and population growth came the higher demand for more items to be created for life's conveniences causing consumerism to escalate. In addition, traditional waste collection and disposal approaches became less efficient. Van de Kludert (1999:5), in his early thinking, demonstrates the importance of such an integrated sustainable waste management system both as an analytical tool and a developmental framework (see Figure 2.1). Therefore Wilson (*et al.*, 2013) argues that as the concept of an Integrated Sustainable Waste Management System (ISWM) became more refined, it also became the norm through the 2000's. Such examples are noted by Shekdar (2009) in many Asian countries such as China, India, Indonesia, Pakistan, Bangladesh and Japan. These countries experienced a boom in urbanisation and received astonishing changes in their economy and social environment that significantly influenced their urban lifestyle.

Wilson (*et al.*, 2013) is of the view that despite the legal requirements of a municipal authority to provide Waste Management services; inclusivity played a pivotal role as shown in many of the 2001 UN-HABITAT WORLD URBAN FORUM (UN-HABITAT) projects. This concept also received broad international consensus as to the ideal method to follow for a sustainable integrated Waste Management approach (UN-HABITAT, 2010:23).

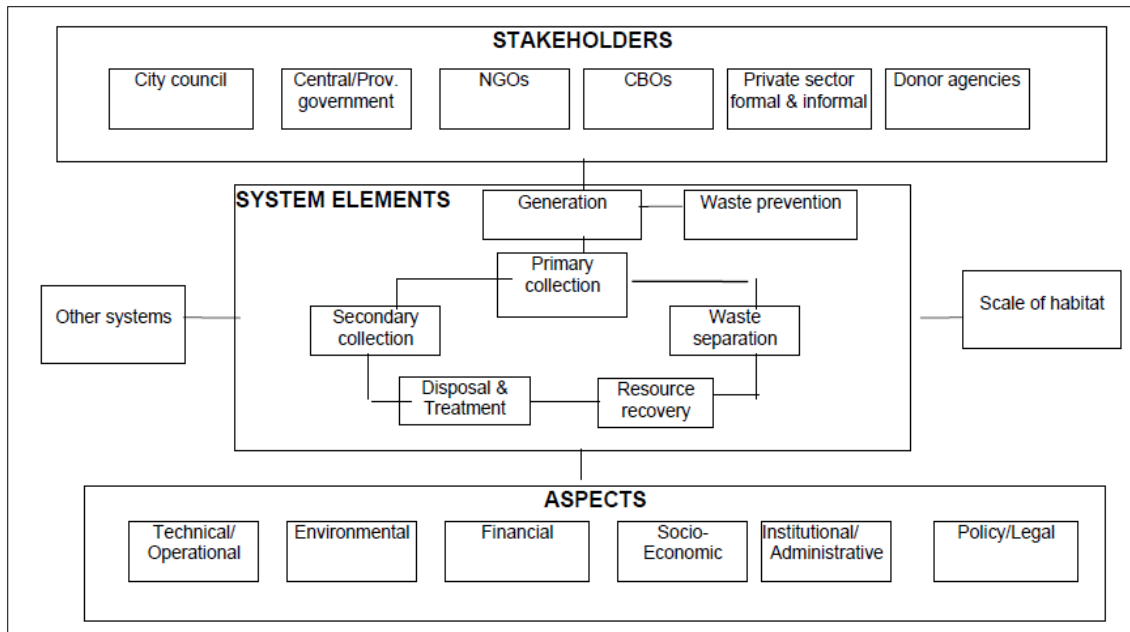


Figure 2.2: Dimension of Integrated Sustainable Waste Management (ISWM) framework

(Source: Van de Klundert, 1999:5, Annex 4B.3 Integrated Sustainable Waste Management)

South Africa, like many developing countries is obliged to the international signatory requirements which embedded the values and principles of sustainable development within Chapter 5 of the South African National Environmental Management Act of 2008 (NEMA). This led to various South African international obligations emerging for the implementation of modern Waste Management and inclusive peoples' approach (NWMS, 2012).

Wilson (2007) also alludes to the significance of the latter signalling the beginning of the waste hierarchy which was seen as the first historic step away from the landfilling notion. It is within this context that South Africa adopted the principles of sustainability by carving away the conceptual thinking and plans for a sustainable Waste Management approach (NWMS, 2012). In South Africa, the National Waste Management Strategy of 2012 gave profound eminence to the new way of thinking which would further be expanded at:

- The Rio Earth Summit 1992 and Agenda 21, the Rotterdam Convention, agreed to by South Africa in 2002 to promote and enforce transparency in the importation of hazardous chemicals.
- The Basel Convention, acceded to by South Africa in 1994, addressed the need to control the trans-boundary movement of hazardous wastes and their disposal, defining the categorisation of hazardous waste and the related policies between member countries.

- The Montreal Protocol to which South Africa became a signatory in 1990 ratified subsequent amendments and phased out the production of certain substances to protect the ozone layer.

(Source: NWMS, 2012:14)

As Wilson (2007) contends, it took the focus away from the typical waste collection and landfilling method to a more all-inclusive Waste Management approach by applying the 3R's (reduce, re-use and recycle) and by creating peoples inclusivity and participation. (NWMS, 2012). The hierarchical approach would facilitate the establishment of this new way of thinking as seen in Figure 2.3 below.

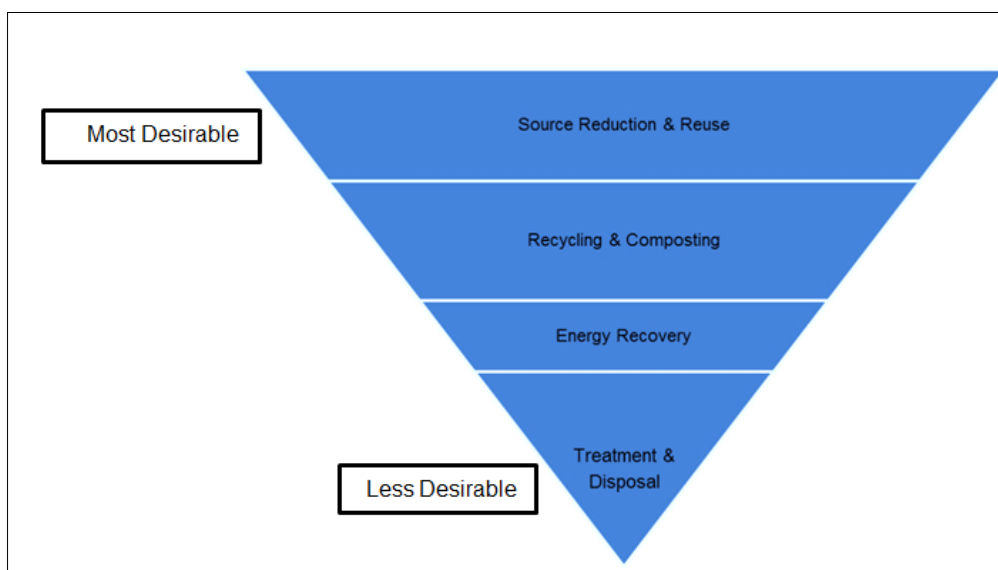


Figure 2.3: Sustainable Waste Management Hierarchy

(Source: The image prepared by L van Oordt, 2017)

Likewise, the signatories also advocated for greater involvement of local people in the decision making processes that would ensure a greater buy-in inclusivity and ownership (NWMS, 2012). Another exciting development for this country was the birth of a newly elected democratic government which formulated a very progressive Constitution which entails the Bill of Rights.

Particular reference is Section 24 of Chapter Two which lays the foundation for environmental protection and for no harm to the health and wellbeing of people as stated in Article 152(1), (b), (c), (e) of the Bill of Rights.

Further underpinning this critical document were the National Environmental Management Act (NEMA), Act number 107 of 1998. This Act's core focus was on the provision of sustainable services within the context of a social, economic and ecological environment and the involvement of people at all levels (Davids, Theron & Maphunye, 2009:19). Davids (*et al.*, 2009) claims that although South Africa introduced at the same time, the Reconstruction and Development Programme (RDP), the new South African government, had a directive to address the injustices of the past apartheid system. In addition, it was used as a tool to create opportunities and to form new building blocks within the developmental scene. This tool was used to establish the critical relationship between local, formal and informal governance, community leaders including the local politicians (O'Riordan, Preston-WWhyte, Hamann & Manqele, 2000). A vital component of the RDP was people's participation in the decision making process, the powers they could exercise with their opinions and the role they would play in projects and the management thereof (Davids *et al.*, 2009:19). These shared initiatives would culminate in shared responsibility and shared benefits by all stakeholders. Fundamentally, the reformed laws brought a new set of norms and standards which would form the basis for waste to be managed and handled collaboratively and sustainably as described in the Waste Act and the National Waste Management Strategy (2012:13).

2.7 PEOPLE INVOLVEMENT IN WASTE MANAGEMENT

Over time, history has shown how waste was managed from biblical times to public health being a crucial driver to highly technological seed processes of Waste Management activities from the industrial revolution to the present. Part of this evolution also brought the realisation that change was necessary at both a political, environmental and social level if Waste Management was to work effectively. In South Africa, the approaches to environmental decision making and policy making had gaps. Oelofse, Scott, Greg Oelofse and Houghton (2006) in their article entitled, *Shift within Ecological Modernisation in South Africa: Deliberation, Innovation and institutional Opportunities*, recognised neither the absence nor the involvement of people as a critical player in the decision making process regarding Waste Management (NWMS, 2012). As Trochinetz and Mihelic (2009) maintain, the formation of institutional arrangements, policies, government's financial management structures and public awareness would attribute to the development of processes for the societal and environmental benefit.

Scott (2003) maintains that this thinking led to the notion of “organised modernism” to fulfil the broader modernist visions of society by creating social and physical order towards achieving economic efficiency through planning for the future. What Scott (2003) describe as the scientific management of society through physical means which would be cleverly orchestrated to create inclusivity of the people. Therefore, Redclift (1992) claims it is essential to pay specific attention to the involvement and participation of people in the planning, legislation and institutional development frameworks by facilitating their participation in the decision making process and to avail the information to them. This applies to a sustainable Waste Management process and system. Many scholars would, therefore, contend that public participation or social involvement would be regarded as a tool to improve Waste Management (UN-HABITAT, 2010). It also implies changing people’s habitual behaviour by encouraging them to place their waste in a bin instead of dumping or encouraging people to bring their electronic waste, such as unwanted computers, to an electronic waste depot instead of dumping it or keeping it at home (UN-HABITAT, 2010:153).

Brazil’s Waste and Citizenship Movement is an example of an inclusivity approach whereby all stakeholders participate in the planning and user feedback mechanism (UN-HABITAT, 2010:154). Continuous dialogue and communication with all role players was another success reported by the Moshi and Tanzanians (HABITAT, 2010), to ensure public involvement and commitment by the municipality (HABITAT, 2010:154). Consequently, these ideas of sustainable development and sustainable Waste Management brought about new concepts of people engagement, partnerships, collaboration and community involvement. The Green Zone Partnership discussed in this thesis is a product of the recent developments presented in this study. History has also shown that the main driving force behind the development of a modern Waste Management concept is the continuous need for improved public health (UN-HABITAT, 2010:19).

In 1991, the *Caring for the Earth: A strategy for sustainable living*, published by the International Union for Conservation of Nature and Natural Resources (IUCN), it was announced that the second most crucial policy statement, which shifted the focus from conservation to sustainable living, was the need for improved public health

(Reid, 1995:54-55). This means that local communities would now form an integral part in achieving sustainable development and would have the necessary foundation to show respect for the ecological environment. Reid (1995:54) contends that the concept would be recognised as the first founding principle and a significant factor for the development of an interdependent system. The International Union for Conservation of Nature (IUCN,1991)

also recognised their duty towards development by identifying the lack of political awareness. In addition, the World Conservation Strategy (WCS) holds on to an integrated approach to environmental and developmental issues (UN-HABITAT, 2010).

Reid (1995:185) therefore notes, before the Rio de Janeiro Summit, a suggestion was for Agenda 21 to be used as the platform to achieve sustainable development. As set out in Earth Charter, Agenda 21 Reid (1995:186) argues that it was regarded by many experts as the most thorough and ambitious attempt to integrate the environment with developmental concerns as attention was placed firmly on people, the communities, organisations and the rights of the poor and marginalised groups.

2.8 PARTNERSHIPS FOR WASTE MANAGEMENT

South Africa has a colonial past of disempowering people with a top-down approach which changed after the first democratically elected government came to power in 1994. The result of this change was that sustainability was now a factor in all developmental spheres, including the development of people. The new government sought to embrace a more people-centred approach, which would encompass the development of a socio-economic policy framework known as the Reconstruction and Development Programme (RDP), (Davids, Theron & Maphunye, 2009:17). The new framework would fuse a people-centred approach with developmental needs for sustainability. Hence, the partnership paradigm shift would mean governance for sustainable development as agreed to at the 1992 Rio Summit by building community capabilities as a critical part of this sustainable development process (Glasbergen, Biermann & Moll, 2007:3).

Glasbergen, Biermann and Moll (2007:6) argue that partnerships are an arrangement in their own right, a configuration of role-players from different sectors of society, with each one having a particular set of interests and expectations to be met. Biermann and Moll (ibid) refer to this as the Green Political Market Place. Poncelet (1997) amplifies these ideas by describing the European Union approach to environmental problem solving through the promotion of a multi-stakeholder approach to ameliorate waste problems. As in many Asian cities, the rapid growth and demand for services, the lack of financial resources, technical expertise, and the lack of management within municipalities have created the opportunity for an institutional and partnership arrangement to be formulated between the municipalities and various actors with regard to Solid Waste Management issues. This necessitates that the Waste Management meet the needs of the citizens in the process of transparency,

openness and ultimately in the decision making phase (Zurbrügg, 2002:5-6). The aim of the partnership was to establish localised schemes and initiatives by the residents themselves such as waste collection and the management thereof, as well as the emergence of small entrepreneurs involved in recycling. In cities such as Ratnapura (Sri Lanka), Kon Tum and Quy Knon (Vietnam), stakeholder engagements were crucial to their Waste Management problem by establishing and enabling waste-to-resource facilities (Storey, Satucci, Fraser, Aleluia & Chomchuen, 2015). This approach allowed authorities to explore the availability and contribution of the stakeholders, their roles and how they could be mobilised to support waste initiatives. However, the success of the relationship depended on factors such as a sound financial, social, regulatory process, behavioural systems and the municipality assuming their role as the champion. In both countries (Sri Lanka and Vietnam) activities involved the participation of the communities, Non-Governmental Organisations (NGO's), local environmental groups and the municipalities' infrastructural support (Storey *et al.*, 2015). Like many scholars, Storey *et al.*, (*ibid*) argues that the success of the waste-to-resource partnership for these countries had two key factors which were, the behavioural change system and financial sustainability component. Zurbrügg (2002) notes that a country such as Indonesia, that had similar schemes, implemented a coordinated citizen participation approach for their collection of waste showing great success which advanced to decentralised composting schemes.

Similarly, in Queensland, Australia, illegal dumping and littering caused severe environmental problems costing the municipality and taxpayers millions of dollars annually to clean up their rubbish. The dumped waste would then find its way into the waterways causing significant infrastructural damage and costs to the municipality. Marine life faced the brunt of this obnoxious behaviour and threatened the area's famed coastlines (Victorian Government, 2013). In response to their challenge, the state formalised a Litter and Illegal Dumping Community and Industry Partnership, an initiative inviting proposals from the community to address the concern. The arrangement gave rise towards an integrated approach to curbing littering and illegal dumping within Queensland. Part of the process was the development and introduction of various awareness and education programmes aimed at changing behaviour (Victorian Government, 2013). Likewise, the Victorian government in Australia also experienced littering and dumping to a similar degree causing severe environmental problems for Victoria. In response, Victoria developed a Litter Partnership Strategy which addressed the issue of illegal dumping. However, at the same time it integrated the recyclers of the area. Part of the strategy included the development of data collection systems to measure litter reduction, conduct research on behaviour change to

inform their educational campaigns and the development of enforcement prevention strategies or approaches (Victorian Government, 2013). Victoria further expanded their aim and incorporated community partnership projects which created environmental knowledge sharing across local government boundaries as seen in Figure 2.4 below (Sustainability Victoria, 2013).

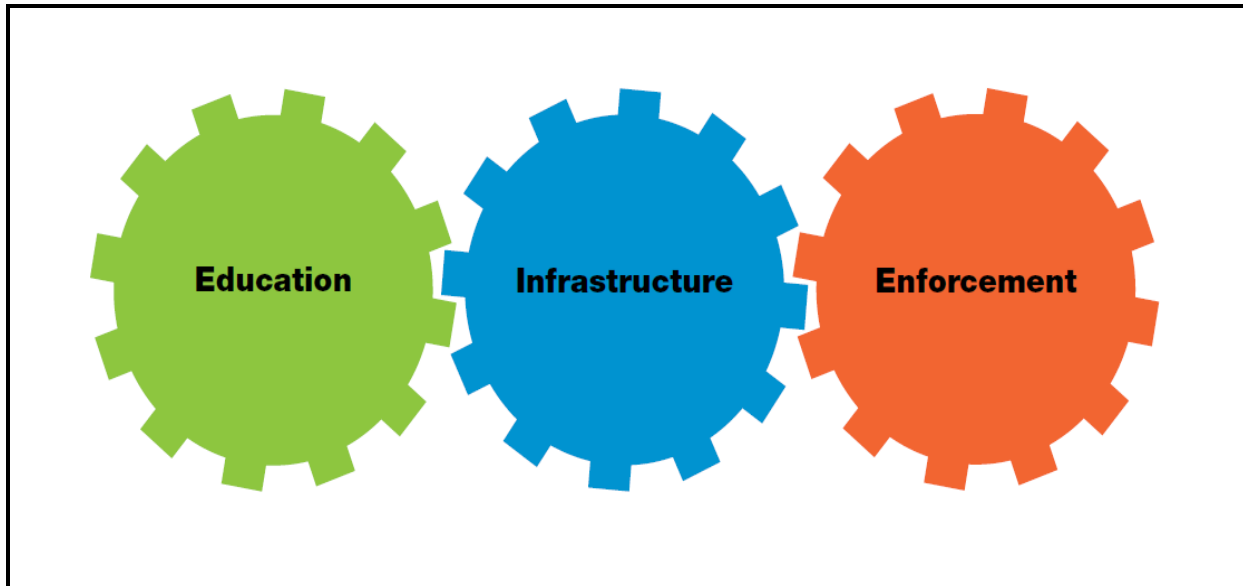


Figure 2.4: Victoria Litter Prevention Framework

(Source: Victorian Government, 2013)

For the Victoria municipality, participation was essential for the transition from a traditional Waste Management system to a more sustainable Waste Management approach. This approach has undoubtedly triggered the use of participation as a tool to manage waste at local government level more effectively. Given the various approaches undertaken by the diverse partnerships reviewed in this chapter, it becomes clear that central to the argument of Waste Management are the drivers or champions who form a critical role in the development of an institutional framework. This in turn results in partnership arrangements and benefits. Therefore, players involved must show commitment to the shared idea, the shared vision and ultimately practice the partnership to achieve effectiveness (Storey *et al.*, 2015).

2.9 CONCLUSION

The historical background in this chapter has shown that waste was dealt with in various ways, from the pre-modern times to present. A significant component that was seen throughout the times was the lack of people's involvement in the management of waste. However, as time evolved this became a significant aspect which formed an integral role in the people's behavioural attitude towards waste management and away from the technical and engineering approaches. As discussed in this chapter, the new approach also received significant support to ensure the ecological and environmental protection for human kind. Also, as indicated by various international and national legislative pieces and the growing pressure of people's responsibility, more was required by individuals to get involved in the management of waste. This became core as to how waste should be handled, disposed of and avoided. Furthermore, the hierarchical notion changed to get people more involved in the process of managing waste as civil society is responsible for its generation thereof.

CHAPTER THREE

THEORETICAL FRAMEWORK

ENVIRONMENTAL PARTNERSHIP THEORY

3.1 INTRODUCTION

While the previous chapter has provided a literature review discussion focusing on the evolution of waste management systems, this chapter presents a theoretical discussion to provide an in-depth analysis of the nature and significance of Environmental Partnership. At a theoretical level, the Environmental Partnership is an integral part of a paradigm shift towards participatory environmental management. As Kapoor (2001) argues, the resurgence of such tools as Environmental Partnerships breaks away from the mainstream environmental management approach which has tended to be centralised and exclusionary. For Kapoor (2001), the exclusionary nature of the previous paradigm manifested itself in the manner in which experts and scientists adopted a narrow view of what constitutes the “environment.” However, over the last 20 years (see Kapoor, 2001), there has been a significant shift towards the so-called “dialogue sciences” as a means to involve communities in decision making. Thus, Environmental Partnership, from a theoretical angle, is supposed to involve a range of stakeholders to find a solution for specific environmental issues or challenges. It allows the study to go beyond merely describing the partnership by looking into the dynamics that unfold within a specific Environmental Partnership. By so doing, it further looks at commonality and the conflicts among partnership stakeholders as critical components of partnership formation and practices. This leads to a significant question such as, what constitutes an Environmental Partnership? What role does each partnership stakeholder play in the environmental decision making using Environmental Partnership? These questions are crucial in deepening the debate about the nature and success of Environmental Partnership arrangements.

The chapter first provides the underpinning theoretical construct of Environmental Partnership as provided by Long and Arnold (1995). This theory of Environmental Partnership provides insight regarding the nature and the daily practices thereof. The Environmental Partnership Map and Environmental Partnership Lifecycle are discussed in detail to show how partnership projects can be located to measure their success.

The second aspect of the chapter focuses on the relevant theoretical debates within the field of Environmental Partnership.

3.2 THE THEORETICAL DEBATE: MEASURING THE SUCCESS OF ENVIRONMENTAL PARTNERSHIPS

As emerging bodies of knowledge and literature came about in support of a new participatory approach, Kapoor (2001) highlights the change and importance being brought about with the environment treated in a decentralised, community orientated and holistic manner. Therefore, making environmental decision for socially inclusive for environmental sustainability other than before when nature and people were viewed in a compartmental manner. This resulted in the exploitation of natural resources for real economic growth by using the power within the general bureaucratic system without consideration for any consequences (Kapoor, 2001). By deepening the debate, additional questions to the argument are posed, whether the Environmental Partnership is an essential tool in practice and if it can be institutionalised? How inclusive is it? What institutional arrangements exist or are required for an Environmental Partnership to work and what those power relations imply to ensure participation (Kapoor, 2001)?

It is within this context that the theoretical debate takes us to the role of socio-historical influence with specific reference to non-confrontational practices drawing attention to collaboration as an approach. Poncelet (1998) argues, collaboration creates involvement by participants, diffuses open antagonistic conflict and minimises the levels of arguments to a polite mien of participants. This behaviour caused contending parties to reach a common understanding by drawing from ecological modernisation and collaboration to resolve the environmental problem (Poncelet, 2001). Poncelet (2001) argue that this form of discourse of confrontation – suppression, and practice results in concerns and negativity on the multi-stakeholder partnership. The use of a non-confrontational approach allowed those who were powerful to dominate and those in a less powerful position to systemically be removed.

Here are some of the concerns:

- Active and empowered stakeholders are dealing with the environmental problem as opposed to those who are passive participants.
- High level of diversity of the group and by those empowered stakeholders causing certain individuals to be excluded.

3.3 ENVIRONMENTAL PARTNERSHIP THEORY

Although much has been said about people's participation and involvement on environmental concerns, authors Long and Arnold (1995) in their book entitled, *The Power of Environmental Partnership* enlighten us with the concept of Environmental Partnerships as solutions to environmental problems. Long and Arnold (1995:8) contend that people do partnership work as they form the core of a partnership and it cannot be objectively separated as they conceive, implement and champion them.

It is against this background that Long and Arnold view people as the participants in the partnership which requires committed individuals who mutually own the following characteristics:

- Some source of expertise
- Credibility within their organisation and their sphere of activity
- Ability to learn and listen
- Commitment to the process
- Willingness to move towards unconventional solutions
- Ability to neutralise potentially explosive situations
- Delegation skills and willingness to accept the implications of participant's empowerment
- Have the capacity to serve a "window" into the source of expertise
- Knowledge of how to erode, run or obliterate barriers
- Knowledge of the group's abilities and the pace that will maximise performance

This new mindset led various professionals and environmental activists working unwaveringly at drafting new innovative pieces of environmental laws. Thus, the new paradigm shift in thought and action were announced in the Brundtland Commission Report which viewed the environment as an integral part of societal goals (Long & Arnold, 1995:27-28). Long and Arnold (1995:49) argue that the success of these partnerships became evident as a result of individuals' commitment and their creativity, their stewardship of which the actual success of the partnership lied within the design and the implementation elements of the partnership.

Furthermore, another dimension brought to the debate was how the partnership works of which Long and Arnold's (1995) theoretical tools were designed to examine the partnership

and the conditions on which the partnership emerged (Long & Arnold, 1995:50). It is within this context that the core of the chapter, the Environmental Partnership Theory of Long and Arnold, provides us with an insight into the workings of the partnership and the management strategies deployed. Inclusive are the tools used which resulted in theoretical frameworks designed by Long and Arnold. It is within these frameworks that a broader perspective and analysis of the partnership through the Environmental Partnership theory (Long & Arnold, 1995:50) are provided.

3.4 THE VALUE OF ENVIRONMENTAL PARTNERSHIPS

It is believed that people who bring knowledge, skills and expertise to a partnership also gives value to the process, societal and organisational objectives which the partnership sets out to achieve. In Long and Arnold's (1995) framework for Environmental Partnerships which was developed within the business world, much debate was brought to the value of Environmental Partnership, their processes and environmental decision making as participants from a natural resource arena got more involved, allowing for higher improved environmental quality to emerge while reducing degradation in some other arenas (Long & Arnold, 1995:4). This action resulted in a more significant burden being placed on the decision making process and for a more effective and equitable solution to the environmental challenge being addressed.

