AN EXAMINATION OF THE KNOWLEDGE PRODUCTION PROCESS IN A SPATIAL PLANNING EXERCISE: THE CASE STUDY OF THE BACK OF PORT PROJECT IN DURBAN, SOUTH AFRICA

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As the candidate's supervisor I have/have not approved this dissertation for submission.

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ABSTRACT

Cities actively endeavour to reposition themselves in the global economy by using large scale neoliberal interventions, which have the potential to significantly alter urban landscapes. Within these interventions, it is important to understand the ways in which knowledge is produced, and how decisions are made. Typically located within cities, ports are drivers of local and regional economic growth, and can stimulate urban development and prosperity. In the age of containerisation, ports and their cities have to transform in order to remain competitive.

This study investigates the Back of Port (BoP) Project in Durban, which is a spatial planning exercise initiated by the eThekwini Municipality that sought to create a BoP zone that would enhance the Port of Durban's competitiveness. The Port was facing a 'congestion crisis', and this city-led project emerged out of a co-operative initiative between the Municipality and the state owned Transnet National Port Authority. It was developed by a range of specialist consultants, with the aim of creating a distinct framework for the management and development of land use in the areas adjacent to the Port.

The study follows the knowledge production process from the Inception to the Concept Plan Phase of the BoP Project. By using discourse analysis, this research identifies the dominant discourses, story lines and discourse-coalitions, as well as other dramaturgical and deliberative factors, which were introduced by various actors and shifted throughout the project. These features shaped this project's knowledge production process, and have the potential to significantly alter urban space in this locality. The 'rules of the game' constructed the BoP Project so that a 'good business climate' would be created for logistics and port-related activities in adjacent city spaces. These spaces were conceptualised as areas of change, which facilitated the introduction of new planning strategies. The knowledge negotiation processes were nuanced and complex, as knowledges associated with the functional discourse-coalition became hegemonic, whilst counter-hegemonic knowledges 'fell through the cracks'. The research revealed that in order for such planning projects to be successful, it is important that decision-making in urban planning is cognisant of the context within which it occurs, and that holistic decisions, based on 'multiple knowledges', are made.

PREFACE

The research described in this dissertation was carried out in the School of Agriculture, Earth and Environmental Sciences, University of KwaZulu-Natal Durban from January 2008 until December 2015 under the supervision of Mrs. Catherine Sutherland.

This dissertation represents original work by the author and has not otherwise been submitted in any form for any degree or diploma to any tertiary institution. Where use has been made of the work of others it is duly acknowledged in the text.

_____ _____

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DECLARATION 1 - PLAGIARISM

I, ……. declare that

1. The research reported in this thesis, except where otherwise indicated, is my original research.

2. This thesis has not been submitted for any degree or examination at any other university.

3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.

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BoP	-	Back of Port
DIA	-	Durban International Airport
D'MOSS	-	Durban Metropolitan Open Space System
IDP	-	Integrated Development Plan
LAP	-	Local Area Plan
LUMS	-	Land Use Management Scheme
SDB	-	South Durban Basin
SIA	-	Social Impact Assessment
TEMPI	-	Transnet eThekwini Municipality Planning Initiative

CHAPTER ONE: INTRODUCTION

Ports are the foundation of international trade, and by being situated between maritime and hinterland networks, they provide immediate linkages between international and local transport systems and trade chains (van der Lugt & de Langen, 2005; Cheon *et al*, 2010). Ports are frequently conceptualised as the drivers of regional economic development, as they attract a wide range of economic activities (van der Lugt & de Langen, 2005). The governance of South Africa's container port system represents a unique situation, as the state-owned enterprise Transnet operates all container terminals, acts as the port authority and controls all rail freight business in the country (Notteboom, 2010). Consequently, planning and operational decisions related to South African ports have always been made by powerful national actors and institutions, outside of the influence of local governments in the adjacent port-cities (Jones, 2002).

For the Port of Durban[1], the relationship between the local government[2] and port authority was particularly strained during the 20th century (Freund, 2002; Merk, 2013). However, within the last decade there has been an improvement in the relationship between Transnet and the eThekwini Municipality, which opened up possibilities for collaborative planning initiatives around the Port of Durban (Mather and Reddy, 2008). One such initiative which emerged from these collaborative endeavours was the Back of Port (BoP) Project. This project was initiated by the Municipality, with the goal of using spatial planning to: address landside port congestion; cater for port-related growth; and rationalise land uses in the areas adjacent to and south of the Port of Durban. Using the BoP Project as a case study, this dissertation uses discourse analysis as an analytical tool to unravel the knowledge production process of this spatial planning exercise, by exploring the discursive, dramaturgical and deliberative dimensions of this strategic project. This illuminates how knowledge from a variety of disciplines was generated and negotiated in the BoP policy arena, in order to produce the outputs of this spatial planning exercise.

1.1 The contemporary context of cities

In contemporary cities, neoliberalism has become the 'common sense' framework for decision-making, which promotes market logic and the adoption of growth-first competitive strategies (Peck and Tickell, 2002). Neoliberalism is based on the belief that the free market will result in the most efficient allocation of scarce resources (Brenner and Theodore, 2002; Thorsen and Lie, 2006). When cities adopt a neoliberal approach, alternative paths to development are considered to be unattractive (Peck and Tickell, 2002).

[1] The Port of Durban is currently the leading container port within Southern Africa, holding a 53 percent market share of the region (Fraser and Notteboom, 2012). It achieved an average growth rate of 8 percent per annum for containerised cargoes between 1985 and 2010 (Fraser and Notteboom, 2012). The Port of Durban is also referred to as 'the Port' in this dissertation.

[2] The local government in Durban is known as the eThekwini Municipality, and is referred to as the Municipality in this dissertation.

Cities and major urban regions are the common sites where wide-ranging transformations of state spatialities are occurring, as a range of neoliberal initiatives are introduced and subsequently evolve (Brenner, 1998; 2004). The restructuring of states and cities due to globalisation is regularly associated with the goal of attracting economic activity to these urban spaces (Brenner, 1999). Cities therefore endeavour to create a built environment which will improve their connectivity to the global circuit of capital, as well as seek to become powerful and influence decision-making within international urban networks (Douglass, 2000). In this competitive context, place-based targeted approaches in urban policies have become favoured since the 1990s, and priority has been given to interventions that promote the integration of these spaces into the global urban network (Swyngedouw *et al*, 2002). Bearing these imperatives in mind, location and territory have become increasingly important in terms of attracting and securing global economic activity (Hazbun, 2004). Consequently the urban form, economic performance and dominant activities of cities are increasingly becoming determined by their linkage to the global circuit of capital (Sykora, 1994; Douglass, 2000).

Cities adjacent to ports have the potential to shape port activities, as well as influence their productivity and prosperity (Daamen and van Gils, 2006). The BoP Project represents a strategic endeavour initiated by the eThekwini Municipality, with the goal of aligning adjacent land uses and activities with the Port of Durban. It is envisaged that these changes would enhance the competitive position of the Port, by creating a synergy with its adjacent city spaces. This spatial planning exercise represents a place-based approach, which would potentially benefit the local, provincial and national economies.

1.1.1 Contemporary cities

Governance is conceptualised as the notion of steering sustainable development, and it is understood that it is the shared responsibility of a range of actors from government, the private sector, civil society and general public to address societal problems (Van Zeijl-Rozema *et al*, 2008). This dissertation examines the knowledge production process of the BoP Project, which involved a range of actors, including predominantly expert consultants and local government officials. In addition, the knowledge production process was influenced by the perceptions of Transnet, the national port authority in South Africa. This spatial planning exercise would be implemented by the local government, in co-operation with other tiers of government. With a focus on government, there has been a shift in urban development from urban management to urban entrepreneurialism in contemporary cities, which forces cities to conform to capitalist development logic (Harvey, 1989a). Urban entrepreneurialism is based on the notion of creating a ‘good business climate’, which fosters conditions that promote economic activities and stimulate capital accumulation (Harvey, 1989a).

In urban and regional policy, development strategies are increasingly centred on the concepts of clustering and agglomeration, which seeks to promote clusters of economic activities that are well connected to urban networks (Harvey, 1989a; Parr, 2002). Furthermore, cities can actively use their natural or socially created competitive advantages to reposition themselves in the global urban network, with the goal of improving economic growth and increasing local prosperity (Jessop, 1998). This study will reflect on the spatial planning exercise through which the eThekwini Municipality is attempting to reposition the city of Durban in the world economy. This would be achieved by creating a 'world class' BoP zone.

A further strategy which is increasingly being used by cities to improve their position in the global urban network is the development of mega-projects (Diaz Orueta and Fainstein, 2008). These large scale, collaborative developments are regularly sited in locations that have become obsolete due to urban restructuring, and they seek to reposition the uses in these areas in order for them to become functional once again (Diaz Orueta and Fainstein, 2008; Lehrer and Laidley, 2009). Consequently land uses, urban spaces, physical forms and social practices are transformed by mega-projects (Lehrer and Laidley, 2009). Mega-projects are therefore the catalysts of urban and political change, impacting on activities at the local, regional, national and international scales (Swyngedouw *et al*, 2002). The BoP Project can be characterised as a mega-project, and its pending implementation will therefore have widespread effects through transforming the urban landscape to the south of Durban.

It is important to highlight that urban restructuring processes, through the implementation of mega-projects, have the potential to adversely impact on the city from a social, economic and environmental perspective (Sykora, 1994). This is because market logic results in the trade-off of options which are considered to be inefficient. Therefore outcomes will not satisfy all actors involved in the policy process. In addition, the context within which mega-projects occur influences the potential opportunities and constraints associated with these strategic projects (Salet *et al*, 2012). Context is a main focus of this study, as the context of the BoP Project provides the basis for examination of this case study through discourse analysis. As these conditions characterise the context of contemporary urban governance in cities, it is important to have an understanding of how knowledge is produced and influences decision-making in urban restructuring processes.

1.1.2 Contemporary ports

Ports have the potential to shape city spaces, by influencing activities and development trajectories of adjacent areas, as well as other connected regions (Daamen and van Gils, 2006). When considering the internationalisation of trade, ports compete directly against one another and act as nodes in rival supply chains (de Langen and Chouly, 2004; Cullinane and Song, 2006; Chang and Lee, 2007). In this competitive context, port efficiency and overall competiveness are vital to the economic well-being of

ports, as well as the areas influenced by ports. The competitiveness of a port is concerned with efficient cargo handling and hinterland connections, as well as its relative position in global supply chains (Carbone and De Martino, 2003; Notteboom and Rodrigue, 2005; Dresner, 2007). Inland distribution has consequently become a decisive factor in port competition, whilst the development of highly connected transport corridors and logistics poles are seen as decisions which can improve the competitiveness and attractiveness of ports (Notteboom and Rodrigue, 2005).

Over ninety percent of world trade is transported by sea, and since the 1960s container shipping has become increasingly prominent, as almost all manufactured goods are transported by containers (IMO, 2012). As containers are standardised and unitised, mechanised freight handling has become the norm for all modes of transport (Läpple, 2000; McCalla *et al*, 2001; Hall, 2007; Iannone *et al*, 2007), and has additionally encouraged intermodal transport (Iannone *et al*, 2007; Fremont, 2009). Furthermore, the emergence of global manufacturing and trading systems has also modified the entire distribution and transport industry; whereby raw materials, components, and final products are manufactured, distributed and shipped globally (Iannone *et al*, 2007; Cidell, 2011). Overall, these changes have meant that ports, their adjacent cities and hinterlands form part of large scale logistics systems, rather than individual distribution systems (Cidell, 2011). Consequently ports, and areas linked to these ports, have invested significant amounts in infrastructure, in order to be selected as a port stop and node in these complex systems (Palmer, 1999; Cullinane *et al*, 2006; Dresner, 2007). There has also been a drive for ports and their adjacent areas to specialise in handling and transporting containerised cargoes, in order to benefit from the growth in container shipping.

When looking at the spatiality of benefits linked to ports, there is a belief that ports and their cities have become disintegrated, as a number of port activities, such as logistics functions, have moved away from cities (Merk and Dang, 2013). This results in cities experiencing less direct economic impacts from their adjacent ports (Merk and Dang, 2013). Port-cities have consequently adopted a range of strategies to promote centralised port-related growth, with the strategic goal of securing port benefits for the adjacent city (Merk, 2013). The BoP Project represents a strategy by the eThekwini Municipality which endeavours to use spatial planning to restructure land uses and activities in close proximity to the Port of Durban. This restructuring seeks to create a synergy between the Port and adjacent city spaces, with the underlying goal of securing port-related benefits for the city of Durban.

1.2 Port development and the planning context of the study

South Africa has adopted a ‘unique’ port service model, where an independent state operator, Transnet, owns all port infrastructure and controls port operations (Kaselimi, 2012). Transnet control port planning and decision-making in South African ports, and consequently influence the economic development

agenda for local governments (Hall and Robbins, 2002). With the opening up of the South African economy in the 1990s, Transnet needed to make a decision regarding which port in South Africa would be prioritised as its 'port of choice' for containerised cargoes (Freund, 2002). Transnet had two options to consider for port development in South Africa. In terms of the first option, the Port of Durban would remain as the country's 'port of choice' and be further developed as an internationally competitive container hub port; whilst with the second option, container traffic could be diverted to other ports in sub-Saharan Africa, including the ports at Cape Town, Coega (near Port Elizabeth) and Richards Bay in South Africa, as well as Maputo in Mozambique (Jones, 2002). This created high levels of uncertainty associated with port planning and decision-making in the mid-2000s, for the Port of Durban[3] and the adjacent city.

Historically, the relationship between the eThekwini Municipality and Transnet was strained (Freund, 2002; Merk, 2013), as the local government had limited influence on strategic port development processes which have an impact on the local context (Hall and Robbins, 2002). Despite this context of uncertainty, after the turn of the 21st century there was a realisation by Transnet and the eThekwini Municipality that they needed to plan in conjunction with one another, in order to facilitate the sustainable expansion of the Port of Durban and its city frontages (Mather and Reddy, 2008). Consequently the Transnet eThekwini Municipality Planning Initiative (TEMPI) was initiated in 2006, which endeavoured to address strategic port issues, secure co-ordinated future growth for the Port and ensure the co-existence of both parties in the competitive global economy (Mather and Reddy, 2008). Subsequently, co-operative structures were established between important departments in Transnet and the eThekwini Municipality, which attempted to address any conflicts, clarify responsibilities and promote joint planning and decision-making with the common goal of improving the Port of Durban (van Coller *et al*, 2007).

1.2.1 Congestion at the Port of Durban

The Port of Durban is the largest port in Southern Africa in terms of the value of cargo handled per annum, and is the second largest in terms of cargo tons handled (van Coller *et al*, 2007). During the 1990s, container volumes gradually experienced growth rates greater than 10 percent per annum, and this exposed the Port's inadequacies, such as inappropriate investment strategies and ineffective management (Hall and Robbins, 2006). When coupled with the removal of international sanctions; the reduction of import tariffs; a gradual rise in the domestic economic growth rate; an increase in consumer spending power; and growth in the number of small enterprises, as well as changing global market circumstances and the revolution of global cargo logistics technology, the Port of Durban was challenged with an

[3] In 2011, Transnet decided that the Port of Durban would be South Africa's 'port of choice' for containerised cargoes.

increasing number of portside and landside pressures (eThekwini Municipality, 2008a). The Port of Durban consequently faced a congestion crisis due to these changing circumstances.

1.2.2 Initiation of the Back of Port Project

Within the TEMPI framework, a number of scenarios were evaluated for the Port of Durban. These considered the forthcoming development needs of the city and Transnet, from an economic, environmental and social perspective (eThekwini Municipality, 2008a). This included the desire to expand the harbour, as well as the re-evaluation of the physical and economic space the Port occupied within the city. Consequently, a number of potential layouts[4] were developed for further analysis within this framework.

Bearing TEMPI processes and the impending congestion crisis in mind, the BoP Project was strategically initiated in late 2007 by the Development Planning, Environment & Management Unit (DPEMU) of the eThekwini Municipality. The BoP Project's main purpose was to develop a distinct framework for the management and development of land use in the BoP zone, which would ultimately be implemented as a Local Area Plan (LAP) and Land Use Management Scheme (LUMS) (eThekwini Municipality, 2008a). This created a script for the BoP Project, which was framed in a planning discourse, and implied that land uses and activities in this area would be restructured, in order to create synergy with the Port of Durban. It was envisaged that this endeavour would address the congestion crisis, bolster the attractiveness of the Port, and benefit the city of Durban.

The BoP zone was strategically identified by the eThekwini Municipality, and the study area was initially comprised of Clairwood, Congella, Jacobs and Mobeni. These areas are located in the South Durban Basin (SDB), which is in close proximity to the Port of Durban. The context of the SDB was highly influential in the BoP Project, as this space would be restructured by the outcomes of this spatial planning exercise. The SDB is regarded as the traditional industrial heartland of Durban, and is the second largest industrial node in South Africa (Scott *et al*, 2002; Scott, 2003; Robbins, 2004). As a result of apartheid planning and policies implemented during the 20th century, racially demarcated labour pools were located in close proximity to industries in this area (Scott, 2003). The incompatible juxtaposition of residential and industrial uses resulted in the SDB becoming conceptualised as a pollution hotspot, which is characterised by poor environmental quality and high levels of environmental activism (Brooks *et al*, 2010). Despite this polluted environmental context, communities in South Durban have a strong attachment to place and want to continue residing in this area (Brooks *et al*, 2010). The SDB therefore represents a highly contested space, which will be shaped by the outcomes of the BoP Project.

[4] Potential layouts included port expansion at Bayhead; Island View; a combination of the Island View and Bayhead options; and the planned dig-out port option at the former Durban International Airport (DIA) site.

Four phases were identified in the BoP Project's *Terms of Reference* report, which included the Inception; Best Practice; Situational Assessment; and Concept Plan Phases (eThekwini Municipality, 2008a). It is important to consider any development from a holistic perspective. The BoP Project attempted to do this by incorporating multi-disciplinary knowledges. Consequently the eThekwini Municipality outsourced the BoP study to a range of specialist consultant teams, who were experts in economics, environmental assessment, planning, public participation, social assessment and transportation planning. These consultant teams formed a consultant consortium. This study will explore how knowledge was produced by the consultant consortium through research processes and negotiations at numerous backstage meetings, and integrated with inputs from various representatives of the eThekwini Municipality. Furthermore, it will investigate how this negotiation of knowledge subsequently resulted in the outcomes of this project. This therefore represented the outcomes of numerous negotiations within the BoP policy arena, which was conceptualised as a knowledge production process[5].

1.3 Rationale for the study

This dissertation provides a lens into the broader political context of the BoP Project, where consultants are employed to generate knowledge, in order to support and enhance decision-making in the port-city of Durban. It is important to examine the knowledge production process of the BoP Project, as it is critical to have an understanding of some of the underlying political processes that shaped this project. These processes have the potential to significantly transform urban spaces in close proximity to the Port. In addition, this dissertation highlights drivers in the knowledge production process, and a thorough examination of the BoP Project provides a valuable case study, which could be used to inform and enhance decision making in other South African port-cities. By examining the knowledge production process through the use of discourse analysis, contrasting perspectives are revealed, as well as the power struggles among the range of actors participating in the BoP policy arena. Throughout the different phases of the BoP Project, different discourses, story lines and discourse-coalitions opposed and complemented one another, and the outcome of these interactions influenced the overall knowledge production process.

From an argumentative discourse analysis perspective, the policy process is conceptualised as a struggle for discursive hegemony, where different actors attempt to gain support for their particular definitions of reality (Hajer, 1995). Discourses have the potential to "shape what can and cannot be thought, delimit the range of policy options and thereby serve as precursors to policy outcomes" (Hajer & Versteeg, 2005: 178). Furthermore, knowledge tends to reflect the underlying power structures present in policy

[5] The BoP Project was put on hold in 2010 for a number of reasons. However, in 2012 public participation processes for the project commenced. At the time of writing, no decision had been made with regards to the implementation of the BoP Project.

processes, and this approach highlights how knowledge is used in these processes, particularly where there is contestation, negotiation, legitimisation and marginalisation (Jones, 2009). Using the methodology proposed by Hajer (2003a), discourse analysis is a valuable means to unravel political conflicts. It bestows researchers with a set of tools, which enables the interpretation of urban policy in a manner that is theoretically informed and perceptive (Jacobs, 2006). Discourse analysis adopts a wide-ranging stance on the analysis of decision-making processes, and additionally recognises the importance of language and context in the policy arena (Jacobs, 2006). Sumner and Jones (2008) importantly note that in the policy process, the analysis of the role of power has revolved around discourses, actors and networks, and institutions. The use of discourses is a meaningful way to understand the link between knowledge and policy development, which has the potential to inform policy design and implementation processes, as well as create the opportunity for the uptake of new knowledges in the policy arena (Jones, 2009). Therefore discourse analysis is appropriate for exploring knowledge production in the BoP policy arena. This study reveals the way in which spatial planning processes associated with neoliberal interventions generally occur throughout the city of Durban, and highlights what is typically included and excluded in these strategic projects.