Apart from Long and Arnold, many scholars in the field are of the view that the theory of Environmental Partnerships could lead to environmental concerns being addressed in an integrated manner. In support of this thinking, Long and Arnold provide verifiable information in their book entitled, *The Power of Environmental Partnerships* which reflects the effectiveness of the emerging phenomena to the environmental challenge. It is within this setting that Long and Arnold's (1995) framework for Environmental Partnerships features the value of what a partnership generates, the proactive involvement of stakeholders to resolve the value differences and the success factors in the quest to a successful partnership. Therefore, Long and Arnold's model addresses the value of Environmental Partnerships with the aim to prevent unenviable conflict and to provide individual parties with the opportunities to compete with their respective industries or with their organisations. The significance is drawn to the interactive value which the partnership holds when seeking solutions in a more strategic and sustainable manner. Environmentalists such as Long and Arnold present that these approaches were becoming the most attractive and pragmatic in dealing with environmental problems interactively.

Societal benefits of successful Environmental Partnerships are believed to be:

- Improved effectiveness
- Increased efficiency
- Enhanced equity
- Effective fulfilment of missions
- Stakeholders access to a broader resource base and
- Improved participant morale and public relations

However, Long and Arnold caution against, for various reasons to be mindful, not all partnerships achieve their benefits or potential.

3.4.1 Classifying Environmental Partnerships

Classifying environmental partnerships triggered the design for a new framework to analyse and to determine the partnership project type. Leaders, organisations, community environmentalist, activists and government stakeholders should apply the “life cycle” approach to understand the partnership type by making use of tools such as the Partnership Life Cycle (PLC) and Environmental Partnership Map (EPM) developed by Long and Arnold (1995). These tools would assist with analysing the process and the potential benefits and risks it holds (Long & Arnold, 1995:10-13).

3.4.2 Environmental Partnership Life Cycle (EPLC)

Although Long and Arnold, in their work, demonstrated the importance of Environmental Partnerships, the question asked is what elements contribute to the Environmental Partnership? From the many examples they have experienced, various organisations and individuals who faced environmental problems, already transformed their thinking away from the conventional approach of dealing with environmental issues? Therefore, Long and Arnold argue that the Partnership Life Cycle (PLC) tool is a useful device to analyse and describe the Environmental Partnership to understand the actual workings of the partnership’s key to success. It is within this context that the partnership travels through distinctive phases from the Seed Phase, through the Initiation Phase, to the Execution Phase and finally the Closure/ Renewal Phase. Figure 3.1 shows the phase the partnership moves through.

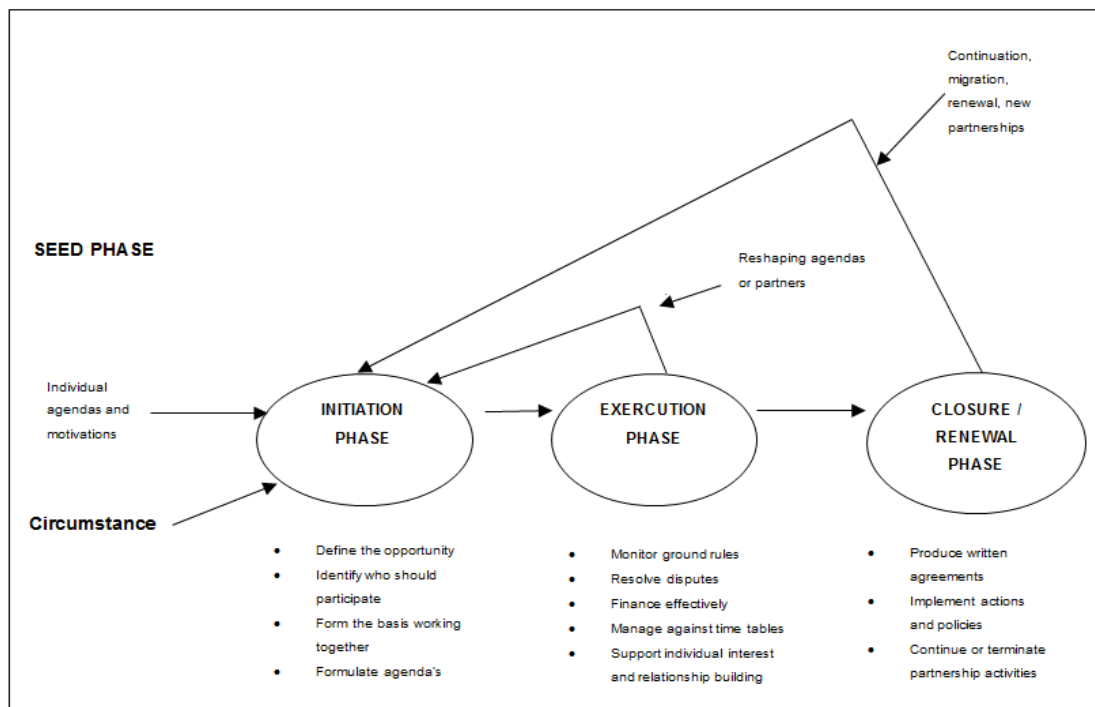


Figure 3.1: Partnership Life Cycle (PLC)

(Source: Long and Arnold, 1995:11)

Figure 3.1 depicts the life cycle of the partnership and the characteristics of the partnership it takes when it moves through the phases once it emerges. However, before the Seed Phase commences, the concepts are marketed and sold as they represent the first step in the process known as the Seed Phase. It is within this phase that Long and Arnold argue that those individuals should have the ability to initiate new ideas, have the boldness to champion the unusual ideas, and have the tenacity to see it through (Long & Arnold, 1995:10).

After the Seed phase, the Initiation phase follows which provides the platform for discussions between stakeholder groups and individuals on the operations of the partnership. Participants brainstorm on critical issues, establishing and sharing scientific data to find solutions to the environmental problem. During this phase, roles and responsibilities are defined, goals are set, and experts called in to fill-in the knowledge gap or to resolve conflict matters. Thereafter the Execution phase commences. At this point, while defining the solution, the issue is given more substance, brainstormed and discussed, more scientific data shared, identified and reconciled including alternatives being discussed.

This is evident to those who have a vested interest in the Initiation phase and seeing the benefits that the process provides (Long & Arnold, 1995:10-13). The PLC process concludes with the Closure/ Renewal phase. During this phase, partners are allowed to communicate their findings and decipher the required actions to be undertaken. It is within this phase that

participants decide whether they wish to continue with the partnership in the present form, or to terminate the partnership or to modify it (Long & Arnold, 1995:13). Long and Arnold (ibid) argue that partnerships are about people, therefore, cannot be separated as they are the single most determinants of a partnership. They champion, coordinate and sell the Environmental Partnership which holds the relationships that occur (Long & Arnold, 1995:13).

3.4.3 Environmental Partnership Map (EPM)

With the emergence of partnerships, Long and Arnold (1995) provide a newly developed Environmental Partnership Framework and tools, which allowed for the assessment of the partnership and circumstances that emerged. This framework was called the Environmental Partnership Map (EPM). The map, which is based on two parameters, would give a more in-depth understanding of how the partnership worked and where the partnership is located. As noted by Long and Arnold (ibid), the two parameters are pertinent to the process before a partnership can be classified as it indicates the degree of conflict, the degree of relevance. The degree of conflict becomes pivotal in the development of any environmental plans formulated. The level of conflict would range from high to moderate to low; meaning high conflict would highlight and result in punitive action between parties, battle publicity and have great concern for underlying environmental issues. The moderate conflict would cause parties to know each other and describe their disagreements but would not decree this publicly. An Environmental Partnership with a low conflict can be best described as parties knowing each other or vying in some context or another where the parties have a common interest or goal to improve the environmental conditions (Long & Arnold, 1995: 57-59).

The second parameter deals with the Degree of Relevance or the overlap of the partnership goals to each other or the organisation's mission (Long & Arnold, 1995:59). It is within this parameter that the partnership is viewed on how the goal or the operations are affected, whether the operations are profoundly affected and the magnitude of the resources invested. Long and Arnold (1995) argue that if the partnership is viewed as a "do good" project, the project is likely to have less attention and not seen as critical and most likely be neglected. Like the conflict parameter, the Degree of Relevance parameter would consider the levels of involvement of participants. The scale ranges from high to moderate to low; high when these participants in the partnership regard their process as a "life or death," and it is almost too late for the environmental issue to be resolved. This would result in raging debates over developments, the protection of the natural resource, associated impacts for the future and

undesirable consequences. Moderate relevance regards the environmental issue of importance but not critical to all participants. Such an example would be the collaboration between parties agreeing to resolve an environmental issue to be within a particular timeframe showing their commitment and believing in working towards the issue and importance thereof. Low Relevance described the participants' view of the project as not a high priority and would most likely not get involved in the project. Within low relevance, the ideal would be to have one party consider the partnership and the issue important enough to get involved as long as the processes do not cause any inconvenience to them or take up their time or resources from those involved (Long & Arnold, 1995:60). This degree of conflict over the environmental issue and the degree of overlap between the partnerships goals and the organisational missions defines four types of partnerships: Pre-emptive, Coalescing, Exploration and Leverage Partnerships.

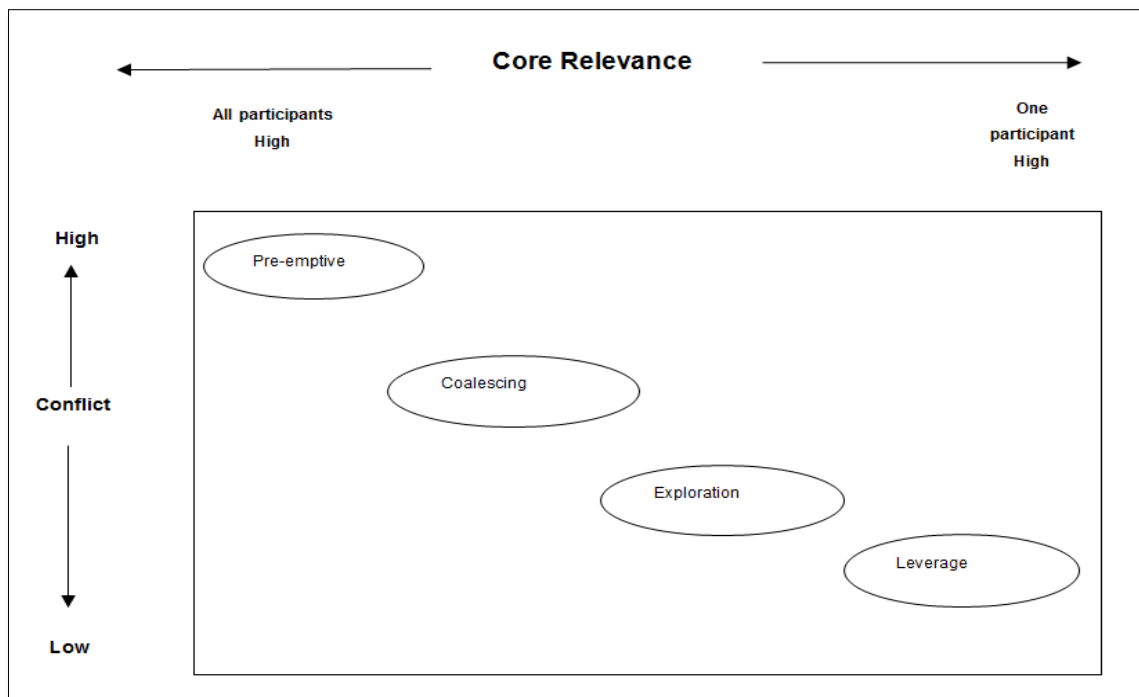


Figure 3.2: Environmental Partnership Map (EPM)

(Source: Long and Arnold, 1995: 61)

Figure 3.2 shows the type of partnerships which are described in this section. According to Long and Arnold (1995), a *Pre-emptive Partnership* is a partnership with a high conflict parameter which is fear and hostile in nature. Seeing any opportunities within this partnership is distorted in the beginning due to the high conflict that exists among the participants. Therefore, a pre-emptive partnership has high core relevance which is indicative of the high levels of hostility among partners. It is within this context that threats or

irreversible damage could occur, primarily if litigation actions and a public confrontation occur.

Coalescing Partnership, within these partnerships, the participants are brought together and are interdependent to attain the common goal of the organisation. Their ability can further characterise this partnership. It has to bring rivals together and disarm threats or disagreements that exist. When placing Coalescing on the scale, the partnership shows some conflict despite the party's collaboration and the aim to enhance the environmental quality. *Exploration Partnership* has a much lower level of conflict and the tendency to have a higher level of participation. *Leverage Partnership* seeks a win-win result with a modest contribution, a high expectancy and return on investment on the social, political and financial front. If Leverage is placed on the EPM, the partnership shows a low core relevance and conflict parameter claiming to have only one group or party dealing with the central issue of concern. Therefore, Long and Arnold (1995) argue and draw our attention to the positioning of the partnership on the scale which shows that they do not always fall precisely on a solo point. Although Long and Arnold provides an understanding of the four partnership typologies, the usefulness of the partnership only becomes clear through the detailed case studies they have investigated. It is with these tools that Long and Arnold (ibid) provide the practitioner with the ability to identify a pattern of actions, success factors and how to utilise EPM as a planning tool for partners involved. In the case of this study the type of partnership investigated was an exploration partnership as it took on those characteristics which Long and Arnold refers to as shown in figure 3.1.

3.5 MEASURING THE DIRECT AND INDIRECT BENEFITS OF PARTNERSHIPS

Assessing Environmental Partnerships has become very challenging because of the quality of the environmental goals set out and resource conservation components that in themselves are very difficult to evaluate. Surprisingly, Environmental Partnerships are rarely evaluated given their novelty as a solution for environmental challenges (Long & Arnold, 1995). Many would face various barriers which could result in the partnership being short-lived unless the partnerships unequivocally showcase their value, both on a stand-alone basis and against alternative courses of actions. This direct benefit usually result in meaningful discussion to improve partnership among the original participants by bringing the partnerships into existence.

While indirect benefit does not involve and convince the original participants to form a partnership, Long and Arnold (1995) argue that the quality of the Environmental Partnerships can be assessed on three levels:

- **Environmental Goals:** Whether the project accomplished its objective to improve a specific element of environmental quality? Did it increase the efficacy, efficiency or equity of achieving this environmental quality?
- **Indirect Benefits:** Did the project produce benefits not directly related to the central environmental issue?
- **Process Management:** How well did the process of partnering work?

(Source: Long and Arnold, 1995: 153)

Long and Arnold describe the levels as;

- The first level is to assess the partnership and to establish whether or not the participants have contributed directly or indirectly to solving the environmental problem or to improving the environmental quality.
- The second level of the assessment incorporate all benefits, other than those central to the environmental issue. In other words, improvements that lead to a new collaboration would be seen as an indirect benefit.
- The third level of the assessment, focusses on participant's performances, which are measured against their counterparts from a process and management perspective. It is said that, should this be done during the partnership stage, it could lead to adjustment and ultimately to improve outcomes of the first two levels of the partnership assessment (Long & Arnold, 1995:153-154).

The McDonald's fast foods were one particular case study of the many which were reviewed by Long and Arnold with particular attention drawn to the collaborative partnership which ameliorated environmental quality in their manufacturing stream and reduced solid waste (Long & Arnold, 1995:161-162). When McDonald's started the partnership process it was slow and many questions asked pertaining to waste management specialist, science and economics were unanswered. Once McDonald's included their packaging manager and their manager production and innovations, the process resulted in the Task Force producing a report in a shorter timeframe as to the timeframe it took stakeholders to agree to work together. In addition additional visits took place to independent recycling companies and facilities of McDonald suppliers.

3.6 PRINCIPLES OF ENVIRONMENTAL PARTNERSHIPS

For Slater, Frederickson, Thomas, Wield and Potter (2007) partnerships in Waste Management and recycling have increased over time especially on strategic and operational levels. However, Slater *et al.* (2007) also argues that the workings of a partnership were not fully understood hence the development of a framework which comprised of the six principles:

- Acknowledge the need for the partnership
- Clarity and realism of the purpose
- Commitment and ownership
- Development and maintenance of the trust
- Establishment of transparent and robust partnership arrangements
- Monitoring, review and organisational success

Drawing from this theory, these principles were used in the analysis of the current study to assess the partnership.

3.7 CONCLUSION

This chapter is presents the theoretical framework of partnerships, with a particular focus to the issue of partnerships in waste management located within the broader theoretical debate of environmental partnerships. It is within this context that the researcher reviewed and introduces the theory of Long and Arnold in the field of Environmental Partnerships. In addition, the associated benefits with such a partnership, the Classifying tools such as the Environmental Partnership Map and the Environmental Partnership Cycle which provides the distinct classification of the partnership type. Furthermore, Environmental Partnerships are perceived to be valuable and it is at this critical point that Long and Arnold (1995: 43-45) caution us on the barriers which limit the formation of an Environmental Partnership such as psychological barriers the partnership holds, mistrust, fear of losing control, pre-conceptions and misunderstandings. Within this context, many scholars in the field acknowledge the emerging need for participatory environmental management partnerships as a decision making tool that could lead to the improvement in resolving environmental problems by bridging the gap between institutional bureaucratic systems, greater community relations and stakeholder involvement.

Even though authors Long and Arnold explicitly see partnerships as an area of high opportunity, they are aware of the difference between those who are inactive in the partnership against those who immensely contribute to the success of the process. Long and Arnold argue that partnerships must result in actions by the participants of the policymakers to be considered successful (See Long & Arnold, 1995). From a sustainability perspective, Long and Arnold (1995:170) argue that the success or failure of an Environmental Partnership depends on three primary categories such as strong people, well-defined stewardship with goals and effective capacity building. While these authors are of the view that people are central to the partnership success, Long and Arnold also argue that Environmental Partnerships are not products or processes drawn from a mould. However, that they form part of an experiment that requires visionary thinking, creativity and a willingness to break from traditional ways of practice (Long & Arnold, 1995:170).

CHAPTER FOUR

RESEARCH METHODOLOGY AND DESIGN

4.1 INTRODUCTION

The research design adopted for this study was informed by the research question and its purpose with the fundamental aim to assess the Green Zone Partnership as a solution to the problem of littering and illegal dumping in the Bonteheuwel community. To locate the study within the broader theoretical context, the Environmental Partnership theory as a framework was used to assess whether or not the Green Zone Partnership improved the environmental conditions in the study area. Therefore, the extent to which this partnership succeeded in achieving its intended outcomes was reliant on the key stakeholders and the community's participation in the partnership arrangement. Thus, the research design adopted was a qualitative methodological design in order to investigate the phenomenon through the collection of data from those key informants who were, directly and indirectly, involved in the partnership project. This methodological design also revealed the dynamics and the complex nature of the partnership project in its natural setting (Mack, Woodsong, MacQueen, Guest & Namey, 2005). It is thus crucial to note, as Kothari (1990) argues, that the appropriateness of the design method and theories allows for a researcher to study the subjects (respondents) and its complexity which gives effect to the analysis that would provide better understanding of the subject and the people's involvement in the partnership arrangement. Furthermore, unlike quantitative research, qualitative research is based on the phenomenon and in the case of this study; the Green Zone Partnership is considered the qualitative phenomenon which allowed the researcher to follow some research design techniques appropriate to collecting data from the key informants. Thus, the research methodology adopted in the study was primarily informed by the type of questions raised. These were:

- What were the circumstances that led to the establishment of the Environmental Partnership?
- Was the locality of the Environmental Partnership mapped accordingly to the tools of Long and Arnold?
- What were the envisaged benefits of the Environmental Partnership?
- What are the views expressed of by the community and the partnership stakeholders about the Environmental Partnership project?

4.2 RESEARCH METHODOLOGY AND DESIGN

Once the research problem was defined, the study started with the formidable task of the conceptual structure which would underpin the research inquiry. This structure, comprises a number of elements such as the data collection and data analysis, formed this study's research design (Kothari, 1990). The methods adopted for the collection of relevant data and the use of suitable techniques underpinned the research project and the outcomes to the research questions as mentioned in the above section. Thus, given the research problem and outlined questions, the research design strategies employed enabled the researcher to unpack the dynamics and the complexities of those informants who participated in the Environmental Partnership, within their natural setting (Mack et al., 2005). However, the research design adopted attempted to locate the study within the broader theoretical context through the data collected. The data yielded maximum information through the disclosure of first-hand information of the participant's interpretation of the problem and phenomenon. It is within this research that various instruments of data collection were employed, capable of influencing practices or policies and potentially making a contribution to the development of theory (Davies, 2007:136).

Creswell (2009) argues that all research is underpinned by a philosophical approach which carries assumptions that the researcher inquires. This approach led to the researched phenomenon being inseparable from the researcher, giving shape to the researcher's experiences when collecting the data and analysing it. One advantage is the close collaboration between the researcher and the participants while enabling participants to tell their story (Baxter & Jack, 2008). Pope, Ziebland and Mays (2006) argue that this approach delivers a vast amount of data from verbatim notes, transcribed recordings of interviews, jotted notes, detailed field notes, qualitative observation and chronological accounts of events to the researcher's reflective notes. Thus, allowing the researcher to use the naturalistic approach by studying the topic in the context-specific real-world settings while seeking to understand the phenomenon (Golafshani, 2003). However, this does not mean that the research design was purely deductive. However, the data that was collected would in no small extent engage the theoretical angle adopted in this study. Thus, within the qualitative study, the researcher followed the logic, from the ground up instead of relying entirely on the theory or from the perspectives of the inquirer (Creswell, 2009). It is at this point that the researcher started to engage with the context of the topic and all the particular details before generalisation dealing with the research problem systematically

(Kothari, 1990:10-11). Thus, the research study began with the problem identification setting the theoretical framework to the research questions and assessing the participatory partnership arrangement to achieve a result. It is within this study that the research questions raised provided the necessary scope in which the research design was formulated which was interpretative due to the qualitative nature (Creswell, 2009) of the study.

4.3 SAMPLING STRATEGY

As Kothari (1990) argue, within any field of inquiry, a population or universe exists. Within this research, there were a range of informants that were present. These informants were identified and selected because of the historically rich information they possessed and answers to the partnership in question which could not be quantified because of its qualitative nature. As Curry, Nembhard and Bradley (2009) argue, that those informants selected were “information rich” because of their detailed knowledge on the phenomenon. Therefore, the overall research sampling technique followed for this study was a non-probability sampling procedure which allowed the researcher to select its informants to achieve trustworthiness purposively. Also, because the research study was qualitative where in a combination of purposive and random sampling techniques was employed to select the relevant informants.

The purposive sampling technique applied was critical and relevant when selecting critical informants as they were actively involved in the GZP project. These included, among others; individual respondents from the city council, city officials from the Waste Management department of the City of Cape Town as well as community leaders who were involved in the partnership project. As Mack et al. (2005) state, purposive sampling allows the researcher to select critical participants who will then be interviewed based on their experience, knowledge, position and background about the subject being researched. Furthermore, the research also applied random sampling to determine how the general population perceived and felt about the environmental problem investigated and to evaluate the partnership. This approach allowed that each member in the population had an equal chance, like any other member in the sample, of being included (Mellville & Goddard 1996: 31). It was during this process that the researcher was referred to other informants who provided further insight into the problem. In this study, the respondents in the household survey were randomly selected based on their physical proximity to the site(s) where illegal dumping and littering took place and for having the necessary information to be surveyed. Also, the key function of the survey was to ask respondents critical questions that were entirely directed to the inquiry

and the conditions that existed. In other words, the questions asked in the interview survey were pertinent as they would perform the actual interrogation for the research inquiry (Alreck & Settle; 2004:89).

These techniques employed, Dolores and Tongco (2007) argue, validate those findings while gathering crucial data in the research process as it contributes to a better understanding of the phenomenon. In the case of this research study, the sample size was small but sufficient enough for the data to be analysed and results to be generated for any suggestions. In this study, the sample population size consisted of 20 community street representatives and four informants referred to who contributed to the study's inquiry (Mack et al. 2003). The community street representatives who embodied their various streets and were part of the partnership provided the history and information to the phenomenon in question. These representatives were highly regarded by the community and seen as the voice of their people who lived within the study population. The key informants selected from the professional stream were those key city officials who formed part of the partnership and possessed a deeper understanding of the problems of the study population. These officials represented their various roles and responsibilities operating within the area. Also, part of the critical informants comprised of the political structures including the city sub-council officials who were drivers to the partnership and responsible for the service delivery needs of the people. Thus, considering the above and central to the study, the researcher adopted a case study approach to understand the phenomenon (Baxter, 2008) better.

4.4 DATA COLLECTION

Within the qualitative process, various approaches have been developed to study a phenomenon in its natural setting and to address the research inquiry. Choosing the appropriate data collection procedure for this study, Creswell (2009) argues, flows from the research question that leads to the type of qualitative data to be collected. For this study which was purposive, the data collection procedure involved interviews, observations and documentary analysis. Generating the data from these procedures provided the researcher with a crucial understanding of the phenomenon, peoples' beliefs and gave insight to peoples' perspectives and interpretations (Ritchie & Lewis; 2003). Ritchie and Lewis (ibid) further present that it requires a different way in how the data can be generated. Methods of data collection also begin after the research problem has been planned or designed (Kothari, 1990). In the case of this research study, some methods were employed to collect the information from the key informants as discussed.

4.4.1 Interview Method

Interviews, although a widely used method, were chosen for this study as they uncovered the deep-rooted issues individuals were faced with (Ritchie & Lewis, 2003). They also provided the researcher with insight to the individual's perspectives, their feelings with regard to the context in which the phenomenon resides and the complexity attached to the research inquiry as Ritchie and Lewis (ibid, 2003) argue.

This method also allows a researcher to engage with informants on points of clarity and to gather a detailed understanding of the inquiry. For this study, in-depth interview was used to elicit the data that was required to understand the inquiry. For the interview process, semi-structured questionnaires were designed for those informants. The first questionnaire was drawn from the community representatives and the community facilitators who were involved in the Green Zone project. These participants give insight into their involvement and their experiences on the research topic (Appendix 3). The second questionnaire paid attention to the involvement of the professional stream and their contribution towards the Environmental Partnership (Appendix 5). Before the research was undertaken, the researcher telephonically informed and discussed the study with the identified participants. Furthermore, this type of technique required the researcher to obtain the necessary permission before the research could be conducted (Appendix 1 and 2) ensuring that all ethical conditions were observed (Appendix 1). For the respective person(s) who wished to remain anonymous, the researcher maintained their anonymity to respect the trust relationship with the informant.

This ensured that respondents were not abused or exploited during the research process (Mack et al., 2005:9). Obtaining interviews with the community participants posed a slight challenge as some the participant's contact details changed. However, this was swiftly resolved as a participant formed the critical contact link to those who needed to be engaged. One of the participants relocated and another two were unreachable. However, the investigator could engage with all of the identified and selected participants through the sub-council structure and the street committee which connected the researcher to the informants. Interviews were conducted in English and Afrikaans and within the familiarity and comfortability space of the participant's homes and surroundings. Other places of interviews were within the City Parks recreational facility, the library and at a non-governmental institution.

For the professional stream of stakeholders, interviews were conducted within their confines of the sub-council office. Meanwhile the educator's interview took place within the school environment which is located within the study area. City officials were interviewed at their respective offices to ensure a feeling of safety and trust. To ensure that all the relevant information was gathered during the interview process, the researcher also recorded handwritten notes. This was useful as the notes provided a broader insight into the phenomenon and peoples' experiences in the situation. Further to the research inquiry, the researcher also took photographic images as evidence to the partnership outcomes as seen in images 4, 5 and 6.

4.4.2 In-depth Interviews

The technique provided the researcher with an interpretative perspective on the phenomenon and people's beliefs, opinions and experiences (Mack, et al. 2005:30). To elicit the data, the researcher followed the in-depth interviews technique by engaging the informant on a face to face basis, conducting the semi-structured interviews accompanied by the interviewer's notes. Through this technique, the data generated provided insight to the phenomenon's efficiency and sustainability, the impact on people's beliefs and day to day lives.

This brings us to a critical point in the technique employed. The researcher was privileged to be entrusted by the respondent and allowed into their private lives. Thus, participants were informed of their privacy rights and the confidentiality attached to the study protocol. This also allowed the researcher to listen carefully and attentively to the participants and probe for further responses on follow up questions, to clarify or to explain.

4.4.3 Observation Method

As Ritchie and Lewis (2003: 35) argue, observations offer an opportunity to record interactions and analyse the behaviour as it occurs within the sample population, yet remaining an outsider to the study area. This also allowed the researcher to see how things or interactions unfolded without influencing or constructing a performance for those involved (Ritchie & Lewis, 2003). Therefore, this technique was a useful approach as it formed an essential element to the phenomenon under investigation. Also, it allowed the researcher to spend time with the participants as an observer other than a participant.

Therefore, the necessary data gathered through observation in the field revealed the following:

- From the partnership list, only a few interventions materialised from the planned activity list developed by the partnership.
- Illegally dumped waste was overall still present in the area.
- The re-developed and upgraded community play park transformed from dumpsite to a clean and conducive play area for the children.
- Ownership by residents demonstrated no dumping zone as the park was in a pristine state.
- The development of the planned satellite waste drop off site never materialised as the site remained full of illegally dumped waste material.
- Temporary employment of people through the extended public works programme was seen removing illegally dumped waste and clean litter from streets, but no recycling opportunities could be seen to stimulate the area's economic growth.

4.4.4 Case Study Method

Since the study occurred in a specific area, the research adopted a case study approach to gather qualitative data from the participants. This was central to answering the research question. The case study approach is a “systematic inquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest” (Bromley, 1990: 302 in Zucker, 2009). The case study approach has been used in scientific research over the years to answer research questions. This kind of study approach is particularly insightful because, as Yin (1994) explains, it presents a multi-faceted understanding of not just a few participants but all relevant stakeholders in the phenomenon under investigation. Therefore, the researcher applied this approach to answer questions such as “how” or “why” the partnership stakeholders’ view the partnership project (Yin, 1994). Therefore, the case study approach provided better insight into the Environmental Partnership phenomenon (Long & Arnold, 1995).

4.4.5 Community Survey

This study also employed the community survey technique for the data collection process. The purpose of this technique was to ensure that the broader community are involved and to obtain insight as to their understanding of the Green Zone Partnership as well as their

involvement or contribution to the partnership. Also, the survey would allow for individuals to share their views as to any value or benefits received by the Green Zone Partnership.

This technique created mutual respect, understanding of each individual's unique response within the context of the partnership and within the context of the Bonteheuwel community.

4.5 DATA SOURCES

While the data collection methods employed played a critical component in understanding the phenomenon of interest, Baxter and Jack (2008: 554) argue that the trademark of a case study lies within the use of multiple data sources as a strategy which enhances the credibility of the data. Within this study, both potentially primary and secondary data sources were consulted.

4.5.1 Primary Sources

According to Baxter and Jack (2008), the collection of data in a case study approach is unique in comparison with other qualitative studies as it allows the investigator to collect and interrogate the phenomenon being studied. In this study, the primary source of data collection were the interviews conducted, engagements with participants within the case study, observations, taking field notes and photos of the case study area.

4.5.1.1 Survey Instrument

For the case study method, survey instrumentation was core in gathering the primary data and translating the information needs in a form that would elicit data from the respondents (Alreck & Settle; 2004). The survey instrument in itself included the survey questionnaire and ancillary information such as the cover letter to the participant. For this study, the survey was expressed in words to elicit the information in simple vocabulary. The question was simple with a logical path in mind by the researcher to elicit the responses. Furthermore, the construction of the questions was also simple and straight forward so to avoid the participants finding difficulties in their responses.

As Alreck and Settle (2004:94) argue, the selection of sentences, words in the vocabulary's true test lie within the data being generated, that is reliable, valid and free from errors. This is crucial for interpreting the data later in the qualitative analysis. According to Alreck and Settle (2004), survey instrumentation is the most reliable way of obtaining information that is

needed for a study. It is also seen as a quick, easy way which is less expensive and the more accurate way to obtain the relevant information (Alreck & Settle, 2004:3). For the primary data collection approach, two survey questionnaires independently were designed or constructed to elicit information from the key informants which comprised of both closed and open-ended questions. Therefore, the central aspect of the questionnaires was to construct structured questions that would address the aim of the research study and to probe for further information on the phenomenon. Thus, the study avoided posing questions that would place considerable strain on the informant's intellect to respond, or questions directed at the respondent's personal character or economic status (Kothari, 1990).

4.5.2 Secondary Data Sources

The nature of this study required analysis of secondary data. Therefore it was imperative to identify reliable secondary data. The researcher reviewed official documents such as resolutions made by the sub-council and plans developed by Solid Waste Management in collaboration with the sub-council and the community. Documents published by the roads and stormwater department of the local context and also various literature materials such as published journal articles and textbooks which provided the researcher with a holistic understanding of the phenomenon being studied. All these sources were particularly useful to the study through providing a broader perspective and a deeper understanding of the issue investigated. . Baxter and Jack (2008) argue that data sources when intertwined and converged add strength to the findings and understanding to the case study under inquiry.

4.6 DATA ANALYSIS

The qualitative research data collected provided a large amount of information after analysis in a detailed text form. According to Miles and Huberman (1994), thematic analysis is appropriate for qualitative data, more especially when the study seeks to discover, using interpretation. Within this study and like with many others, the interviews conducted provided the researcher with detailed notes with a new challenge, to make sense out of the text which later resulted into the analysis and interpretation.

Pope, Ziebland and Mays (2006) argue that data analysis already starts during the information gathering stage as the data are continually being reflected upon, interpreted and written up by the researcher as the interviews proceed. This process allows the researcher to ask further questions that refine the data collected and the exploration of new avenues of

inquiry (Pope, et al. 2006). Therefore, this study adopted the thematic data analysis method. Before the data was analysed, there are procedures that were followed. These procedures are:

- Familiarisation process for all the data collected using all the specified research techniques carried out. Data generated included all notes made in the field and during the observations.
- The collected data was thematically coded. The researcher applied the first level coding by identifying apparent themes that emerged from the data collected and all the descriptive, concrete ideas that were presented by interviewees. Data was labelled (coded) the identified salient ideas within the data sets that relate to the research question.
- During this stage, the researcher examined the codes to extract themes that indicate broader patterns of meaning that were significant to the research question.
- The codes recorded resulted in critical themes being highlighted in the data in an attempt to answer the inquiry.
- Themes were further reviewed by the researcher and checked against the dataset to verify their relevance and validity.
- Furthermore, evidence from the dataset was extracted to give legitimacy to each theme identified. Thereafter, themes were categorised into broad themes (parent themes or 'second level codes) and sub-themes.
- During this process the researcher finalised the defined themes that were generated for the final reporting which included the final themes contextualised within the framework of the research question.

Finally, data analysis was carried out using a statistical analysis software application known as the Statistical Package for Social Science programme. Through this programme, relevant graphs were generated based on the data captured through the questionnaires completed by the participants. The software programme used allowed the researcher to interact and work with the Cape Peninsula University of Technology's statistician who evaluated and validated the questionnaires and their strength. After that, the data collected were assessed by the researcher before being analysed by the statistician. All datasets were then expressed on graphs and in numerical values which were interpreted qualitatively.

4.7 ETHICAL CONSIDERATIONS

This study involved the participation of various individuals which would provide insight to the problem and the circumstances that led to the formation of the Green Zone Partnership. Therefore, it was required by the researcher to engage with those participants or the persons for their co-operation and involvement in the study. Furthermore, it allowed the researcher to gain access to schools, residents and council officials. This required the researcher to obtain from individuals, or persons formal consent to engage with them (Appendix 2 and 3). As Mack (*et al.*, 2005:8) indicated, research is an act of engagement between the researcher and the participant of which ethics assist with the establishment of agreed-upon standards that ensures that proper research ethics are held and conducted and that research is based on the premise of trust between the researcher and the participant. Furthermore, the researcher ensured respect for persons who wished to remain anonymous by retaining their anonymity. In this case study, participants and the municipality were dealt with according to the research ethics as stated in the latter. The researcher upheld all research ethics guidelines. At the beginning of the research, letters were drafted to the relevant respondents for their participation in the research study before conducting the interviews. Therefore, a permission letter was first provided for approval before the interview proceeded (Appendix 2). All permission requests were accompanied by CPUT's Health and Wellness Sciences Research Ethics Committee (Appendix 1).

4.8 STRENGTHS AND LIMITATIONS OF THE METHOD USED

To achieve the intended aim of the study, it was important that the views of the selected participants were captured as authentically as possible. Qualitative research provides the necessary setting to do so and has become an important tool in the broader approach of applied Science (Mack *et al.*, 2005). By using the qualitative research method, the researcher was able to obtain data from a small sample group. This contextually rich data provided valuable insight into the local perspectives of the study population. Another advantage to this method was the financial viability as the sample group was small.

Despite the strengths associated with this study methods, the following limitations associated with the research are:

- The availability of politicians due to local government elections' preparations provided some delays in conducting the interviews.
- The number of participating politicians was limited, and although the views and opinions were expressed widely, it might not represent the views of all the constituents.
- The case study area, which is a high gang infested area, restricted the researcher from entering the area alone and required an accompanied person from a safety perspective.
- Although secondary data sources was also reviewed which provided historical information of the study area, data collected was confined to the primary source, the informants who represented the street committees and the study.

4.9 CONCLUSION

This chapter explains the research design and methodology adopted in this study. Also, the chapter discussed the qualitative research approach that adopted for this study. Thus, the chapter demonstrated the methods employed for this study and the processes it undertook from the inception stage when the researcher collected the data to the analysis stage. Also, whilst the chapter's aim was to discuss the research and methodological design adopted, it is important to note that it demonstrated how the research question or topic influenced the preferred choice of data collection methods. This allowed the researcher to employ the appropriate methods to answer the research question and topic. In addition the chapter discussed a range of data collection techniques such as a community survey and the face to face in-depth interviews with key stakeholder partners. Finally data analysis adopted is also outlined, in addition ethical standards adopted in this study are also discussed.

CHAPTER FIVE

PRESENTING THE RESULTS

5.1 INTRODUCTION

This chapter aims to present the research results in a way to attempt to answer the research question of whether or not the Green Zone Environmental Partnership was a solution to improve the littering and illegal dumping problem in the Bonteheuwel community. To answer this question, the researcher conducted interviews on the issue with key stakeholders. At this point, the researcher brings attention to those objectives of the study with particular attention to the participants' attitude towards the problem, their response as to how they viewed the partnership the extent to which participating partners benefitted from the partnership and most importantly, if the partnership changed the environmental conditions in a positive way. The objectives of the study are as follows:

- To determine the circumstances that led to the establishment of the Green Zone Partnership between the City of Cape Town and Bonteheuwel community.
- To find out what the views of the community and partnership stakeholders are towards the Green Zone Partnership project.
- To find out whether or not the Green Zone Partnership has improved environmental quality by reducing littering and illegal dumping in the area.
- To identify the benefits of the Green Zone Partnership towards the partnership stakeholders and the community.

Before presenting the results, it is important to note that employing the Theory of Environmental Partnership by Long and Arnold (1995) the Partnership Life Cycle and the Environmental Partnership Map were critical in the analysis of the Green Zone Partnership project as seen in chapter six of this thesis. The following section addresses the first objective of the study.

5.2 THE CIRCUMSTANCES LEADING UP TO THE FORMATION OF THE GREEN ZONE PARTNERSHIP

To fully understand the presentation of the empirical data, it is necessary to discuss the circumstances that led to the formation of the Green Zone Partnership. In Chapter one, the researcher introduced the study area and the social context in which the partnership emerged. However, in this section the data elicited from the research provides insight into the environmental problem that led to the emergence of the Environmental Partnership.

Given the complexity, it was also evident that further factors such as people's ignorance and challenges with regard to the availability of land for the building of accessible drop off sites created additional reasons for the formation of a collaborative partnership. In this case, key stakeholders saw the need to address these issues through the integration of service delivery across the essential services provided to the residents and to achieve a clean environment. The birth of the Green Zone Partnership Model augmented the notion that people in these partnerships would solve environmental problems collaboratively. The people within the Green Zone were key stakeholders from the community, city officials from respective departments, politicians and the sub-council manager for the Bonteheuwel area. Furthermore, the political structures retained their decision making powers and so did the various municipal departments who formed part of the Green Zone committee to deal with the illegal dumping of waste. However, the Green Zone Partnership's mammoth task was to improve the environmental quality, came with a proliferation of issues that are discussed here.

5.2.1 Proliferation of waste in Bonteheuwel

Despite the various public awareness and education interventions undertaken by Solid Waste Management, waste dumping remained an enormous challenge for the City of Cape Town. For instance, R350 million was spent entirely by the City in the removal and clearing of illegally dumped waste in public open spaces over one financial year (01 July to 31 July of a financial year). Further, the increase in population and a shortage of housing as per census 2011 showed that the number of informal dwellings or backyard dwellers were on the rise and were a significant contributing factor to the illegal dumping of waste problem. In most cases, owners to these premises would not make provision for a second or third bin to accommodate the increased waste as an additional bin would incur a cost. Also recognised, one of Solid Waste Management's core functions is to remove illegally dumped waste and

the enforcement of the Waste Management By-law. However, due to insufficient human resources, the control of illegally dumped waste became imaginably impossible task to perform for Solid Waste By-law enforcement team of 18 members only. These circumstance led to the formation of the Green Zone Partnership.

5.2.2 Impact Caused

Given the circumstances that led to the formation of the Green Zone Partnership a number of critical factors also led to the emergence of the partnership. Some of which are shown in the photo's 5.1.



Blockages to the bulk system due to illegal dumping/ littering causing localised flooding



Blocked Drains Clearing



Litter & dumping in children's play park



Illegal dumping occurring in Netreg road under the bridge

Photo 5.1: Illegal dumping and blockage to the bulk water system

(Source: Jeffares & Green, 2012: Golden Project Summary Report)

From an overall environmental health perspective, the above photos show the impact of indiscriminate dumping of waste whether on the playing grounds for children or it ending up

in the storm water system. Furthermore, the dumping of solid waste also contributed to the pollution of the Jakkalsvlei Canal.

In addition, this behaviour also resulted in health problems being experienced by many residents such as an increase in diarrhea cases being reported to the environmental health officer. The aesthetics of the area being unacceptable, E. coli and faecal coliform counts in the canal falling within “unacceptable” levels including high levels of ammonia, total nitrogen and phosphate levels being persistently high, while dissolved oxygen levels had been counted being natural to fair (PD Naidoo & Associates Consulting Engineers Report, 2011). The report also identified the impact of backyard dwellers in the area as a major contribution to the disposal of waste. Also, the draining to the Jakkalsvlei Canal as a possible source of faecal pollution due to inadequate sanitation facilities with general solid waste runoff.

Furthermore the photos show the social impact the dumping of waste had on the community as playparks intended for the recreational use for kids of this community could no longer be used as a play area. Another common behaviour was dumping of waste at the entrance of the Golden Gate Bridge. Waste dumped would be burnt to obtain precious metals from items such as mattresses, couches and computers that were dumped by people not living in the area.

Also recognised in the photos are the following waste types that were discarded in the open space as the table 5.1 below will show:

Table 5.1: Types of Waste Disposed

Types of Waste Dumped	<ul style="list-style-type: none"> • Wood • Kitchen food waste • Glass bottles • Paper • Plastics • Garden waste • Builders rubble • Tyres • Paint tins • Electronic waste (i.e. Computer Casings)
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(Source, L van Oordt, March 2018)

5.3 THE ORIGIN OF THE GREEN ZONE PARTNERSHIP

In this chapter the circumstances that led to the formation of the Green Zone Partnership are described but the origin of this partnership emanated from an initial request from the City of Cape Town Roads and Storm Water Department for the clearing out of waste causing blockages in storm water systems and the need to implement waste avoidance campaigns as an attempt to prevent the continuous blockages of the storm water and the Jakkalsvlei canal. This engagement which happened in 2010 led by the Solid Waste Management Department whom obtained the involvement of various stakeholders servicing and living in the Bonteheuwel area. Furthermore, this request received support from the local subcouncil and councillors which led to the formation of a local community Green Zone Partnership Plan on how to achieve a clean environment with intended outcomes on the agenda.

The inclusivity approach adopted also provided an opportunity for participants to get involved and to play a critical role in identifying all waste management issues and environmental problems to be addressed. This would give effect to the Green Zone Partnership Plan as to how waste dumping must be dealt with. In 2012, to create broader participation, various line departments were consulted to secure their willingness and commitment to the Green Zone Partnership and simultaneously to champion who would drive this commitment and the Green Zone Partnership. It is within this context that the various stakeholders and specifically the champion would drive the following set objectives which were:

- To ensure integration and ownership by all involved in the Green Zone area by all involved in the Green Zone Partnership.
- To ensure that the Green Zone area stakeholders are sufficiently empowered and have the necessary support from an institutional resources (i.e. the city line departments).
- To facilitate effective communication and build trust in the integrity of the process.
- Provide guidance and focus to achieve maximum benefit from the partnership.

These played a critical role as to how the stakeholder views the partnership as discussed here.

5.4 VIEWS OF KEY STAKEHOLDERS REGARDING THE GREEN ZONE PARTNERSHIP

Although the literature has shown that there are varied views with regard to Environmental Partnerships, those involved in this partnership project expressed their views towards the partnership. Stakeholders expressed disappointment and dissatisfaction with the environmental conditions in their vicinity. It was more especially the environmental conditions that they were experiencing with sadness and high concerns for their health and the environment. Participants indicated that the conditions that led to the establishment of the partnership have not changed. Kids are still falling sick, miss school and their plying grounds are still filthy. Both the community and the professional group of stakeholders felt that the Green Zone was the solution to the problem as the common goal was to improve their environment and curb illegal dumping of waste in open spaces in their community.

During the interviews, these stakeholders were clear on the reasons why this partnership was initiated. Participating stakeholders indicated that the partnership was established because of the illegal dumping problem but also noted that they viewed the partnership as a space whereby all could come together to discuss the environmental problems experienced in the community. All viewed the Environmental Partnership as being about the environment, the community's wellbeing and the residents of the area, wherein the plan generated was the reflection of their views.

The views expressed by all the stakeholders were that dumping was as a result of people not caring, uneducated and stolen bins. All agreed that sufficient services from solid waste were provided. Furthermore, the majority of the stakeholders interviewed held the view that the culprits were those who lived in the community of Bonteheuvel as well as individuals outside of the area. However, it could not be confirmed if the surrounding business community formed part of the illegal activity.

Stakeholders who also contributed to highlighting the importance of waste education and awareness, allowed them to bring about change in their respective communities.. They expressed feelings of sadness about the illegal waste dumping i in their community and the nonchalant attitude towards the community especially with dumping happening at night. Community participants felt that the placing of cameras to catch offenders would be a solution to the problem. Another option voiced out by one participant was the beautification of the area would be a solution to the problem. Community participants expressed their disappointment with the sub-council and the critical champion not honouring the commitment

to build the drop off recycling facility. Participants in the stakeholder group conveyed their views towards the problem and felt the magnitude of the problem attracted more dumping to the area. As stated by an informant,

“A person who sees the dumped site just adds more waste to that site”.

Household participants expressed their unhappiness about the dirt being dumped indiscriminately anywhere, they felt that people outside of the community and people visiting them would view them as dirty people. Stakeholder participants felt that waste dumping was feeding gang-related activities such as the burning of metals. Stakeholder participants expressed their concerns and saw the problem more than words could describe including the fear for their health. As described by one of the stakeholder participants,

“The tonnages of waste can only be estimated when visualised and when driving by it”.

Another stakeholder participant articulated the problem as being too complicated and contributed to the condition to the socio-economic circumstances of the people living within the area as well as the weak economic planning of the past, resulting in people having no pride or a ‘do not care’ attitude. All the participants reflected their unhappiness but were hopeful that the situation would change and improve once the recycling facility was in place.

With regard to the champion in the partnership, people were of the opinion that the champion would ensure the inclusivity of the community in the development of the plan. The stakeholders indicated that the partnership was instrumental in changing attitudes towards waste but only to those directly involved in the project. A stakeholder also indicated, when reporting illegal dumping in progress, none of the law enforcement agencies or metro police responded to the report. Thus, reported cases go unnoticed or offenders do not get prosecuted. Taking photos of the offender also made the stakeholders feel uneasy and it raised concerns for their safety. Participants felt that the subcouncil champion did not drive the illegal reporting process as there was no follow up when a complaint of illegal dumping was reported. Many of them were continuously redirected to other law enforcement offices when reporting an illegal dumping issue resulting in the problem not being dealt with during the Execution Phase in the project life cycle. Furthermore, many of the stakeholders viewed access to information and transparency as a key and complex challenge that crippled the excellent work that was done. Stakeholders indicated that the lack of communication between the subcouncil, the champion and the community with regards to the actions and

interventions were poorly done. Also, many of the household stakeholders felt that it was people living outside the area who received most of the employment to do clean-up work on illegal dumping removal than the people from the Bonteheuwel area. The subcouncil champion expressed his view and stated,

“I had limited communication as municipal processes are slow, and this causes slow movement on developments and any feedback related to the recycling facility”.

This led to poor feedback on progress to the community as all stakeholders realised or recognised that communication as critical for partnerships. From the sub-council chairperson, the informant felt that the subcouncil's activity day were the ideal platform to communicate what was happening in the area or the community. It was stated that ward committees ought to involve the people to ensure information dissemination, possible projects and plans which could potentially transfer into projects that address the basic needs of the people. With these strong views expressed, the research led into the following section of the study which is whether the Green Zone Partnership improved the environmental quality of the Bonteheuwel community.

5.5 IMPACT OF THE GREEN ZONE PARTNERSHIP ON ENVIRONMENTAL QUALITY

This section addresses the third objective of the study which explores whether the Green Zone Partnership improved the environmental quality with regards to littering and illegal dumping. These findings were obtained through interviews which included stakeholder participants from the professional group and the household participants group that were involved in the project. According to Long and Arnold's (1995) project lifecycle, it is essential for stakeholders to get involved from the beginning in order for them to be part of the project and the developments from start to finish. In the Green Zone Project there were various stages of which are the beginning, middle and the end stage. Most of those involved participated from the start or at the beginning stage. However, some stakeholders joined the Green Zone Partnership in the middle stage and at the end stage as they represented their various committees. Those that joined the partnership in the middle or at the end viewed themselves as street representatives and not a driver of this partnership process. The same was said by those stakeholders from the professional group as a responded indicated,

“I was a representative of the street committee and I could give input in the Green Zone Partnership.” His role as a Green Team committee member allowed him to give

input on the partnership. As said by the champion; “I saw my role as the champion in this process”.

In view of the involvement, value and contribution the partnership held, many stakeholders were of the view that the partnership improved their environmental conditions. According to the community facilitator and environmental activist for the Green Zone, her input was the provision of ideas, to be actively involved in the plans and interventions. According to her, in her observation, the littering and dumping decreased on those open spaces where the dumping occurred, but the dumping increased in other areas. From another informant, in his observation, the project did improve the conditions but when the project stopped, the littering and dumping became worse. For another local residing in the area, who received education and information through the community facilitator and whom trained her on waste management, the project impacted her positively. She could recycle and understood what recycling was but regretted that she was confined to her own workspace only and not the broader community.