1.4 Aims and Objectives

The aim of this study is to examine the knowledge production process of the BoP Project, from the Inception Phase to the Concept Plan Phase. This timeframe was selected as the researcher was directly involved in this spatial planning exercise during this time period. In order to achieve this aim, four research objectives were identified.

1) To identify and explore the dominant discourses within the BoP Project, and determine which actors construct and subscribe to them.
2) To examine the knowledge basis and ideologies which influence the dominant discourses within the BoP Project.
3) To examine the dramaturgy present within the BoP Project.
4) To explore the degree of deliberation amongst important actors within the BoP Project.

1.5 Chapters of the study

This dissertation consists of nine chapters, in order to satisfy the aims and objectives of this study. Following this introductory chapter, the two subsequent chapters establish the theoretical basis of this study. Two theoretical frameworks were used for this dissertation. In Chapter Two, environmental politics is firstly presented as a broad theoretical framework within which complex policy-making processes occur. The linkages between policy and knowledge are examined, as these linkages shape the construction, transfer and negotiation of knowledge in policy processes. Adopting an analytical stance, the interplay of discourses, actors and networks, and institutions are identified as critical components

when analysing power in knowledge production and policy-making processes. The final focus of Chapter Two shifts to discourse analysis, and particularly its discursive, dramaturgical and deliberative dimensions.

Chapter Three presents the second theoretical framework of this study. The first part of the chapter focuses on theories which guide policy and decision-making in contemporary cities. It explores neoliberalism and globalisation, which create the impetus for cities to link into the global circuit of capital. Urban entrepreneurial approaches and the creation of a good business climate are argued to be a means to achieve this end, as cities actively attempt to reposition themselves in the global economy. The second part of this theoretical framework examines contemporary ports, with an emphasis on the impacts of containerisation on port development, as well as port development models.

Chapter Four explores the context within which the BoP Project is situated. The landside context of the SDB is presented, with particular focus on the evolution of Durban as an industrial city, and the impact of apartheid planning on this space. The second part of Chapter Four concentrates on the Port of Durban, and explores the root of congestion and the congestion crisis in this vicinity. The relationship between Transnet and the eThekwini Municipality is subsequently described, which led to the inception of a collaborative planning initiative between these two institutions. The BoP Project was generated from this initiative, and is explored in the third part of Chapter Four.

Chapter Five presents the methodology, which highlights the approaches used to achieve the aim and objectives of this dissertation. Adopting a qualitative approach, data pertaining to the BoP Project were collected through observations, interviews and review of relevant documents. Discourse analysis was used as the analytical framework to analyse the data collected. This methodology is useful when examining the discursive, dramaturgical and deliberative dimensions of policy-making processes, and can therefore be applied to the knowledge production process of this spatial planning exercise. In addition, Dey's (1993) approach to qualitative data analysis was selected as an additional framework for data analysis. With this approach, analysis is associated with the iterative processes of describing the researched phenomena, classifying it and finally observing how various concepts interrelate with one another (Dey, 1993). Furthermore, the limitations of the study, pertaining to the discourse analysis approach, positionality and action research, the timing of the BoP Project, and the unavailability of main actors to be interviewed, are discussed.

There are three results chapters in this study. Chapter Six firstly highlights the unique context of the BoP Project, which influenced the discursive elements of this spatial planning exercise. Secondly, epistemic notions which subconsciously structured the BoP Project are discussed; whilst thirdly, the story lines

which emerged from the transport and planning policy fields are examined. These framing story lines are deconstructed into components and their respective elements, revealing their underlying discourses.

Adopting the same approach as Chapter Six, Chapter Seven deconstructs the economic, social and environmental story lines that were evident in the BoP Project, and identifies their underlying discourses. Importantly, all of these discursive factors influence the knowledge production of the BoP Project.

Chapter Eight is the third results chapter, and adopts a temporal outlook by using the elements of discourse analysis to examine the context, processes and politics of the BoP Project over time. This chapter examines the evolution of the knowledge production process in the BoP Project, by using the four phases of this complex spatial planning exercise as a framework, as well as examining the 'rules of the game' which established the context for these phases. In addition, the discourse-coalitions which formed throughout these phases are examined, as well as the negotiation of knowledge that resulted in the final project output of this spatial planning exercise.

Chapter Nine presents the conclusion of this study, which illuminates the ways in which the aim and objectives were achieved. The nuanced knowledge production process of this project is explored, whilst the value of using discourse analysis as a methodology to understand this spatial planning exercise is examined. Finally, the relevance of the study for planning in the city of Durban is discussed, and recommendations for future studies are presented.

CHAPTER TWO: ENVIRONMENTAL POLITICS, POLICY-MAKING, KNOWLEDGE PRODUCTION AND DISCOURSE ANALYSIS

2.1 Introduction

Policy-making is a highly complex process, and it is important to understand the linkages between policy and knowledge with regards to the construction, transfer and negotiation of knowledge in policy-making practices. When analysing power in knowledge production and policy-making processes, the interplay of discourses, actors and networks, and institutions are critical components. Furthermore, as a form of policy analysis, discourse analysis can be used to analyse complex policy-making processes. Discourse analysis, as constructed by Hajer (1993; 1995; 2003a; 2003b; 2005a; 2005b; 2005c; 2006a), is the analytical framework selected for this dissertation, and the theory associated with this methodology focuses on the discursive, dramaturgical and deliberative elements of policy-making processes. This chapter explores these theoretical ideas, beginning with environmental politics.

2.2 Environmental politics

In the disciplines of geography and politics, the field of environmental politics has provided insights into the relationships and interactions between different actors, as they produce knowledge, policies and plans which shape spaces in contemporary cities. Policy-making in contemporary cities is complex because there are many contested claims on urban space and its development. This study draws from the literature on environmental politics, where the definition of the environment is broad, and includes the interrelations between the biophysical and socio-economic environments. Any societal or environmental issue, such as those encountered in spatial planning exercises, can be located within the domain of environmental politics. Furthermore, the conception of what the environment encapsulates has become multi-disciplinary. Hence environmental concerns can include social, economic, cultural, urban and rural issues (Eden, 1998; Jordan and O'Riordan, 2000). This reveals that environmental conceptions have become entangled with other domains of thinking, and have become widely accepted (Eder, 1996). This integrated form of thinking reflects the endeavour to adopt a holistic approach towards environmental and societal issues (Barbanente and Monno, 2005). The policy-making practices of the Back of Port (BoP) Project are indicative of environmental politics, as the outcomes of this spatial planning exercise will have implications for the broad biophysical, economic and social environments of the South Durban Basin (SDB), which is the urban space situated adjacent to the Port of Durban. This project is therefore located within the broad realm of environmental politics.

Traditionally, a system is considered more complex when it has an array of elements interacting with one another, whilst a less complex system typically has fewer interacting elements (Dryzek, 1997). When exploring environmental politics, it is important to note that human and ecological systems are intrinsically complex, and environmental issues are situated at the interface of these systems (Dryzek,

1997). Complexity can therefore be attributed to the fact that knowledge related to environmental concerns is highly interrelated and unstructured; and politicians and policy-makers consequently do not understand these issues in their entirety, which creates uncertainty (Jordan and O'Riordan, 2000). Complexity and uncertainty are therefore central to environmental politics and environmental issues (Eden, 1998; Jordan and O'Riordan, 2000).

Furthermore, in multi-level conditions of governance where environmental issues are debated, there are often no rules or routines to follow. This reflects institutional ambiguity, which refers to conditions of governance where solutions for challenging societal problems cannot be located within the margins of traditional, self-governing states (Hajer, 2006b). As a result, traditional institutions are often unable to realise the desired policy outcomes through their own means, and they are therefore obliged to interact in governance networks which are characteristically multi-party, polycentric and inter-cultural (Hajer, 2006b). This allows for external actors, such as consultants, to be included in policy-making processes, in order to supplement knowledge, and make the information more understandable for decision-makers. The incorporation of consultants was an important element in the BoP Project.

Due to the multi-disciplinary nature of environmental politics, the interpretation of environmental phenomena differs from discipline to discipline (Dryzek, 1997). There is also intra-disciplinary debate and contestation between actors regarding the understanding of the same phenomenon (Dryzek, 1997). The complexity of rationally conceived interpretations of the same problem is evident in the development of the BoP zone in Durban, as will be shown in this dissertation.

Inter- and intra-disciplinary debate makes an issue political, due to the contestation and power struggles associated with its interpretation and understanding. What is deemed as important to one discipline may be considered insignificant to another, because various groups of people understand reality in different terms (Hajer and Wagenaar, 2003). There will therefore be conflicting assessments and evidence presented in the policy process, as well as contradictory conclusions and diverse solutions suggested for a given issue (Strydom *et al*, 2010). In terms of sense-making, Hajer (1995) notes that a given argument or perceived fact pertaining to a phenomenon will be rational to the discipline or school of thought from which it originates, due to the discursive logic that is imbued in the thoughts of the discipline or school of thinking. This is collectively referred to as Hajer's (2006b) concept of multi-signification. With the concept of multi-signification, actors use systems of signification to meaningfully make sense of a policy situation (Hajer and Laws, 2006). However, within multi-actor policy-making processes, there are a number of systems of signification used by actors to make sense and derive meaning from a situation, and this may lead to a lack of clarity, as different actors may not be able to understand or make sense of these alternative systems (Hajer, 2006b). Within this context, knowledge is assessed according to the discursive logic of dominant actors, discourses or groups. This reveals that power is central to

environmental politics. Nonetheless, the diverse range of interpretations and complexities of an issue results in confusion, conflict and argumentation surrounding the policy-making process.

Additionally, environmental politics has temporal and spatial characteristics. Smith and Kern (2007) highlight that environmental issues are comprehended and addressed in different ways over different time periods and geographic spaces, because these processes are fundamentally guided by subjective, ever-transforming value systems. Consequently, there are no universally fixed practices associated with environmental politics (Gomart and Hajer, 2003). This is because what was deemed appropriate in the past may now be considered inappropriate due to the existence of different value systems. This results in the production of different knowledges over time. The same can be said of different geographic spaces, where the applicability of practices will differ from place to place, and from culture to culture. Therefore context, in a temporal and spatial sense, is important to environmental politics. The significance of context is explored in this dissertation with regards to the BoP Project.

This section has provided an overview of environmental politics and its inherent complexities. The following section presents the theoretical frame of policy and policy-making developed from the literature for this dissertation. It is important to note that policy is traditionally conceived as both a product and a process, and the environmental politics associated with the BoP Project can be situated within this conception.

2.3 A traditional perspective on policy and policy-making

The definition of what policy encapsulates has changed considerably over time, from the initial rational conceptions by Harold Lasswell, to contemporary definitions which have become more complex (Sumner and Jones, 2008). Neilson (2001) states that policy refers to a series of purposive procedures, activities or actions. These intentional plans or frameworks of action, which are established in order to guide decisions and realise desired outcomes, are goal-oriented and seek to effectively provide solutions to real world problems by instigating action (Jones, 2009). In addition, these plans of action are based on specific values, which consequently guide various activities and behaviour (Jones *et al*, 2009). A policy can consist of one or more instruments which effectively seek to satisfy numerous objectives, and these can be either distinct or ill-defined (Daugbjerg, 1998).

Jordan and O'Riordan (2000) note that in the 1960s, policy-making processes were conceived as consisting of sequential stages, namely: problem emergence; agenda setting; consideration of policy options; implementation; and evaluation. This is traditionally known as the linear model of policy-making, as proposed by Harold Lasswell in 1951 (Neilson, 2001; Perkin and Court, 2005). There has been significant criticism of the linear model of policy-making (Garrett and Islam, 1998; Sutton, 1999;

Neilson, 2001; Perkin and Court, 2005). Most of the criticism is based upon the notion that in reality, policy-making processes are dynamic and iterative, and do not follow such a structured and linear pattern. Nonetheless, Sumner and Jones (2008) note that these sequential stages of policy-making still have value and can be used as a heuristic means against which reality can be evaluated. Exploring and criticising the linear model of policy-making is beyond the scope of this research, nevertheless it is important to be aware of these stages, as they can be used to structure policy-making processes into a number of clear steps, which is valuable for analytical purposes.

Wildavsky (1979, cited in Jordan and O'Riordan, 2000: 80) states that "policy is a process as well as a product. It is used to refer to a process of decision-making and also to the product of that process". By being both a process and a product, policy is therefore naturally complex. The BoP Project does not focus on a specific policy for the eThekwini Municipality, but rather it is concerned with the spatial planning exercise which will implement broader planning ideas. These ideas are framed by powerful policy documents, such as those incorporated in the eThekwini Municipality's Integrated Development Plan (IDP). Furthermore, Sutton (1999: 5) argues that policy is best understood as a "chaos of purposes and accidents". This reiterates that the domain in which policy is produced is dynamic, with numerous complex interconnections. Additionally, Keeley and Scoones (2000) maintain that policies are culturally embedded, which adds to this complexity; whilst Garrett and Islam (1998) assert that this complicated process is exposed to political, economic and social pressures over time, which ultimately results in a variation of rationalised outcomes for the same problem or policy concern.

2.3.1 The politics of policy-making

In contemporary times, policy-making is conceived as being the direct outcome of politics (Hajer, 2003a). Simply, it can be seen as the process of responding to politics by creating and generating policy. It is an interpretive, variable, and widely spread process, which involves a diverse range of actors, organisations and institutions, where opposing assertions are reviewed, compared, amalgamated and acted upon (Hajer, 1995; Keeley and Scoones, 2000). In essence, policy-making involves both knowing and evaluation (Boulanger and Brechet, 2005). This enables policy-makers to understand the perceived 'truth' of the situation, and take appropriate action. Policy-making often results in the redefinition of a known social problem in such a way that a solution can be found for it, and this is typically achieved by the use of experts from diverse fields, who redefine the issue and its particular parameters (Hajer, 1995). Furthermore, policy-making is the prevailing means by which societies order latent social conflicts (Hajer, 1995). It is therefore political in nature, due to its inherent contestation and conflict. Policy-making can occur at a range of government levels, namely at the national, provincial and local government levels, and is commonly associated with state intervention, through the use of policy instruments and objectives (Daugbjerg, 1998). The BoP Project represents practices associated with

policy-making in Durban, which were initiated due to the interaction of various levels of government in South Africa and their interests in the Port of Durban.

The aim of policy-making is to analyse various situations and consequently determine which actions are appropriate (Hajer and Laws, 2006). As discussed in Section 2.2, actions which are deemed appropriate during a particular period of time may not be suitable in the future, and this reiterates that policy-making is an iterative, dynamic and context-specific process. Policy-makers operate under specific circumstances in the policy process. This is referred to by Hajer (2006b) as the conditions of governance, where policy-makers attempt to solve problems in a multi-level context, in which a range of actors are required to work with one another. As actors are widely diverse and from different tiers of government, they are not always able to exert control over other actors, and consequently policy is negotiated in the policy arena (Hajer, 2006b). Policy-making therefore entails the processes of construction and reconstruction of groups of actors, as well as the various relationships, interactions, negotiations and understandings between them (Jones, 2009).

Associated with these conditions of governance are Hajer's concepts of institutional ambiguity and multi-signification, which were presented in Section 2.2. In the context of institutional ambiguity and multi-signification, actors negotiate relevant signifiers, and effectively establish the 'rules of the game' over the duration of the policy process (Hajer, 2006b). Therefore actors, through their interactions with one another, play an important role with regards to negotiation in policy-making processes. The fact that policy is negotiated is imperative to this study, as it has implications for the knowledge production process, which will be discussed later in this chapter.

Hajer (1995: 59) argues that the policy-making process can therefore be conceptualised as a "struggle for discursive hegemony in which actors try to secure support for their definitions of reality". This understanding reveals that the policy-making process is a highly contested, argumentative domain, which involves actors who participate at varying degrees in these processes. Importantly, these actors introduce different discourses into the policy arena, which have varying levels of imbued power, in order to gain support for their particular conceptions of reality. However, these discourses are often in contrast with one another due to opposing actor beliefs and worldviews (Keeley and Scoones, 2000). In addition, institutions represent an ever-constant force behind policy-making, which formally and informally influence the 'rules of the game' (Jones, 2009). Bearing this in mind, Garrett and Islam (1998) note that actors who participate in the policy process are controlled and determined by official and unofficial rules and practices. Therefore, institutions are an influential constituent of the policy process, as they shape the 'struggle' for discursive hegemony. This reiterates the dynamic, complex and political nature of policy-making, where actors, their discourses and institutions are integral to the argumentative 'struggle' in the policy arena. Since this dissertation explores the argumentative 'struggle' in the BoP Project, and focuses

particularly on the knowledge production process, it is imperative to explore the linkages between policy and knowledge. This is examined in the following section.

2.4 The linkages between policy and knowledge

As the knowledge production process of the BoP Project is central to this dissertation, it is critical to define the common properties of knowledge, have an understanding of various approaches related to knowledge, and thereafter explore how knowledge relates to policy-making processes. Knowledge is a broad concept which refers to a theoretical or practical insight with regards to a given issue. Knowledge is understood as information which has been assessed and arranged in such a way that it can be used meaningfully (Perkin and Court, 2005). It can refer to specialist and scientific investigations; formal and informal foundations of understanding, such as experiences; as well as theoretical, practical and context-specific insights (Jones *et al*, 2009).

When examining the vast literature on knowledge, it is imperative to note that many different types of knowledge are recognised. For example, some literature focuses on the contrast between expert and lay knowledge. Expert knowledge is determined by what an actor knows, and this is shaped by their educational and practical training, technical practices, and overall experiences (Booker and McNamara, 2004; McBride and Burgman, 2011). Experts can be recognised by their training, qualifications, professional memberships and peer recognition (Ayyub, 2001; McBride and Burgman, 2011). Expert knowledge draws on complex scientific and linear frameworks, and is based on the notion that science should be the determining factor in decision-making processes (Baud *et al*, 2011). In contrast, lay knowledge is associated with the experiential and cultural aspects of local knowledge, and is based on adaptive, informal, cultural and context-specific phrases (Scott and Barnett, 2009). Local knowledge from communities is characterised as being subjective, and is regularly excluded from decision-making forums, as it lacks the power and perceived 'legitimacy' of formal science (Scott, 2011).

A second comparison pertaining to different types of knowledge is the contrast between objective and tacit knowledge. In their broad literature review of knowledge, Ambrosini and Bowman (2001) compared objective and tactic knowledge. Objective knowledge is characterised as being easily communicable, and readily sharable amongst actors (Ambrosini and Bowman, 2001). In contrast, tacit knowledge is based on five characteristics (Ambrosini and Bowman, 2001). First, this knowledge is difficult to write down and communicate with others; whilst secondly, the people possessing tacit knowledge cannot easily explain the structures which shape their performance (Ambrosini and Bowman, 2001). Third, tacit knowledge is based on personal knowledge, and fourth, this knowledge is practical, and relates to an individual's know how and pragmatic experiences (Ambrosini and Bowman, 2001). Finally, this knowledge is also context-specific (Ambrosini and Bowman, 2001). It is important to be

aware of the different knowledge typologies in policy-making processes, as these have an impact on knowledge production processes. This study identifies the types of knowledge which were evident in the decision-making processes of the BoP Project.

Bruckmeier and Tovey (2008) maintain that all knowledge has a common characteristic in that it is socially constructed[6], and should be envisaged as 'knowledge in practice'. Consequently, all knowledge is constructed through social processes, and is instilled with a mixture of historical and context-specific qualities (Bruckmeier and Tovey, 2008). According to Ytreland (2009: 16), "scientific knowledge is not a passive product of nature but an actively negotiated social product of human enquiry". Hence knowledge is conceived as a socially constructed, political product (Ytreland, 2009).

In addition, knowledge is considered to be situated (Bruckmeier and Tovey, 2008). This means that there is no single truth which can be discovered, and all knowledge is considered to be partial, as well as connected to the particular context within which it is generated (Nightingale, 2003). Hommes *et al* (2008: 6) note that "knowledge that fits to the local situation often needs to be constructed as it is not readily available". Nowotny *et al* (2001) assert that knowledge can uphold its particular claims when it is localised and contextualised. Spatiality and temporality are consequently important to negotiated knowledge, as in different spatial and temporal contexts, certain forms of knowledge may be unable to uphold their given claims, and hence they lose value and applicability in the policy process.