Thus, household participants said receiving training, education and capacity building during the project provided great value which resulted in the implementation of various kinds of interventions during the Green Zone Project. As per community facilitator, the education, awareness and training provided her with the ability to implement food gardens, recycling and beautification projects. According to one participant, he obtained the knowledge to implement food gardens and transfer knowledge of waste education by doing face to face training with young teenagers. From another informant who has participated in the information sessions, said that she could provide one on one engagement with her neighbours.

According to the informant, because of the capacity building that she received, through the community facilitator, and her experience was communicated as follows:

“I could implement one on one engagement sessions with my neighbours telling them about the consequences of dumping”.

Another informant provided one on one engagements talking explicitly to the horse and cart collectors whom contributed to the illegal dumping of waste. It is within this context that stakeholders indicated their support to the Green Zone Partnership as a new approach to illegal dumping. However, they recognised that much work needed to be done with regard to

the stakeholder's roles and input if the partnership was to survive. These benefits received were critical and brought value to the Environmental Partnership. When interviewing stakeholders, the household informants indicated that capacity building allowed them to develop their strategic plan for the sub-council and they could use the skills within other strategic planning meetings.

While the benefits were well received, one informant was of the view that the information given during the Environmental Partnership project was of great value and more than anticipated. This stakeholder also perceived the GZ project as the tool that encouraged ownership, self-reliance and active citizenship which ensured that people would become empowered. All participants agreed that the capacity building received assisted them in developing initiatives and encouraged their youth, neighbours and schools to start with waste minimisation projects. The community facilitator also agreed with one of the city's departments to form a food garden and practice recycling. However, the recycling was short lived due to health and safety reasons. The food garden is continuing and expanding through introducing organic gardening and composting to the community, used/implemented at early childhood development centres in the area. Furthermore, during the interviews and the community facilitator was in the process of signing a further five-year lease on the grounds to continue with her garden.

According to the community facilitator, through the partnership project, she obtained refresher training which resulted in projects such as: composting, seeds planting, when to harvest the plants, financial management, storing of seeds and harvesting, as well as the maintenance of beds in the garden and ornamental gardening. Furthermore, the facilitator engaged with the City department on her food gardens sustainability as she humbly said;

“I understand how a Memorandum of Understanding now work if I want my food gardens to continue”.

In the photo's (Photo's 5.2) below the community facilitator are in her food garden with the community members who she has trained and who were harvesting their crops as a result of this partnership.



Photo 5.2: Community Food Gardens

(Photos: Source L Van Oordt, 2017)

Furthermore, the main purpose of the partnership was to improve the environmental quality of Bonteheuvel which required investments or contributions from stakeholder’s from various sectors of the society as a key component in the development and growth of the stakeholders and in the partnership itself. This was clearly defined as aspirations of participants in the agenda. These contributions would translate into logistical support which was provided by the subcouncil with regards to meeting space, assisting the local school to arrange for meeting space with the broader community and liaising on behalf of the community with various departments for their involvement on projects on any environmental matter to be resolved (i.e., clearing of illegally dumped waste from an open space). The provision of strategic support as departments provided technical input on how the waste problems could be addressed including the development of waste education and awareness programmes for the area.

This brought the results to a critical point, on the stakeholders’ relationships and the continuation thereof. In this partnership, the relationships among all started strong and it still appeared to be strong when the project ended as informed by the stakeholders. However, when engaging with the informants, the partnership seemed to be absolute as many said they only engaged on a needs’ basis and others were of the view that it was non-existent. It appears that once the formal plan was implemented and cited as a vital success to the

partnership, the lack of a dedicated participatory team caused many failures and minimised the chances to an improved environmental quality for the future.

With regard to the champion, stakeholders regarded the champion as the primary driver and perceive this overall as a benefit to the partnership and what goals needed to be achieved. However, to sustain the input and environmental quality that was generated, it lacked follow up both from the champion and the community that has taken ownership. As articulated by the informants;

“No follow-ups or interactions to encourage people through the Green Zone champions were done, bureaucratic processes halted the drop off execution and the lack of public awareness in the community prevented them from seeing the bigger picture of the problem”.

Thus, to ensure sustained measurable services for improved environmental quality, stakeholders were clear as to their solution to the illegal dumping of waste, a planned drop off facility with other initiatives such as garden waste services, builder’s rubble, electronic waste services and glass recycling. Informal markets ought to be integrated into the commercial space including the horse and cart businesses. Further, stakeholders suggested that pilot projects such as garden waste services, builder’s rubble and electronic waste services be explored. This would improve the environmental quality, as articulated by one participant.

5.6 BENEFITS TO STAKEHOLDERS

Although the evidence provided gave many positive outcomes to the valued input, further probing gave insight as to the extent of input which resulted in benefits to those stakeholders. Such as the provision waste education, training and capacity building that were provided, many of the informants said;

“I had no training, I received none, I implemented no waste education”.

Although some informants did not receive the value of this input, the majority of the informants said this changed the way they disposed of waste. All the informants indicated that they made use of their black refuse bins, while others noted taking their waste to the nearest drop off facility and others indicated they would do both. When engaging with the

stakeholders, they said this was their commitment towards improving the environmental quality.

Thus, given the benefits, it was essential to raise the questions as to the Environmental Partnership efficiency post the closure phase, indicative of the effectiveness of the partnership and environmental quality. To answer the question informants responded as follows:

- Some believe that food gardening and waste disposal awareness have increased in the community.
- Some viewed the MOU (Memorandum of Understanding) with the Sports and Recreation Department important for the longevity of the food gardening project, thus drafting new MOU agreements (Appendix 8).
- It is believed by many that the partnership encouraged the youth (teenagers) to get educated so that they can be more literate, knowledgeable about waste and their environment.
- Some viewed the partnership mostly provided youth education and engagements.
- Youngers believed that this partnership provided waste education to them through sports, playing ball and recreation.
- It is believed that this approach allowed for face to face waste education with young teenagers on health and dumping issues and the implications thereof to be addressed.
- Some believe that it increased the neighbour's awareness on the road to encourage those to keep the street clean and to advise people walking the streets to place their rubbish in the street litter bin.
- Some viewed the beautification and recreation of parks on the illegally dumped areas resulted in the stopping of dumping on those sites..

Further, it was essential to establish how the benefits, in turn, were transferred to the broader community and if they contributed to the quality of the environment. According to those informants, this was what they had to say;

- Participants viewed the education and awareness beneficial as to how the waste problem could be resolved.
- The community is now more aware of the environmental problems associated with illegally dumped waste in the community and in open spaces.

- The partnership give peoples dignity back as participants were educated, trained and could transfer information/ knowledge to others.
- People were left empowered and they would gather to address other issues of concern.
- Community understood the problem and attitudes towards the challenge.
- Recycling ongoing, ongoing lobbying for improved waste services.
- The strategic plan was brilliant as it empowered the councillor to utilise this knowledge and capability in other planning fora.
- Council suffers from an overload of information on the other hand and should be done differently in future.
- The plan must highlight all aspects of the project idea and must ensure regular communication or reporting to participants.
- Sub-council can play a more prominent role and can get involved more through their activity day. This day allows various stakeholders and members of society to do presentation that affects the community.

5.7 CONCLUSION

The data expressed are those of rich informants who contained the history to this partnership project. Outlined is the information gathered during the surveys conducted which achieved the research objectives and the research questions posed. The qualitative design also allowed the researcher to elicit facts by employing the appropriately selected techniques which would ensure the study objectives could be achieved. As the facts emerged, the results indicated that people jointly explored solutions to their environmental problems and in some cases saw waste from an opportunistic position. Also, the results express a change in the way people saw the environment and how they would deal with their environmental concerns from an unplanned to a more planned strategic manner. The results also highlighted a significant challenge which was experienced by the policymakers, the need for people to see the value they hold especially on a voluntary basis and the importance of a champion and champions to drive matters of concern in an integrated way instead of only having one driver.

Other essential facts that came to light were;

- The development of an Environmental Partnership meant to ensure a formulation of a more strategic planned approach.
- The level of awareness rising increasing with training and development of the people.
- Improve and increase insight into both opportunities and obstacles for pursuing a more preventative approach to protect the environment.

Based on the results, the scope of the project goals and the objectives to be achieved were clear. However, it lacked the follow through on the delivery and execution to sustain the partnership. Apart from the fact that these participants expressed their views on this Exploration Partnership, it is crucial that the data elicited give critical insight to the workings of the Green Zone Partnership after the project was concluded. Indeed, it was not a surprise, as can be seen in the results when the partnership required champions and to a large extent those agreements that would sustain the partnership were not evident. Attention is, therefore, drawn to the workings of the partnership and the imperfections and inefficiencies of the partnership. When assessed, it was indeed clear that the partnership experienced organisational structural flaws, such as a continuous stewardship or champion role after the project closure phase. There was no champion to continue with the work in the partnership. This flaw presented the following insufficiency, not enough champions to co-drive the process and people at the household level.

This, in turn, caused the environmental goal to not be attained, or any of the other objectives expressed in the environmental project plan. This could suggest that people's interest, commitment and needs were not followed through and in particular the drop off satellite facility that was on the agenda but lacked the resource to complete the activity. This also brings us to the process of the partnership and if a process breakdown could have resulted in the discontinuation of activities in the Closure Phase. When the various informants were interviewed by the researcher, both groups acknowledge the access to information and transparency was a huge element to the partnership being ineffective. Also, expressed by those participants were the following issues;

“A lack of communication between the subcouncil champion, community and stakeholder participants in the partnership”.

Household informants expressed their disappointment with the subcouncil for not fulfilling the role to feedback on the recycling facility or to call public meetings. Community participants also felt that external people receiving clean-up work within the targeted community ought to be limited so that more opportunities are given to residents of the area. The sub-council champion expressed his view that the limited communication was due to the municipal bureaucratic processes which caused a slow movement on developments relating to the recycling facility that led to inadequate feedback on progress to the community. All stakeholders perceived communication as critical for partnerships. Stakeholder viewed sub-council activity days as the ideal platform to communicate what was happening in the area to the community. It was suggested that ward committees should get more involved with the people and to ensure information dissemination on possible projects and or plans could potentially transfer into projects the could address the basic needs of the people.

All these would suggest that the partnership saw a decline in priority and did not receive the attention as agreed and parties, including the champion, failed to engage with the critical decision-makers in order for the environmental goal to be achieved. The next chapter presents an in-depth analytical discussion on the Green Zone Partnerships Model about Environmental Partnerships and their effectiveness before proceeding to closing remarks and recommendations.

CHAPTER 6

ANALYSIS AND DISCUSSION

6.1 INTRODUCTION

The primary aim of this chapter is to present an analysis and discussion of the Green Zone Partnership (GZP) project. The purpose of the analysis is to glean from the results presented in the previous chapter with the theoretical framework as discussed in chapter three, systematically. By locating the case of the GZP which was shaped to enhance ecological wellbeing effects of littering of waste in the general population's open space, the chapter along these lines draws from the hypothesis of natural partnerships as presented by Long and Arnold (1995).

The theoretical position of Environmental Partnership provided Long and Arnold (1995) was intended to give a profound understanding of the nature and importance of particular Environmental Partnerships, as well as to portray how partnerships frame partnership projects to explain or address a particular environmental problem(s).

It is within this context that the chapter analyses the collected data on at least three levels:

- Locate the GZP project regarding the Partnership Life Cycle Model (PLCM) which provides an idea on which phase the project is located. This will help to identify whether or not the project has achieved its intended outcome.
- The GZP must thus be located within the Environmental Partnership Map which allowed us to map the project based on the level of conflict and the core relevance among the partnership stakeholders. This level of analysis is crucial as it reveals the extent to which the partnership stakeholders were willing to work collectively in achieving the partnership agenda.
- The last analysis is based on whether or not the GZP project has achieved a specific environmental goal. This is crucial as it determines the level of success for this partnership project. As Long and Arnold (1995) allude to, the environmental goals comprised of the direct and indirect environmental benefits derived from the partnership project. Due to the different interests that each of the stakeholders bring to the partnership setting, these goals may only appeal to some of the partnership stakeholders.

At this point, it is crucial to remind the reader of the aim and objectives of the study presented in chapter one. The main aim of the research was to assess the Green Zone Partnership as a solution to the problem of littering and illegal dumping in the Bonteheuwel community.

In achieving the aim of the study, the research objectives were as follows:

- To locate the Green Zone Partnership within the Partnership Life Cycle Model and Environmental Partnership Map provided by Long and Arnold's Environmental Partnership theory.
- To identify the benefits of the Green Zone Partnership towards the partnership stakeholders and how the community viewed of this partnership.

To find out whether or not the Green Zone Partnership has enhanced environmental quality by reducing littering and unauthorized dumping in the area.

6.2 CLASSIFICATION OF THE ENVIRONMENTAL PARTNERSHIP BASED ON MAP

According to Long and Arnold (1995), the first step towards assessing Environmental Partnership projects is locating them in the Environmental Partnership Map. This method of partnership analysis is warranted as it allows us to develop a deeper understanding of how a specific partnership project was formed. Thus the analysis of partnership projects, in terms of the Environmental Partnership Map (EPM), uses two dimensions of the nature of the projects. These are, the level of conflict and the level of co-relevance among the stakeholders before the formation of the partnership. These levels are briefly explained as follow:

As reported by Long and Arnold (1995), a partnership can take on any of the three levels of conflict varying from high, moderate to a low conflict partnership. Meaning, if the partnership exerts a high level of conflict, stakeholders in those partnerships are in a great battle, strongly opinionated and not in agreement with the environmental problem solutions. High-level conflict in a partnership tends to have underlying environmental issues and concerns that can result in punitive actions between parties. The high level conflicts tend to go public. A partnership that experience moderate conflict gives stakeholders an opportunity to know each other and to talk through the disagreements without going public.

Last but not least, a partnership experiencing low conflict shows that partners know each other, or in some context or another whereby the parties have expressed the same interest and goals to improve the environmental conditions (Long & Arnold, 1995: 57-59).

Like the conflict parameter, the degree of core relevance parameter indicates the extent of commitment by the organisation and participants to initiating, managing and concluding the partnership and taking cognisance of the overlap that exists between partnership goals and the mission of an organisation. Thus, the co-relevance scale ranges from high to moderate to low. High relevance is when a partnership regards the process as a matter of “life and death” leaving the environmental problem almost too late to be resolved. This parameter indicates the extent of commitment by the organisation and participants to initiating, managing and concluding the partnership, taking cognisance of the overlap that exists between partnership goals and the mission of an organisation. Stakeholders would express strong views with regard to associated impacts and potential undesirable outcomes.

The moderate level of relevance in a partnership, results in the environmental problem being viewed as important, but not critical to all stakeholders. However, they are happy to collaborate. Within such a partnership, stakeholders commit and believe the collaboration will lead to a solution. Low level of relevance is when one party or person believes in the importance of the issue while others regard it as insignificant. In this scenario, one party considers the initiating of a partnership while others may show their willingness to get involved without it causing any inconvenience to them, their time or resources. That being said, placing these two parameters on two axes results in the Environmental Partnership Map defining the type of partnership that will emerge

As explained in chapter three, these two parameters of the EMP are used to describe and to analyse the Green Zone Partnership to broadly provide insight into the degree of conflict and the degree of relevance among the partnership stakeholders. These two parameters indicate the extent to which the historical conflict and overlapping interest influence the success of work together addressing a specific environmental problem. Therefore, each of these parameters (level of conflict and the degree of co-relevance) is considered in the context of the GZP project.

6.2.1 Level of Conflict

From the perspective of the stakeholders of the Green Zone Partnership project, the level of contention preceding the arrangement of this partnership was low. As one of the managers stated, the Green Zone Partnership was established in 2010 following anticipated environmental health impacts of littering of waste dumped in the public open space leading to infrastructural breakdown of stormwater systems due to blocked pipes filled with waste. This further led to overflowing and burst pipes which exposed the children of the Bonteheuwel community to dirty water. As many complainants indicated, the children from the community played in the dirty water contaminated by bacteria or other germs. This caused their children to experience skin rash conditions and diarrhoea. Residents in the community are going through immense efforts to extract metal by burning of waste and even their mattresses to remove precious metals. The residents complained as this caused many children to experience respiratory problems.

Littering exacerbated with people having an 'I could not care mind-set', restricted to the lack of street sweeping services further increased the pollution levels in the area as litter ended up in the trench and catchment systems. While various stakeholders from the community were concerned with the continued state of environmental degradation in the area, the City of Cape Town (as a partnership stakeholder) was concerned with the financial costs associated with removing waste in the public open spaces. For the city council, public open spaces provide a range of environmental goods and services which should be restored from any impact due to illegal dumping. It was within this context that the Green Zone Partnership was established by both the City of Cape Town Solid Waste Management and the Bonteheuwel community to address the problem of littering in the area.

Thus, based on how the partnership was formed, the parties involved in the Green Zone Partnership displayed a low degree of conflict. Although the community structure was present, evidence from data collected revealed that there was no initial collective platform through which participants engaged to address this specific environmental problem (Waste Management problem). Before the formation of the partnership, the community stakeholders' only means of channelling environmental concerns to the local municipal sub-council was via the local political representative (ward councillors). Although the community structure was present, there was no initial collective platform through which the participants engaged or for the environmental problem to be addressed. It was more like reporting a problem to the City

authority or the ward councillor to action without confronting or debating or even following up on the problem. It was a wait-and-see approach.

However, this approach was inclined to be one-sided as people took on a passive participative attitude and not necessarily in a collaborative problem-solving manner which resulted in only one partner contributing towards solving the problem.

In other words, once the problem was logged by the councillor or the city authority, the illegally dumped waste was removed with specialised machinery and the problem was solved. The consequence of this solution was that the people of Bonteheuwel played no active role in any preventative measures, allowing the situation to carry on indefinitely. Due to the absence of any dialogue between the community and the City council, it meant that the community had to work on their own without any help from the City. For instance, the community facilitator, one of the partnership stakeholders, said she started her own recycling business, but due to the limited land she sought alternative land that would accommodate her recycling, and in return, she hoped that this process would encourage other people to recycle their waste instead of dumping it. When she discovered the challenges the City of Cape Town faced, she realised that more people needed to know and learn about waste dumping. She then started discussions with the Sports and Recreation Centre in Bonteheuwel which would host the recycling hub and later become the space for her food gardening campaign as well. The discussion was received collaboratively without any hostility or unrealistic demands as there was a willingness from the Sports and Recreation department to get involved because it created no inconveniences to them, or to the staff officials. In the end, an unused resource was now put to good use without incurring excessive cost. This non-confrontational dialogue led to an official memorandum of understanding between the facilitator and the city of Cape Town department.

6.2.2 Core Relevance

Core Relevance is one of the significant pillars used to assess the success of the partnership project. This aspect of the analysis is informed by a premise which says: interests of partnership stakeholders inform all partnership projects, hence partnerships are judged on the extent to which they meet needs and or interests of stakeholders of those partnerships.

Therefore the critical concept behind core relevance is about whether or not the degree of interests among stakeholders to solve specific environmental problems is evidence in this

case. It is thus crucial to note that Long and Arnold (1995) point out that the degree of interest need not be symmetrical for partnerships to set off (see Zungu, 2003). There must, however, be at least one party that believes the issue to be of crucial significance, the core relevance must be larger for the one partner. In this context, there is recognition by this partner that others see the issue as relatively unimportant to their organisation. In terms of the two major GZP stakeholders of the GZP partnership project, the Department of Solid Waste of the City of Cape Town (CCT), felt that by joining hands with the Bonteheuwel community, the levels of illegal dumping which affects the natural environment and pose health hazards to the community could be addressed.

This means that in this partnership project (i.e. GZP); the CCT is not just playing a passive role, but a leading one to ensure that their goals are accomplished. As one of the city's officials noted:

“The GZP partnership project is clearly aligned with the strategic vision of the City of Cape Town in that it allowed the communities to start cleaning their area and to take charge of their environment. We as the City of Cape Town pay so much to clean the stormwater infrastructure blocked by waste and thus causing a health hazard to the environment and people. It is in our best interest that we see to it that the project succeeds to benefit all stakeholders involved in this project”.

Thus in the case of the GZP project, the CCT once again perceived a need to contribute to the necessities of the local people by improving their natural environment and wellbeing. Though the ward councillor and the communities in general perceived the project as crucially important, the CCT took an initiative role by providing necessary resources to kick-start the project. For instance, the city conceived the idea of forming the project and providing resources including finance and training to the local community. Therefore it is apparent that the Green Zone has taken a crucial leadership role in the formation of this partnership project. As one of the participants commented:

“Yes, the CCT has tried to play a major role to focus on improving the standard of living by creating dialogue with us so as to address the issue of waste. Without the assistance from the CCT, we would not be able to start this project on our own”.

Furthermore, Long and Arnold (1995) argue that the concept of low relevance also dictates that other parties will only provide assistance to the party that view the issue as necessary,

as long as they do not have to manage the process or as long as the process is not an inconvenience in terms of time and resource expenditure. In the case of the GZP project, the City of Cape Town had to raise funds, organise expertise for design, manage the process and sell the concept of the project to the local community. This asymmetry, where one group considering the partnership issue critical and the other group considering it non-critical, is typical of a low relevance partnership (see chapter two). While the data reveals that the local communities have moderate relevance or interest towards these projects, it was however understood that such low levels of commitment were attributed to the lack of resources to execute the environmental objectives of the GZP project. In an attempt to measure the scale of core relevance on the side of the local community, the question on the value of the GZP project was asked. As depicted in the figure below, the positive responses were just above the average scale.

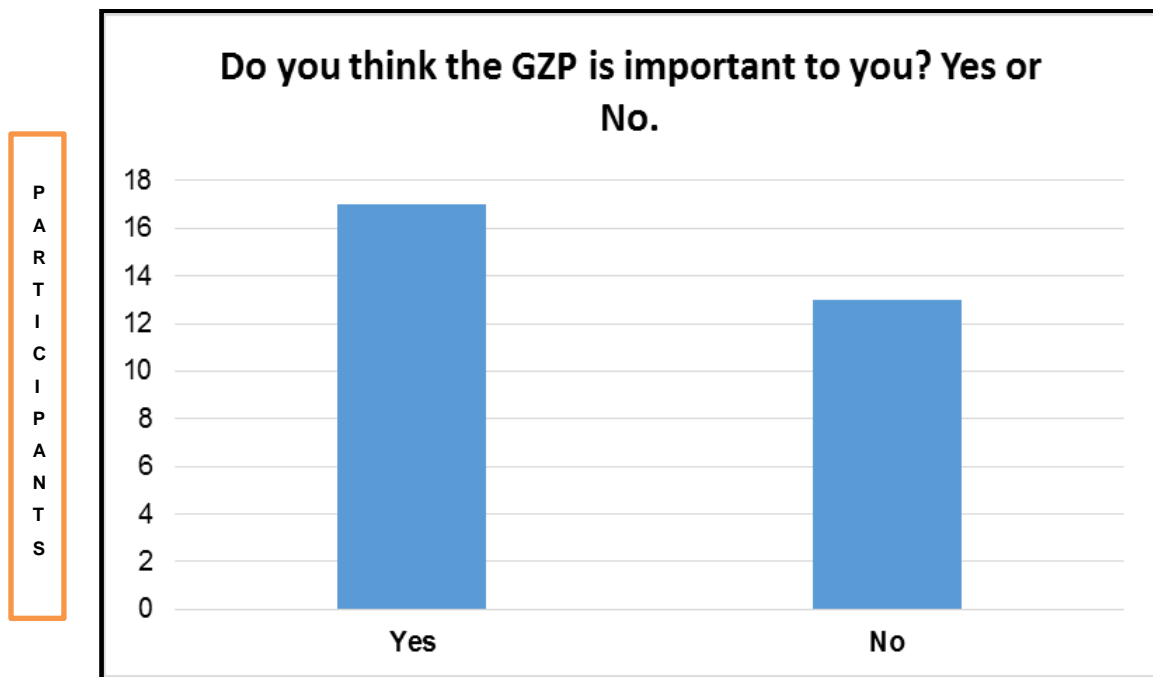


Figure 6.1: Measurement of core relevance on the side of the local community

As shown in Figure 6.1, the response rate concerning core relevance of the GZP project shows that out of 20 individual households interviewed, 17 said YES to the question. This translates to 85 % of the respondents. However, the remaining community members said their interests were not leaning towards the core aspect of the project. In the figure below, the partnership is located on the Environmental Partnership Map and the type of partnership these projects took on. Figure 6.3 shows the partnership type for this study.

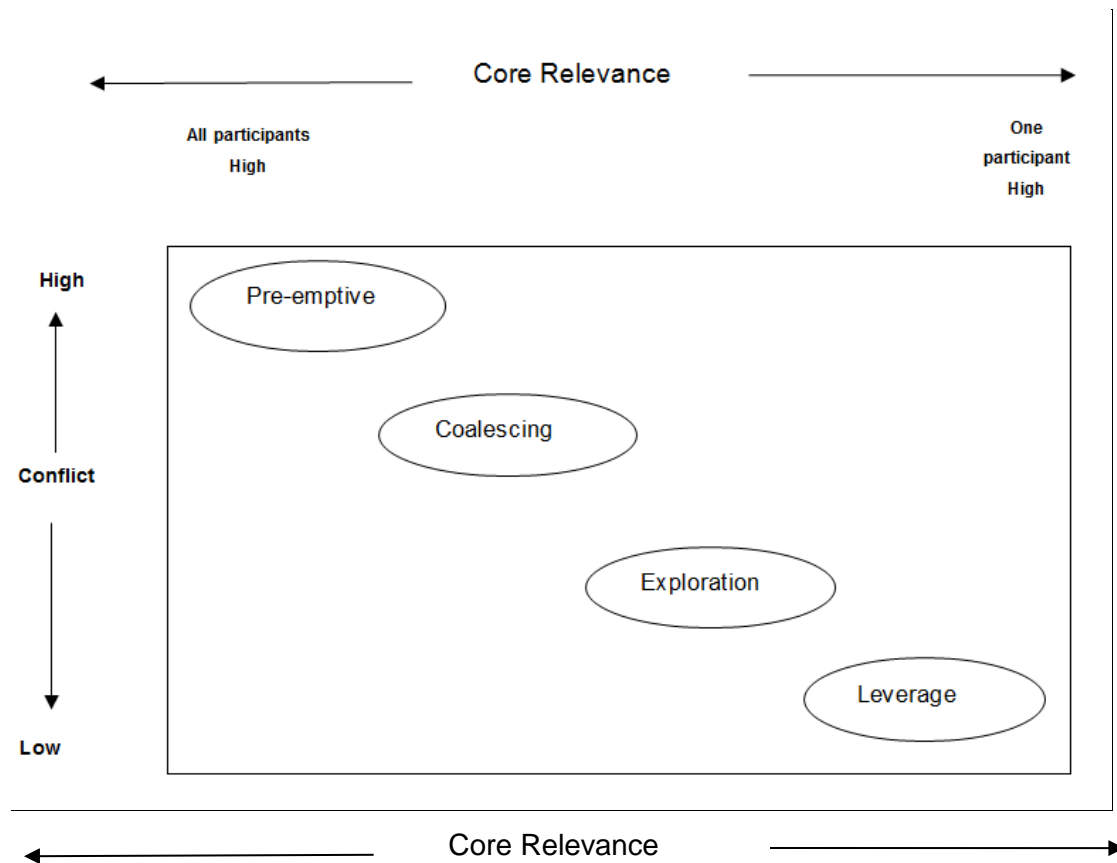


Figure 6.2: Environmental Partnership Map (EPM)

(Long and Arnold, 1995)

In the Green Zone Partnership, the Solid Waste Department joined hands with the sub-council, the community representatives and the schools to considerably improve the availability of resources in order to achieve the goals agreed to. As noted by the school principal in this Green Zone Area, the schools were a safe place to all and welcomed those using it for the waste awareness and education activities. It was the place for the community meetings to be conducted and the space creating a dialogue between those stakeholders and the community involved. This was a safe space without feeling threatened by the prevailing scourge of gangsterism in the area.

Within the Green Zone Project, each one in the partnership considered the partnership essential and crucial to contributing towards improving the environment. For others who participated, they gladly supported the process, while others' priorities focussed on their core service delivery business instead of being seen as a driver to the process or process of financial assistance.

6.3 LOCATING THE GREEN ZONE PARTNERSHIP PROJECT

Thus, when placing the project on the Environmental Partnership Map to locate the type of partnership, this project presented a low conflict and a low relevance scale that is known as an Exploration Partnership project. In the case of the Green Zone Partnership project, all the characteristics of this partnership fit the description of the Exploration Partnership Framework as described by Long and Arnold (1995). What does this suggest about the kind of the GZP project? The section below explores the question.

6.3.1 The Exploration Partnership

Exploration Partnership is described by Long and Arnold (1995) as a partnership that provides organisations with the ability to seek and to explore solutions collaboratively, to identify critical knowledge gaps about the environmental issue and give parties the ability to identify what they believe is an urgent or critical environmental problem.

Table 6.1: Summary of the Green Zone Partnership Project

Partnership Project	Bonteheuwel Green Zone Environmental Partnership
Level of Conflict	Low
Core Relevance	Low
Main Issue	Eradicate the illegal dumping of waste in the Green Zone area
Partnership Type	Exploration Partnership

(Source, L van Oordt, October 2017)

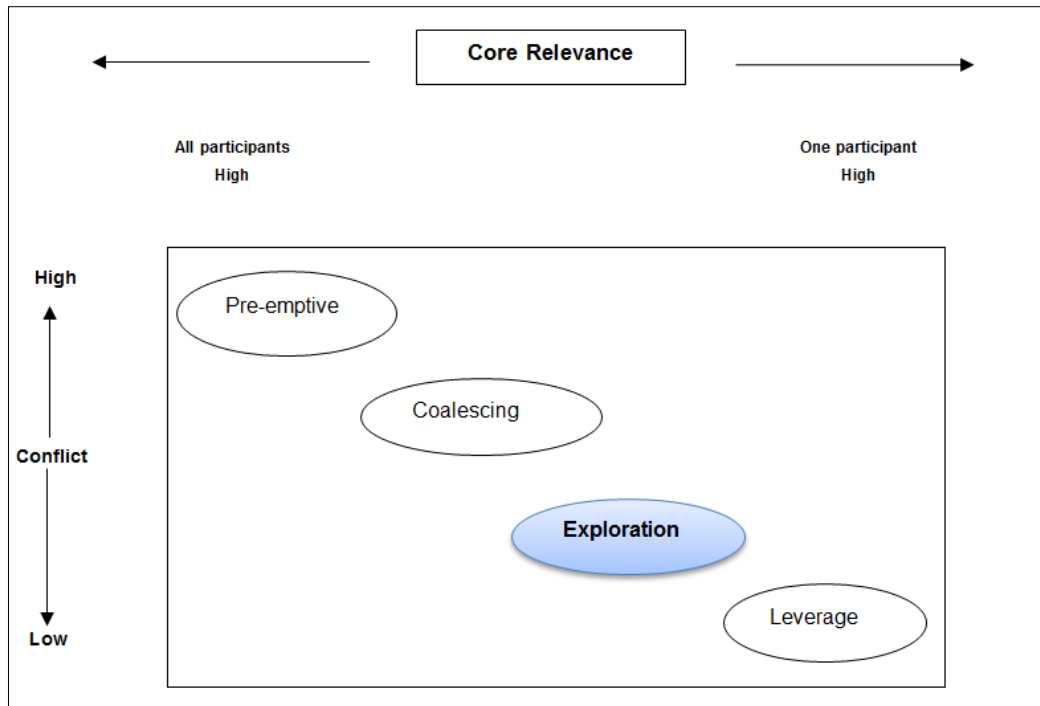


Figure 6.3: The Green Zone Partnership Located on the Environmental Partnership Map

(Source: Long and Arnold, 1995: 61)

According to Long and Arnold (1995), those who enter into an Exploration Partnership do it because:

- Partners proactively search out the required expertise that could solve the problem.
- Partners initiate and form a professional collaborative approach to get the problem solved as well as getting the job done.
- Exploration partnerships are an attempt to solve time-consuming environmental challenges through collaboration, joint research, exploration, and public communications.

The Green Zone project partnership is typically showing all the characteristics described in the list above. Furthermore, the strong presence of a champion forms an integral part of the solution-driven process. However, Wilson (2007) argues that this becomes a challenge from the onset when environmental protection becomes the new driver for change especially by those in developing countries as viewed in chapter two. This approach or thinking changes the landscape of people’s involvement in wanting to address the issue of waste. This was evident when the professionals were interviewed and responded by saying the process assisted with the devising of a strategic waste dumping solution plan, unlike in the past

whereby the focus was previously single-minded emphasising only one aspect of the solution which is the educational component.

Further, theory has it that the institutional involvement and capacity plays a vital role which the project demonstrated when it came to those who had to drive the process or provide the resources to achieve results and opportunities. From an institutional capacity, the idea of a champion in the Exploration Partnership to continue after the project closure was critical as the champion would support those participants in the construct of opportunities underpinning the theoretical framework of the Environmental Partnership. This was evident from a response given by an informant who was interviewed during fieldwork. In her response, she stated that she never knew that the project existed neither did she know the champion, the sub-council manager at the time for Bonteheuwel. Seeing where this partnership is located, the next aspect was to understand the nature of this project and the relationships formed within the partnership project. This brings the analysis to explore the partnership and the question asked in this thesis.

6.3.2 The Green Zone Partnership as an Environmental Exploration Partnership

Exploration Partnership as described by Long and Arnold (1995) is a partnership in which organisations explore solutions to an environmental need and whereby parties proactively search for solutions. This is done by finding those with the necessary expertise to solve the environmental issue. In the Green Zone Partnership, the events that unfolded showed the participants involved were not strong drivers or champions who could achieve the solutions to their environmental problems resulting in the solutions becoming less reachable.

In addition, as previously mentioned, the participants involved in this arrangement did not know each other as individuals in a particular way. Thus, arguing that there were various reasons why partners choose this partnership strategy for developing solutions (Long & Arnold, 1995). In the case of the Green Zone Partnership and according to the participants, the decision to take on this approach was due to:

- The possible lack of credibility especially of those responsible for processing the solution.
- The partnership method gives various parties the space to share their knowledge and expertise in solving the problem.

- It created an opportunity for them to learn about each other to develop a practical solution.
- Various activities performed by the partnership were jointly done such as the research for land to place the drop off facility while individual participants were often left to decide on how to use the shared knowledge generated by the partnership.

Also, this type of partnership carries a sense of opportunities and the Green Zone pursued many real opportunities to change the behaviour of individuals on environmental issues. Given these reasons, the Green Zone Partnership identified various opportunities from various participants of which the need for a waste drop off facility was seen as the solution to the problem and the environmental goal to be achieved. This would require a proactive champion to drive the process (Long & Arnold, 1995). The Green Zone also brought comfort levels and little emotional baggage which the authors identify for typical to the Exploration Partnership. One of the activities led by the school principal was for example when all parties met to devise plans for an awareness day in the Green Zone Area. It is important to note that the objective of an Exploration Partnership was to attempt to investigate options to improve or solve the environmental issues of joint concern. In the Green Zone Partnership, it was evident that parties never worked with each other but offered the most significant promise for the environmental problem to be solved.

6.4 THE CLASSIFICATION BASED ON PARTNERSHIP LIFE CYCLE (PLC)

To classify the Green Zone Partnership regarding the Partnership Life Cycle, the results showed that the project was in the closure phase. It also revealed that this project moved through the distinct phases of the PLC before it reached at the closure stage as it moved from birth(i.e., conception or formation) to maturity stage (operation phase)or rebirth (Long & Arnold, 1995). Herewith, the emergence of the Environmental Partnership with particular attention to the conditions that led to the formation and what transpired in these phases are described. Figure 6.4 describe the phases in the PLC model.

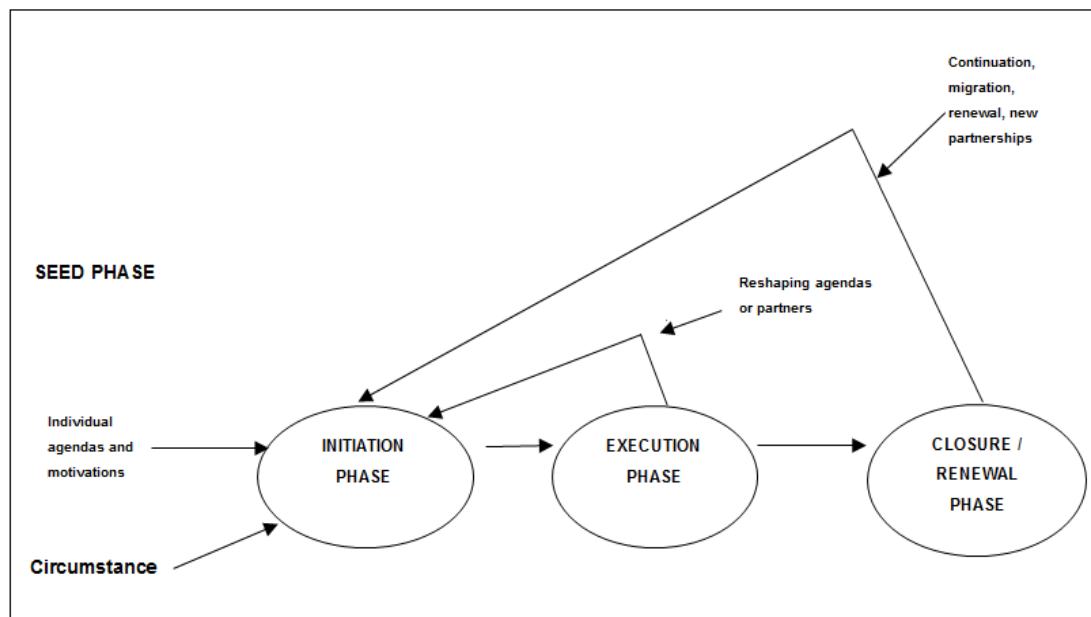


Figure 6.4: The Green Zone Partnership Life Cycle (PLC)

(Source: Long and Arnold, 1995)

6.4.1 Green Zone Partnership SEED Phase

In a previous statement by the City of Cape Town in a media release, the municipality announced having spent more than R350 million with regard to the clearing up of illegally dumped waste. This led to the need to change people’s attitude if the prevailing environmental and even health conditions were to be improved. Some of these conditions mentioned were the burning of waste where people of the community indicated this to be the cause of their children’s bronchial problems. Furthermore, the illegal dumping of waste in the playparks and on sidewalks resulted in the kids not having a place to play or having a sidewalk to walk on. Furthermore, these conditions resulted in an unappealing site as well. Also, compromised was the infrastructure in Bonteheuwel due to blocked drains and the canal which caused flooding. Children in the community were more exposed resulting in them becoming more susceptible to communicable diseases such as diarrhoea. To address these environmental conditions, a collaborative meeting with the Solid Waste Management department in September 2011 was called. The meeting aimed at improving the solid waste management conditions in the Bonteheuwel community. This historic meeting which happened on 1 September 2011, coinciding with the beginning of spring and arbour month, also highlighted a new approach to address environmental conditions in future. This first meeting resulted in the presence of key and affected line functions in the City of Cape Town whereby key representatives noted the attendance of the Branch Collections for the Drop-

Offs and the Stormwater and Catchment division and the purpose of the collaboration among all present. It is at this meeting that the concept of a Green Zone Partnership was introduced and shared to all present as a three-year project with the primary focus on illegal dumping. During this meeting, stakeholders received an overview of the Green Zone Partnership concept and the key features of the partnership. These features would entail a participating stakeholder to be non-political, for the stakeholder to be from the community, represent their key sector and the involvement was entirely voluntary.

While this meeting happened in the Seed phase, it also provided stakeholders with the opportunity for various issues on illegal dumping and environmental concerns to be discussed and agreed too regarding goal setting. The Seed phase in this project provided the opportunity for those who showed interest to give their commitment to the commencement of the partnership which was;

- Stakeholders recognised and agreed to be the official Green Zone Partnership Team.
- To establish agreements that would improve the environmental conditions.
- The team to develop a strategic action plan including resources required or to be managed.
- The sub-council manager recognised and nominated as the official coordinator and champion for the Green Zone Partnership.

Further, giving eminence to the individual motivations and agendas which came to the fore in this Seed phase for illegal dumping was;

- The need for CCTV at hotspots and risks to equipment due to a high level of crime in the area. Follow up meetings required the presence of law enforcement.
- According to an informant who has stated, that they have tracked dumping in this area and it is mostly the horse and cart people who dump the waste indiscriminately. A discussion followed around the need to use the horse and cart people to the benefit of waste collection and make it easier for them to drop off.
- From another informant, she raised the need to engage with the horse and cart people on the dumping of their waste.
- One participant stressed the need to educate the children in a challenging environment with high levels of gangsterism and non-educated parents.

- Form an informant, another issue raised was the issue of community gardens, local opportunities and the need for economic value.
- The roads and stormwater department emphasised and raised the issue of high level of blockages of storm water in the Bonteheuwel/Netreg area due to the dumping of solid waste. Further to this was the concern about equipment theft and gangsterism in this area.
- According to the roads and stormwater department, the indicators for reporting showed that the Bonteheuwel area reported 53 stormwater blockages as a baseline to measure the impact and success and if things were getting better or worse.
- The school principle in the Green Zone area requested that the Bonteheuwel Principle's Forum be approached again to nominate their representative(s) as he could only represent Bishop Lavis.

However, here are responses from stakeholders and their reasons for getting involved in the partnership.

"I got involved because I am not happy with the situation and not impress as it poses a health risk and people just don't care!

Another respondent said;

"I am feeling sad as the younger generation will suffer if things don't improve."

"Dumping of waste is a complex problem, it is a socio-economic condition as a result of poor historic planning and people's desires being not met causing people not to care and to dump their waste or to litter."

As the issues in the Seed phase took shape, the agenda concluded and the partnership moved into the Initiation Phase as described in the following section.

6.4.2 Green Zone Project Initiation Phase

As the partnership moved into the Initiation Phase, results show the various challenges stakeholders experienced and raised in the preceding phase before the formal partnership was established. Using the Initiation Phase, the focus was on the process by brainstorming critical issues in solving the problem with well-defined potential solutions. In the case of the

Green Zone Project, external experts were called in to take the Green Zone participants from ideas to reality. This led to a second and critical meeting in October 2011 which provided the much-required substance to the illegal dumping issues raised and in grounding the Green Zone Partnership.

Here are the related issues that surfaced in a meeting held in October 2011;

- Litter is ending up in the catchment and causing pollution.
- The central drainage systems are being cleaned but not the smaller systems in the back streets.
- What is litter doing in the drainage system in the first place?
- Lack of education among parents and children.
- Look at strengthening street committee's and include sport.
- Add waste as an issue as part of the function of street committees.
- The canal is full of litter causing germs and people using the situation as an opportunity to create jobs to clean the canal.
- Items removed from drainage systems include tyres and foetuses.
- People are not proud of where they live and education is required at block committees and at street level.
- Improve people's morale and change their mind-set
- Clean up in the area motivates others not to dump their waste.
- Councillors in the area are not leading by example.

Interestingly, a comment from a stakeholder was the need for people to dump and litter as it creates jobs for them as a litter pickers. The results showed that this phase gives eminence to the Green Zone Team's roles, goals and the milestones to be achieved. Here are the goals agreed to:

- Manage the dumping and littering through a satellite drop off waste facility
- Stop the Burning of Waste Material
- Minimise Blocked storm Water Drains due to waste being dumped in the system
- Instil community pride and ownership
- Increase community involvement on the issue of waste dumping
- Access to Council Information and Opportunities

Therefore, the formation of the plan ensured the inclusivity of a broad range of stakeholders and expertise in this phase of the PLC. In addition, the involvement of external consultants who provided the necessary input to the process and support to the champion such as the resources required for the interventions pursued were shown. In Figure 6.5 all stakeholders participated in the Green Zone plan being developed as consulting experts to support the process. Here are some of the responses given by the stakeholders with regard to the Green Zone plan.

“The experts broadened our understanding as to all requirements for a drop off facility and they also empowered me in the process on how to develop a strategic plan which was brilliant as I could help and advise others not in a position to do such a plan.”

From the Subcouncil Chairperson

Picture 1



Collaborating and forming joint solution sets

Picture 2



Experts giving technical input

Picture 3



Locals Input/ Contribution to the problems

Figure 6.5: Stakeholder developing the Green Zone Partnership Plan

(Source: Van Oordt & Pithey (Green Team): Final Green Zone Plan, 2013)

6.4.3 Green Zone Partnership Execution Phase

As the partnership moved to the Execution Phase, the establishment and collaboration among partners took shape giving more substance to the process and by defining solution sets to the problems. Important to note, the Execution Phase allowed stakeholders to implement the plan and to fill the gaps with experts input such as the roads and stormwater and river catchment, as well as from solid waste – waste minimisation.

Within this phase, results indicate another critical factor with regard to the champion, who was the sub-council manager and who would drive the agenda among the partners by coordinating and facilitating discussions among them. One such discussion convened was the construction of a Satellite Drop off facility which would directly benefit the community and

impact the illegal dumping occurrence. The results show the champion's stewardship in coordinating and convening the process when a motion in support of this intervention was submitted to council for the approval to build this facility. This motion received the necessary approval as seen in Appendix 9.

However, some argue that they were not aware of this motion neither were they informed. This was a response from a stakeholder;

“Sub-council never gave us feedback on this motion.”

However, as the champion facilitated the partnership process and in particular the drop off facility, the results show that the coordination and facilitation by the champion lacked complete dedication and focus, an attributed to a poorly conceived strategy or plan. In the case of the Green Zone Project, the evidence suggests that the investments made during the Initiation Phase did not pay off as the plan failed through logic and critical analysis. However, despite a poor return on investment, results indicate the champion's facilitation provided a signed agreement for the food gardening project with the Parks Department as seen in Appendix 8.

Stakeholders argued and expressed their concerns towards the Green Zone action plan by saying;

“We did not see any improvements in the waste conditions.”

Also, from another participant;

“The plan highlighted aspects of the project ideas but there was a lack in the regular communications and report backs to us as participants on the plan which must be addressed in future.

Despite the plan showing inefficiency in the Execution Phase results show great positivity with regard to various waste education and awareness, capacity building and training to the participating stakeholders. Furthermore, regarding the plan, a critical component to the sustainability that surfaced was the continuous financial input and resources to ensure continuity of the activities generated as a result of the plan. Also, what the results revealed was the lack of continuous financial contribution to ensure that all commitments or goals

were met especially the one that would impact the illegal dumping. The findings would suggest that the financial support became less attainable due to the diversion of funds to more priority needs indicated by the city, such as housing.

As one respondent said;

“We still don’t have the drop off as promised in the plan and we don’t have bins.”

“The plan gives us education on how to report dumping but the law enforcement people don’t come out to catch the guys. This process is not working.”

Furthermore, the results suggest activities implemented had no monitoring plan so to reshape the agenda or to change strategic tactics for those environmental goals.

6.4.4 Green Zone Partnership in Closure / Renewal Phase

As the Green Zone Partnership moved into the closure or renewal phase, the results suggest that minimal to no positive impact can be shown to the actual illegal dumping being reduced. However, the project in the closure phase showed various positives such as the education and capacity building, the signing of agreements between the participants and the municipal departments including the skilling of people for continued work in the Green Zone Area. However, on the contrary during the final field visit, some of the respondents supported the notion and benefits it provided by saying;

“The partnership allowed me to continue my partnership with Sports and Recreation independently to sustain the gardens I made.”

“I have continued educating the youth on waste and their environment so they can become more literate on the issue.”

“I have continued with face to face education with the youth on dumping and it’s implications.” “I advise the street people to place the rubbish in the bin.”

Important to note as the Green Zone Project comes into the Closure Phase, as it’s partnership travelled from initiation stage identifying goals and plans to deliver on, the results also revealed a very significant finding which was the retirement of the champion with a total

seizure of the project. This suggests that the Green Zone, according to PLC, was apparently in a Closure and a Non-Renewal Phase.

Furthermore, the results show that although a substantial investment was made by giving the participants various waste education, training and capacity building, the finding suggests that very little thinking was given as to how the project results would be communicated to the stakeholders and the broader community on goals and milestones achieved. In this phase, the project also indicated its breakdown as activities came to a standstill when the champion was no longer directing the proceedings and activities of the project. Also noted, there were no closure or renewal discussions for partners to make the necessary decision as to the future and existence of the partnership for sustainability. Importantly, the results also showed no agreement on the management of waste in a sustainable manner or actions that would lead to the implementation and completion of the drop off waste facility.

Hence, Long and Arnold's argument that once the partnership made progress towards solving the issue, such a partnership typically vanishes and therefore claims for an Exploration Partnership to succeed.

6.5 MEASURING THE DIRECT AND INDIRECT BENEFITS OF THE GREEN ZONE PARTNERSHIP

According to Long and Arnold (1995), Environmental Partnerships as environmental problem-solving solutions pose a challenge in measuring the success and how it operates and therefore becomes rarely assessed or evaluated. Long and Arnold (ibid) contend that to know if the partnership has been a success or failure, the Environmental Partnership must achieve measurable environmental benefits (direct and indirect). The benefits should reflect both those received directly and indirectly generated by the partnership and not always linked to the critical environmental issue to be solved. Within this context, Long and Arnold suggest measuring the Environmental Partnership on the following three levels:

- **Environmental Goals:** Whether the project accomplished its objective to improve a specific element of environmental quality? Did it increase the efficacy, efficiency or equity of achieving this environmental quality?
- **Indirect Benefits:** Did the project produce benefits not directly related to the central environmental issue?

- **Process Management:** How well did the process of partnering work?

With regard to the three levels of measurements outlined above, these will now be discussed as three distinct levels of assessments with different purposes. The infield data collected indicated that the Green Zone Partnership project generated benefits and in particular to the stakeholders who participated. The following section addresses each of the benefits.

6.5.1 Environmental Goals: Direct Benefits (Green Zone Partnership)

According to Long and Arnold (1995), the first level's primary purpose was to determine whether participants have contributed to solving the environmental problem. In this project, the specific environmental goal was to curb illegal waste dumping. To measure this, Long and Arnold indicate that there are two ways in which environmental goals can be measured. The views of those participants and non-participants in the project and the attitude change which resulted in more extended sustained actions, environmental impact. These measurements are essential if sustainable Waste Management in communities is to be achieved. In the Green Zone Partnership, clear goals was generated and are measured, a critical element in Long and Arnold's theory of Environmental Partnerships.

With the primary goal of the Green Zone Project to ensure that illegal dumping is prevented and to improve the environmental conditions, stakeholders argued that the project had led to some achievements. Before the project formation, stakeholders had no plan or idea on how to solve the problem and had no resource to support any idea to materialise the solution. Also, with an increase in the blocked sewer system and environmental health concerns, the partnership was formed. With the formation of the partnership, various benefits came along towards achieving the environmental goals which would change people's attitudes and behaviours toward the problem:

The question now asked is; whether the environmental goals set out was achieved and did it create any benefits for these stakeholders in the project. During data collection, stakeholders responded and revealed that since the inception of the project, very little has improved with regard to illegal dumping and littering. As stated by one participant:

“The dumping areas we have beautified, people stopped dumping on that vacant site and dumped their waste somewhere else. In those areas, the waste dumping reduced and increased in others areas, but I don't think the dumping improved at all.”