2.4.1 Knowledge-as-substance versus knowledge-as-participation

Bouwen and Taillieu (2004) maintain that there are two types of approaches related to the transfer, negotiation and construction of knowledge. These can be identified as knowledge-as-substance and knowledge-as-participation. Knowledge-as-substance conceptualises knowledge as a substance or matter which can be transferred from one entity or person to another (Bouwen and Taillieu, 2004; Bouwen *et al*, 2005). This refers to the transfer from those who possess knowledge to those who do not possess it (Bouwen *et al*, 2005). This approach is indicative of knowledge being produced in separate 'silos' by actors from different policy fields. For example, in the BoP Project this would be the knowledge separately produced by the economic, environmental, planning, social and transport teams, which would then be transferred within this consultant consortium. According to this approach, functional knowledge is considered to be hard, quantifiable data, which is formal, organised, and adheres to specific practices and general principles (Nonaka and Takeuchi, 1995). Furthermore, Bouwen and Taillieu (2004) reveal that this approach does not consider implicit knowledge, which is entrenched in various social interactions and dealings. For example, knowledge-as-substance could be the 'hard' facts and figures emerging from an economic assessment, which are not negotiated or disputed.

[6] Social constructivism is further examined in Chapter Five.

Conversely, knowledge-as-participation[7] deems that knowledge is created by the interactions between diverse actors (Bouwen and Taillieu, 2004). With this approach, the creation, development and sharing of knowledge is relational, and it is located in the organised performances of collaborating actors (Bouwen and Taillieu, 2004, Bouwen *et al*, 2005). For this approach, the temporary proximity of actors is a critical constituent in the knowledge transfer process, as knowledge is negotiated and socially constructed in prescribed processes (Torre, 2008). Within different communities of practice, there will be the inclusion and exclusion of certain knowledges, as some knowledges are favoured over others (Bouwen *et al*, 2005).

The negotiation of knowledge occurs within community of practices, as actors are allowed to introduce their individual information and ideals to these processes (Wenger, 1998; Bouwen and Taillieu, 2004; and Bouwen *et al,* 2005). However, gatekeepers of knowledge have an impact on the transfer of knowledge in these practices (Reimer, 2009), as they have the capability to drive or inhibit knowledge transfer between actors (Morrison, 2008). Reimer (2009) notes that gatekeepers can be lead firms participating in policy-making processes, as they have an integral and defining role in the transfer of knowledge. Lead firms, such as the economic team from the BoP Project, have the power to determine what knowledges are included or excluded, and have a role in the selection of content for presentations and the formatting of reports. Therefore within the knowledge-as-participation approach, knowledge is considered to be relational and collaboratively produced, where the relationships between actors, as well as the quality of these relationships, are deemed to be critical. An example of knowledge-as-participation is knowledge which is socially constructed for a spatial planning exercise, such as the BoP Project. This knowledge was shaped by interactions and negotiations between a consultant consortium and municipal officials. This dissertation explores these knowledge approaches with regards to the BoP Project's knowledge production process.

2.4.2 Understanding the link between knowledge and policy

Jones (2009) highlights that there are three different paradigms which can be used to understand the link between knowledge and policy. These paradigms focus on how knowledge is incorporated and decisions are made in policy-making processes. The paradigms are categorised as: rational; pluralism and opportunism; and politics and legitimisation. According to the rational paradigm, knowledge instigates and directs policy (Jones, 2009). This approach is often referred to as the linear or knowledge-driven model (Jones, 2009). In addition, knowledge is considered to be valuable and apolitical, and feeds into the policy process (Jones, 2009). Furthermore, policy-making operates in a problem-solving manner, with reason and logic being imperative (Jones, 2009). Within this paradigm, knowledge in the policy-making process is conceived and used in a rational and logical manner.

[7] Bouwen and Taillieu (2004) maintain that this second knowledge approach is predominantly used by contemporary social constructivists and discourse scholars.

The second paradigm, pluralism and opportunism, challenges the rationality of the policy process (Jones, 2009). In this paradigm, policy-making involves pragmatic decisions taken in conditions of uncertainty (Jones, 2009), and these decisions are therefore not made in a linear fashion. Furthermore, the flow of knowledge is conceived as opportunistic (Jones, 2009). Actors therefore play an important role in this paradigm (Jones, 2009). Actors influence the opportunities available and are responsible for introducing knowledge, and consequently pluralism, into the policy process. In addition, knowledge stems from a wide range of actors, including external actors, such as local community members and consultants, who participate in policy-making processes (Jones, 2009).

The third paradigm which is useful for understanding the link between knowledge and policy is classified as politics and legitimisation. Within this paradigm, power is believed to be imbued throughout the entire knowledge production process, from knowledge creation to uptake (Jones, 2009). Consequently, knowledge will tend to reiterate and maintain existing power structures and disparities which are evident in society (Jones, 2009). In addition, the "policy process is seen as the site of politics, processes of contest, negotiation, marginalisation...with knowledge production and use entwined with these forces" (Jones, 2009: 11). After decisions are made, knowledge is used to legitimise political actions (Jones, 2009), and what counts as legitimate knowledge is politically determined (Autes, 2007). It is important to note that various schools of thought in political science, as well as the study of policy and discourse, incorporate elements of this paradigm into their conceptualisations (Hajer, 1995; Jones, 2009). The application of these paradigms to the BoP Project is critical with regards to understanding the knowledge production process of this strategic project.

None of these paradigms are more important than the others; however, in a particular situation one paradigm linking knowledge and policy may become more relevant or dominant. When considering the three paradigms linking knowledge and policy over time, Jones (2009) notes that most of the earlier theoretical research was focused on the rational paradigm, and subsequently the pluralism and opportunism paradigm. However, most contemporary research in this field focuses on theoretical developments emerging from the third paradigm, namely politics and legitimisation, which increasingly recognises the impact of power and politics on the policy process (Jones, 2009). As a result, the following sections will focus predominantly on research based within the paradigm of politics and legitimisation, which links power, knowledge and policy.

Within the third paradigm, knowledge is distinctly imbued with power relations (Jones *et al*, 2009). Regardless of whether power is exercised by discourses or actors, it is still present in knowledge interactions. Within policy processes, the power structures involved in knowledge generation are not always apparent, but instead they are converted into social strategies that enhance communicability

(Bruckmeier and Tovey, 2008). Furthermore, power structures shape what is deemed as acceptable and appropriate with regards to particular matters, values and norms (Bruckmeier and Tovey, 2008).
Consequently, knowledge is conceived as a strategic and powerful asset to various actors and institutions (Ytreland, 2009). Sumner and Jones (2008) note that in policy-making processes and their implementation practices, the analysis of the role of power and knowledge construction revolves around three components, namely discourses, actors and networks, and institutional practices. This is the focus of the following section.

2.5 The analysis of power in policy-making processes and practices

When analysing the role of power and knowledge production in policy-making processes, Sumner and Jones (2008) identify discourses, actors and networks, and institutional practices as critical components. These highly interconnected components were briefly introduced in Section 2.3.1, which focused on the argumentative 'struggle' present in policy-making processes. The following sections present theory based on these components, which are integral constituents of policy-making and the construction of knowledge. The first component presented is discourses.

2.5.1 Discourses in the Policy Arena

Exploring discourses creates an opportunity to understand the interaction of knowledge and power in various policy processes (Hajer, 1995; Rydin, 2003; Jones, 2009). The study of discourse has been practised in multiple fields of enquiry, and consequently there are a range of different interpretations of discourse (Linnros and Hallin, 2001). Discourses have been used in micro-level linguistic research methods, Foucauldian notions of discipline and power in humanity, and also in the exploration of global ideological discourses (Wiering and Immink, 2006). Across all of these interpretations, one of the main tenets of discursive theories is that discourses do not merely describe social objects and conceptualisations of the world, but rather they construct them (Papanagnou, 2010).

The Foucauldian perspective on discourses

The interpretation of discourse for this dissertation is based on the Foucauldian perspective of discourse. Foucault places significance on social constructions, which are meaningfully arranged into discourses (Rydin, 2003). Knowledge, power and discourses are fundamental to this line of thinking. Foucault critically explored the changes in knowledge formation, or what is deemed as knowledge by society (Flyvbjerg and Richardson, 2002). 'Discourse' and 'discursive formation' were identified by Foucault as critical concepts in knowledge construction and policy-making (Hobbs, 2008). Foucault understood discourses as intricate, distinguishing practices of representation, which are revealed through circulations and dispersions of power and knowledge at a particular instant in time (Endres, 2009). A discursive formation refers to a range of statements across several separate texts that have order, regardless of their

disparity in origin (Endres, 2009). This importantly establishes the rules or truths which are associated with discourses. Dispersions of power and knowledge facilitate the establishment of compatible and incompatible themes in separate statements, and furthermore control and create an opportunity for resistance to a given discourse (Endres, 2009).

Hobbs (2008) highlights that Foucault's understanding of discourse takes into account the ways of thinking, practices and language at a particular moment in time. In addition, discourses have implications for reality, social practices and action. Foucault (1979, cited in Stevenson, 2009) asserts that discourses are historically crafted through the various interactions of language, processes and structures, and can be conceived as the structural links which exist between knowledge and power. Discourse, when understood from a Foucauldian perspective, surfaces in the policy-making process by the identification of conflict and power (Foucault, 1990, cited in Stevenson, 2009). This means that discourses are revealed in contested policy arenas, where different rationally conceived notions converge with one another. For Foucauldians, discursive hegemony is ever present in policy processes. A single discourse is typically dominant temporarily and spatially, and therefore determines what is deemed to be acceptable in society (Dryzek, 1997). This dissertation identifies the dominant discourses which emerged within the BoP Project's policy arena.

From this point of view, discourse and power can both be delineated in terms of one another (Rydin, 2003). When considering human agency, Foucault believes that individuals are subject to discourses (Dryzek, 1997) and do not possess power. Power is therefore conceptualised by Foucauldians as being relational, however it is not possessed by actors, but rather they yield or exercise power through their use and application of discourse in policy processes (Hajer, 1995; Flyvbjerg and Richardson, 2002; Rydin, 2003). However discourse can also hinder the generation of power as it provides the basis for opposing strategy (Flyvbjerg and Richardson, 2002). Discourses can therefore simultaneously generate and consolidate power, as well as challenge and dilute it. Foucault (1978, cited in Medina *et al*, 2009) adds that discourse is an indirect means of exercising concealed power. The crux of Foucault's argument is that discourses are constraining, limiting and restrictive by nature (Hajer, 1995). In contrast, contemporary understandings of discourses, for example those of Hajer (1995) and Dryzek (1997), have a different take to Foucault.

Contemporary understandings of discourses

As the methodology of this dissertation is based on the application of discourse analysis, it is imperative to explore contemporary understandings of discourse, which have different perspectives to Foucault[8]. Discourse is defined by Hajer (1995: 44) as "an ensemble of ideas, concepts, and categories through

[8] The contemporary understandings of discourse that are presented are rooted in the Foucauldian tradition; however they have a different interpretation of certain elements when compared to Foucault.

which meaning is given to social and physical phenomena, and which is produced and reproduced through an identifiable set of practices". When exploring discourses, Hajer (1995) focuses on the structures of significance that are embedded in language, and how meaning is attached to these structures. Reflecting a post-positivist approach, language is not considered to be a passive, neutral medium which mirrors reality, but it is rather viewed as a system of signification, though which reality is socially constructed (Hajer, 1993; Hajer, 1995; Hajer and Versteeg, 2005; Hajer, 2006a). In addition, Hajer (2000) asserts that discourses should not be regarded as discussions or debates, but rather they refer to the central structure, pattern or configuration of a political debate which is decoded by a researcher. These structures of significance are based on specific assumptions, judgements and contentions, which set the scene for discussions, debates, conflicts and resolutions (Hajer, 1995). Identifying discourses therefore enables controversies to be understood in terms of the argumentative rationality that individuals bring to a discussion (Hajer, 2006a).

A particular discourse is comprised of a body of expressions, which contains homogeneity in message and expressive means, or ways in which the discourse is communicated (Adger *et al*, 2001). Homogeneity in message signifies that these expressions share particular knowledge and perceive the phenomenon under consideration in a particular way (Adger *et al*, 2001). In addition, homogeneity in message considers that there may possibly be common beliefs related to the origins of problems, as well as their solutions (Adger *et al*, 2001). This implies that the specific characteristics of a discourse can be used to define the discourse as a truth system (Adger *et al*, 2001). Consequently, the truth system of a hegemonic discourse will result in the acceptance of certain practices and knowledge, whilst non-conforming practices and knowledges will be rejected.

Importantly, discourse is related to the social practices within which it is generated, and they consequently have an institutional dimension (Hajer, 1995). This is because discourses are meaningfully embedded in language. They are not communicated and contested in an apolitical void, but rather in a context which is characterised by specific social practices that have the capability to influence meaning. This highlights the significance of the context, in a social, spatial and temporal sense, in which a discourse is generated and transformed. This has ramifications in terms of the applicability of particular discourses to different temporal and spatial localities. According to Schmidt and Radaelli (2004), discourses are always based in broader institutional contexts, where institutions and society frame the discourses and determine what is perceived to be suitable and expectable in terms of action. Consequently, discourses should be related to the specific practices or contexts within which they are applied (Fischer and Forester, 1993). This conforms to the Foucauldian perspective on discourses, which refers to the belief that context matters. For this dissertation, it is therefore imperative to understand the context in which the BoP Project was situated.

However, contemporary interpretations of discourses have a different perspective to Foucault, particularly in terms of discursive hegemony, human agency and the enabling effect of discourses. For Foucault, discursive hegemony is prominent in the policy arena, where a single discourse is typically dominant temporarily and spatially, and determines what is deemed acceptable to society (Dryzek, 1997). When commenting on the plurality of discourses, Dryzek (1997: 20) challenges this perspective, and believes that "variety is as likely as hegemony". He notes that hegemony weakens over time, which enables a range of new discourses to be uncovered. Similarly, Dryzek (1997) argues that at a certain level, actors are able to separate themselves from the discourses present in society, and can draw on a plurality of discourses which exist. Dryzek (1997: 20) differs in opinion to Foucault, and notes that discourses "are powerful, however they are not impenetrable". Hence, contemporary understandings of discourses acknowledge that plurality of discourses is as common as hegemony of discourses.

With regards to human agency, the Foucauldian perspective holds that individuals are subject to discourses (Dryzek, 1997) and do not possess power. For Foucauldians, power is conceived as being relational, where it is present in all societal relationships; however, it is neither possessed by actors nor social groups which yield dominance (Hajer, 1995; Flyvbjerg and Richardson, 2002; Rydin, 2003). A number of arguments have opposed this perspective, particularly those concerned with the role of human agency[9]. Human agency is associated with the belief that actors possess power themselves, and can strategically intervene in social activities (Giddens, 1984, cited in Lamsal, 2012). For Hajer (1995), human agency is considered to be as important as discursive power, since actor relationships and interactions are significant in policy processes. Furthermore, Adger *et al* (2001) acknowledge the power of human agency in these practices, by noting that actors subscribing to a discourse are involved in the discourse's creation, replication and modification through communicative statements. These understandings highlight the power of human agency in policy-making; and emphasise that although participating actors are partially subject to discourses, they also have the potential to influence discourses. This differs from Michel Foucault's perspective.

The constraining aspects of discourses, as acknowledged by Foucault, are also reflected in contemporary interpretations. Discourses are entrenched with subject-positions, which order "the way in which policy actors perceive reality, define problems, and choose to pursue solutions in a particular direction" (Hajer and Laws, 2006: 261), as they are entrenched with rules (Hajer, 1995; Keeley and Scoones, 2000). Similarly, these sentiments are shared by Dryzek (1997), and Smith and Kern (2007), who state that discourses are useful when negotiating meanings of issues, as well as determining the manner in which solutions for problems are derived. Importantly, discourses are critical in determining which knowledge is selected to be negotiated in policy-making processes. However, contemporary interpretations also

[9] Human agency is further examined in Section 2.5.2.

consider that discourses have an enabling dimension (Hajer, 1995; Bogelund, 2007), particularly when combined with actor strategies. This means that actors are aware of the structuring and constraining aspects of discourses, and strategically use a plurality of discourses to shape the outcomes of a policy process (Hajer, 1995). Thus, although discourses are constraining, the strategic use of multiple discourses by actors means that they can be enabling in the policy arena. This is an additional difference to the Foucauldian perspective on discourses, and is further elaborated on in Section 2.5.2.

Discourses and hegemony

As stated before, Hajer (1995: 59) conceptualises the policy process as a "struggle for discursive hegemony in which actors try to secure support for their definitions of reality". A hegemonic discourse results in specific actions or practices being deemed as rational, whilst other forms of actions or practices are marginalised or perceived to be irrational (Selsky *et al*, 2003). This highlights an important feature of discourse, whereby it has the potential to shape actors' contributions to a specific discussion (Hajer, 2006a). Although one specific discourse can be dominant over others, in due course the political debate is informed by a range of discourses (Hajer, 1993; 2006a). The discursive closure of policy problems refers to the process by which most of the constitutive elements of a phenomenon are disputed, while at the same time, particular claims from discursive fragments become associated and produce a specific definition of a policy problem (Hajer, 1995). Often, this results in the findings from the research being reduced to a visual representation or a catchy one-liner (Hajer, 1995), which captures the perceived essence of a phenomenon. However, this reduction may cause the loss of meaning (Hajer, 1995).

It is important to link discourse to its overall influence on a situation, particularly in terms of dominance and power. If a discourse is hegemonic, the knowledge associated with the discourse becomes powerful in the policy process, however if the discourse is counter-hegemonic, the knowledge associated with the discourse will not gain support and will not become legitimised. The hegemonic qualities of a discourse are associated with the notions of discourse structuration and discourse institutionalisation. Discourse structuration materialises when a particular discourse begins to dominate the way a given social unit conceptualises reality, whilst discourse institutionalisation occurs when a discourse becomes entrenched in specific institutional arrangements and practices of society (Hajer, 1993; 1995; Bulkeley, 2000; Bogelund, 2007). When linked to knowledge production, it is clear that discourse structuration will result in particular knowledge becoming prevalent in a given domain, whilst discourse institutionalisation will result in the favoured knowledge being entrenched or engrained into a particular domain. Ideas, views or concepts which do not support or conform to the accepted solution or understanding, can be classified as counter-hegemonic discourses. Discourse institutionalisation has the capability to suppress knowledge associated with, and emerging from, counter-hegemonic discourses. This lessens their impact in the policy arena, as this knowledge would be counter to the institutionalised way of thinking. As a result, the

negotiation of knowledge will be structured around the institutionalised discourse and its associated conceptions.

Discourses cannot be easily manipulated, especially when they are entrenched in institutional procedures (Hajer and Laws, 2006). Nonetheless, Bulkeley (2000) highlights that achieving discourse institutionalisation is more difficult than achieving discourse structuration. This is because discourse institutionalisation requires that the discourse be more robust and powerful, as it will be institutionally challenged by counter-discourses at a greater scale than those encountered at the discourse structuration level. Nevertheless, if there is both discourse structuration and discourse institutionalisation, the specific discourse can be described as dominant or hegemonic in the specified domain (Hajer, 1995; Adger *et al*, 2001). As stated above, this has significant ramifications for the knowledge which is ultimately produced from the policy arena. This study reflects on discourse structuration evident within the outputs of the BoP Project.

Institutions[10] are the product of discourse structuration. According to Rydin (2003), institutions determine the particular context in which newly introduced discourses are generated and influenced. Discourse formulation occurs on numerous levels as well as in diverse localities (Hajer, 1993). The process of producing new discursive insight may result in the modification of practical reality (Hajer, 1995). This is because hegemonic discourses which are entrenched in society may be eroded by alternative discourses, and hence this may result in newly introduced knowledge, and consequently new political practices, which translates into changes in reality. Furthermore, in times of crisis, institutional legitimacy may be destabilised, whereby a new fresh outlook is required, which enables marginalised discourses to come to the forefront (Smith and Kern, 2007). This will impact on the particular knowledge which is introduced into the policy arena, and challenges the established or entrenched forms of knowledge.

A discourse will only have a political effect if it is enacted and consequently becomes a component of a communicative act (Hajer, 2005a; 2005b). Logically, actors are responsible for communicative acts. Bearing the role of human agency in policy-making processes in mind, the following section elaborates on actors and their networks in the policy processes.

2.5.2 Actors and Networks

When analysing power in policy-making processes, actors and networks are the second component identified by Sumner and Jones (2008). Actors are involved in the process of creating, debating, finalising and implementing policy (Dryzek, 1997). Policies, plans and programmes represent the

[10] Institutional practices are presented in Section 2.5.3.

outputs of collaboration between various state and non-state actors (Garrett and Islam, 1998). Actors have different levels of power and influence, and consequently certain views, discourses or ideas will become more prominent than others in the policy process, which may result in conflict between actors. As noted before, Foucauldians would argue that actors do not possess power, but exercise power through their use of discourse. However other theorists, such as Giddens (1984, cited in Lamsal, 2012), propose that actors possess power themselves. This is evident when various actors strategically intervene in social activities. Through their agency they advance a proposal, initiative or argument (Giddens, 1984, cited in Lamsal, 2012). This is achieved through debates, persuasion and manipulation (Hajer, 1993). The focus of this section is concerned with how actors interact and use discourses.

In complex policy processes, a multi-disciplinary range of actors are required to collaborate with one another, in order to gain a comprehensive understanding of a phenomenon (Hajer, 1993). However, as they are from different backgrounds, actors often interpret reality in different ways (see Hajer's (2006b) concept of multi-signification in Section 2.2). In these practices, actors encounter one another, and knowledge is produced from these social interactions. In order to deliver appropriate knowledge for policy-making processes, co-operation amongst these actors is required (Laws and Hajer, 2006). Hajer (1995) introduced the notion of the communicative miracle in policy-making practices, which highlights that although actors communicate their ideas in different ways, they seem to be able to understand one another (Hajer, 1995). Despite the "great variation of modes of speech", actors use story lines[11] to understand issues and processes, albeit that their interests and agendas may reflect a different viewpoint (Hajer, 1995: 46). In addition, discursive affinity refers to the fact that arguments are derived from a range of sources and have different meanings, however they are able to conceptualise the world in a similar way (Hajer, 1993; 2006a; 2006b). Separate aspects from different arguments may have a comparable cognitive or discursive structure, which consequently insinuates that they belong together, and this is often acknowledged by other actors as being correct, even though these actors do not have a complete understanding of an alternative argument (Hajer, 1995). Although actors from different disciplines communicate in different ways, they can understand each other, resulting in understanding among actors in policy-making processes.

Furthermore, "actors do not exist in a vacuum" (Keeley and Scoones, 2000: 91), and they are influenced by internal factors related to the individual actor, such as their viewpoints, agendas, goals and strategies. An actor's viewpoint on a particular issue will be determined by their ideological perceptions, professional aptitude and personal resemblance to, or dislike of, other actors (Allison, 1971, cited in Garrett and Islam, 1998). It is important to note that actors hold, generate and value knowledge in different ways, and this ultimately contributes to their specific perception of an issue or problem

[11] Story lines are presented in Section 2.6.1. Story lines refer to condensed statements summarising complex narratives (Hajer, 2006a).

(Hommes *et al*, 2008). When actors are afforded the opportunity to contribute to the knowledge base of an issue, the manner in which they construct the problem creates a connection between the knowledge base and various actor perceptions. (Hommes *et al*, 2008).

Actors are not confined in discourses, but rather they proficiently manoeuvre and utilise discourses as a means to achieve policy supremacy (Hajer, 1995). They are able to make sense of particular happenings in the political arena by extracting from pre-existing systems of meaning, namely discourses (Selsky *et al*, 2003). This is central to this dissertation, as actors participating in the BoP Project endeavoured to create a solution in the BoP zone, by drawing on pre-existing discourses relevant to the specific context. An actor's political argument is generally based on multiple discourses (Hajer, 1993; Selsky *et al*, 2003; Medina *et al*, 2009). This means that an actor's argument will combine different discourses in order to be constructed in a logical manner. This is due to the desire of the political actor to be rational in the policy arena, and for their argument to seem plausible and appropriate to other participating actors. The discursive construction and interpretation of reality is undertaken by the participating actors, and this directly influences the outcomes of the political process, as it determines which discourses are brought to the forefront in policy-making practices. This may result in actors using multiple methods to interpret an issue (Selsky *et al*, 2003) due to the range of discourses and associated strategies introduced by actors into the policy arena. This can logically account for the spatial and temporal variances in policy action and solutions.

Moreover, Smith and Kern (2007) acknowledge that policy-makers utilise and alter discourses in their policy actions; however by using a given discourse, they encounter the structuring effects associated with the limitations of the discourse. Actors who have become accustomed to operating within the frame of the institutionalised discourse will use their standing to impose their institutionalised ideas and perspectives onto other actors, thereby making them interpret and approach reality according to their beliefs (Hajer, 1993). In these processes, actors who are influenced by institutional rules and routines put forward particular arguments, with the overall aspiration of getting these arguments and ideas acknowledged (Torfing, 2011). This acknowledgement can be achieved by the actors using their aptitude to create a persuasive argument (logos); the use of the speaker's reputation, standing and credibility (ethos); as well as by employing various rhetorical skills which seek to provoke given emotions (pathos) (Hajer, 1995; Torfing, 2011).

Smith and Kern (2007) argue that Hajer highlights the recursive relationship between interests and discourses, whereby actors can realise their interests through discourse. In addition,

> "…actors seek strategically to co-opt and neuter a threatening discourse in the ascendant through tactics such as rhetoric, ridiculing aspects of an argument, undermining other actors' positions by

> exposing them as ideologically driven or self-serving, inserting elements of other story lines. All of these are used to shape the debate and try influence policy" (Smith and Kern, 2007: 5).

However, powerful actors who are able to identify when certain established or emerging discourses challenge their fundamental interests, are able to inhibit developments at the level of discourse (Dryzek, 1997, Jones, 2009). These actors can strategically draw on different discourses to meet particular ends (Medina *et al*, 2009), and effectively inhibit alternative discourses. Powerful actors have the potential to influence decision-making and other outcomes in the policy arena. However, Jones (2009) argues that knowledge is secondary to interests in the policy arena. Interests from different actors confront one another, and the actors with the better means become dominant in policy-making practices (Jones, 2009). These actors use knowledge as a line of reasoning to achieve their desired outcome or to reinforce previous decisions (Weiss, 1977, cited in Jones, 2009). However, a single actor cannot have complete dominance in a policy arena, in terms of having knowledge and information required in entirety (Laws and Hajer, 2006). Furthermore, no actor has complete knowledge, as in essence knowledge is considered to be partial. Also, over time different knowledge is introduced by different participating actors, and newly introduced discourses challenge existing discourses. This often challenges powerful actors and their level of power, and their influence therefore changes accordingly. Hajer and Versteeg (2005) argue that important moments in power struggles are when discursive regularities or practices are interrupted and adjusted.

However, power is not only exercised at the discourse level, but it is also exercised in the way powerful actors actively utilise discourses so as to create a meaningful performance (Hajer and Versteeg, 2005). Related to performance, actor strategies are used to describe the manner in which social groups utilise their knowledge and understanding of an issue, in order to resolve it (Brown and Resondo, 2000). This is often done in a strategic, organised and rational manner. When actors want to convey something to other actors or an audience, they rely on what they have in common with one another, as well as their mutual lifestyle and cultural content (Hajer and Wagenaar, 2003). Actors will often 'cloak' themselves in the language of a particular discipline, in order to serve their individual interests (Dryzek, 1997). This will make them more appealing to other actors participating in policy-making processes. Political 'friends' and 'enemies' will be identified (Papanagnou, 2010), as different ways of presenting an issue will make certain solutions appealing or threatening to those involved in the policy-making process (Garrett and Islam, 1998). The relative appeal or threat will change and evolve over time. This depends on the actor strategy employed, as well as the actors participating in the policy network. This highlights that actors are not passive in the policy arena; rather they make rational and strategic choices, and hence they have a critical role and power in this contested domain.

Actors operate in networks in policy-making processes. A policy network represents a meso-level concept, which is often integrated into policy-making processes by the state, with the overall goal of using these networks to legitimise and implement policy (Bulkeley, 2000). However, actor networks may also be informal, as subscribing actors strategically aim to promote their understandings over other networks, by identifying key allies in power positions or institutions (Keeley and Scoones, 2000). This consequently extends the scope and impact of their preferred discourses (Keeley and Scoones, 2000). Actor networks are the means through which knowledge becomes enacted and entrenched as practice (Keeley and Scoones, 2000). The current knowledge in these networks exposes the powerful actor interests evident in them, and reveals how actors strategically use knowledge as a means to satisfy their agendas, goals and interests (Jones, 2009).

Within these policy networks, certain groups hold a prominent position, whilst others are excluded (Bulkeley, 2000). These networks can also be open or closed, which determines who can participate within these practices. In policy-making practices, there is often a vague distinction between policy-makers and policy-influencers (Sumner and Jones, 2008). Policy-makers are the actors who are the involved in the decision-making processes of policies; whilst policy-influencers are actors who have input into policy-making processes, but do not make the final decisions. Actors who are regularly involved in policy networks are consultants. This study examines the role of consultants as policy-influencers in the BoP Project.

Consultants as influential actors in policy-making processes

Under conditions of multi-signification and institutional ambiguity, decision-makers may not have the necessary specialised knowledge and skills to interpret or understand the knowledge presented in policy-making processes. As a result, external actors known as consultants, with expertise in specific fields, are introduced into the policy arena to aid in the negotiation of knowledge, in order to present it to decision-makers in a simplified and meaningful way. Consultants are often the ones to introduce knowledge into the policy arena, suggesting technical solutions and practical ways forward. In South Africa, consultants play a dominant role in knowledge production for the state (Van Niekerk, 2008). The notion of the 'consultant state' implies that the knowledge and practices of the state are being shaped by consultants (Van Niekerk, 2008).

Consulting firms and consultants are dominant actors who gain strategic importance in knowledge-based economies (Creplet *et al*, 2001; Bouteligier, 2009). This is primarily because in recent times information and knowledge have become imperative in our complex society (Bouteligier, 2009). From a broad perspective, consulting firms aim to provide professional solutions to problems which are faced by their clients (Creplet *et al*, 2001; Reihlen and Nikolova, 2010), as they are carriers of knowledge (Bouteligier, 2009). Clients seek consultants to find solutions outside their organisation as they do not always have the

capacity to complete exercises; or they use consultants as a neutral means to legitimise various solutions, due to their 'perceived' independence. A consultant's technical knowledge is considered to be rationally and legitimately derived, and becomes regarded as a source of power in policy-making processes (Nelkin, 1975). As a result, a project team, which is a short-term assemblage of consultants and clients that come from a diverse range of backgrounds, is assembled during policy-making practices (Reihlen and Nikolova, 2010). This occurred in the BoP Project, which is the case study examined in this dissertation. Furthermore, consultants are often selected by informal processes, and are expected to introduce new knowledge to the client in terms of decision-making (Creplet *et al*, 2001). These informal processes of selection are often political, as clients may prefer certain consultants to others, for example, due to personality clashes or institutional requirements. This study investigates the production of knowledge in the BoP Project, through the interactions between the local government and the appointed consultant consortium.

Consultants are recognised by the associations they belong to, their levels of education and their experience (Creplet *et al*, 2001). They have problem-solving skills, utilise different tools and methodologies, and are known as 'knowledge workers'. (Creplet *et al*, 2001). Consultant teams have an extremely diverse knowledge base, and act as 'knowledge brokers' in the decision-making process (Creplet *et al*, 2001). This is because they introduce different forms of knowledge into the policy arena, which are negotiated and presented as possible policy outcomes or solutions. Consequently, they have access to a range of methodologies, within which they will be able to collectively gather relevant best practices (Creplet *et al*, 2001).

Creplet *et al* (2001) maintain that consultants have four different types of knowledge. They possess 'basic knowledge', which is drawn from their professional training, as well as 'know-how', which is gained from applying their practices and their general experience (Creplet *et al*, 2001). Furthermore, they possess a 'systems understanding', which is holistic in nature and determines how they interpret issues, and finally, they have 'self-motivated creativity', whereby they strive to produce the most successful outcomes (Creplet *et al*, 2001). All of these types of knowledge will be introduced into the policy process, as consultants endeavour to find solutions to various problems (Creplet *et al*, 2001).

Consultants are therefore an integral part of policy- and decision-making processes. This reiterates that consultants are important actors in the policy arena, as they influence which knowledge is introduced and subsequently negotiated in this domain; and in essence, the outputs and outcomes which have the potential to impact and influence reality. This study examines the role of the consultant teams in the knowledge production process of the BoP Project. As noted before, "actors do not exist in a vacuum" (Keeley and Scoones, 2000: 91). Consequently, they can be influenced by external factors such as

institutions. The following section focuses on theory pertaining to institutional practices, which are important when analysing power in policy-making practices.

2.5.3 Institutional practices

Institutional practices are the third component identified by Sumner and Jones (2008), when analysing power in policy-making processes. The term institution "encompasses formal organisations as well as customs, and patterns of behaviour and action" (Jones, 2009: 13). However, institutions may also be informal in nature. Overall, institutions represent an ever-constant force behind policy-making, which formally and informally influence the 'rules of the game' (Jones, 2009). Wagenaar and Cook (2003: 149) note that practice is a difficult concept to define; nonetheless, it entails "action, community, situatedness, criteria, standards, warrants, knowing, dialectic, discourse, emotions and values". To Hajer (2006a: 70), the concept of practice is defined as "embedded routines and mutually understood rules and norms that provide coherence to social life". In the policy arena, policy-making is controlled and directed by rules and routines which are embedded in and shaped by institutions (Hajer, 2006b). These rules and routines aid in avoiding or transforming conflicts, create trust between actors, steer expectations, and are typically written as constitutions which define the power of important institutions (Hajer, 2006b). In essence, they aim to create order in policy-making practices. Jordan and O'Riordan (2000) note that institutions are not merely unresponsive organisations, processes and relationships, as they also include people. They are resilient and last for long periods of time, even once important actors move on from them (Jentoft, 2004). Institutions are therefore both dynamic and stable, and can evolve over time and space.

Institutions have the capacity, capability and power to determine who is able to participate in the decision-making process. In addition, they influence different actors' strategies and shape what the actors involved believe to be feasible and desirable, as well as influencing actor behaviour and controlling the entire structuring of the political process (Steinmo, 2001). Jones (2009) states that institutions are very influential in determining which ideas and knowledge are utilised in various policy processes. In addition, institutions are able to directly and indirectly shape the interface between knowledge and policy by controlling knowledge generation processes, such as determining when research is commissioned and its respective priorities (Jones, 2009). This means that the knowledge generated will typically be aligned to institutionalised rules, routines and ways of thinking. It is imperative to note that institutions also contain a historical dimension, as previously enacted policies provide political limitations and prospects for future paths of action, which is referred to as path dependency (Hajer, 2006b; Collier and Collier, 1991, cited in Jones, 2009; Jacobs, 2006). Campbell (2002) notes that ideas are transformed within the policy process in such a way so as to fit with the prevailing institutions. As a result, institutions are able to keep particular concerns off the agenda (Luke, 1973, cited in Jones, 2009), which has important implications for knowledge production processes.

The preceding sections have examined discourses, actors and networks, and institutional practices. These are integral components when analysing power in policy-making and the construction of knowledge. As the methodological approach in this dissertation is based on discourse analysis, the following sections examine the discursive, dramaturgical and deliberative dimensions of this analytical framework.

2.6 The discursive, dramaturgical and deliberative dimensions of discourse analysis

This dissertation uses discourse analysis as a methodological framework to analyse the knowledge production process of a spatial planning exercise within the city of Durban. Hajer (2004; 2005b) reveals that when using discourse analysis as a methodology to analyse policy-making practices, there are three critical dimensions to consider, and these are known as the discursive, dramaturgical and deliberative dimensions. These dimensions can be used to explore how knowledge is socially constructed and negotiated in policy-making processes. It is consequently important to explore the theoretical aspects of these three dimensions, starting with the discursive dimension[12].

2.6.1 The discursive dimension of discourse analysis

According to Hajer (2005b; 2006b), the discursive dimension of discourse analysis incorporates discourses, metaphors, story lines, discursive affinity, emblematic issues, discourse-coalitions and institutional practice. The discursive dimension refers to the devices which can be used to analyse what is said in the policy-making process (Hajer and Uitermark, 2008), as this directly affects and influences the specific knowledge which is produced in these processes. Discourses, discursive affinity, and institutional practices were presented in Section 2.5, and consequently this section will focus on the remaining discursive devices, starting with story lines.

Story lines refer to condensed statements summarising complex narratives (Hajer, 2006a). They are constructed statements which assemble formerly disparate elements of discourse, and resultantly enable the creation of new meanings and understandings (Hajer, 2000). Story lines are powerful devices which are used by actors to understand complicated issues, without the need to refer to wide-ranging and bulky justifications (Smith and Kern, 2007). Hegemonic discourses are commonly centred on the creation of a story line, which effectively provides a summarised, compressed and often metaphorical representation of how the specific policy discourse classifies issues and resolutions (Hajer, 1995). In complex policy situations, story lines are often the only things that actors have in common with one another, and hence consensus, understanding and ultimately policy are built around story lines (Hajer and Laws, 2006).

[12] Hajer's (2003a; 2005b) discourse analysis framework was selected as the main research method in this study. It is further explored in Chapter Five.

A story line can modify what is perceived as out of place, and generates new insights into the social order (Hajer, 1995). It can help with problem construction, as well as the establishment of a social and moral order in a given field (Hajer, 1995). Story lines act as a platform within which an actor can comprehend their individual contribution to the specific knowledge production process, or identify their personal preference in the context of certain scientific findings (Hajer, 1995). As a result, story lines have the capacity to shape the knowledge which is produced or constructed by an actor (Hajer, 1995). Furthermore, they enable actors to derive meaning from an assortment of discursive categories, and these are presented as a series of symbolic references which propose a common interpretation of the given physical or social phenomena (Hajer, 1995).

Actors may subscribe to the same set of story lines; however, their interpretation of its underlying meaning may be completely different (Hajer and Versteeg, 2005). The assumption of mutual understanding is false and quite often people do not completely understand one another; nonetheless, people collectively have the capacity to create meaningful political interventions (Hajer and Versteeg, 2005; Hajer, 2006a). By being exposed to alternative discourses or perspectives through story lines, actors are able to enhance their personal understanding of a phenomenon beyond their individual discourse of expertise or experience (Hajer, 1995). This means that they will be able to selectively introduce relevant forms of knowledge into the policy arena. As a story line effectively combines elements of various discourses into a relatively logical whole, it importantly conceals the discursive complexity, and thus enables people from different backgrounds to understand one another (Hajer, 2006a). This means that the solutions to complex problems can be identified (Hajer, 1995), and highlights the critical role of story lines in contested policy arenas. This dissertation identifies dominant story lines and their evolution throughout the various phases of the BoP Project.

Hajer (1995) argues that cognition and understanding does not stem from extensive discursive systems, but rather it is introduced through story lines. This is one of the critical assumptions with regards to the conception of story lines. They play an important role in terms of the positioning of subjects and structures, and the surfacing of new story lines can elicit political change, as they can rearrange the understanding of given phenomena, and hence they can be the "prime vehicle of change" (Hajer, 1995: 63). This reveals the critical role played by story lines in introducing knowledge to the dynamic, ever-changing policy arena.

In order for a story line to be considered as politically powerful it has to be widely shared (Hajer, 2005c). As story lines become recognised and entrenched, more actors progressively start to use the specific story line; and consequently they become routine and further established in societal debate (Hajer, 1995). Actors use story lines to impose their view of the world on others, advise particular social positions and practices, and denounce alternative social arrangements (Hajer, 1993; 2006a). Story lines can become

influential in society and can dictate appropriate actor behaviour, as well as determine the suitability of respective knowledge in the policy arena, and whether or not it will become entrenched. If a hegemonic story line is disputed, people are still compelled to position their contribution according to the recognised categories (Hajer, 1995). This means that newly introduced knowledge will have to conform to the prevailing story line. Furthermore, they have the potential to create a basis which informs actors' choices with regards to action, and can provide a plot which can aid in delineating effective solutions (Hajer and Laws, 2006). This reveals the power of dominant story lines in contested policy-making processes.

Metaphors are often embedded in story lines, and these linguistic devices have the potential to reveal understanding by comparing one phenomenon to another (Hajer, 2000). A metaphor is defined by Hajer (2005b) as understanding and experiencing a particular phenomenon in terms of something else. Schon (1979, cited in Hajer, 1995) maintains that metaphors act as a common ground which connects diverse discourses. This enables actors to construct their own conception of the phenomenon and re-interpret various aspects of knowledge emerging from another field, as well as enhancing their understanding by filling knowledge gaps and ambivalences which may have been excluded from the original text (Hajer, 1995). According to Dryzek (1997), metaphors are rhetorical devices which are used to convince an audience to look at something from a specific perspective. The exact words used in the metaphor will help establish the desired perspective. As a result, they influence the negotiated and socially constructed knowledge in the policy-making process.

Emblems are also relevant when discussing story lines. Issues which become prominent during a particular period and dominate public and political interest are termed emblems (Hajer, 1995). These play an important role in symbolising story lines, and create a fundamental focal point around which different coalitions contest (Smith and Kern, 2007). Emblematic issues are referred to by Hajer (2006b: 45) as "a specific policy problem that captures the imagination at a particular moment in time and fulfils a key role in the general understanding of a much larger problem complex".

Story lines enable different discourses to be connected and form the basis of discourse-coalitions (Hajer, 2005a; 2005b). A simplified definition of a discourse-coalition is "a group of actors that, in the context of an identifiable set of practices, shares the usage of a particular set of story lines over a particular period of time" (Hajer, 2006a: 70). A discourse-coalition is therefore comprised of three elements, namely: a series of story lines; various actors that subscribe to and promote particular story lines; as well as the distinguishable institutional practices within which discourses are generated, modified and transformed (Hajer, 2000). These all interact with one another in the system of operating institutional practices, which has an influence on the discourse-coalition itself (Stevenson, 2009). These elements collectively mean that different actors from diverse backgrounds are able to use story lines to form specific coalitions (Hajer, 1995), and consequently exert power (Illsley and Richardson, 2004; Hajer,

2005b). In addition, these three elements influence the knowledge produced in the policy arena, as the interplay of these elements controls what knowledge is introduced into an existing policy domain, and subsequently negotiated. Hajer (1995) places significant emphasis on competing discourse-coalitions in the policy development process.