As a stakeholder stated:

“The areas in which education and awareness were conducted showed improvement while the area remained a dumpsite.”

Drawing from the environmental goals looking into the efficiency and effectiveness of the Green Zone Partnership, the results indicated that some of the stakeholders continued working alone. One of the anonymous respondents said:

“We report the dumping to law enforcement but they don’t react to the complaint, nothing comes from our reporting not even to subcouncil.”

Important to note, according to Long and Arnold (1995), the champion spearheads the vision and goals of the partnership and participating stakeholders for the partnership to be successful. In the Green Zone Project, the champion was the key to facilitating the involvement of people and the coordination of resource support to implement activities. However, due to various reasons such as the turnaround time and to meet milestones as a result of bureaucratic processes, many of the milestones became unattainable. As indicated by the councillor:

“The greening of the park was delayed because of the city processes and especially the clean-up of the dirt at the bridge before the area could be beautified.”

These are all critical factors when achieving environmental goals. The results from data collected indicated that informants viewed this delay as non-compliance to what was agreed upon, expressing their dissatisfaction. One such goal, the prevention of illegal dumping through the construction and the implementation of a new waste drop off facility, the most significant and tangible solution to the environmental problem received the following response from stakeholders when interviewed:

“They never constructed the drop off as promised and we are still waiting!”, and as another respondent also said: “The greening of the park was delayed because of the city processes and especially the clean-up of the dirt at the bridge before the area could be beautified.”

According to the theory of Long and Arnold (1995), the success of this type of Environmental Partnership Framework requires signed agreements from a partnership project in order for

the partnership to succeed. Many community members argue that the plan designed to deliver the most excellent solutions was not driven by those who championed the project enough.

With regard to the behavioural changes, when revisiting Long and Arnolds theory of Environmental Partnership; the theory says that attitude changes indicate how much leverage a partnership generates after it has come to an end. Drawing from this theory, if the partnership convinced those stakeholders and non-participants to change their attitude creating a positive impact on the environmental issue and quality, it would be regarded as a good indicator of the durability of agreements and completed projects. According to Long and Arnold (1995) this, in turn, enhances the investment. In the Green Zone Partnership, the attitude changes were seen as a catalyst to improve the issue and environmental quality, directly linked to the associated activities that would create impact. However, interviews with the Green Zone stakeholders indicated that only a few experienced positive attitude changes while many saw no difference to those who continued with their old habits of dumping their waste.

As stated by one stakeholder:

“The community was more aware of the dumping issue and people that received capacity building got together on other issues of concern.”

A Green Zone respondent had the following to say:

“We know that the attitudes of people are a challenge but the education and the partnership helped with the problem.”

Regarding the investment made as indicated by Long and Arnold, the results show that the participants that were directly involved and who experienced educational waste behaviour change for transformation had a positive attitude compared those that had no exposure to the Green Zone Partnership. This is what the sub-council chairperson had to say about how she experienced people attitude change:

“The experts broaden our understanding as to all requirements for a drop off facility and they also empowered me in process on how to develop a strategic plan which I believe is brilliant as I could help and advise others not in a position to do such a plan.”

It was clear that the informants viewed this delay as non-compliance to the commitments made in this phase expressing their dissatisfaction towards it. Of the various actions planned, the construction and implementation of a new waste drop off satellite facility was the most significant and tangible solution to the environmental problem. However, as one of the respondents said:

“They never constructed the drop off as promised and we are still waiting.”

To reflect on the environmental goals and those investments made when analysing the Green Zone Partnership, the project exhibited several outcomes based on the respondents interviewed which indicated that those equally opportunistic participants achieved certain outcomes. Here are some of the highlights shared by the informants when they were interviewed:

- The training and the capacity building given provided an opportunity to transfer skills and knowledge.
- Ongoing waste educational programmes and ongoing waste minimisation activities such as schools’ recycling.
- Waste entrepreneurship is seen as a possibility to achieve sustainable livelihoods.

6.5.2 Direct and Indirect Benefits of the Green Zone Partnership

According to Long and Arnold (1995) to ensure that the partnership works and it makes sense for those investing in the idea, it is essential that the objectives are achieved with measurable environmental benefits. These benefits must include indirect benefits that the partnership produces within a reasonable time. Within this project, various indirect benefits (not directly related to the central environmental) arose and presented below.

6.5.2.1 Indirect Benefits

Drawing from Long and Arnold (1995), this project yielded numerous benefits other than those related to the focal environmental problem. Those benefits shared by the informants were distinct and few. As one respondent said,

“The project provided them with an opportunity to engage with the relevant department responsible for approving graffiti artwork which was employed on the bridge. Sadly, due to a

lack of communication with the community and the sub-council the artwork from the bridge was removed”.

During infield data gathering, this was no longer present. An indirect benefit which was favourable in the project was the provision of waste education during school holidays and during library weeks which led to a school waste awareness event within the Green Zone Golden Gate community hosting 650 people including learners. A response from one of the key experts on the project, Keith Roman (2010), had the following to say in his email:

“Parents and learners who attended the event understood the importance of the event, but understood that there’s still a long way to go to achieve sustainability.”

He continued to say:

“We’re on the right track – in terms of: a sustainable model which is replicable, a unique model using Waste to integrate Council services at local community level and a socio-economic catalyst for improving the environment, health, safety and creating job opportunities.”

In his communication, he also reflects on the positive feedback received from the champion and from the stakeholder Roads and Stormwater with regard to the stormwater project, which could be successfully “closed”. In other words, the Green Zone Project reduced the blockages and flooding caused by littering and dumping and the canal could flow without any hindrances. Another indirect benefit which the Green Zone Partnership formed was with a non-profit organisation (NPO) based in Cape Town, called Soil for Life, that helped people learn how to grow healthy, organic food using simple, low-cost, environmentally-friendly methods. During this process, community members received food gardening training; one of the many indirect benefits due to the partnership as well as how to do home composting which assisted with the food gardening in Bonteheuwel and the Solid Waste management department which explored home composting as a waste minimisation approach (See Appendix11).

The photo 6.1 below shows the facilitator explaining to a community member the types of crop planted in the garden bed.



Photo 6.1: Community facilitator in food garden

(Source: L Van Oordt, 2016)

In addition, other indirect benefits that resulted in opportunities were the provision of entrepreneurial training on how to turn waste challenges into opportunities through recycling. The benefit included the provision of waste tours so participants can understand the waste stream and transfer the knowledge to the community creating awareness on the impact of people's attitude on the environment. To beautify the Green Zone, the community park was improved as a means to mend the overall environmental quality for the Green Zone.

Picture 1



Photo 6.2: Green Zone Golden Gate Park before being beautified

(Source: Jeffers and Green, 2012)

Picture 2



Photo 6.3: The Beautified Green Zone Golden Gate Park

(Source: L van Oordt, June 2016)

Given the level of investment, the impact on the environmental quality remained poor with very little to show as a success.

Apart from the park and the gardens created, the door to door engagements by participants did not yield any impact. As the results indicated when a stakeholder was interviewed the participant said the following.

“When doing the door to door education and we did not see any attitude changes with our people as they continue to dump their waste especially those items not collected on normal refuse collection days such as the mattresses, old kitchen appliances, and old furniture.”

Another participant said that, there is not enough visible patrolling to stop people from dumping as people dump in the night after 12:00 when all are asleep. Further, was the impact of the bureaucratic process causing confusion with regard to reporting lines, lobbying for resources and importantly to clarity as to who is responsible for and the timeframes to clear an illegally dumped site in the Green Zone Area. So, when the project was assessed, information revealed that the key stakeholders received communications’ training which was central to the operational know-how but never reaped any benefits. One participant responded by saying:

“We do not see an impact and the environmental conditions did not improve, especially with the reaction time in catching dumpers in the act or the enforcement officers will arrive late or never at all.”

According to Long and Arnold (1995), an essential element for a successful Environmental Partnership is relationship building through collaboration which emerges in the project. In this project, such a collaborative engagement was the emergence of a Tuffy Partnership Agreement with the city in the interest and benefit of the community activities planned. The collaboration resulted in the provision of plastic bags during all cleaning up events that would occur in the Green Zone Area of Bonteheuwel. However, this collaboration was short lived and only during the Execution Phase of the Green Zone Partnership. As the results indicate, after project closure this partnership with Tuffy came to an end and all activities within this phase became inactive resulting in all good being undone as illegal dumping on open spaces and canals remained and resumed. Also, various indirect benefits such as educational activities all came to an end in the Closure or Renewal Phase.

6.5.2.2 Direct Benefits

Long and Arnold (1995) argue that for a partnership to work, there must be direct and indirect benefits. At this point, we reflect on the direct benefits that the partnership yielded. The partnership brought various benefits wherein the sharing of knowledge was seen as a direct benefit and having access to the resources such as the law enforcement authorities when illegal dumping was in progress.

Although it was discussed that people lacked the understanding on how the operations for responding worked, it also provided the opportunity to educate people and share the necessary knowledge on this issue. In addition it created the platform to engage with the law enforcement authorities so as to increase the rapid response time to the dumping in progress and complaints thereof. With regard to the goal of the champion and his stewardship, many of the participants played a dynamic and robust role in attaining behavioural change despite people's social circumstances. However, the champion whose role it was to lead and to ensure continuity of the process and its many activities, could not follow through the strategic implementation plan which was regrettably not achieved.

Importantly, as seen below the plans for the Satellite Drop off facility, which was drafted, was never pursued after the project closure. In Figure 6.7 and Figure 6.8, all plans and approvals were established but the project closure phase showed that this never materialised. In Figure 6.8 and 6.9, Solid Waste Management initiated the drafting of plans and the layout for the new drop off facility. However, more than halfway through the process the plans were halted due to the resignation of the Green Zone Satellite Drop off facility project manager.

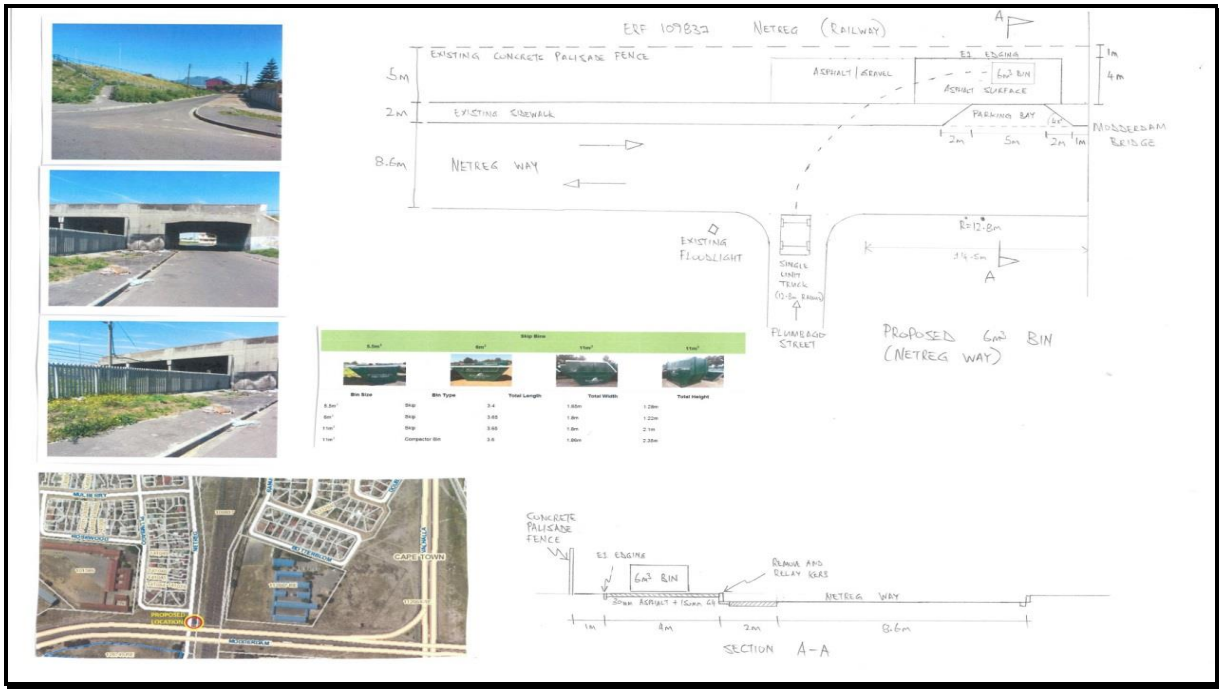


Figure 6.6: Drawings and location for the Green Zone Satellite Waste Drop off Facility

(Source: Elroy McKay, 2012)

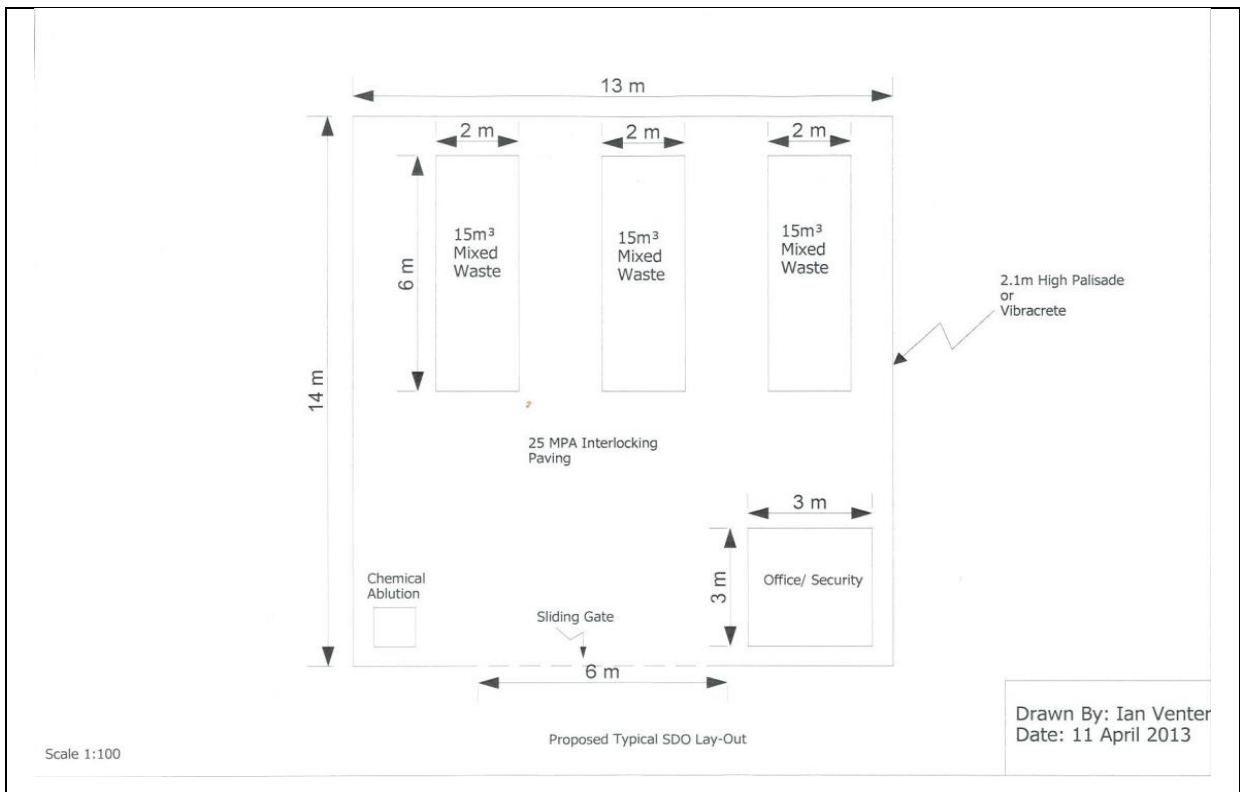


Figure 6.7 Schematic Layout of Waste Deposited in Skip Containers

(Source: Ian Venter - City of Cape Town, 2013)

The above schematic diagram (Figure 6.7) provides the layout of the proposed drop off waste facility that would be placed within the Green Zone Area to improve the dumping for the disposing of big household goods such as fridges, couches and other household items that cannot be disposed through the city's normal refuse collection system which is the 240l black wheelie bin. This, however, never materialised as indicated earlier.

According to Long and Arnold (1995), at the heart of an Environmental Partnership, success lies in the enthusiasm and determination of participants. Part of the success were the benefits as described but importantly a partnership's accomplishments can be measured in two categories: the completion of a project with participants and non-participants affected by the partnership and the attitude changes that sustain the accomplishments over a more extended period (Long & Arnold; 1995:157). Long and Arnold contend that this can be accomplished by affected participants and non-participants on completed projects that may directly achieve the long-term goal or "sustainable goal". In many instances, they complete the project which forms part of the larger plan for achieving the sustainable goal, what we might call the "Intermediate Goal". The projects not achieving the sustainable goals, but contributing positively so to provide a model to emulate, are called "Immediate Goals" (Long & Arnold, 1995:157). In the case of the Green Zone Partnership, the sustainable goal was the sustained relationships among participating and no-participating stakeholders.

6.6 ACHIEVEMENTS PROCESS GOALS

According to Long and Arnold (1995:166) when considering this level of assessment, it is critical as it measures the cross-sectoral partnerships, it measures the environmental priority settings and implementation mechanism which leads to adaptation based learning. By assessing the process credibility, transparency can be gained especially to a strategy that has not been proven in many observers' eyes (Long & Arnold, 1995:166). Thus, by conducting the process assessment, it can improve the objectives and results of the first two levels. In the case of the Green Zone Partnership, the critical issue to consider for assessment was;

- To critically assess the champion's success in stewarding the environmental goals in the partnership in addressing two fundamental parts of the study's objectives: if the agenda set out was achieved; and the champion's contribution in the decision making process.
- To assess whether the partnership initiatives continued and relationships survived.

Long and Arnold (ibid) argue that it is critical to have a person that would champion partnerships and the agenda. In doing so, the process is managed and coordinated so as to reach the environmental goals. In the Green Zone Partnership project, the partnership failed to reciprocate and failed to attain the goal as results indicated the champion lacked a stewardship role by driving the process and the maintenance of the project.

As a respondent stated:

"I am disappointment with the sub-council not fulfilling the role to provide feedback on the recycling facility or to call public meetings".

Thus, with regard to transparency and information sharing, there were fundamental flaws in the process as discovered when collecting the data. According to Long and Arnold (ibid), a partnership process requires resources and commitment from those giving it, in the case of the Green Zone, the stakeholders responsible for building the drop off facility were no longer available and a new form of discussion were required to secure the resources. Assessing the process, data showed that this was poorly driven and managed by the champion whom he expressed was due to limited communication and the municipal bureaucratic processes. It was evident that the champion had little powers in the decision making process. The lack of tactics and strategy by the champion and critical stakeholders involved prevented the partnership from capitalising on potential opportunities for change.

As one participant said:

"Using close circuit cameras will assist in catching those doing the illegal dumping as a potential capital investment by the private sector instead of city resources which were limited at the time".

Another stakeholder responded by saying:

"The sub-council champion did not drive the illegal reporting process as they were constantly redirected to different law enforcement offices and never got assisted as promised in the Green Zone strategic planning meeting."

The results indicate that the stakeholder's participants' input were only in a consultative manner and had no say in the resource management that could improve the environmental quality but rested with the expert departments that controlled the resources. This gives a sense that unequal power existed, which according to Long and Arnold (1995) is a critical factor for a partnership to succeed.

Table 6.2: The key stakeholder partners in the Green Zone

Objectives	Partners
Regulate Coordinate communications, job creation	Sub-Council
Infrastructure support, job creation, Capital finance, services for illegal dumping, education	Solid Waste
Operation financial support, labour staff, services	Roads and Storm Water
Education	Health
Coordinate, information dissemination, input to capital and operational plans	Community Structures and local leaders
Enforcement and monitoring	Law enforcement
Schools education	Educational Institutions

(Source; L van Oordt; June 2018)

Data collected indicates, the departments with the necessary resources including those politicians who had the decision making power had also the influence and stewardship to drive the process and outcomes which was not the necessarily the nominated champion. Also, the same sentiments were shared by some respondents as the expectation to deliver was not met. McQuaid (2000) calls this a product champion who uses others to develop the project. In this study, it also appeared that a greater expectation was not met by those partners and individuals involved as the city was driving the process overall. After the project closure phase Solid Waste Management did not continue driving the partnership process either in the absence of the champion. According to Long and Arnold (1995), it is important to note that for the Environmental Partnership to achieve its goals, the initiatives agreed upon must be met and for participants to consider new opportunities in future. In the Green Zone Partnership, stakeholders were given various waste education, training and capacity building which would create new opportunities and empower them to continue with initiatives that were derived while the project existed.

However, these benefits came only to a few resulting in inadequate gap information sharing that can improve the environmental quality and attitudinal transformation. The data indicated that the once benefitted had the following to say;

“My food garden is still continuing and I have expanded by introducing organic gardening and composting to the community at early childhood development centres in the area. I am also in the in the process of signing a five-year lease on the grounds to continue with my garden”.

Long and Arnold (1995) argue that this is typical of an effective partnership converting agreements of the findings into tangible activities. In the Green Zone Partnership started with an environmental need to be resolved and to do so; it required those people that would buy-in and agree to the agenda. The success of partnership stakeholders was showcased at the national level at the National Waste Conference in 2012 through the Waste Wise Programme. However, this was not locally shared among the relevant structures causing limited publicity of the participatory partnership and process and what it holds as the potential towards solving environmental problems. Long and Arnold (ibid) alluded that sustained partnership a means to sustained behaviours and attitudes. Participants in the Green Zone were unable to do so having minimal measurable improvements on environmental quality and how these improvements could be sustained (Long & Arnold, 1995). However, the results showed that the partnership ended and that those relationships remained, but as friendships, while those who pursued to continue have done so on a microscopic scale and on a personal capacity and not with the sub-council or the champion.

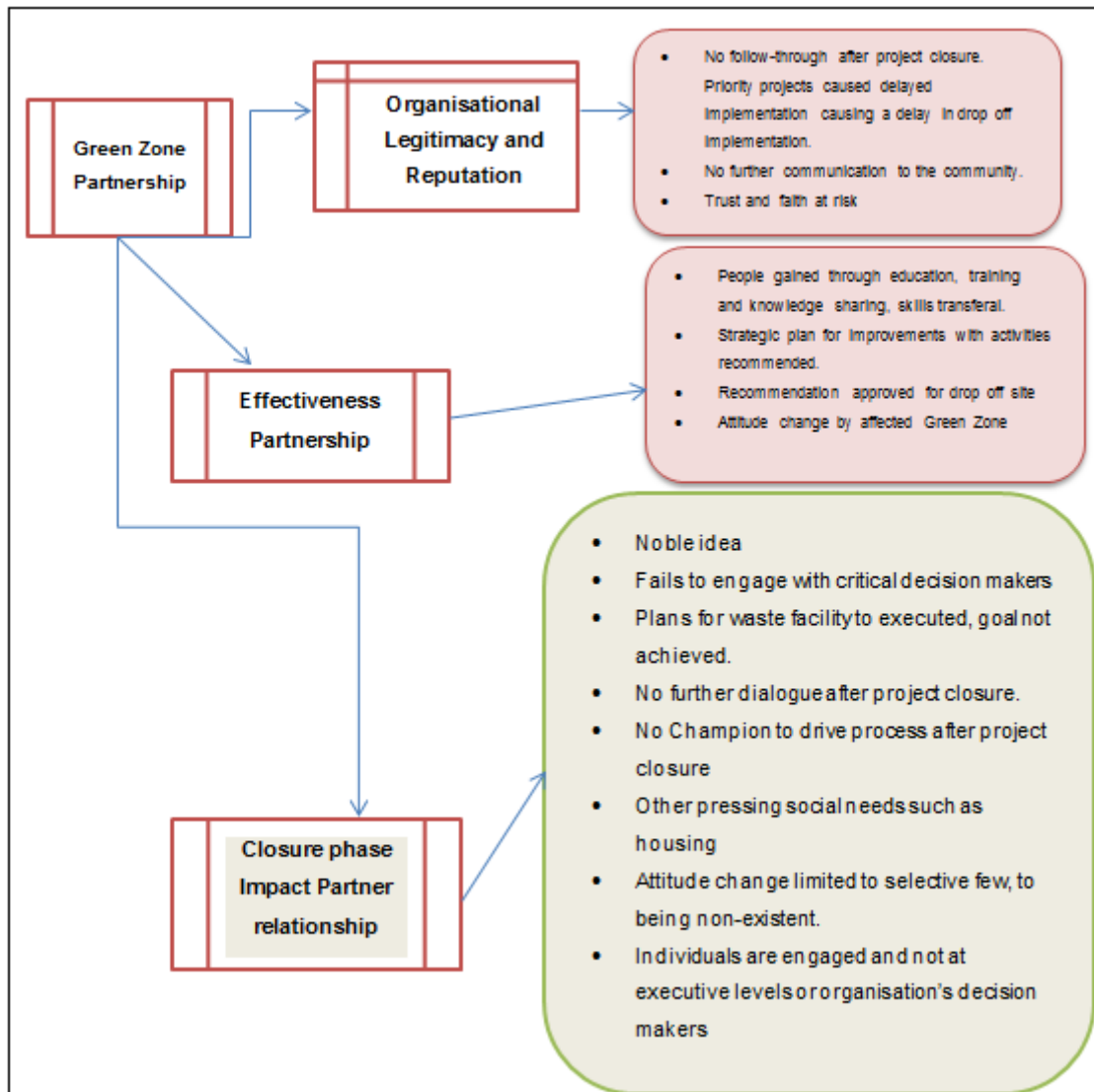


Figure 6.8: Summary of the Goals Achieved in the Process

(Source: L Van Oordt, 2017)

6.7. CONCLUSION

Within this chapter, a critical analysis was provided for the Green Zone Partnership and with particular reference to the people involved, the partnership process and those factors that contributed to some successes of the partnership and befitting from it. Through this framework, the waste problem was analysed against the theory of Environmental Partnerships for improved environmental quality. The study has discovered that although the Environmental Partnership was developed in Bonteheuwel, only a selected few benefitted while the lack of a champion(s) from various partners brought failure in the process. It is within this project that the type of Environmental Partnership Framework is applied for much analysis and to determine the flaws and deficiencies the project brings to a partnership process. Furthermore, the Environmental Partnership type also gives insight to the real benefits reaped by the participants.

It also provides understanding to the significant role of the champion, the costs and resources to partners involved and how to mitigate such risks to ensure the sustainability of the partnership in the long run. Further, within the theoretical framework of Long and Arnold and such other theorists seeking to establish the insinuations of theory for partnerships, it is said that Environmental Partnerships are not easy to assess as the above discussion has shown. Through this Exploration Partnership, more insight was provided to the organisational or institutional arrangements and the effect of such bureaucracy on the partnerships life cycle and its outcomes. In this case, the Exploration Partnership Framework provided a more precise understanding of how the partnership differed from a local government institutional arrangement and if replicated what it could mean for other programmes and project partnership relationships. This was a particularly important component as the people saw this as significant hindrances in the progress of the project solution, apart from the minimal interaction by the championing. Furthermore, it is believed that this partnership framework can significantly contribute to monitoring and evaluation of partnership programmes and projects by assessing those environmental solutions for improved environmental quality.

CHAPTER 7

KEY FINDINGS AND CONCLUDING REMARKS

7.1 INTRODUCTION

As this thesis moves to the final part, it is essential to reflect on the aims and objectives of this study as outlined in chapter 1 and the key approach used to study the Environmental Partnerships as a solution to environmental problems. The main aim of the study was to assess whether or not the Green Zone Partnership is a solution to the problem of littering and illegal dumping in the Bonteheuwel community. As a rationale to this approach, the theory of Long and Arnold's (1995) Environmental Partnership Framework was used for this study. This theoretical framework, provided for a critical examination and understanding of the Green Zone Partnership project with evidence that would enable us to arrive at firm conclusions.

7.2 AIMS, OBJECTIVES AND FINDINGS

Since the primary purpose of this chapter is to demonstrate how the study has reached the aim and the objectives, it is critical to remind the reader of what the aim and objectives were.

The main aim of the research was to assess whether or not the Green Zone Partnership is a solution to the littering and illegal dumping of waste in the Bonteheuwel community, which spoke to the primary research objectives to be achieved.

The objectives of the study were as follows:

- To determine the circumstances that led to the establishment of the Green Zone Partnership between the City of Cape Town and Bonteheuwel community.
- To find out whether or not the Green Zone Partnership has improved environmental quality by reducing littering and illegal dumping in the area.
- To locate the Green Zone Partnership within the Partnership Life Cycle Model and Environmental Partnership Map provided by Long and Arnold's Environmental Partnership theory.
- To identify the benefits of the Green Zone Partnership for the partnership stakeholders and the community.
- To find out what the views of the community and partnership stakeholders were toward the Green Zone Partnership project.

To attain the objectives of this study specifically, for objectives two, three and four, the theory on Environmental Partnership by Long and Arnold (1995) was used to analyse the Green Zone Partnership project. The partnership project was first located within the Environmental Partnership Map (EPM) and the Partnership Project Life Cycle (PLC). The last objective was achieved through careful examination of the Environmental Partnership goals alluded to by Long and Arnold (1995). These criteria focus on the direct and indirect benefits generated by the partnership project. In Chapter 6, for example The GZP was evaluated against the EPM using the scale of core relevance and the scale of conflict levels, in which it proved to be of low relevance and in conflict. This categorisation led to the Green Zone Partnership mapped as Exploration Partnership. This came to the fore during the investigation as partners had shown that their preferred approach was to talk through problems and work together to solve, or to address the environmental issues. This process resulted in important representatives from the community and the city departments collaborating on ideas and taking action, which culminated in the formation of the Green Zone Partnership team in 2010.

7.3 KEY FINDINGS AND RECOMMENDATIONS

Taking into consideration the aim and objectives of the study, the key findings are presented below and these are:

- During the time of the projects existence there was a significant reduction of illegal waste dumping and all activities associated with the accumulation of waste and disposal thereof.
- There is a direct relationship between the partnership and the reduction of waste during the partnerships existence and could be used as a tool to manage waste and illegal dumping activities.
- The role of the champion is critical in driving the environmental goals and strengthening the relationships for the continuation of the partnership, lacking such qualities and that of a champion or that of several champions would lead to meaningless implementation through Waste Management stewardship. In this case study, the one individual who possessed the skills and the expertise to socialise the novel idea of Environmental Partnerships as an environmental problem-solving approach lacked simultaneously the precious human capacity to entertain this and advocate this to the individuals in the community.

However, as the research unfolded, findings show that those who participated also performed no stewardship to the broader community and relied on the sub-council champion to lead. Apart from the champion, the case study demonstrated the value and the beneficiation the partnership brought to the overall project as those who were involved could implement meaningful interventions that improved their livelihood and their immediate environmental conditions. However, it was insufficient to sustain or to ensure permanent improved environmental conditions. Moreover, the lack of a champion led to the discontinuation of all good work done and the failure of the implementation of other activities. Judging from the Green Zone case, there was no further momentum as the champion slipped away from the core environmental issues to various other societal needs to be addressed.

- Secondly, the research paid attention to the value this case brought to the project with regard to collaboration and by investing time and various resources such as knowledge, expertise and empowering stakeholders and with the necessary skills to create continuous behavioural change in the community. Findings show only a few had the opportunity to benefit from skills and knowledge transfer. In this context, the findings indicate that those involved had the advantage to acquire new knowledge but never employed waste management behavioural change as it was visible that the waste and littering problem remained excessive. This suggests that the Green Zone never improved the environmental quality in the case study.
- Thirdly, in many collaborative projects, communications are a fundamental instrument to ensure proper workings and interactions between stakeholders. The findings of the current study indicate that communication between the stakeholders and the champion was ineffective to minimal. There was no process in place to provide critical information on decisions or actions taken on their Waste Management solution which was presented to the council. This essential element left a void leading stakeholder doubting the Environmental Partnership and the champion's overall commitment.

7.4 CONCLUDING REMARKS

In conclusion as Long and Arnold (1995) state, Environmental Partnerships are impossible to ignore because of the potential opportunities they hold. This is a process that requires time for its formation and it requires the dedication and driving force of a person that will champion the process with all those involved. Having a champion, ensure that all who have shown interest are kept involved and honour their commitment and agreements that were put forth on the agenda. In this case study, various elements have been highlighted that make the formation of an Environmental Partnership and the role it plays in an environmental problem-solving approach possible. Thus, the Green Zone Partnership, has shown that the partnership attempted to solve an environmental problem as a new approach to solving Waste Management problems. However, this ambitious endeavour has also shown insights into the aspects that require attention for a waste Environmental Partnership to succeed of which leadership is such a requirement to sustain a partnership. Furthermore, through this case study, Environmental Partnerships have shown to compliment and support regulatory processes that support environmental goals set out by those involved in partnerships. Thus, it is hoped that the research results presented would ideally act as a guide for those who venture into partnerships by using Environmental Partnerships as a problem-solving tool.

7.5 RECOMMENDATIONS

7.5.1 Key Champion

People are critical to any partnership but a leading person such as a champion is critical to the success of a partnership and the process it takes on. This person who drives the process should also have the tenacity to achieve the outcomes of any partnership. Such a champion must have the ability to pursue the agreed agenda and have the systems in place to do so. Within the Green Zone Partnership, shared responsibility was critical for the partnership to succeed. The champion who was the catalyst was under-resourced as the partnership failed to have various sub-champions that could drive the project outcomes and commitments to the closure phase. Therefore, it is essential to have more than one person to play a champion's role.

Furthermore, the constant capacity building of champions with the provision of knowledge and expertise on the topic will allow the champion to make informed decisions in leading the

process forward or to intervene when necessary. A critical aspect of a champion is the constant presence of the participant in order to manage the expectations, milestones and dialogues as the partnership moves along the various phases. Within this Green Zone partnership, this characteristic lacked which is an essential feature for partnerships' sustainability. In addition, when critically analysing the role of the champion, it was evident that no tactical changes or interventions were done in modifying the strategic intent, milestones or the activities so to achieve the desired outcomes. In a partnership, this is crucial as it allows for changes to occur while being mindful of the partner's goals and needs. Something a champion must be mindful of in a partnership venture of this nature is ensuring that there is a balance between what is required in project administration, management and the strategic goals to be achieved. In the case of the Green Zone Partnership, none of these were performed, so it was unable to achieve the objectives that were agreed upon and was a clear indication of the failure of the project.

7.5.2 Project Collaboration

This case study clearly shows the need for a more integrated approach which requires more than one driver from the various partners involved. By taking on this approach, it promotes accountability and commitment by all involved. The case also revealed the principle idea of a transversal or cutting across all resources to achieve the intended outcomes and must be driven with vigour and through dedicated person(s). This will ensure political commitment, stakeholder involvement and commitment to deal vigorously with problems. In the current state, the Green Zone Partnership was a space for all to collaborate and to avoid working in isolation, but this was unsuccessful as partners remain isolated in the context of the bigger picture.

7.5.3 Improved Communication

A huge factor that came out through the interviews was the lack of communication from the champion to the community and to the various stakeholders. In any partnership, communication is crucial and supporting resources such as communication toolkits as guides to drive change and keep transparency high. This will ensure people are included throughout the process as a valued partner. In this case study, the lack of information dissemination caused stakeholders being unaware of the activities, outcomes or benefits. It is, therefore, suggested that the sub-council community activity days should be used as a communication tool to inform the community of their dumping and environmental status and

should be used as a platform for the dissemination of information to the community for robust discussion and critique. Also, it is critical that a community communications strategy form part of the Environmental Partnership to manage the expectations of the community and to ensure transparency.

7.5.4 Improved Institutional Arrangement to Improve the Environmental Partnerships

For this case, to achieve sustainability, there are some fundamental elements required to ensure the success of a Green Zone Partnership. These are:

- Level of people's involvement.
- The provision of various champions representing the various stakeholders from the city departments to ensure institutional representations and appropriate resources.
- The integration of resources such as infrastructure, institutional capacity, expertise and funding

These aspects, although identified, lacked the constant presence during the partnership as it evolved creating minimal investment in the partnership by all stakeholders. Thus, it will be essential that these commitments become written agreements by all involved so to ensure the longevity of the partnership. Within this partnership, there were very little signed agreements to secure the sustainability of the Environmental Partnership and the stakeholders involved. Thus, questioning the level of effectiveness and commitment of the partnership. Therefore, for a partnership to be effective, it is essential that it be supported through signed agreements as it is a crucial aspect to any Environmental Partnership. As indicated, the involvement of people requires the role of various sub-champions to support the aim and to ensure that coordination and facilitation among the various stakeholders take place. All these contribute to the effectiveness of the partnership.

7.5.5 Capacity Building

In the case of the Green Zone Partnership, various education, awareness and training sessions took place. However, when critically analysed, the evidence showed that only a limited number of people were privileged enough to receive this benefit while the greater need for various educational and awareness programmes to the broader Bonteheuwel were absent. Through analysis, the partnership showed that only those involved in the project received waste education, training and capacity building on a range of topics including

waste. This exclusive group, of only a few, could provide the necessary skills transferral and knowledge to those they engaged. In the case of the Green Zone, the knowledge transferral happened in various forms from face to face engagement to school talks but as the momentum faded from the champion and the Green Team members, so did the capacity building, training and knowledge sharing die out. Also, as the Green Zone Partnership structure fizzled out having no champion or the presence of the overall subcouncil support, the capacity building discontinued eventually becoming non-existent. These are all critical aspects that need to be considered when investing in the partnership, collaborating and ensuring that the structure remains stable and unaffected by stakeholders at large. The result of such a partnership usually leads to the failure to change attitudes which were evident in the Green Zone Partnership. Furthermore, the environmental and awareness programmes implemented worked very well focussing on skills transfer to people. This allowed people not to lose sight as to the economic opportunities that people could take up from waste.

7.5.6 The Environmental Partnership Plan

In the Green Zone Partnership, an Environmental Partnership plan was developed that strategically directed the partner's joint objectives and activities to improve the illegal dumping problem. However, all those involved in the design of the plan and the realisation of the actions presented, were also the ones who did not honour the commitments as the plan was not signed, causing a loss of accountability to those who committed to it. Furthermore, when the plan is critically analysed these stakeholders involved representing their various institutions lacked the critical decision making power to sign and agree to the stated goals. In the case of the Green Zone Partnership, these were critical for partnership impact.

7.5.7 People Involvement

Although the Green Zone Partnership included the relevant people who would play a critical role, the partnership engaged with the critical decision makers that would change the course of events. In the case of the Green Zone, the engagement with key decision makers led to the positive motion to erect a satellite waste drop off facility and yet, the partnership failed to engage with the general people in the community to ensure the implementation thereof. Therefore it is crucial not only to engage with key decision makers but also those implementers at ground level.

7.5.8 Leveraging

This study observed that many opportunities arose during the project's Execution Phase allowing participants to implement projects in a private, individual capacity or part of the partnership project. However, this leveraging was not successful or sustainable as projects were not communicated to the critical decision makers to further develop their projects or to bring on board any technological research, if applicable. It was evident that the individual participants failed to involve the champion or the relevant decision-makers, on those projects leading to limited partnership impact as participating stakeholders worked in isolation. This is critical when opportunities must be maximised and benefits are to be reaped by all. Another observation was that participants were caught up in their daily activities resulting in the participants not being engaged in dialogue and missing the opportunities for potential leverage to be lost.

7.3.9 Financing Environmental Partnership

In the Green Zone Partnership, the financial support came mostly from city departments to initiate the environmental partner's hype while raising funds in kind or donations to contribute to activities such as the clean-up campaigns or for a water tank for the food gardens. However, the study observed the lack of a dedicated fund to improve the illegal dumping and potential creativity of the partners to improve their environmental conditions. It was evident that apart from the millions to clean up the dumping areas, it would require millions to have interventions that support attitude change and the necessary infrastructure to support the disposal of waste. Therefore, such financial investment and expenditure are required by all to contribute in an equal manner. When observing the study, this was something that required attention to ensure fairness amongst all partners.

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APPENDIX 1: Ethical Clearance



HEALTH AND WELLNESS SCIENCES RESEARCH ETHICS COMMITTEE (HW-REC)
Registration Number NHREC: REC- 230408-014

P.O. Box 1906 • Bellville 7535 South Africa
Symphony Road Bellville 7535
Tel: +27 21 959 6917
Email: sethn@cput.ac.za

4 October 2016
REC Approval Reference No:
CPUT/HW-REC 2016/H39

Faculty of Applied Science

Dear Ms Lavinia van Oordt

Re: APPLICATION TO THE HW-REC FOR ETHICS CLEARANCE

Approval was granted by the Health and Wellness Sciences-REC on 15 September 2016 to Ms van Oordt for ethical clearance. This approval is for research activities related to student research in the Department of Applied Science at this Institution.

TITLE: An Assessment of the Green Zone Partnership Model (GZPM) as a solution to the problem of littering and dumping in the Bonteheuwel community, City of Cape Town, South Africa.

Supervisor: Mr Zungu

Comment:

Approval will not extend beyond 5 October 2017. An extension should be applied for 6 weeks before this expiry date should data collection and use/analysis of data, information and/or samples for this study continue beyond this date.

The investigator(s) should understand the ethical conditions under which they are authorized to carry out this study and they should be compliant to these conditions. It is required that the investigator(s) complete an **annual progress report** that should be submitted to the HWS-REC in December of that particular year, for the HWS-REC to be kept informed of the progress and of any problems you may have encountered.

Kind Regards

A handwritten signature in black ink, appearing to read "N. Naidoo", with a horizontal line underneath.

Mr. Navindhra Naidoo
Chairperson – Research Ethics Committee
Faculty of Health and Wellness Sciences

APPENDIX 2: Research Participation Request



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

CORPORATE SERVICES AND COMPLIANCE
COUNCILLOR SUPPORT AND SUBCOUNCILS

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Subcouncil 5 Manager

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SUBCOUNCIL
AMABUNGANIA
SUBRAAD

5

SERVING THE MAIN SUBURBS OF:
BISHOP LAVIS, BONTEHEUWEL, DELFT AND VALHALLA PARK

To: Sub council- Bonteheuwel
City of Cape Town

Research Participation Request

I would like to thank you for the willingness to enable the Masters student, Leander van Oordt (192 052616), to work with sub council on this research project which will be highly valued.

I hereby formally agree on our willingness to participate in the proposed study and for any documentation to be accessed as well as participant engagement in accordance with the institutions Ethical Guidelines in respect to confidentiality, sensitivity when requesting information from people and the responsible reporting of results when compiled

Please sign below to indicate your permission granted.

Thank you sincerely

Leander van Oordt

Agreement to Access Records and/ or participants:

Authorised Person

Martin Keith Julie
Manager: Subcouncil 5

SUBCOUNCIL 5 SUBRAAD 5 IBHUNGANA 5
CNR/O JAKKALSVLEI AVENUE & KIAAT ROAD, BONTEHEUWEL
www.capetown.gov.za

Making progress possible. Together.

APPENDIX 3: Consent letter provided to Participant



CONSENT LETTER PROVIDED TO PARTICIPANT
--

Dear Participant

The intent of the interview is to assess the City of Cape Town Green Zone Partnership Model implemented in Bonteheuwel. The interview is part of my Master’s program within the faculty of Applied Science - Environmental Health supervised by Vincent Zungu.

We regard your participation valuable and I would appreciate your input and opinion on this Partnership Model. It is important to note that your participation in this interview is voluntary and you can withdraw your involvement at any time. The interview should not be more than 20 minutes and there would be no implications should you decide to withdraw from the interview.

Please note, that all information received from the interview will be treated with the utmost confidentiality and your anonymity will be respected. All records will be kept in a safe place and only the researcher will have access to the information.

The research for this study was approved by the Higher Degree Committee of the Cape Peninsula Institute of Technology. For any enquiry or questions regarding the research you are welcome to contact Leander van Oordt on vanoordtfam@gmail.com

To indicate your approval to participate in the interview, please tick the box.

Thank you sincerely
Leander van Oordt

APPENDIX 4: Questionnaire Guide for Community Interview



ANNEXURE1: QUESTIONNAIRE GUIDE FOR COMMUNITY INTERVIEW

Name

Interviewee.....

Date

interview.....

(Select one only)

Demographics

1. Gender
 - Male
 - Female

2. What is your age?
 - Less the 35 years old
 - 36-54 years old
 - 55 years and older

3. What is your highest level of education achieved?
 - Less than Matric
 - Diploma
 - University

4. You employment status at time of participation in the Green Zone Model.
 - Full time
 - Part time
 - Unemployed

(Select one)

1. How were you selected to participate in the partnership model
 - Through the community structures
 - Through sub council
 - As an individual

2. What was your role in the partnership model?
 - Individual participating
 - Representative of the community
 - Community facilitator
 - All of the above

3. What in your understanding caused people to dump/ litter in your area?

- They don't care about the area
- They don't have a waste collection service
- People are not educated /illiterate
- Bins have been stolen

4. How did you dispose of your waste?

- Did you dispose the waste in the bin
- Did you dispose it on open land
- Did you take it to the city drop off facility?
- Was it collected on waste collection day

5. What were your feelings towards the dumping/ littering in your area?

.....
.....
.....
.....

6. What in your understanding was the Green Zone Partnership Model?

- Is it about the waste problem in Bonteheuwel?
- Is it about people coming together to solve the waste problem
- Is it about the environment?
- All of the above

7. What kind of input did you contribute when the Green Zone plan was developed?

- Provided input and ideas on how the waste problem could be solved
- Provided input on how you felt about the general state of the environment and health
- Participated in the green zone plan development
- All of the above

8. In your observation who was responsible for the dumping in the area

- Bonteheuwel Community
- Individuals living outside the Bonteheuwel community
- Businesses
- All of the above

9. According to your observation, did illegal dumping and littering improve in your area

(Select one)

Yes	No
-----	----

If no, why?

.....
.....

.....
.....

10. Have you started reporting dumping?

(Select one)

Yes	No
-----	----

If no, why?

.....
.....
.....

11. What kind of waste education and awareness training did you receive?

- Information session
- Community facilitators engaging with you
- Waste awareness event
- Workshops
- None of the above

12. Have you implemented waste education and awareness activities?

(Select one)

Yes	No
-----	----

If no, why?

.....
.....
.....

13. What kind of activities have you implemented?

- Community awareness raising
- One on one with the neighbour
- Waste Event
- Recycling projects
- Beautifying hotspots
- Foodgardens
- All of the above

14. What are you doing with you waste now?

- Are you disposing of the waste in the bin
- Are you taking your waste to a drop off and / landfill/ recycle
- All of the above

15. What are you doing now?

- Still active with community raising waste awareness
- Still actively involved in the Green Zone activities
- Practising good waste management doing recycling
- Not active/ doing nothing at all

16. Have you continued to implement the Green Zone Partnership model?

(Select one)

Yes	No
-----	----

If yes, say what it is?

.....

.....

.....

.....

APPENDIX 5: Questionnaire Guide for Stakeholder Interview



ANNEXURE 2: QUESTIONNAIRE GUIDE FOR STAKEHOLDER INTERVIEW

Name

Interviewee.....

Date

interview.....

Demographics

1. Participant Position

- Professional
- Management level
- Management level within the City of Cape Town(level 4 management and up)
- Political
- Educational institution

(Select only one by the box questions)

1. What are the nature and magnitude of the Littering and Dumping problem?

.....
.....
.....
.....

2. How will you describe the community's attitude towards the problem?

- I don't care attitude
- Perception that dumping and littering creates more jobs.
- People care, but do not have the services to support good waste behaviour
- All of the above

3. What kind of services are in place to minimise this problem?

- Waste Collection services by the Council
- Drop off Collection points for waste
- Informal collectors
- Any other service arrangements present in the area

4. What services should be provided to minimise the problem?

- Drop off Collection points for waste
- Agreements with the informal collectors.
- Visible law enforcement service
- Other service arrangements that would suit the need?

5. What was your role in the Green Zone partnership?
 - Champion of the process
 - Committee member
 - Representative

6. What criteria were used to establish the Green Zone Team?

.....

.....

.....

7. What is your understanding of the Green Zone Partnership Model?
 - Is it about the waste problem in Bonteheuwel?
 - Is it about people coming together to solve the waste problem
 - Is it about the environment?
 - All of the above

8. During what stage of the partnership did you get involved?
 - Beginning
 - Middle
 - Towards the end
 - Not involved at all

9. In your observation who was responsible for the dumping in the area
 - Bonteheuwel Community
 - Individuals living outside the Bonteheuwel community
 - Businesses
 - All of the above

10. What were the circumstances that led to the formation of the partnership?
 - Waste Dumping causing various environmental problems
 - Good waste management not practiced
 - Not enough public awareness on how to practice good waste management
 - All of the above

11. What was your contribution to the Green Zone partnership?
 - Physical human resource (people)
 - Logistical support (for example: sending letters to participants)
 - Strategic Support (Skills, knowledge, expertise, for example development of the plan)
 - Sponsorship (financial and donations)

12. What capacity building did you receive to ensure long term success and the function you play?
 - Meetings, Seminars

- Training
- Workshops
- All the above
- None

13. In what way was the Green Zone Partnership Model a contributory factor?
- Develop strategic plans that is structured to match the environmental problem to solve
 - Developing formal arrangement with the partners to solve the problem
 - Stakeholders relationships provided improved plans to the problem

14. How is the relationship now?
- Strong
 - Weak
 - Engage only on a needs basis
 - Non existent

15. What agreement did you make as a partner?
- Verbal agreement of your commitment
 - Written agreement of your commitment
 - Project management involvement (planning, tasks implementation)
 - None of the above

16. What projects did you implement as a result of the Green Zone Partnership
- Educational awareness
 - Drop off satellite facility
 - Greening and beautification of the dumped sites
 - Reduced pest infestation
 - Increased visible law enforcement
 - All of the above

17. What follow-up interactions has happend to ensure the implementation of the Green Zone plan?

.....

.....

.....

.....

18. What according to you were beneficial, using the community participation model with community facilitators?

.....

.....

.....

.....

APPENDIX 6: Letter to Director City Parks



CITY OF CAPE TOWN ISIXEKO SASEKAPA STAD KAAPSTAD

Civic Centre
12 Hertzog Boulevard
P O 298
Cape Town 8000
9th Floor
Tel: 400-2478
Fax: 086 588 6298

Iziko IoLuntu
12 Hertzog Boulevard
Inombolo Yebhokisi 298
Cape Town 8000
9th Floor
Umnxeba: 400-2478
Ifeksi: 086 588 6298

Burgersentrum
Hertzog-boulevard 12
Posbus 298
Kaapstad 8000
9de Vloer
Tel: 400-2478
Faks: 086 588 6298

E-Mail: Elroy.McKay@capetown.gov.za

DEPARTMENT: SOLID WASTE MANAGEMENT

DATE : 12 March 2013
TO : Director: City Parks
SUBJECT : Satellite Drop-off, Erf 128749, Onderbos Street, Bontheheuvel

Dear Mrs Chantal Hanslo,

Background:

Illegal dumping is a huge problem in the Bonteheuvel area. The major problem we face is illegal dumping from the horse-and-cart users, where their unwanted goods (garage waste) that holds no value is being dumped on open spaces in the area.