As previously stated, story lines act as the cement which group discourse-coalitions together (Hajer, 1995; Smith and Kern, 2007). Members of a discourse-coalition do not necessarily have to share a worldview or deep-rooted cognitive beliefs, but they are linked by story lines (Bulkeley, 2000; Hajer, 2000). This is primarily because they 'sound right' to a number of audiences (Hajer, 2000). Discourse-coalitions are linguistically based, rather than interest based (Hajer, 1995). Story lines are important to coalition formation, due to their figurative or metaphorical nature which essentially allows for a range of interpretations of a given issue (Hajer, 2000), and hence they are an integral component of discourse-coalitions.

A discourse-coalition consists of a flexible set of actors, which subscribe to story lines for a given period (Smith and Kern, 2007). Illsley and Richardson (2004) argue that during environmental policy debates, discourse-coalitions are created in order to uphold a specific discourse or outlook. However over time actors may depart from the discourse-coalition, whilst new actors may join existing coalitions. Within discourse-coalitions, actors may share preferences; however, they often have their individual agendas and rationales (Hajer, 1995). Actors may join discourse-coalitions with particular intentions or planned ambitions. However, on occasions when actors subscribe to a given coalition, they re-evaluate these ambitions (Smith and Kern, 2007), due to various interplays in the policy process (Bulkeley, 2000). Nonetheless Smith and Kern (2007) assert that besides the fluid nature of the discourse-coalition, the story line of a discourse-coalition is maintained. This dissertation identifies the dominant discourse-coalitions, and how their knowledge conceptions evolved during the different phases of the BoP Project.

In order for a discourse-coalition to be considered as dominant, central actors should be compelled to recognise the rhetorical power of the discourse, and the policy procedure should be performed according to the conception of the hegemonic discourse (Hajer, 1993; 2006a). This reflects discourse structuration and discourse institutionalisation (See Section 2.5.1), and determines the knowledge which is negotiated and produced in policy-making processes. The first dimension of discourse analysis has been presented, which identifies devices that are used to analyse what is said in policy-making processes. The next section explores the dramaturgical dimension of discourse analysis.

2.6.2 The dramaturgical dimension of discourse analysis

The dramaturgical dimension of discourse analysis reveals how and where knowledge is presented, as this influences how knowledge is portrayed in policy practices. When politics is considered from a

dramaturgical perspective, it is conceived as "a sequence of staged events in which actors interactively decide on how to move on" (Hajer, 2006b: 46). Policy-making depends on acts of speech, where individuals from different domains negotiate a situation (Hajer, 2005b). Dramaturgy refers to how things are said by various actors, and in what exact settings these things are said (Hajer and Uitermark, 2008). The sites or locations in which discursive exchanges are staged have an impact on what can be articulated or proposed by various actors in a meaningful and influential way (Hajer, 2003a). As a result, this has ramifications for knowledge construction in the policy arena. These elements form part of the dramaturgical dimension of policy-making, which is defined by Hajer (2005b) as the physical-symbolical contexture of a discussion. This incorporates elements such as scripting, staging, setting and performance, as identified by Hajer (2005b). Dramaturgy explores the different sites where knowledge meets policy, which involves an assortment of actors and diverse institutions, and is essentially a place where knowledge and evidence is presented and decisions are made (Jones, 2009). When dramaturgy is linked to knowledge, Hajer (2006b) notes that this dimension explores the manner in which participating actors intuitively negotiate a particular issue or situation.

The concept of setting is the actual physical situation in which an interaction takes place, and this can incorporate tangible elements, such as the stage set and the artificial devices used by actors (Hajer, 2005c). Linnros and Hallin (2001) refer to these as discourse arenas, which are the spaces where texts, utterances and different forms of discursive and social practices are executed. These spaces reveal where discourses become apparent, as well as where various conflicts emerge as a result of competing discourses (Linnros and Hallin, 2001). This reiterates that discursive practices are always located in space (Linnros and Hallin, 2001). A discussion is not simply a conversation, but in addition can be considered as an act (Hajer, 2005c; Hajer, 2006b). Lynch (1991, cited in Hajer, 2005c) maintains that all acts occur in a particular context, which Hajer (2005c) ultimately believes impacts upon the quality of the act. Hajer (2006b) argues that actors manipulate words, but settings influence words and actors as well. This reiterates that context is important in discourse analysis.

Within different settings, there are different rights and rules (Hajer, 2003a). This fundamentally shapes what is perceived to be appropriate behaviour. Nowadays, the settings in which politics and policy are constructed are often considered to be unstable (Hajer, 2005b). In these situations, performing ultimately determines which rules are abided by in various procedures, which conception of reality is selected, what temporal-spatial frame is deemed as fitting, and finally, what signifies a legitimate intervention (Hajer, 2005b). Utterances are made in a range of settings, with each setting having a performative dimension (Hajer, 2005c). When politics is conceptualised in a dramaturgical sense, the setting of the stage influences the play of politics (Hajer, 2005c). Hajer (2005c: 629) refers to the setting of the stage as the "sequential ordering of political moments or staging of the political act". Garrett and Islam (1998) importantly note that actors involved in the policy process have the potential to enhance their individual

agendas by changing the setting so they effectively have more influence over resources, which can shape the decision-making process.

Hariman (1995, cited in Hajer, 2005c) highlights that it is imperative to examine the political process in a given setting as a series of staged performances of conflict and conflict resolution, since politics continuously needs to be enacted. This is beneficial to the researcher as it has the potential to reveal what circumstances result in an assortment of people and voices appearing in political discussions, how the diverse contributions from a range of actors can be meaningfully linked to one another, and under what conditions significant statements are produced (Hajer, 2005c). They collectively have the potential to shape decision-making (Hajer, 2005c). As the researcher for this dissertation was part of the social consultant team in the BoP Project, dramaturgical dimensions of this project could be identified within meetings between the consultant consortium and local government officials.

Scripting pertains to endeavours which ultimately construct the specific setting, such as determining the actors involved in the play, and providing various prompts for appropriate behaviour (Hajer, 2005c). For Hajer (2005b), an effective script can proficiently define protagonists and antagonists, and has a clear plot, which is realised though a particular order of scenes. The term counter-scripting refers to the attempts of antagonists to negate the effectiveness of scripts proposed by protagonists (Hajer and Uitermark, 2008). Staging refers to the intentional organisation of an interaction, which employs contemporary and newly created symbols, as well as distinguishing between active players and seemingly passive audiences (Hajer, 2005c). This dissertation examines the scripting and staging which occurred within the BoP Project, and shaped the knowledge production process in this spatial planning exercise.

Performances can be conceived of as shared productions, in which certain actors have a dominant role; whilst others are positioned in the role of the audience for a period of time, but nonetheless play an important role in the performance (Hajer, 2005c). When the political process is conceived as a series of staged performances, it is possible for the ‘rules of the game’ to be continuously negotiated over time within informal governance networks (Hajer, 2006b). Contextualised interactions have the capability to generate social realities, and performance refers to the manner in which these realities are achieved (Hajer, 2005c). Examples of generated social realities include conceptualising a particular phenomenon, the knowledge related to the given phenomenon and the associated formation of new power relations (Hajer, 2005c). Performance suggests the comprehension that certain meanings need to be continuously reproduced, that signification requires enactment, and that these occurrences transpire in a particular setting (Hajer, 2005b). Performing a situation is essentially imposing a specific definition of reality onto others (Hajer and Uitermark, 2008). Some performances are associated with replication, while other

performances relate to improvisation, as suggested by Waterton (2003, cited in Hajer, 2005b). These pertain to the manner in which a volatile set of circumstances can be alleviated.

The importance of scripting, staging, setting and the performative aspects of the dramaturgical dimension of discourse analysis has been presented. The analysis of these aspects reveals how knowledge is presented in policy-making practices. The following section examines the third and final dimension of discourse analysis.

2.6.3 The deliberative dimension of discourse analysis

The third dimension of discourse analysis is known as the deliberative dimension, and this refers to the democratic quality of a discussion. This affects the production of knowledge as it fundamentally determines the level of negotiation between actors in policy-making practices, including who is involved, when they are involved and their level of involvement. Deliberation is not simply about convincing and persuading individuals with a sound argument, but is a performative act which invents a public of its own (Hajer, 2005c). Hajer (2003b: 183) highlights three features of a deliberative process:

> "(1) it is an exchange of pros and cons of particular solutions and is concerned with understanding the different viewpoints from which the various claims are made; (2) it contains a negotiation of the rules of the game; and (3) in light of the above it is also a matter of cultural politics: it is a string of moments at which people discuss and negotiate value commitments, and either discover or develop shared understandings and adherences or not".

Furthermore, Hajer (2005b) identified six aspects which comprise the deliberative dimension of discourse analysis. The first aspect is reciprocity. When related to policy-making practices, this aspect refers to the relative degree of hearing both sides of an argument, and whether opposing arguments can be responded to (Hajer, 2005b). Inclusiveness is the second aspect of the deliberative dimension, and is concerned with whether or not stakeholders are involved in the argumentative exchange of policy-making practices (Hajer, 2005b). The fourth aspect, openness, refers to the barriers which prevent certain actors from participating in policy-making practices (Hajer, 2005b). The fifth aspect focuses on accountability, which is concerned with how those actors involved in policy-making processes are held responsible for their actions, and whether they abide by established rules (Hajer, 2005b). Dialogue is the final aspect of the deliberative dimension, which reflects an iterative process where multiple stakeholders are involved in the mobilisation of knowledge in policy-making practices (Hajer, 2005b). This dissertation will reflect on the deliberative processes evident in the BoP Project.

Deliberation occurs when people are involved in, negotiate and contribute to decision-making processes. In terms of involvement and participation in policy-making practices, Hajer (2003a) maintains that there

are two generations of involvement. With the first generation of policy practices, stakeholders and the public are only engaged at the 'end-of-pipe', which is subsequent to policymakers and politicians reaching a consensus with regards to a specific plan, decision or policy exercise (Hajer, 2003a). Policy-making in this instance occurs with a sole sectoral-orientated focus (Hajer, 2003a). Conversely, with second generation practices participation occurs in the early phases of policy-making, which is conceived to be more open to all stakeholders and recognises their various interests and concerns, as well as having an area-orientated focus (Hajer, 2003a). When stakeholders and the general public are involved in policy-making practices, this will have direct implications in terms of the practices of democracy and legitimisation.

The three dimensions of discourse analysis which have been discussed play a critical role in understanding policy-making processes, as they identify the various components of knowledge production and negotiation.

2.7 Summary

The BoP Project can be located within the broad realm of environmental politics. Within this overarching frame, Chapter Two focused on four sets of theoretical concepts. The first focus was concerned with policy-making in contemporary times. These processes are highly complex and imbued with uncertainty. Policy-making is conceptualised as a "struggle for discursive hegemony in which actors try to secure support for their definitions of reality" (Hajer, 1995: 59). The second focus of this chapter was related to the linkages between knowledge and policy. Two approaches to knowledge were identified, which influence how knowledge is transferred or negotiated in the policy-making practices. Adopting an analytical outlook, the third part of this chapter explored discourses, actors and networks and institutions in policy-making processes. These components were identified as being critical when analysing power in policy-making processes. The final focus of Chapter Two was concerned with analysing policy-making processes using discourse analysis. This is associated with the discursive, dramaturgical and deliberative dimensions of discourse analysis. Each of these dimensions has the potential to shape knowledge production in policy-making processes.

The next chapter explores contemporary cities and ports. In contemporary cities, policy-making processes are increasingly shaped by the neoliberal agenda, with the goals of promoting globalisation and improving their relative competitiveness in the global economic network. Similar to cities, ports compete against each other in order to secure economic trade. Contemporary ports can be classified according to prominent port development literature; however they face a range of challenges by sharing their interface with cities.

CHAPTER THREE: CONTEMPORARY CITIES AND PORTS

3.1 Introduction

The urban landscape represents a space where dominant discourses and ideologies become evident (Summer, 2006). Spatial planning exercises, such as the Back of Port (BoP) Project, do not occur in a void. They are influenced by the cities within which they are located, as well as by the city's most prominent forms of economic activity. Policy-making processes in contemporary cities throughout the world are shaped by the goals of national, regional and local governments, which have become increasingly aligned with neoliberalism and are influenced by forces of globalisation. Within this context, cities actively compete against one another in global economic networks, with the goal of securing capital, economic activities and other investments. Cities adopt an array of governance approaches, and realise these approaches in different ways, in order to improve their competitiveness and reposition themselves in these global economic networks.

Although the BoP Project is a spatial planning exercise located in an urban space, this project is linked to the Port of Durban. It is therefore imperative to examine port-related theories and literature. Contemporary ports have been impacted upon by containerisation. These ports compete against one another with the goal of securing economic trade, and their development over time can be characterised by a number of port development models. As ports are located adjacent to cities, a number of challenges or trade-offs are experienced in the port-city interface. This chapter examines how port development is occurring in contemporary neoliberal cities.

3.2 Contextualising neoliberalism

During the recovery period from the end of the Second World War (WWII) to the 1970s, the foremost theoretical framework which guided economics and policy-making was known as Keynesianism (Thorsen and Lie, 2006). The Keynesian approach focused on demand-led interventions, which sought to create full employment and pacify abject poverty through the application of distributive policies (Swyngedouw *et al*, 2002; Thorsen and Lie, 2006). During this period, the context was characterised by robust union power, considerable national state intervention in economics, and the adoption of managerial-welfarist and distributional strategies (Brenner, 2004; Purcell, 2009). However, during the 1970s the Keynesian approach was superseded by a 'monetarist' or neoliberal approach, which currently remains the dominant approach for macro-economic policy-making (Thorsen and Lie, 2006; Purcell, 2009). Neoliberalism represents the context within which the BoP Project was completed.

Neoliberalism and the neoliberal approach is understood as a calculated response, where free market alternatives were favoured over distributional and welfarist approaches, in order to deal with the

unrelenting global economic recession and conditions of stagflation[13] in the 1970s (Brenner and Theodore, 2002; Purcell, 2009). Neoliberalism refers to a set of tenets concerned with the creation of a suitable structure for economic regulation, where the laws and forces of supply and demand are not determined by government interventions or other economic regulations, but rather they are determined by the free market (Brenner and Theodore, 2005). The neoliberal approach became hegemonic, particularly in Britain and the United States of America in the late 1970s and early 1980s, being intrinsically associated with Thatcherism and Reaganism, and subsequently spread throughout the world to such an extent that neoliberal restructuring has become the prevailing political and ideological form of globalisation (Brenner and Theodore, 2002; Jessop, 2002; Peck and Tickell, 2002). Thus neoliberalism has shaped the governance of modern-day urban development (Brenner and Theodore, 2005), and is highly relevant to the BoP Project.

Neoliberalism can be understood as the re-emergence and proliferation of economic liberalism, which is characterised by the ideology that states should cease to intervene in the economy, and that any interventions should only be made by market players or parties engaging in the free and self-regulating market (Brenner and Theodore, 2002; Mansfield, 2004; Thorsen and Lie, 2006). Under neoliberal conditions, the purpose of the state should be to uphold property rights, particularly individual, commercial and private property rights, whilst creating conditions which promote the formation of stable economic policies (Thorsen and Lie, 2006; Purcell, 2009). Therefore it is believed that government intervention undermines market mechanisms and logic, and consequently reduces economic efficiency, as resources are not efficiently allocated (Thorsen and Lie, 2006). Market logic is therefore believed to outperform state-directed logic (Brenner and Theodore, 2002; Mansfield, 2004; Purcell, 2009). Neoliberalism has become 'common sense' for decision-making in cities, and promotes the adoption of growth-first competitive strategies (Peck and Tickell, 2002). Therefore, under neoliberal conditions the state reduces its assistance for citizens, particularly for the poor and vulnerable, as market players are favoured (Purcell, 2009).

3.2.1 Neoliberalism in practice

Neoliberalism can be described as a location-specific strategy, as certain spaces are selected for the application of neoliberal policies, strategies and projects (Brenner and Theodore, 2005). This development logic has resulted in the adoption of market-orientated approaches in cities throughout the world, which promote their economic status and competitiveness in order to secure future neoliberal projects and capital investment (Swyngedouw *et al*, 2002). These approaches are often focused in particular spaces in cities, which are considered to hold great potential for improving competitive advantage. Purcell (2009) maintains that the adoption of these market-orientated approaches facilitates innovation and promotes economic growth. This research is focused on the knowledge production process of a spatial planning exercise, where

[13] Stagflation represents conditions of high inflation, low economic growth and high levels of unemployment (Purcell, 2009).

a certain space in the city of Durban was selected to implement a location-specific strategy, with the goal of producing a more competitive, 'state of the art' port-city interface.

Neoliberal reform projects can be described as path dependent, and perform a critical function in the remaking of political-economic spaces in cities throughout the world (Brenner and Theodore, 2002). Path dependency means that both present and future conditions, proceedings, activities and decisions are shaped by previous conditions, proceedings, activities and decisions (Page, 2006). Therefore neoliberalism reproduces itself through neoliberal projects, as the contexts within which these projects are generated are shaped by inherited institutional frameworks, policies, practices and political conditions (Brenner and Theodore, 2002). Harvey (2005) also describes neoliberal projects as self-legitimising, as they establish neoliberal assumptions as the dominant way of understanding. Similarly, Peck and Tickell (2002) argue that the discourses linked to neoliberalism have a self-actualising feature, as economic choices influencing the social world become aligned with, and are driven by, market forces. Therefore market forces heavily influence the spatiality of economic activities and dominate decision-making. This self-actualising characteristic results in the neoliberal 'lock-in' of growth-first approaches to economic development, whilst alternative paths for urban development are considered to be economically unattractive and unfavourable (Peck and Tickell, 2002). This research explores the knowledge production process of a spatial planning exercise, which if implemented, would result in the 'lock-in' of certain activities in the designated BoP zone. Once a neoliberal reform project is adopted, it is difficult to deviate from this path due to neoliberalism's path dependency and self-legitimising characteristics. These characteristics entrench neoliberalism as the dominant framework for policy-making and decision-making in contemporary society.

Brenner and Theodore (2002) note that there is significant divergence between neoliberalism's ideology and its daily application to political processes. Summer (2006) argues that the local application of neoliberalism has always been closely linked to state institutions. In practice there has been an increase in coercive and disciplinary forms of state intervention, which imposes market rule on all aspects of life (Brenner and Theodore, 2002). Purcell (2009) describes the state's active mobilisation of capital as the 'aidez-faire'[14] characteristic of neoliberalism, which results in the public investment of capital into efficient infrastructural projects, the transfer of technologies from the public sector to the private sector, public investments to create partnerships concerned with private land development, and the growing dominance of using exchange value as the central way to value urban land. This study focuses on the way in which the eThekwini Municipality is attempting to mobilise and reorganise capital in the BoP zone, in order to become a more competitive port-city. Therefore the state has a critical and active role in establishing conditions which promote the free market and the accumulation of capital.

[14] 'Aidez-faire' means 'help to do', and specifically refers to policies that promote the accumulation of capital (Purcell, 2008; 2009).

Jessop (2002) argues that under neoliberal conditions, partnership-orientated forms of governance are a regular occurrence, due to the underlying neoliberal belief of inevitable state failure or inefficiency. Therefore other stakeholders and partners become critical role-players with regards to the delivery of neoliberal projects. The promotion of partnerships typically involves the retreat of the state from its social welfare responsibilities. However, the state still has a facilitating and overseeing role in the partnership, and actively establishes ground rules, resolves disputes and promotes some form of accountability (MacLeod and Goodwin, 1999; Jessop, 2002). The case study of this dissertation was initiated as a result of a partnership between the local government in Durban and the national port authority, and hence it reflects a high level of state intervention in order to support neoliberal goals. Hall (2006) states that the neoliberal approach orientates economic and social policies in a manner which primarily focuses on the private sectors' needs and requirements. Furthermore Purcell (2009) argues that neoliberalism results in a democratic deficit as power is seemingly transferred from citizen to corporations, and that the outsourcing of governance to other structures reduces democratic insight.

By adopting this market-led stance, the number of options available to governments and citizens is reduced (Purcell, 2009). Consequently, neoliberalism is regularly characterised by ardent contestation. For example, neoliberalism is opposed by socially-based endeavours, which aim to uphold non-market practices or activities which are not aligned to unrestricted capital accumulation (Brenner and Theodore, 2005). In addition, neoliberalism tends to aggravate regulatory malfunctions, such as market failures, as these projects have a tendency to destabilise various economic, institutional and geographical requirements for economic and social regeneration (Brenner and Theodore, 2005). This means that certain neoliberal outcomes may not always be adequate from a societal or holistic point of view. Therefore this collectively results in the generation of new configurations of social polarisation, as well as the proliferation of market failures and uneven development throughout the world (Brenner and Theodore, 2002). Furthermore, neoliberal projects regularly call for 'democratic' decision-making practices; however in reality, these do not oppose or challenge the underlying power relations, but rather strengthen existing power relations (Purcell, 2009). As a result, neoliberal projects can be described as dynamic, as they continually evolve and adapt in order to negotiate challenges and adversity (Brenner and Theodore, 2005).