Two years ago Solid Waste Management implemented a public awareness program (Waste Wise) in the area in conjunction with the local Sub-Council to educate the local community on waste streams. A task team was formed led by the Sub-Council Manager. The local community identified 'community representatives' per street and started taking ownership of their area.

Solution:

Solid Waste Management started looking at establishing a satellite drop-off (SDO) site in the area, but the availability of property is a challenge. The initial space identified in Netreg Road was deemed to be part of the road-reserve.

The only available space in the area, erf 128748, is owned by City Parks. There have been discussions with Bradley Burger, PPO at City Parks, about Solid Waste Management possibly using a portion of the property. At the recent site meetings with the task team, Joseph Mitchell, Superintendent in the area, supported the idea of a proposed satellite drop-off site in the area.

Proposal:

The Solid Waste Management Department would like to request permission to utilise a portion of erf 128749 as indicated on attached map. The proposed SDO, no more than 200m² in size, will be on the Eastern portion of property, with the existing play-park moving to Western portion of the property. It is suggested that a fence (or bollards) be erected on points A-B-C to prevent vehicles accessing Onderbos Street directly from Modderdam Road.

As per attached drawing, the proposed SDO will consist of two to three containers enclosed with concrete palisade fencing. The area will be surfaced by means of interlocking paving with controlled gate-control from access point off Onderbos Street.

Should City Parks consider the request, Solid Waste Management will communicate specific site-coordinates to Property Management and request for rezoning of specific area to suit purpose.

We trust you find this in order. Should you have any queries, please feel free to contact me at any stage.

Regards,

A handwritten signature in black ink, consisting of a large, loopy 'E' followed by 'MCKAY' in a cursive style.

Elroy McKay
PRINCIPAL TECHNICIAN: PROJECT MANAGEMENT
DATE: 12/04/2012

APPENDIX 7: Golden Gate Community Meeting Notes



GOLDEN GATE COMMUNITY MEETING NOTES



19 MARCH 2012

Held at Klipfontein school, Bonteheuwel

Attendees			
Tamara Drake	TD	WasteWise (Team support/ Project Management: Golden Gate project)	draket@jgi.co.za
Keith Roman	KR	WasteWise (Project Management)	kroman@mweb.co.za
Kenny Groenewald	KG	WasteWise (Communities)	kenny@abeshare.org
Abdulla Parker	AP	City of Cape Town (Catchment Planning)	Abdulla.Parker@capetown.gov.za
Hilton Scholtz	HS	CoCT (Roads & Stormwater Dept)	Hilton.Scholtz@capetown.gov.za
Quinton Williams	QW	WasteWise (Team support/ Communities)	williamsq@jgi.co.za
Faizel Jumat	FJ	CoCT (Solid Waste)	Faizel.Jumat@capetown.gov.za
Ishmail Meyer	IM	Klipfontein school: Principal)	admin@klipfonteinps.wcape.school.za
Martin Julie	MJ	CoCT: SC5 Manager	Martin.Julie@capetown.gov.za
Michelle de Wet	MdW	CoCT (Law Enforcement: Graffiti Unit)	Michelle.DeWet@capetown.gov.za
Refer to Attendance register (Annexure A) for Golden Gate attendees.			
Apologies			
Jameyah Armien (CoCT:)		Trevor Hill (CoCT: Environmental Health)	
Councillor Rau		Councillor Abrahams	
Description			
INTRODUCTION, MEETING PURPOSE AND EXPECTATIONS			
<p>As the Chair of the meeting, Martin Julie welcomed everybody to the meeting. The purpose of the community meeting was to present on the key findings of the Golden Gate (GG) waste perception survey, to hear from the attendees regarding any additional issues/ concerns relating to waste (dumping/ littering), and finally to form a sub-committee consisting of representatives from GG who would work with the City to improve the dumping and littering challenges occurring in GG.</p>			
SURVEY FINDINGS FEEDBACK			
<p>Abdulla Parker presented on the key findings of the waste perception survey. The attendees agreed that the findings accurately reflected how they felt regarding the littering and dumping challenges in Golden Gate. Abdulla reiterated that dumping and littering created negative work (i.e. the money used to clean stormwater drains, streets etc. should not have been spent in the first place) and could have been spent on other more longer term initiatives/ project in the GG area.</p>			
FACILITATED DISCUSSION			
<p>Ishmail Meyer highlighted that everybody now knows what the issues are in GG in terms of waste and littering, adding that these issues needed to be dealt with via process and eventual plan which would be implemented over time. Changing behaviour in the GG area (regarding dumping and littering) would be a process that needed to be initiated now for implementation over time.</p>			
<p>Kenny Groenewald stated that the community needed to help themselves, take ownership and responsibility which</p>			

would ensure the sustainability and success of the project in the medium to long term. Champions identified in GG would assist with effecting change/ making a difference and would encourage others to change. Everybody needed to work together (once positive change seen) to improve/ beautify GG. Kenny Groenewald added that companies/ business invest in success and when they see communities themselves taking responsibility/ ownership- therefore future opportunities were endless. Changing/ improving GG was ultimately the community's choice and one needed to begin with the meeting attendees (do not focus on neighbour but what you as an individual can do).

Facilitated by Ismail Meyer and Kenny Groenewald, the following key points were noted by the meeting attendees as key challenges within the area. Potential solutions provided by attendees are also noted below.

DUMPING AND LITTERING

What did you say?	What can be done about this?
Dumping (bottles and rubbish) occurring on private land behind the Mosque	<ul style="list-style-type: none"> • Contact owner of property to close off the area • Talk to the family/ people who are dumping there- names known and/or fine. • Erect large containers (skip) in front of the mosque for material to be deposited into- needs to be investigated further. • Contact the Health inspector to issue letter re health impacts of dumped waste and for area to be cleaned.
Concerned about confidentiality when reporting culprits	<ul style="list-style-type: none"> • Residents to phone toll-free number on pamphlets/ round stickers/ car license holders. • City to speak to offenders and ask them to stop dumping. • <i>Get reference number when reporting dumping etc.</i> • <i>Names requested to provide feedback to the individual reporting the transgression.</i>
General meeting notes: <ul style="list-style-type: none"> • Wheelie bins get stolen. No point in putting infrastructure if gets stolen. • Want City to clean behind the mosque but can not as on private land. • If close alley way behind mosque, people will still dump there. • Community have asked Councillor for a large containers (skip) to be placed in front of the mosque. Surveillance/ monitoring needed and lock-up/ secured. • Are bylaws that deal with dumping and burning (R500 to R2 500 per offence). • Erect an information board (not metal) with this information in GG (fine amounts, who to contact). • City to be sensitised re confidentiality of people who report transgressors. 	

BURNING

What did you say?	What can be done about this?
Children suffer from asthma and hospitalised.	<ul style="list-style-type: none"> • Report burning via phoning 107 (free from landline). • Report burning via phoning 112 (free from cellphone).

Law enforcement – apply bylaws.	<ul style="list-style-type: none"> City to talk to scrapyard owner to accept wire with plastic covering to avoid burning it.
General meeting notes: <ul style="list-style-type: none"> CCTV needed in the streets Burning has been reported before but police do nothing about it. Feel that no one cares. 	

STORMWATER BLOCKAGES/ POLLUTION

What did you say?	What can be done about this?
Sewerage overflowing from pump station into detention pond and children playing in the area	
General meeting notes: <ul style="list-style-type: none"> Stormwater blockages cause flooding in the streets which make the children sick. Pipes always blocked- JetVac struggles to clear out. 	

“PARKING LOT” ISSUES

What did you say?	What can be done about this?
Speed bumps	

ELECTION OF GOLDEN GATE SUB-COMMITTEE:

Eight representatives (with back-ups) from the meeting were nominated/ volunteered to be part of the GG sub-committee who would meet with the City Line Departments every two months to develop and implement the plan (still to be developed for short, medium and long term interventions). Refer to table below. Martin Julie as the SC 5 Manager would champion the GG project (with support from other City Line Departments).

Street name	Community representative
1. Oudehout street	Dorothy Davids Nicholas Grootboom (Back-up representative) Gavin McQueen (Back-up representative)
2. Oleander street 2	Erica Smith
3. Oliehout street	Zahara Koopman Peter Philander (Back-up representative) Nadiema Koopman (Back-up representative)
4. Neil-Mellon	Nolan Abrahams

	Susan Oliphant (Back-up representative)
5. Netreg road	Cynthia Cupido Sandra James (Back-up representative)
6. Onderbos street	To be selected by GG community
7. Oleander street 1	To be selected by GG community
8. Oudehout street 1	Derek Abrahams

Refer to attendance register (Annexure A) for contact details.

Kenny Groenewald noted that WasteWise could assist/ provide support on an ad hoc basis to the GG community but ultimately the community needed to take ownership and responsibility for effecting change in their area.

THANK YOU AND MEETING CLOSE

T. Drake thanked both the WW team and the City for attending the meeting and for their input and support leading up to the Community meeting. Meeting attendees were also thanked for their valuable input and enthusiasm provided during the meeting.

There were huge opportunities within GG for positive change to be made. The sub-committee (consisting of the GG representatives as well as certain City Line Department representatives) needed to develop a plan for implementation over time and assign roles and responsibilities. A sub-committee meeting date needed to be arranged as soon as possible.

Notes taken by: T. Drake.

Post meeting notes for reference purposes in terms of the Plan/ methodology:



METHODOLOGY TO BE FOLLOWED POST COMMUNITY MEETING:

In terms of the methodology with regards to the Golden Gate project, the following key approach was agreed to:

1. Identifying the problem- *completed*,
2. Establishing the need (via undertaking the waste perception survey)- *completed*,
3. Obtaining buy-in from City Departments/ stakeholders and undertake short-term planning- purpose of 14 March Stakeholder meeting- i.e. *completed*,
4. Community feedback from Community meeting in terms of the survey results, identify champions within community to form a GG sub-committee- 19 March Community meeting, *completed*,
5. Project Core Team Planning session (identify and confirm key stakeholders= City Line department: individuals, horse & cart representatives, organisations etc.) - *Date TBC*,
6. Draft the GG Action Plan (with input from the survey, community meeting and City Line Departments)- *Date TBC*,
7. Community Action Plan (to be discussed and confirmed by GG sub-committee) - *Date TBC*,



Implement the Action Plan and Monitor/ record change- *Date TBC*.

Annexure A

Golden Gate Community Meeting: Klipfontein school
Monday 19 March 2012: 19:00- 20:00

NAME:	ADDRESS:	CONTACT NUMBER:
Quinton Williams	14 Central Square, Pinelands	021 532 0940
Nolan Pretorius	1 Danielem STR. Netreg B/H	0765476009
Eren Smith	58 Oleander Netreg	021-6947933. 08359916769
Susan Oliphant	7 Camomile Golden Gate Netreg	0715635186
Anaëne Jules	4 Sweetpea Golden Gate Netreg	0848244481
Denise Abraham	17 Oudehout Street Netreg	0745611131
M. Grootboom	51 Oudehout Str. Golden Gate	0216948476
NANCY A. KODMAN	31 Oudehout Str. NETREG	0762293561
KASHIFA DAVIDS	16 Oudehout STR. NETREG	021 6947678
Sylvia Lappers	21 Netreg	0753709949
CARIN McQUEEN	55 Oudehout STR NETREG	0738622399
J. SWARTZ	31 ^A Oudehout STR NETREG	0738622399

Golden Gate Community Meeting: Klipfontein school
Monday 19 March 2012: 19:00- 20:00

NAME:	ADDRESS:	CONTACT NUMBER:
Dorethy Davids	35 Oudehout Str. Netreg	010 88 00 400.
JANEK ALEXANDER	55 ^B Oudehout STR. NETREG	0734608612
VALERIE J. JULES	2 ^C Oudehout STR NETREG.	
Amanda Damas	150 Netregweg Netreg	
Nazreema Schroeder	2 ^C Oudehout Str Netreg	079137572
ABRAHAM LEGGETT	55 ^A Oudehout STR. NETREG	
Keith Roman		
Alan John	COET	0722919690
Heidi Scholz	Coet - Roman	021 93 08467
ROSEMARY MINNAPPE	19 ^B Oudehout Str NETREG	021 6947675
Peter Islander	1 ^P Oudehout Str	0216943015
Ashwin Borbas	53 ^A Oleander Str	0734048491



CITY OF CAPE TOWN
THIS CITY WORKS FOR YOU

Golden Gate Community Meeting: Klipfontein school
Monday 19 March 2012: 19:00- 20:00



NAME:	ADDRESS:	CONTACT NUMBER:
NICKLAAS GREUTBOM	51 OUDEHOUT ST. GOLDEN GATE	021 694 8470



CITY OF CAPE TOWN
THIS CITY WORKS FOR YOU

Golden Gate Community Meeting: Klipfontein school
Monday 19 March 2012: 19:00- 20:00



NAME:	ADDRESS:	CONTACT NUMBER:
T. DRAKE	14 CENTRAL SQUARE, PINELANDS, 7405	021 532 0940.
Z. Koolman	31 OLIE HOOP NETREG	082064544 021 694 6618
R. Williams SHAMIEKA Saba	71 NETREG WEG	
	33 OUDE HOOP NETREG	079230151
SOMPHA	37 OUDE HOOP NETREG	
R. Daniels	55 OUDEHOOP STR NETREG	021 694 8273
W. J. STEPHENS	57 NETREG WEG -	6951237
J. Liessing	45 Oudehout. STR. Netreg	
J. DASSON	52 MICHAEL HEW. ST- CHARLEVOIX	0834595863
B. Jones	13 NETREG WEG NETREG	0765980268
A. Kix	53 OUDEHOOP NETREG	0734914515
C. Cupido	59 NETREG WEG B/H	

APPENDIX 8: Memorandum of Agreement

MEMORANDUM OF AGREEMENT ENTERED INTO BETWEEN

THE CITY OF CAPE TOWN: SPORT AND RECREATION DEPARTMENT
HEREIN REPRESENTED BY LOKINE MTWALI
IN HIS CAPACITY AS EXECUTIVE DIRECTOR

(hereinafter referred to as the City)

AND

GARDEN OF HOPE COMMUNITY FOOD-GARDEN
HEREIN REPRESENTED BY SUERITA ERNSTZEN
IN HER CAPACITY AS A WASTEWISE COMMUNITY FACILITATOR

(hereinafter referred to as the Garden of Hope Community Food-garden)

WHEREAS the City and **Garden of Hope Community Food-Garden** agree to enter a Memorandum of Agreement in order to promote a Food-garden in the Bonteheuvel area.

AND WHEREAS it is agreed that the Community Centre's grounds and water will be used by **Garden of Hope** Community Facilitator group to develop a food-garden.

The terms and conditions of usage will be finalised to ensure that other activities at the Community Centre are not impacted negatively.

NOW THEREFORE THE CITY AND GARDEN OF HOPE COMMUNITY FOODGARDEN AGREES AS FOLLOWS:

1. DURATION

This agreement will commence on the date of signature for the duration of one year and renewed annually, after which it will be evaluated.

2. FEES

As part of this agreement the garden area within the community centre's property will be utilized free of charge as this forms part of the partnership with **Garden of Hope** Community Food-garden.

b d e

3. RESPONSIBILITIES OF GARDEN OF HOPE COMMUNITY FOOD-GARDEN

Garden of Hope Community Food-garden must provide to the COCT a monthly report providing feedback of the project and progress with regards to its objectives.

Garden of Hope Community Food-garden will be responsible for the following:

- To empower the community circle members through skills training and attending workshops about gardening.
- To uplift the standard of living of the members to provide for themselves, and
- To support the soup kitchen that is on the premises.

Garden of Hope Community Food-garden will, at its own cost, provide all the equipment they deem necessary for the development of the food-garden.

The volunteers that will assist in the garden will consist of a maximum of 15 members from the centre. They will be responsible themselves to select and monitor their members.

4. RESPONSIBILITIES OF THE CITY

The City will be responsible for providing the area within the community centre's property that has been designated for the development of the community food-garden.

The City will be responsible for providing water from the Community Centre for the development of the community food-garden.

The facility manager at the Community Centre must monitor this agreement.

5. INDEMNITY

Garden of Hope Community Food-garden indemnifies the City against all sums which the City may be liable to pay for any injury, loss or damage sustained by any person on or about the premises, including costs incurred in defending or contesting any such matter whether such injury, loss, damage and costs are caused by or result from any negligence on the part of the City or any part for whose negligence the City is vicariously liable in law.

P S E

6. TERMINATION

This agreement will be terminated if **Garden of Hope Community Food-garden** performs other activities or uses the Community Centre grounds for purposes other than as stated in its objectives.

This agreement can be terminated by either party by giving twenty one (21) working days notice of its intention to terminate.

7. ENTIRE AGREEMENT

This agreement constitutes the entire agreement between the parties and supersedes any other agreements previously concluded.

No amendment of this agreement and no waiver of any of the City's rights are binding on the parties unless expressly contained in a written document signed by the City and **Garden of Hope Community Food-garden**.

No party shall be bound by any express or implied term, representation, warranty, promise or the like not recorded herein, whether it induced the contract and/or whether it was negligent or not.

8. DOMICILIUM CITANDI ET EXECUTANDI

The parties choose as their domicilia citandi et executandi for all purposes under this agreement, whether in respect of court process or communications of whatsoever nature, the following addresses:

The City of Cape Town
.....
.....
.....
.....


D SE

Garden of Hope Community Food-garden

44^A Chestnut street

Bonteheuwel

7764

Any notice or communication required or permitted to be given in terms of this agreement shall be valid and effective only if in writing but it shall be competent to give notice by telefax or by e-mail where a party has notified the other party of such a telefax number or an e-mail address.

SIGNED AT Cape town ON THIS 21 DAY OF June 2012.

AS WITNESS:

1. [Signature]

2. _____

[Signature]
By
For CITY OF CAPE TOWN
who warrants that he is duly
Authorised hereto

SIGNED AT Bonteheuwel ON THIS 10th DAY OF May 2012.

AS WITNESS:

1. C.A. Kest

2. [Signature]

[Signature]
Suertja Ernstzen
By
For Garden of Hope Community
Food-garden who warrants that
he/she is duly authorised hereto

APPENDIX 9: Sub Council Resolution

09 - MOTION BY COUNCILLOR MONDE NQULWANA - Message (HTML)

File Message

Ignore X Meeting OneNote Mark Unread Categorize Follow Up Translate Related Select Zoom

Junk Delete Reply Reply All Forward More Move Actions Tags Editing Zoom

Delete Respond Move Tags Editing Zoom

If there are problems with how this message is displayed, click here to view it in a web browser.

From: Sharepoint User Sent: Fri 2013/02/08 09:39 AM

To: Elroy McKay

Cc: Trevor Anthony Carroll; Leander van Oordt

Subject: 09 - MOTION BY COUNCILLOR MONDE NQULWANA

Report Subject	MOTION BY COUNCILLOR MONDE NQULWANA
Author	SIWISA; THANDO
Meeting Date	19/09/2012
Resolution	Approved;#Recommend
Resolution Details	The motion was READ by Cllr Monde Nqulwana (mover) and he RECOMMENDED that Sub-council 09 supports this motion and RECOMMEND to Solid Waste Department to: <ul style="list-style-type: none"> • ESTABLISH satellite dumping sites within Sub-council 09; • PROVIDE necessary resources to implement this motion; and • A public participation process BE DONE to establish points for satellite dump sites. Seconded by Monde Mabandla Resolved That the motion be SUPPORTED by Sub-council 09 and be FORWARDED to Solid Waste Department for action.
Additional Comments	Motion was forwarded to Solid Waste Department. Mr Trevor Carroll on Wednesday 10 October 2012 and waiting for response. 23/01/2013 Subcouncil 09 meeting: Response dated 25 October 2012 was received from Principal Technician: Project Management, Mr Elroy McKay that a feasibility study will be done for possible satellites and further actions will be communicated.
How Resolved	Consensus
Period	2001/10/1 -2013/02/04
Line Comment	Elroy McKay advised that a investigation was in process. Internal meetings

See more about: Sharepoint User.

EN 07:44 AM 2018/11/15

APPENDIX 10: City Media release

City awareness drive calls on communities to help stop illegal dumping

**MEDIA RELEASE
NO. 40 / 2015
22 JANUARY 2015**

STATEMENT BY THE CITY'S EXECUTIVE MAYOR, PATRICIA DE LILLE

Note to editors: this is an extract from a speech made by Mayor De Lille at the launch of the City's Illegal Dumping campaign in Kensington today, 22 January 2015.

The City of Cape Town is proud to announce the launch of our Illegal Dumping campaign today.

Each month, the City attends to numerous blocked sewer systems and toilets and clears illegally dumped materials from open spaces.

We have also seen deaths as a result of illegal dumping when three-year-old Jordan Lewis died in April 2013 after playing near illegally dumped chemical waste in Delft.

Between October and December 2014, the City attended to around 25 000 sewer blockages across the city. On a daily basis, the City also attends to the unblocking of full-flush toilets in informal settlements.

Illegal dumping is extremely costly as the City spends approximately R350 million annually to clear waste from open spaces, sewer systems and toilets.

The illegal dumping of waste not only places a burden on the City's finances and resources, but can also pose a threat to public health. We are therefore launching an extensive campaign to deter this practice and keep communities safe.

The R350 million we spend annually to clear illegal waste could be much better spent elsewhere on new services and infrastructure. For example, the City could have built 2 065 houses, or provided electricity for 31 627 homes.

As a responsive administration, the City is now shifting its focus from being reactive to the problem, to being more proactive.

The Illegal Dumping campaign will create awareness about the damaging effects of illegal dumping and educate residents on the costs of clearing waste and on how to dispose of waste in the correct way.

The campaign will highlight both illegal dumping in open spaces by companies and residents and the improper disposal of waste into the sewerage system.

While there are some hotspots, the problem of illegal dumping is a city-wide problem, and we will seek to raise awareness of this throughout the metro.

Some of the areas where illegal dumping in toilets is most prevalent include Dunoon, 6th Avenue in Kensington, and parts of Khayelitsha, while areas where dumping in open spaces is most prevalent include Nyanga, Brown's Farm, Mitchells Plain and Epping Industria.

Problematic areas for sewer blockages include the South Peninsula area, Parow, Mitchells Plain and Philippi.

The campaign will run in conjunction with the roll-out of green litter bins, which will be placed near toilets in informal settlements and public toilets so that residents can dispose of waste properly.

Toilet blockages are also a problem throughout the metro where there are public toilets.

People have to share these facilities and we urge residents to keep these toilets clean for others who also use them.

This year the City plans to roll out 844 bins in 15 informal settlements at a cost of approximately R844 000. Eventually these bins will be placed in all informal settlements where we are legally able to place them.

At present, incidents of illegal dumping are under-reported, and communities are encouraged to work with us to ensure that more incidents are reported.

Residents can contact the City's call centre on 0860 103 089 to report illegal dumping or sewer blockages.

We urge communities to take down the details of perpetrators and their vehicles, including registration numbers and, if possible, gather photographic evidence so that we can prosecute those who dump illegally.

Help us stop illegal dumping by reporting problems and reporting the perpetrators so that those acting illegally can be brought to book.

The combined message will be communicated on numerous platforms, including billboards, newspapers and in targeted communities.

Residents can visit the City's website or their local subcouncil office for a list of waste drop-off sites, which can also be found via the following link:

<http://www.capetown.gov.za/en/Solidwaste2/Pages/Dropoffandrecyclingpoints2.aspx>

END

ISSUED BY:

INTEGRATED STRATEGIC COMMUNICATION, BRANDING AND MARKETING DEPARTMENT, CITY OF CAPE TOWN

MEDIA ENQUIRIES:

ZARA NICHOLSON

SPOKESPERSON FOR THE EXECUTIVE MAYOR – PATRICIA DE LILLE

CITY OF CAPE TOWN

TEL: 021 400 4998 CELL: 079 416 5996, E-MAIL: ZARA.NICHOLSON@CAPETOWN.GOV.ZA

2015/01/22

APPENDIX 11: Home Composting Training

Annexure C: Photographs of Composting Containers in use during 2012

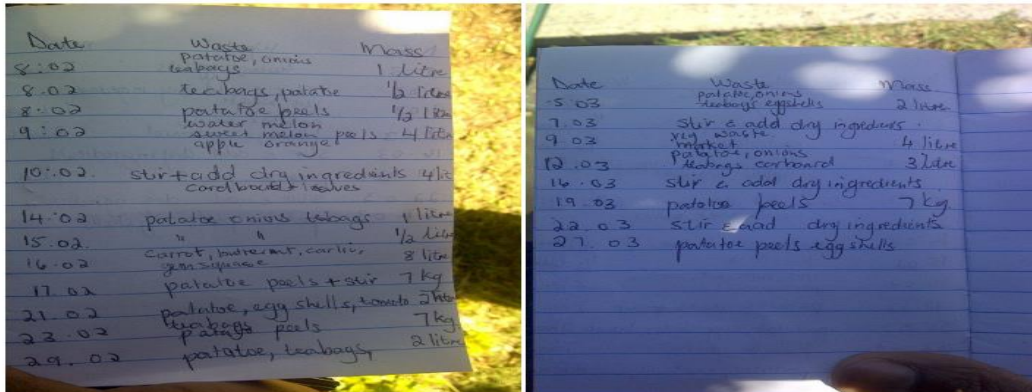
1. Composting container placement, and weighing of organic waste using scales provided



2. Further examples of placement of the composting containers



3. Examples of data collection and recording in notebooks provided



4. Examples of kitchen and garden organic waste placed in composting containers



5. Further examples kitchen and garden organic waste placed in composting containers



6. Composting container exit hatch (where compost is extracted) while compost is maturing



7. Examples of compost produced by composting containers



8. Example of one of the community gardens where the compost was used.