Therefore, in practice, neoliberalism has resulted in governments striving to create conditions which promote the prominence of the free market and the accumulation of capital, with a particular focus on partnership forms of governance. However this aspiration has also resulted in the exacerbation of regulatory malfunctions, reduced the concern for social livelihoods due to the 'lock-in' of growth-first approaches to economic development, and also rejects alternative paths for urban development.

Importantly, neoliberalism calls for the liberation and de-regulation of economic activities and the adoption of entrepreneurial approaches, which are not defined to national borders but can occur on a global scale.

This ultimately creates market-driven globalising economies and the rescaling of national state space (Jessop, 2002; Brenner, 2004). Neoliberalism has therefore become the functional basis of competitive globalisation, which has promoted state restructuring and rescaling throughout the world (Peck and Tickell, 2002). This is the focus of the next section, which explores globalisation and its impact on the circulation of capital, which ultimately influences city strategies.

3.3 Globalisation and the circulation of capital

Globalisation facilitates and promotes the increased global movement of people, capital, commodities, wealth, place-based characteristics, impressions and ideas (Brenner, 1999). This section focuses on globalisation and the circulation of capital. Globalisation represents a process change in the scalar focus of economic activity, from the national to global scale (Sykora, 1994). This has also resulted in considerable restructuring of urban regions and cities, as they become linked with one another due to forces of globalisation (Sykora, 1994). According to Douglass (2000), globalisation can be defined as accumulation at a location due to the assimilation of capital at the global scale, which is influenced by the interplay between the three circuits of capital, namely production, commodity trade and finance. Over time the circulation of capital has changed, which influences the location of economic activity and spatial patterns throughout the world. States have influenced the circulation of capital since the turn of the 20th century, and are therefore conceptualised as important geographic infrastructures, as they influence the processes of territorialisation, deterritorialisation and reterritorialisation of capital (Brenner, 1999). This means that states have the potential to determine locations of capital accumulation, and consequently influence urbanisation processes (Brenner, 1999). The BoP Project represents an example of the state focusing capital in a space that is perceived to hold high economic value for the city of Durban, which is in close proximity to its Port. Therefore in the context of globalisation, it is important to have an understanding of the state's spatial relationship with the circulation of capital, with focus on the territorialisation, deterritorialisation and reterritorialisation of capital. Territorialisation can be defined as a type of collective action, where a given area is demarcated and regulated for a particular purpose (Sack, 1986, cited in Somaini, 2012). According to Harvey (1997), territoriality implies the following: areas are classified; there is a form of communication which delineates their boundary; and that there is an effort to direct or contain access to resources within this boundary.

Prior to the 1970s, the deterritorialisation and reterritorialisation of capital took place within the spatial boundaries of the state. However, after this period, globalisation impacted on capitalism, which resulted in the collective decentralisation of capital accumulation, urbanisation and state regulation, and consequently facilitated new patterns of sub- and supra-national territorial organisation (Brenner, 1999). Consequently, the three circuits of capital have become deterritorialised since the 1970s, and the circulation of capital has extended outside the boundary of the state (Brenner, 1999). Therefore during the 1970s there was a

significant shift in the global organisation of production, which led to practices of economic and political restructuring at the national, regional and local levels (Sykora, 1994). The spatial geography of production was altered by forces of globalisation, and this was due to: the enhanced capability of businesses to access distant resources and technologies; their participation in markets in faraway localities; and the creation of organised production networks with other firms in these locations (Hazbun, 2004). This increased mobility throughout the world was largely initiated by the diminishing of spatially dependent transaction costs (Hazbun, 2004). When coupled with technological transformations and the subsequent intensification of competition, this reduced the conventional function of location (Porter, 2000). Therefore forces of globalisation have resulted in changes to the circulation of capital, as people in distant places increasingly interact with one another for production purposes. As a result, investments and capital have increasingly been exchanged between cities throughout the world, including Durban.

According to Brenner (1999), the current stage of globalisation is predominantly influenced by processes of reterritorialisation, which refer to the restructuring and re-scaling of states and cities, with the goal of attracting economic activity. Soja (1987, cited in Brenner and Theodore, 2002) highlights that restructuring can be understood as the sequence of deconstruction and subsequent rebuilding of the imperatives and arrangements of economic, social and political aspects of society. Re-scaling highlights that forces of globalisation have become recognised in contemporary cities, as territories interact with one another on different geographic scales when compared to the past, with the goals of increasing their spatial area of influence and securing investment from the global circuits of capital (Brenner, 1999). In this context, the shifting of resources, capital and people on the global scale has enhanced competition between cities throughout the world, as they endeavour to become powerful and influences markets, as well as attract assets and investments (Zhang and Zhao, 2009). Consequently, cities actively endeavour to restructure themselves, in order to attract flows of capital and reterritorialise. Location has therefore become increasingly important to reterritorialisation processes in cities, as they capitalise on their place-specific advantages (Hazbun, 2004). The BoP Project is occurring in context of globalisation, where place and location are important. This project's locality represents a space that the local government is trying to take control of and restructure, in order to create a space which can be globally competitive. The following section further explores how cities are related to the global circulation of capital.

3.4 Competitive cities and their link to the global circuit of capital

Brenner (2004) argues that at the sub-national scale, major urban regions such as cities are the common sites where wide-ranging transformations of state spatialities and reterritorialisation processes are occurring. When coupled with the decentralisation of power from the national to local governments, cities represent 'fundamental geographic units' in the current stage of globalisation, where a range of neoliberal initiatives are introduced and subsequently evolve (Brenner, 1998: 4). The dynamics which drive various

expansions and changes in cities are from forces arising at the international level (Douglass, 2000). A city's urban form, economic performance and dominant activities are increasingly determined by its linkage to the global circuits of capital (Sykora, 1994; Douglass, 2000). As a result, external forces have the potential to influence urban form, for example, the gentrification of inner-city neighbourhoods, coupled with the economic and social revitalisation of central city areas (Sykora, 1994). The heightened competition between cities drives certain urbanisation processes, and influences the physical form and functions of specific areas in cities (Douglass, 2000). This means that certain places in cities will be altered due to their relative connectivity with the global circuit of capital. Therefore over time the built environments of cities evolve, as localities become vacant, and subsequently revitalised, regenerated, reconstructed and gentrified (Weber, 2002). There are many models which attempt to classify urban growth, and one such example is stage theory proposed by Birch (1971). This research explores the spatial planning exercise which could potentially lead to the evolution of the built environment in close proximity to the Port of Durban.

Additionally, the strengthening of global economic, political and social relations has inherently impacted on the performance of localities, whereby a place's performance is determined by its connectivity to external locations and urban networks (Sykora, 1994). If a place is disconnected from the global urban network, then it stands to lose out on economic activities, as well as the dissemination of global technology, ideas and practices. Furthermore, if cities fail to compete effectively, they face the possibility of being excluded from funding streams from the national government, and may miss out on economic opportunities due to their perceived low economic potential (Peck and Tickell, 2002). Therefore by being detached from the global urban network, city prosperity can be adversely affected.

Friedmann introduced the world city hierarchy hypothesis in the 1980s. Although this hypothesis has been critiqued[15], the hierarchy of world cities has been adopted by cities throughout the world, and has shaped their response to globalisation, as they endeavour to reach a higher level in this hierarchy. According to Friedmann (1986, cited in Douglass, 2000), a city's position in this single global economic network is determined by the relative amount of global economic power it possesses. In order to become elevated in the world city hierarchy, the following functions are prerequisites: finance, transnational command and control functions, global services, transport services, information, political or ideological functions, cultural functions and the hosting of world events (Short *et al*, 1996). The ranking of cities within the world city hierarchy is constantly changing, as a city which is currently elevated may lose standing in this hierarchy in the future, due to the dynamics of intercity competition (Douglass, 2000). As cities endeavour to improve their competitive position, specific spaces throughout cities are targeted for neoliberal interventions, such as

[15] Short *et al* (1996) critique the world city hierarchy hypothesis by claiming that there is a lack of evidence of the existence of this hierarchy. Beaverstock *et al* (2000) highlight that the world city hierarchy hypothesis is based on a narrow attributive survey, where critical variables and characteristics are challenging to quantify and calibrate.

areas proliferated by poverty and social exclusion (Peck and Tickell, 2002). This has the potential to influence the dominant activities in a locality, as cities actively restructure themselves in order to promote activities that are well integrated with the global circuit of capital, so as to attract capital, investment and other economic activity.

Overall, cities are restructured by forces of globalisation, but forces of globalisation can also be influenced by cities, by virtue of the manner in which they influence territorial organisation (Brenner, 1999). Thus cities are a fundamental geographic unit, as they are the spatial interface between local and global flows (Jessop, 2002). Cities which promote high productivity are able to become national assets, whilst dysfunctional cities with congestion problems and social unrest have the potential to have a negative effect on the national economy (Begg, 2002). Therefore in order to secure world city functions and elevate their standing in this hierarchy, city planners and local authorities embrace proactive and entrepreneurial strategies, with the strategic goals of improving the city's position and attracting economic activities (Douglass, 2000; Swyngedouw *et al*, 2002). The following section explores the approach to urban governance, which is associated with realising these strategic goals.

3.5 Urban entrepreneurialism as an approach to urban governance

The nature of local politics has evolved, from being centred on the local welfare state in the public sphere of politics, to a more disjointed, neoliberal political arena, which is characterised by the presence of new actors, particularly from the private sector (Dannestam, 2004). In this context, a new approach to urban governance is required in order for cities to remain competitive. Harvey (1989a) notes that there has been a change in urban governance in cities, from urban management to urban entrepreneurialism. Urban managerial practices were typically directed at providing an urban population with local services, facilities and benefits (Harvey, 1989a). Bearing this in mind, urban management was better suited to welfarist and Keynesian approaches, whilst urban entrepreneurialism became more relevant to neoliberal approaches dominating contemporary society. Entrepreneurialism refers to the systematic, business-like manner in which the public sector manages an urban area (Swyngedouw *et al*, 2002). In addition, Harvey (1989a) mentions that urban entrepreneurialism functions as an 'external coercive power' over different cities and urban regions throughout the world, and forces them to conform to the capitalist development logic.

According to Harvey (1989a), urban entrepreneurialism is based on the notion of creating a 'good business climate', which is associated with conditions that are: favourable to economic activities; attractive to capital accumulation; efficiently organised; benefits from clustering of activities; and well connected to urban networks. McFarlane (2012) argues that urban entrepreneurialism has reduced the levels of taxation for businesses and wealthy entrepreneurs in urban areas. This further facilitates a 'good business climate'. It is important to note that these neoliberal policy initiatives generally tend to favour the practices of the city's

elite (Brenner and Theodore, 2002; Summer, 2006). Therefore the politics surrounding urban entrepreneurialism is often controversial, and McFarlane (2012) asserts that displacement of the poor is a regular occurrence in order to secure urban spaces for entrepreneurial ventures.

Nonetheless, Harvey (1989a) notes that urban entrepreneurialism is characterised by three defining features. The first feature highlights that the political arena is increasingly influenced by powerful business interests, which are realised through the establishment of public-private partnerships to foster economic development (Harvey, 1989a). As a result, the private sector has a greater influence in urban policies (McFarlane, 2012), which has the potential to influence urban form and the development trajectories of certain spaces in cities. As noted before by Jessop (2002), public-private partnerships are often based on the neoliberal belief that state failure is inevitable.

For the second defining feature of urban entrepreneurialism, Harvey (1989a) notes that the activities linked with public-private partnerships are entrepreneurial and often risky ventures, and therefore they are considered to be speculative, rather than rationally planned and managed developments. This means that there is a possibility for undertakings to not live up to their promised or full potential. However, cities still endeavour to implement these innovative, risky strategies, with the envisaged goal of improving their economic competitiveness (Jessop and Sum, 2000). With entrepreneurial cities, most of the risk in private investment initiatives is held by the local government (Roberts and Schein, 1993; Dormans *et al*, 2002). Therefore urban entrepreneurialism and its associated ventures always contain a degree of uncertainty and risk (Jessop, 1998).

The third feature of urban entrepreneurialism places attention on the political economy of place, and not the entire territory; however benefits accrued may be experienced and shared at a larger spatial scale (Harvey, 1989a). This is aligned with the arguments in Section 3.3, that specific places within urban areas have become increasingly important due to processes of reterritorialisation. This results in the construction and expansion of capitalist spaces in cities, which increasingly attracts economic activity and facilitates the connection to the global circuit of capital (Douglass, 2000). As a result, cities are objectified in order to be perceived as attractive to potential city investors or users of space (Dormans *et al*, 2002). Consequently, successful elements of the city are enhanced in an entrepreneurial fashion, and repackaged for specific users, in order to boost city income and promote growth. Attention is often given to creating a strategic identify of a place, and in so doing, goods and services provided are packaged to provide the local experience (Jessop, 1998; Jessop and Sum, 2000; Dormans *et al*, 2002). Over time, the city image, as well as place-specific images, will evolve depending on the context, which will favour certain activities and practices, whilst others will be restructured (Dormans *et al*, 2002). These activities and practices have the potential to influence the city's urban function and forms. Therefore place-based targeted approaches in urban policies have become favoured since the 1990s, where priority has been given to the integration of

places into the global urban network (Swyngedouw *et al*, 2002). Framing the BoP Project as part of the production of a 'state-of the-art' port for Durban reflects this approach of new identity formation.

Collectively, the pursuit of urban entrepreneurialism, based on these three defining characteristics, has meant that locations throughout the world have been subjected to new forms of urban governance and patterns of development (Harvey, 1989a). The BoP Project represents a neoliberal project undertaken in this context. Harvey (1989a) additionally highlights that there are four basic options available to cities when pursuing urban entrepreneurialism (see Table 3.1).

Table 3.1: The four options available to cities when promoting urban entrepreneurialism

1. Identify and utilise the specific advantages possessed by a place • This may relate to the location specific advantages of a place, particularly in terms of the production of goods and services, the resource base and the financial power of the urban area to invest in public and private infrastructure.
2. Focus on consumer power • Identify consumer needs in a given space. • Provide a response to these needs, in order to promote consumer spending.
3. Secure important control and command functions • Particularly in finance, government or the collection and processing of information. • Requires investment in order to promote the overall goal of agglomeration economies.
4. Securing the redistribution of surpluses from national government • Cities participate in activities where they can secure surpluses and funding from national government. • These surpluses can subsequently be redirected to other activities.

Source: Adapted from Harvey (1989a)

It is important to explore the first option in Table 3.1, as identifying and utilising the specific advantages possessed by a place is relevant to the BoP Project. In terms of this first option, Jessop (1998) notes that there is a difference between static and dynamic competitive advantages, where the former refers to the 'natural' factor endowments of a place, whilst the latter refers to advantages or assets which are socially created and can be transformed by social processes. A created asset could be generated by aligning the spatial planning system with the requirements of a port. This was the case in the BoP Project, with the goal of reproducing the economic trade benefits associated with the Port of Durban. Other examples of created assets include reliable electricity and water supplies, a diverse labour pool, adequate transport infrastructure, good health services and educational facilities (Douglass, 2000).

Created assets enable cities to create their own niches within evolving divisions of labour, production and consumption (Swyngedouw *et al*, 2002). Furthermore, they attempt to align the dynamics of a locality with the perceived or actual prerequisites determined by the globalised and neoliberal economic system (Swyngedouw *et al*, 2002). Therefore cities can actively use their static or dynamic competitive advantages to reposition themselves in the global urban network, with the goal of improving economic growth and increasing local prosperity. A way of repositioning cities is through the application of urban restructuring strategies.

3.5.1 Urban restructuring

Once cities have identified that they want to adopt urban entrepreneurialism objectives, city spaces will need to be restructured according to this development logic. In this context, urban spaces are subjected to urban renewal processes, and are often re-imaged and gentrified in order to facilitate the creation of a 'good business climate'. In a competitive city, the pursuit of economic growth changes urban renewal into a negotiated objective, whereby urban renewal is conceived to be a prerequisite for economic regeneration in the city (Loftman and Nevin, 1995; Swyngedouw *et al*, 2002). Urban regeneration has regularly become closely linked to the economic and physical revitalisation of urban areas, whereby elements in the urban area are altered to make them attractive to property developers and private investors (Loftman and Nevin, 1995). Consequently, cities are increasingly becoming important agents of economic development (Rogerson, 1999). Urban revitalisation is described by Beauregard and Holcomb (1980, cited in Temelova, 2007) as an intricate phenomenon which was concerned with the introduction of new vigour into cities, and the improvement of their urban areas, for various economic and social uses. Urban revitalisation and urban regeneration are often used interchangeably, however some note that for urban revitalisation, the focus is on activities and functioning; whilst for urban regeneration, the emphasis is placed on physical upgrading and environmental improvements (Temelova, 2009). With urban revitalisation, the property-led approach has become integral to numerous urban strategies, where private investment in encouraged (Temelova, 2007). Cities place great emphasis on, and allocate large quantities of resources to, promote the 'right' kind of urban development to improve the city's attractiveness, particularly when they are competing with neighbouring cities (Begg, 2002). Creating a 'good business climate' attracts economic activity, which is beneficial to the city and greater urban region.

When adopting urban entrepreneurialism as an urban governance strategy, cities endeavour to restructure themselves in two ways. Firstly, clustering is promoted as a form of restructuring within city spaces; and secondly, mega-projects are used as a vehicle to promote urban development. These two restructuring strategies are the focus of the following sections.

Clustering in contemporary cities

In contemporary cities, clustering represents a development strategy which promotes urban entrepreneurialism and creates a 'good business climate' in a specific area. Governments can significantly influence economic activity at the microeconomic level by eliminating challenges to growth, removing inefficiencies and upgrading existing and potential new clusters within a given locality (Porter, 2000; Parr, 2002). Clusters refer to the geographic concentration of interrelated businesses, suppliers, service providers and institutions in a given industry, where these entities compete and collaborate with one another (Porter, 2000). These clustering entities are orientated around a core economic specialisation in cities (de Langen, 2002; 2006). Clusters of economic activity are perceived to be a critical driver with regards to the increase

of exports, as well as enticing foreign investment into a given locality (Porter, 2000). Clustering consequently represents an important element which enhances the competitiveness of businesses, governments and other organisations at the microeconomic level (Porter, 2000). The BoP Project reflects the urban entrepreneurial approach adopted by the local government in Durban, with the goal of creating a strategically organised logistics and port-related cluster of activities in close proximity to the Port of Durban.

Although the entities within a cluster may be rivals, their close proximity to one another significantly improves competitiveness due to the promotion of agglomeration economies[16]. According to de Langen (2002), these entities cluster together for three reasons. Firstly, they cluster together due to there being a large labour pool inside the cluster, which reduces search costs for sourcing appropriate labour (de Langen, 2002). Secondly, the presence of suppliers and customers in the cluster area reduces transport costs and enables face-to-face contact, which promotes further clustering (de Langen, 2002). This also facilitates a higher degree of specialisation within the cluster (Puga, 2010). The third driver of clustering is the presence of 'knowledge spill-overs' associated with frequent interactions within the cluster, which results in the permeation of innovative knowledge and ideas (de Langen, 2002; Puga, 2010).

Therefore clustering represents a development strategy used by cities to improve competitiveness at the microeconomic level, with the goal of promoting urban entrepreneurialism. It also highlights the economic rationale driving the restructuring of urban spaces. The second way of restructuring urban spaces in cities is through the implementation of mega-projects.

Mega-projects: vehicles for urban development

Mega-projects have become common vehicles for urban development in contemporary cities, and they tend to reflect the characteristics associated with urban entrepreneurial approaches to urban governance. Mega-project ideology is centred on the premise of constructing a competitive city, and these large scale development projects strategically aim to ensure that cities are quickly repositioned in the global economy (Hannan and Sutherland, 2015). Furthermore, mega-projects are regularly sited in locations which have become obsolete due to urban restructuring; and by being catalysts of change, they consequently seek to reposition the uses in an area through urban regeneration strategies, in order for them to become functional once again (Swyngedouw *et al*, 2002; Diaz Orueta and Fainstein, 2008; Lehrer and Laidley, 2009). There are typically two types of mega-projects. Firstly, there are large scale projects which have a strong economic focus, such as those associated with eminent industrial estates and shopping centres; and

[16] Economies of agglomeration denote the benefits accrued when businesses are strategically located in close proximity to one another, as well as people, capital, goods and services (Demaziere *et al*, 2003). Agglomeration economies promote increasing returns to scale when production is increased (Marshall, 1920, cited in Rosenthal and Strange, 2003).

secondly, projects which aim to construct strategic infrastructure, such as those projects with a focus on airports, road networks, bridges and other critical transport infrastructures (Flyvbjerg *et al* 2003, Kennedy *et* al, 2011). The BoP Project would therefore be aligned with the second type of mega-project, through the goal of planning a strategic BoP zone for the city of Durban. Although there is no agreed definition of mega-projects, most of these large-scale interventions have a number of defining features, which are highlighted in Table 3.2. Some of these defining features are evident in the BoP Project.

Table 3.2: The defining features of mega-projects

Defining features of mega-projects	Sources
• High levels of complexity • Large scale projects with a long project life span • Associated with state-led public private partnerships, and the involvement of a range of developers and actors • Exceptionalism in terms of policy and planning • Significant transformation of land uses, urban spaces, physical forms and social practices • Significant costs • High levels of uncertainty	• Bruzelius *et al* (2002) • Swyngedouw *et al* (2002) • Flyvbjerg *et al* (2003) • Van Marrewijk *et al* (2008) • Diaz Orueta and Fainstein (2008) • Fainstein (2009) • Lehrer and Laidley (2009)

These mixed-use large scale projects are characterised by the increased involvement of private actors and their considerations in decision-making, as well as the establishment of partnerships between the government, industry and non-governmental organisations, referred to as public-private partnerships (Jessop, 2002; Brenner, 2004; Diaz Orueta and Fainstein, 2008; Lehrer and Laidley, 2009). With new forms of urban governance, the roles of local authorities have been changed in such a way that these authorities operate concurrently as enablers, partners and clients (Swyngedouw *et al*, 2002). Authorities can therefore be both developers and regulators of mega-projects. This is reflected in the case study examined in this dissertation, as the eThekwini Municipality initiated the BoP Project; however this project was outsourced to a consultant consortium. Consequently, the local government became the 'client' or developer of this project; however they will also be responsible for its implementation and regulation, through partnerships with national government departments and other parastatals.

One of the goals of mega-projects is to increase the property tax base of the city, and this is achieved by reorganising social, spatial and economic aspects in an urban area (Swyngedouw *et al*, 2002). This reorganisation means that higher social and economic returns are experienced with these urban development strategies, and the values of properties increase, which ultimately increases tax returns for the local government (Swyngedouw *et al*, 2002). As a result, urban areas are planned in such a way so as to maximise the potential rent from these new urban development strategies (Swyngedouw *et al*, 2002). This means that urban spaces are rationalised by cities, as particular land uses and activities are promoted, whilst others become displaced.

The planning style characterising mega-projects can be described as eclectic, where emphasis is placed on design features, details, morphology and aesthetics of the urban area (Swyngedouw *et al*, 2002). These projects evolve and become multifaceted over time, as they are challenged by an extensive range of interests, whereby the context influences the opportunities and limitations of the mega-projects (Diaz Orueta and Fainstein, 2008; Salet *et al*, 2012). Mega-projects are generally initiated with a single focus; however they have the capability to adapt to local conditions, and consequently have the potential to be flexible and diverse (Lehrer and Laidley, 2009). In addition, they are regularly infused with discourses which emphasise socio-economic and environmental benefits from the implementation of the mega-project (Lehrer and Laidley, 2009). Although mega-projects transform land uses, they are not built in a vacuum, and existing physical forms, urban practices and the planning system influence the context of the mega-project (Salet *et al*, 2012). Thus the contexts in which mega-projects are situated are highly influential on their outcomes. As the BoP Project reflects some of the defining features of mega-projects, context is therefore critical to this spatial planning exercise.

Despite their role in urban development, mega-projects have had a range of criticisms levelled against them, particularly in terms of their implementation and impacts (Sutherland *et al*, 2015). Some of these criticisms appear in Table 3.3. Despite these criticisms, cities continue to undertake these large-scale urban interventions, with the belief that the economic benefits will outweigh any costs.

Table 3.3: The criticisms of mega-projects

Criticisms of mega-projects	Sources
• High levels of risk in these speculative ventures • Substantial cost overruns • Long project life span that is associated with delays • Lack of accountability and transparency • Low levels of participation - participation occurs once the ideas shaping the mega-project have been fixed and accepted by powerful actors. This represents 'end-of- pipe' participation • Lack of consideration of alternatives • Negative environmental impacts • Increased social polarisation and socio-spatial fragmentation, as well as reinforces social inequalities. Property prices increase with mega-projects, which results in the displacement of low income housing and the reduction of other social interventions • Planned outcomes seldom match the actual outcomes due to biased forecasting. • Exceptionality in planning and urban policy procedures. This includes the bypassing of orthodox planning tools, statutory regulations and institutional organisations, as well as the formation of project agencies, which have exceptional capabilities with regards to intervention and decision-making • Focus on elite interests • Low levels of integration with existing city processes and planning systems	• Loftman and Nevin (1995) • Bruzelius *et al* (2002) • Swyngedouw *et al* (2002) • Flyvbjerg *et al* (2003) • Gellert and Lynch (2003) • Lehrer and Laidley (2009) • Boelsums (2012)

In order to overcome some of these criticisms, Omega Centre (2012) argues that mega-projects should be considered as 'open systems', due to their constant interaction and interdependencies with their local context. This means that the local context should shape mega-projects, and this could be achieved by encouraging higher levels of public participation (Omega Centre, 2012). If mega-projects are treated as

'closed systems', there may be a reduction in legitimate stakeholder involvement and consensus in decision-making (Omega Centre, 2012).

Therefore, although mega-projects may have adverse effects in contemporary cities, cities strategically undertake these large scale urban interventions, with the goal of repositioning themselves in the global economy. This form of urban restructuring reflects that urban entrepreneurialism is a prominent driver in city strategies throughout the world. Overall, this chapter has predominantly had an economic focus, however cities are not only concerned with economics, but rather they are home to people and the biophysical environment. Most cities throughout the world have subscribed and committed to the notion of sustainable development, with the goal of promoting sustainable solutions. The next section briefly explores sustainability, which is also an important city agenda.

3.6 Sustainability as an alternative agenda in cities

Sustainability represents an alternative agenda prominent in cities throughout the world, with the normative goal of ensuring sustainable development. Sustainability is a highly complex concept, which is based on the principles of inter- and intra-generational equity; and has four cornerstones, namely: the economic, environmental, social and institutional dimensions (Spangenberg *et al*, 2002). This normative concept endeavours to ensure the equal consideration of economic development and the environment within policies, planning and strategies, to ensure that economic growth is also balanced with social concerns (Meadows, 1998; Robinson, 2004; Hopwood *et al*, 2005). Sustainable development is inherently concerned with the trade-offs between economic, environmental and social objectives (Lehtonen, 2004; Hermans and Knippenberg, 2006).

Sustainability seeks to avoid practices which are beneficial in the short term, but detrimental to the environment and social world in the long term (McGranahan *et al*, 1996; Folke *et al*, 2003). By introducing a range of disciplines and perspectives into decision-making processes, sustainability calls for an integrated approach to all aspects of governance (Robinson, 2004), with the aspiration of achieving a 'win-win' solution when dealing with contemporary issues. The institutional dimension of sustainability focuses on the governance of human interactions, which become established by defining practices, procedures and assigning roles (Spangenberg *et al*, 2002; Berkes *et al*, 2003; Gunderson, 2003). It also advocates strong leadership, accountability and democratic governance in society (Schwabe, 2002; Gibson, 2006). In addition, sustainability promotes the inclusion of local knowledge into decision-making processes (Yli-Pelkonen and Kohl, 2005; Raymond *et al*, 2010), in order to ensure that global discourses related to the neoliberal agenda are not the only considerations in decision-making.

Cities are critical in terms of ensuring the realisation of sustainable development, as they represent the sites where sustainable policies and initiatives are implemented (Agyeman and Evans, 2003; Gibbs *et al*, 1998). Although the neoliberal agenda is prominent in contemporary cities, alternative agendas need to be considered in the development processes within these spaces. In the context of this research, the commitment to sustainability by the local government in Durban means that the neoliberal agenda should not be the only driver with regards to the BoP Project and associated port development. The extent to which sustainability is included in the planning of large scale developments in Durban is explored in this study. This was also the focus of research undertaken by Hannan in Durban (see Hannan and Sutherland, 2015).

Thus the most prominent theoretical frameworks which have influenced economics and policy-making, and therefore city spaces, in contemporary cities have been explored. The following section discusses contemporary ports, with a particular focus on port competitiveness, port development models and development challenges in the port-city interface.

3.7 The role of ports in city development

3.7.1 Ports in contemporary times: the container revolution

Ports throughout the world are diverse, ranging from small quays for berthing ships, to extensive centres with numerous terminals which are coupled with a cluster of industries and services (Bichou and Gray, 2005). Nonetheless, they all represent the interface between land and maritime connections (Carbone and De Martino, 2003; Cullinane and Song, 2006; Brooks *et al*, 2010), and have stimulated urban development in cities due to prosperity linked with trade (Merk, 2013). Over ninety percent of global trade is transported by sea, which highlights the economic importance of ports. Ports are the foundation of international trade, and provide immediate linkages between international and local transport systems and trade chains (Cheon *et al*, 2010). They are compulsory transit points along the coastline, which sanction the import of goods into a country, as well as facilitate the export of goods which augments the development of the country's economy (UNCTAD, 1992). Ports are considered to be the engine which drives local and regional economic growth, and are conceptualised as places which respond to demand, particularly through the physical transfer of freight flows (Ducruet, 2009). Therefore ports are conceived as economic catalysts, where their associated services and activities generate benefits and socio-economic wealth for the regions they serve (Bichou and Gray, 2005). Furthermore, port throughput has been positively correlated to employment in port regions, including the port hinterland[17] (Ferrari *et al*, 2012). Therefore the higher the level of port throughput, the higher the expected levels of employment in the port region.

[17] Hinterlands represent the interior localities serviced by a port, as well as the origin and destination of traffic flows which pass through the port (van Klink and van den Berg, 1998).

Before the introduction of containers, cargoes were individually loaded and unloaded through the use of barrels, sacks and wooden crates, which was time-consuming and labour intensive (Bernhofen *et al*, 2012). The container revolution in shipping began during the late 1950s in the USA, when Malcolm McLean sought to integrate coastal shipping with his trucking business, by using the first form of containers to move cargo from local producers to customers in unitised 'boxes' (Chang and Lee, 2007; Bernhofen *et al*, 2012). In 1966 the first international container vessel sailed from New York to Rotterdam (Iannone *et al*, 2007; Bernhofen *et al*, 2012). Thereafter, the use of containerised cargoes has grown significantly, and this cargo type has become dominant in maritime transportation. Although this section focuses predominantly on containerised cargoes, it is important to note that ports still handle other cargoes types, such as breakbulk, dry bulk, liquid bulk and ro-ro (roll on/roll off cargoes). However containerised cargoes have experienced the greatest growth in the last fifty years. In 1970, global ocean container traffic was between four and five million Twenty-foot Equivalent Units[18] (TEU), and by 2010 it was forecast to grow to 140 million TEU (Iannone *et al*, 2007).

Containerisation is regarded as the industrial revolution of general cargo transportation and handling methods (Iannone *et al*, 2007; Fremont, 2009). As containers are standardised, they can be transported globally on ships, trucks and railway cars, without the direct handling of their internal cargoes whilst being in transit; and resultantly mechanised freight handling has become unitised for all modes of transport (Läpple, 2000; McCalla *et al*, 2001; Hall, 2007; Iannone *et al*, 2007). The standardisation of containers promoted the use of intermodal transport, which had critical ramifications for the maritime transportation sector. For intermodal transport, the advantages of each mode of transport can be combined in order to provide the most efficient door-to-door service (Fremont, 2009). Significant advances in cargo handling efficiency have resulted in the reduction of costs and freight charges, as well as improved global trade flows, which has further enhanced globalisation (Iannone *et al*, 2007). However, greater levels of automation and flexibility linked to intermodalism in ports has also altered work practices, which means that less port workers are employed relative to the past (Palmer, 1999).

The growth and liberalisation of world trade in the 1970s favoured the transnationalism of production and further spread technological advancements, and also altered the way goods were transported by sea, land and air (Palmer, 1999; Ubbels, 2005). The emergence of global manufacturing and trading systems modified the entire distribution and transport industry, whereby raw materials, components, and final products are manufactured, distributed and shipped globally (Iannone *et al*, 2007; Cidell, 2011). These distribution networks have extended globally primarily due to the division of production, manufacturing and consumption (Rodrigue, 2004). Importantly, production and manufacturing has shifted to countries

[18] In 1964, the International Organization for Standardization established universal dimensions for containers with a length of either 20 or 40 feet, and a width of 8 feet (Iannone *et al*, 2007). TEU is the standard unit of measurement for containers.

with low costs and competitive advantages (Slack, 2001; Ubbels, 2005). The proliferation of multinational enterprises was one of the main instigators behind global production and distribution networks, where attention is placed on customer satisfaction and product innovation, whilst production is outsourced to a network of suppliers (Notteboom, 2007). Furthermore, customers expect services which have greater flexibility, reliability and precision, all at the lowest cost, which forms the basis of just-in-time management (Notteboom, 2007). Importantly, containers are well suited to just-in-time management, where schedules and reliable delivery are paramount throughout entire transport chains (Fremont, 2009). Containerisation has not only revolutionised maritime transport systems, but it has also altered inland transport systems through the introduction of global intermodal logistics, which functionally complement maritime transport systems (Iannone *et al*, 2007).

Another development has been that multinational companies recognise that warehousing and transportation are not their central focus, and consequently they have outsourced logistics operations to third party logistics service providers (Notteboom, 2007). These service providers manage the incoming and outgoing flows of containers between suppliers and end-producers, which has improved the reliability of transport services (Slack, 2001; Cidell, 2011). Consequently, emphasis is placed on the transportation of goods from suppliers to end receivers, who can be on the other side of the world. As a result, new patterns of freight distribution have been created by changes in global production systems and structural changes in logistics operations (Notteboom and Rodrigue, 2005). Overall, containerisation, and the internationalisation of trade and global production networks, coupled with new patterns of freight distribution have meant that ports, their adjacent cities and hinterlands form part of large scale logistics systems, instead of individual distribution systems (Cidell, 2011). These changes occur in a competitive context.

Competitive ports

Ports compete with one another throughout the world, and this competition also includes the different overland supply chains (de Langen and Chouly, 2004; Cullinane and Song, 2006; Chang and Lee, 2007). The competitiveness of a port is governed by its internal strengths, which includes efficient cargo handling and hinterland connections, as well as its connections in a given supply chain, which is becoming increasingly dependent on external co-ordination (Carbone and De Martino, 2003; Notteboom and Rodrigue, 2005; Dresner, 2007). As international trade increases, ports and the efficiency with which they process cargoes have become progressively important to port competition (Blonigen and Wilson, 2008).

The significant growth within the containerised cargoes sector has implications for ships sizes and consequently the physical requirements of ports. As a result of this growth, very large vessels have become common in maritime transportation. These vessels are capable of holding many containers, which facilitates the reduction of per-unit operating costs through economies of scale (Dresner, 2007). These large ships have created the need for deeper ports, larger quays and larger cranes, whilst terminals need to

efficiently handle the increased volumes of containers (Slack, 2001; Daamen and van Gils, 2006). The introduction of these large vessels has also altered routing patterns, as owners have reduced the number of port stops for these vessels in an endeavour to maximise their revenue potential, as inefficient ports can cause delays in the supply chain (Dresner, 2007; Hall, 2008).

Bearing these implications in mind, seaports have invested significant amounts in infrastructure, in order to be selected as a port stop (Palmer, 1999; Cullinane *et al*, 2006; Dresner, 2007). However, Slack (2001) asserts that containerised transportation is fickle and a 'lottery', as significant investments by the port industry does not necessarily guarantee that shippers will select the investing port. Furthermore, greater priority is placed on improving the connectivity of ports to their hinterland. Ports were traditionally considered to be the centre of transport activities; however the aforementioned factors have adjusted this traditional role, as inland terminals have increasingly become important to transport chains[19] (Palmer, 1999; Lee *et al*, 2008).

In this competitive context, de Langen (2007) classified hinterlands into two categories, namely captive and contestable hinterlands. A captive hinterland encapsulates all regions where one port has a significant competitive advantage, primarily due to reduced transport costs (de Langen, 2007). Consequently the single port handles the vast majority of cargoes to and from this hinterland region. A contestable hinterland refers to the regions where no single port dominates activity, as there is no significant cost advantage for competing ports (de Langen, 2007). Consequently these ports have similar market shares (de Langen, 2007). As a result, de Langen (2007) argues that ports are continuously at risk of losing their market shares in the contestable hinterland. For the majority of ports, captive hinterlands have weakened as there is often no clear cost advantage with dealing with a single port, and consequently ports need to develop strategies to secure hinterlands in this competitive landscape (de Langen, 2008). Thus, ports have lost their monopolies over certain hinterlands, which often overlap with one another (Cullinane and Song, 2006; Dresner, 2007). The quality of road, rail or inland water ways access to and from the port hinterland is different for ports, and the quality of these inland modes influences the port's relative competitiveness (de Langen and Chouly, 2004).

Contemporary ports are increasingly conceptualised as gateways into hinterlands, and act as important intermodal through-points in logistics systems (Palmer, 1999). As inter-port competition has increased significantly, supply chain management principles and value-driven approaches have been globally adopted by ports in an endeavour to boost their competitiveness (Chang and Lee, 2007). Overall, port productivity

[19] Inland terminals are also known as inland container depots and dry ports throughout port development literature (Notteboom and Rodrigue, 2005). There are a wide range of inland ports with different sizes, functions and ownership, which range from uncomplicated terminals to complex entities that incorporate logistics zones and governance structures (Rodrigue *et al,* 2010). Inland terminals can be very large and at great distances from the main port, or they can be smaller and serve as a local satellite function to the main port.

is dependent on the performance of the entire supply chain, and not just focused at the port (Ubbels, 2005). They are constantly searching for strategies to meet growing throughput demands, whilst also reducing total costs (Cheon *et al*, 2010). Notteboom (2008) noted that the relative successes of ports are revealed by the capability of the port community to establish and utilise synergies with other nodes and players within the same logistics network. It is important to note that the cost of hinterland and overland transport tends to be higher than the combination of maritime transport and port costs, and can represent between 40 to 80 percent of the total cost of container shipping (Notteboom and Rodrigue, 2005; de Langen, 2008; Van Der Horst and de Langen, 2008). As a result, overland transport needs to be as efficient and cost-effective as possible, in order for the transport chain to remain competitive. Therefore, in a globalised world, inland distribution has become a significant factor for maritime transportation and freight distribution (Notteboom and Rodrigue, 2005).

Since the 1990s there has been considerable focus on road and rail connections to ports (Hall, 2007). Overall, the general consensus was that inadequate landside transportation corridors were a substantial hindrance to port expansion and development (Hall, 2007). Bearing the growth of containerised cargoes in mind, terminal facilities have experienced pressures to expand, and have become space-extensive consumers of land in urban regions (Slack, 1999). As a result there is competition for land, which is generally a scarce resource at the interface of land and water (Hall, 2008). The land adjacent to the Port of Durban, which is envisaged as a BoP zone, represents such a space. The lack of space for expansion in urban areas has often meant that new terminals are constructed on greenfield sites far away from the city, in order to alleviate congestion problems (Slack, 1999; Hoyle, 2000). Therefore the growth of containerisation has meant that ports have to invest in themselves, as well as improve their connectivity to their hinterland in order to remain competitive. Importantly, these investment decisions are shaped by actors who are involved in the governance of the port.

Port Governance

Port governance refers to the governance of the variety of port actors involved in the port economic cluster (de Langen, 2006). Throughout most of the 20th century, port governance was concerned with public control, where the state was the regulator, as well as the provider of infrastructure and port services such as cargo handling and port labour (Debrie *et al*, 2007). However since the 1980s devolution has occurred in most countries, whereby ports have been transferred from state ownership and control to more flexible forms of port governance, which are often directed by the private sector and independent port authorities (Palmer, 1999; Baltazar and Brooks, 2001; Debrie *et al*, 2007). Devolution is based on the tenet that the private market is more efficient than the state at allocating resources, which ensures that the port industry is more responsive to customer demands (Gillen and Cooper, 1995; Baltazar and Brooks, 2001). In certain countries, such as Argentina, China, Canada and France, there has been the devolution of port control and responsibilities from national to lower tiers of government (Debrie *et al*, 2007).

However in other countries, port governance has not devolved to lower levels. For example, Kaselimi (2012) highlights that South Africa has adopted the service port model, where an independent state enterprise owns all port infrastructure and carries out all port operations. The governance of South Africa's container port system is described by Notteboom (2010: 2) as "unique", as the state owned enterprise Transnet operates all container terminals, acts as the port authority and controls all rail freight business in South Africa. This has ultimately blocked global terminal operators from entering the South African stevedoring market (Notteboom, 2010). As a result, Transnet has a great influence on port planning and decision-making, and therefore controls which ports will handle certain cargoes. Nonetheless, it is important to note that competition between the container terminals within the South African port system is still evident, as market players such as shipping lines, forwarders, logistics service providers and shippers still make the final decision as to which port they select to use (Notteboom, 2010). Nonetheless, in the South African context, Transnet is an influential player with regards to any port-related development. This represents the institutional context within which the BoP Project is situated[20].

Contemporary ports have been examined in this section, with a focus on the container revolution, as well as their drive to remain competitive. Furthermore, port governance in this competitive context has been briefly presented. The following section highlights the two main port development models, which have shaped contemporary ports throughout the world. These models were interrogated and applied by actors in the BoP Project.

3.8 Port Development Models

3.8.1 The Anyport model

The Anyport model was developed by James Bird in 1980, and focused on the temporal and spatial evolution of port infrastructure in large traditional ports (Notteboom and Rodrigue, 2005; de Langen, 2007). At the time of its inception, this model was considered to be the foremost conceptual perspective on port development, and identified three significant port development phases (Notteboom and Rodrigue, 2005). The initial phase of port development is the setting phase, which normally occurred before the industrial revolution (Notteboom and Rodrigue, 2005). This is characterised by the establishment of a port with a small lateral quay, which is contiguous to the town centre (Notteboom and Rodrigue, 2005). With this phase, port development is highly dependent on the local geography adjacent to the port, as the port district becomes an important feature within the urban landscape (Chan and Yip, 2011). This phase is typically associated with the movement of general cargoes, whilst port-related activities on adjacent sites include warehousing and wholesaling.

[20] The South African port governance system is further discussed in Section 4.3.3.

Over time various expansions occur in ports and cities, particularly due to improvements in maritime technologies and cargo handling techniques (Notteboom and Rodrigue, 2005). This results in the second phase of port development, which is known as the expansion phase. Features such as docks, quays and jetties are subsequently built to deal with larger ships and more passengers. Docks are built further away from the city's central business district, and thus the expansion phase reveals the changing spatial relationship between the port and the urban area (Notteboom and Rodrigue, 2005). As the port grows, port infrastructure and related land uses move outside of the original delineation of the port from the setting phase, whilst railway lines become integrated with port terminals, which opens up access to various inland hinterlands. Cidell (2011) describes this as a decentralisation at the metropolitan scale, as ancillary port-related functions relocate to inland locations. In addition, industrial activities in the urban area become port-related (Chan and Yip, 2011).

As the port and city continue to develop, this results in the next phase of port development which is known as specialisation. This is linked to improved cargo handling equipment and techniques, and is associated with larger sizes of ships entering the port, which means that the port needs to adapt to the continuously increasing demand for cargo handling and storage spaces outside the expanded port area (Notteboom and Rodrigue, 2005). Consequently, the specialisation phase is marked by the decision for the port to specialise in particular cargo types, which become realised in the port's investments, infrastructure, land uses and activities (Notteboom and Rodrigue, 2005). For example, port development in the specialisation phase would result in the construction of specialised piers to handle freight, such as containers, ores and coal (Chan and Yip, 2011). In some instances, ports move away from their original setting to undeveloped greenfield locations, in order to improve their handling capacities and escape congestion (Chan and Yip, 2011). As a result, there is opportunity for the reconversion of obsolete and abandoned locations within the original setting area into waterfronts, housing and commercial developments (Hoyle, 2000; Notteboom and Rodrigue, 2005).

Despite the Anyport model being considered as the prominent conceptual perspective on port development, Notteboom and Rodrigue (2005) argue that this model does not account for new developments brought about by containerisation. They argue that the Anyport model does not provide explanation for the recent growth of seaport terminals. These terminals act as transhipment hubs, which can be classified as extensive maritime hub-and-spoke networks, and are also used for the collection and distribution of predominantly containerised cargoes (Notteboom and Rodrigue, 2005). The second criticism levelled against the Anyport model is that Bird's model does not consider inland terminals and hinterland connections to be a driving factor for port development (Notteboom and Rodrigue, 2005). This is contrary to what is occurring in contemporary ports (Notteboom and Rodrigue, 2005). Due to these two short comings of the Anyport model, Notteboom and Rodrigue (2005) propose that an additional phase of port development should be added to this model, and this is known as port regionalisation.

3.8.2 Port Regionalisation

According to Notteboom and Rodrigue (2005), port regionalisation represents the fourth stage of port development, which places emphasis on improving the integration of inland freight distribution systems, with the overall aim of enhancing efficiency in the port-related transport chain. This stage is concerned with the regional influence of the port, which is well beyond its perimeter; whilst the focus is on logistics integration, transport corridor creation, and connectivity to inland terminals (Notteboom and Rodrigue, 2005). In contemporary ports, inland distribution has become a decisive factor in port competition, whilst the development of transport corridors and logistics poles are seen as decisions which can improve port competitiveness (Notteboom and Rodrigue, 2005). Consequently, ports have reacted by increasing the size of their support areas through the creation of logistics centres and new inland terminals (Lee *et al*, 2008).

Notteboom and Rodrigue (2005) argue that the gradual shift towards port regionalisation is a market-driven process, which reflects the importance that market players place on logistics integration. Effective port regionalisation means that the inland distribution segment of supply chains can improve their efficiency, and consequently reduce distribution costs (Notteboom and Rodrigue, 2005; Notteboom, 2006). As noted before in Section 3.7.1, the increased role of logistics service providers means that there is greater control on larger segments of supply chains. Consequently, distribution functions which were historically isolated, are now controlled by a single entity (Notteboom and Rodrigue, 2005). Therefore the functional integration of logistics has removed various intermediate steps in the transport chain, which results in the reduction of both costs and time delays, whilst economies of scale in distribution have been facilitated (Notteboom and Rodrigue, 2005). Therefore from an economic perspective, logistics and its integration into supply chains have become increasingly important to ports and their hinterlands in terms of competitiveness.

Inland terminals are a cornerstone of port regionalisation, and have become critical to landside transport, and the integration of logistics. Over time, the ports and their associated networks face a number of pressures in close proximity to the port (Notteboom and Rodrigue, 2005). Pressures include the general lack of space surrounding ports, significant levels of congestion, and high property values. These pressures have an adverse effect on the efficiency of the port and its associated transport networks (Iannone *et al*, 2007). As a result, the inclusion of inland terminals into these transport networks becomes an attractive proposition for a number of reasons (Notteboom and Rodrigue, 2005). Property prices adjacent to inland terminals tend to be lower than prices around main ports. Furthermore, inland terminals are increasingly being located at sites with good access to transport networks, and the space available for expansion (Cidell, 2011).

Inland terminals predominantly handle containers, however other intermodal activities are also present, as well as added value services including consolidation, deconsolidation, transloading and light manufacturing (Slack, 1999; Rodrigue *et al*, 2010). Therefore these terminals can function as cargo bundling points within

the transport network, and can perform a satellite function with regards to the maritime load centre, as they help to relieve congestion pressure around the main port and promote intermodal transfers (Notteboom and Rodrigue, 2005; Iannone *et al*, 2007). Inland terminals can become part of broader logistics zones, as they possess traditional port and logistical functions and services, and are thus capable of serving both local and regional markets (Notteboom and Rodrigue, 2005). These terminals can also be used by shippers to synchronise import cargoes with production lines, as well as for the storage of empty containers (Notteboom and Rodrigue, 2005). This collectively means that there is greater organisation within supply chains, which enhances the potential for economic efficiency. Thus, an inland terminal can promote economies of scale in inland distribution, by handling higher volumes at lower per unit cost (Rodrigue *et al*, 2010). Inland terminals can be integrated into the transport network associated with a port, and can also draw greater volumes of traffic to the port (Notteboom and Rodrigue, 2005). Therefore inland terminals have become an important cornerstone of port regionalisation.

Corridors are also a cornerstone of port regionalisation. A corridor is defined as a central axis through which port terminals are linked to inland terminals and distribution systems (Rodrigue, 2004). They represent an accumulation of flows and infrastructures which are shaped by economic, infrastructural and technological processes (Rodrigue, 2004; Rodrigue *et al*, 2010). Corridors have shaped urbanisation in many places throughout the world as transport, economic and demographic processes are linearly articulated along them, as they offer improved accessibility and connectivity (Rodrigue, 2004). From a distributional point of view, corridors are home to inland terminals, and link global and regional flows along a logistically integrated axis (Rodrigue, 2004).

With port regionalisation, terminal activities become prominent along and at each end of the corridor, which results in the development of logistics poles (Notteboom and Rodrigue, 2005). This is predominantly achieved by promoting logistics land uses zoning along these corridors (Notteboom and Rodrigue, 2005). Logistics poles are attractive to logistics service providers, as they are close to markets, have access and are highly connected to intermodal transport and related infrastructure, and can promote agglomeration economies (Notteboom and Rodrigue, 2005). This has the potential to create synergies and economies of scale for these service providers, which further enhances the attractiveness of the corridor (Notteboom and Rodrigue, 2005). Furthermore, manufacturing and logistics activities also flourish in these clusters, which reinforces the need for logistics services in these spaces (de Langen, 2006). Logistics poles in corridors are therefore important for ports and inland terminals with regards to maintaining their economic desirability and appeal (Notteboom and Rodrigue, 2005). The promotion of logistics poles is therefore important to the fourth phase of port development. Thus port regionalisation is concerned with the regional influence of the port; and focuses on logistics integration, transport corridor creation, and the connectivity to inland terminals (Notteboom and Rodrigue, 2005).

Port regionalisation therefore represents an add-on to the Anyport model, which makes this model more applicable to contemporary port development. This theory is relevant to zones landside of a port, which occur in a theoretical, idealised competitive port system. However in reality, port-related activities are not the only activities landside of ports, as urban spaces have also developed and evolved in these adjacent zones. Activities in these spaces may conflict with the goals of the port, and consequently there are a range of development challenges in the port-city interface.

3.9 Development challenges in the port-city interface

3.9.1 Conflicting interests in the port-city interface

Ports can also influence their adjacent city spaces, and have the potential to affect the development within port-city regions (Daamen and van Gils, 2006). However, city spaces are also dynamic, and there are often conflicting interests between port activities and other development paths in cities. de Langen (2006) identified five conflicting interests which regularly oppose port development in the port-city interface. These trade-offs are further outlined in Table 3.4. The various outcomes of each of these trade-offs are different for each port, and these ultimately influence the overall competitiveness of the port (de Langen, 2006). Furthermore, these trade-offs are often exacerbated with increased port-related growth and activities (Slack, 1999). This results in greater impacts in the port-city interface. Therefore there are often tensions associated with port development, and these can adversely impact on port competitiveness. The way in which the port authority or local government deal with trade-offs will influence what occurs in the port-city interface. Although ports have economic benefits, port development is also associated with a number of trade-offs and costs.

In order to obtain support for port-related developments and expansions, it is often stated that the economic benefits associated with port growth will benefit the local, regional and national economy, as well as the general public (Kolk and van der Veen, 2002). However when considering the geographic spatiality of benefits associated with ports, Merk and Dang (2013) asserted that it is no longer apparent that a well-functioning port will automatically have a net positive impact on the adjacent port-city. This is linked to the belief that ports and their cities have become disintegrated, as a number of critical port activities have moved away from cities, whilst logistics functions have moved away from ports, which results in cities experiencing less direct economic impacts from the port (Merk and Dang, 2013). Despite this relocation, the adjacent city still predominantly experiences local negative impacts from ports, such as poor air quality and water quality, as well as high levels of waste, noise, odours and traffic congestion (Merk and Dang, 2013). As a result, much of the economic benefits associated with ports spill over to other regions, whilst negative impacts linked to ports are highly localised (Merk and Dang, 2013). This heightens the local opposition to port development.

Table 3.4: Conflicting interests with port development in the port-city interface

Trade-offs with port development	Description	Sources
Environmental protection	• Environmental protection is seen as an obstacle to port development. • Port development results in a number of environmental issues, including: noise, air and water pollution; greenhouse gas emissions; and environmentally unfriendly transport. • Dredging to maintain the depths of ports has an adverse effect on the environment. • Environmental assessments result in delays in port infrastructural projects. • Port land is set aside for the environment, to provide environmental services. • Ports need to exhibit high levels of environmental performance in order to secure community support.	• UNCTAD (1992); Goulielmos (2000); Slack (2001); de Langen (2006); Giuliano and O'Brien (2008); Hall (2008);Verhoeven (2010); Lam and Notteboom (2012); Merk (2013)
Urban development	• There is land use conflict between older port functions and newer urban development possibilities. • Obsolete and dilapidated port city areas are targeted for urban redevelopment. This represents the restructuring of old port areas for new functions. • Urban growth impacts on port development, whilst port development influences the economic, cultural, social and environmental functions within urban areas. • The port-city interface is a highly contested space, with high demand and competition between port-related and urban land uses. • Illegal invasion of port-related activities into urban areas, if there is poor enforcement of land use zoning by authorities.	• de Langen (2006); Lee *et al* (2008)
Labour conditions	• Unrest associated with labour unions, where strong unions and their demands can influence the competitiveness of a port by increasing labour costs. Labour strikes can significantly reduce port productivity. • Containerisation has reduced the labour intensive nature of port activities. This means that there are less port-related employment opportunities.	• Läpple (2000); Slack (2001); de Langen (2006); Hall (2008); Lee and Ducruet (2009)
Residential interests	• Residential housing was traditionally constructed in close proximity to the port. However, port expansions have meant that communities are juxtaposed with port activities, which exposes residential areas to negative environmental externalities and other safety concerns. • Port and residential activities are incompatible with one another. Port operations are often 24 hour operations. • Local activism and resistance to port development can prevent port expansion plans. This is associated with argument that local communities do not benefit from port expansion and growth, as contemporary port activities are less labour intensive. • High levels of congestion around ports, due to the sharing of transport routes. • Redevelopment of existing terminal sites adjacent to ports, which results in greater levels of congestion. • Ports also become a barrier to mobility in city spaces, and are seen as an inconvenience.	• Slack (1999); McCalla *et al* (2001); de Langen (2006); Hall (2008)
Overall economic development	• There is a trade-off between promoting other forms of regional economic development or port development. • Ports influence the regional economy; however the regional economy also influences ports. • Strategic economic decisions can either promote port-related growth, or prioritise other economic activities and industries.	• de Langen (2006); Ducruet (2009)

Despite the trade-offs and negative impacts in the port-city interface, ports are still perceived to be attractive economic nodes for cities, such as Durban. Consequently, these cities adopt a number of strategies to promote port-related development.

3.9.2 Policies to promote port-city development

Port-cities throughout the world strive to facilitate port-city development through a range of public policies, which can be categorised within the following policy areas: port development; port-city development; transport; research and innovation; spatial planning; environment; and communication (Merk and Dang, 2013). The policy instruments used within these various policy areas to promote port development and expansion are highlighted in Table 3.5.

Table 3.5: Policies used for port-city development

Policy areas	Policy instruments	
Port development	• Long term strategic port planning • Port information systems • Development of new port functions • Upgrading port workers' skills	• Modernisation of port terminals • Industrial development policies on port sites • Port labour relations
Port-city development	• Creation of maritime clusters • Economic diversification policies • Creating synergies between port and other clusters	• Attraction of port-related headquarter functions • Co-ordination between ports • Co-operation with neighbouring port-cities
Transport	• Intermodal access of hinterlands • Dedicated freight lanes/corridors	• Intermodal shifts of hinterland traffic
Research and innovation	• Innovative policy to improve port performance • Logistics related innovation systems	• Fostering local research related to the port • Attraction of port-related research institutes and port-related firms
Spatial planning	• Port land use planning	• Common Masterplan for port and city
Environment	• Emission reduction policies • Climate change adaption policies • Renewable energy production in the port	• Energy efficiency policies • Waste reduction policies
Communication	• Port communication and information • Maritime museums • Waterside leisure and recreation	• Cultural projects related with port • Port as part of global city-brand

Source: Merk and Dang (2013)

Port-cities can therefore adopt a range of these strategies in order to promote port growth, with the goal of securing local port benefits. Merk and Dang (2013) identified that the most effective port-city development policies were focused on transportation, as well as on research and innovation. These policies promote high levels of port traffic performance. With the overall goal of improving port performance, strategic port-related projects, such as the BoP Project, can adopt a range of these policy instruments in order to achieve this goal.

Thus the port-city interface is a dynamic space with competing issues, which are traded-off with one another. If port development is favoured, there are a number of strategies available to promote port development and growth, with the overall goal of creating an efficient and competitive port.

3.10 Summary

This chapter firstly explored the foremost theoretical framework which has guided economics and policy-making in contemporary times: neoliberalism. In this context, where the free market shapes development and planning, globalisation has become a critical factor influencing development throughout the world. With globalisation, place has become more important, and cities have become critical geographic units. Furthermore, distant places can now interact with one another, leading to the creation of the global economic network. Consequently cities endeavour to link into the global circuit of capital, with the underlying goal of promoting economic growth in their locality.

Bearing this context in mind, cities have adopted a new approach to urban governance. This approach, known as urban entrepreneurialism, is implemented by cities attempting to restructure and reposition themselves in the global economic network. Cities therefore aim to create a 'good business climate'. This can be achieved by creating clusters of economic activities in order to promote agglomeration economies. A further way of implementing this approach on the ground is through the use of large scale development projects, known as mega-projects. Clustering and mega-projects have a significant impact on urban forms and functions within city spaces. Although cities adopt policies and strategies indicative of the neoliberal approach, alternative agendas need to be considered, as cities are also home to people and the biophysical environment. An example is the consideration of sustainability.

The second part of this chapter examined contemporary ports, with an emphasis on the impacts of containerisation on port development. Ports are conceptualised as the economic catalysts of local, regional and national growth, and provide immediate linkages between international and local transport systems. As a response to the significant growth of containerised cargoes, ports have to adapt in order to remain competitive. An examination of the foremost port development models highlighted that inland terminals, corridors and the integration of logistics have become increasingly important to contemporary ports. Ports are located adjacent to cities, and the port-city interface represents a space where the conflicting interests between port activities and other development paths in cities are realised. Despite these challenges, contemporary port-cities continue to invest in their ports and port-related spaces, with the goal of securing local benefits from ports.

The following chapter presents the context of the BoP Project. Firstly, the focus is on city spaces adjacent to the Port of Durban, and how this landside space has evolved over time. Secondly, the Port of Durban is

explored, with emphasis on its congestion problems, as well as the institutional relationship between the national port authority and local government. After presenting the port and landside context, the details of the BoP Project, which is the case study of this research, are presented.

CHAPTER FOUR: CONTEXTUALISATION OF THE BACK OF PORT PROJECT

4.1 Introduction

Context shapes discourses in the policy arena. This chapter therefore presents the background within which the Back of Port (BoP) Project is situated, and has three main sections[21]. First, it focuses on the landside context of the South Durban Basin (SDB), with emphasis on how Durban evolved as an industrial city throughout the 20th century. The SDB became the city's industrial heartland. Apartheid planning resulted in labour pools being located adjacent to heavy industry, which had ramifications for this highly contested space. However with the demise of apartheid, new forms of governance and planning were introduced at the national level, and at the same time South Africa became more integrated into the global economy. This had implications at the local level, and impacted the SDB. In the second section of this chapter, the Port of Durban and the problem of congestion are explored. Additionally the complex relationship between the port authority and the local government, as well as contemporary port developments in the Port of Durban are presented. This sets the scene for the final section, which presents the details of the BoP Project. The main purpose of this project was to develop a distinct framework for the management and development of land use in the designated BoP area.

4.2 The landside context of the South Durban Basin

The BoP Project study area is located in the city of Durban on the east coast of KwaZulu-Natal, and falls under the jurisdiction of the eThekwini Municipality. Durban is the second most populated urban centre in South Africa (Freund and Padayachee, 2002). The study area is landside of the Port of Durban, and is to the west and south of the Port. This study area is situated within the SDB, which is located on an elongated north-east / south-west axis, from the Port of Durban to Umbogintwini (See Figure 4.1). The SDB is approximately 63 km^2 in size (King, 2004).

The SDB is currently the second largest industrial node in South Africa, and is the traditional industrial heartland of Durban (Scott *et al*, 2002; Scott, 2003; Robbins, 2004). This area is renowned for its manufacturing activities; however it is also home to diverse activities associated with other industries, including food processing, beverages, textiles, clothing, pulp and paper, metals fabrication, automotive components, chemicals and petro-chemicals (Robbins, 2004). Areas in the SDB which came to possess industrial characteristics over time include Congella, parts of Isipingo, Jacobs, Maydon Wharf, Mobeni, Prospecton and Umbogintwini (King, 2004). The two refineries, chemical industries, chemical storage

[21] The data for Chapter Four were drawn from secondary reports and academic papers related to Durban, the South Durban Basin and the Port of Durban. The detailed background data generated by actors within the BoP Project is not included in this chapter, but rather it is presented in the three results chapters. This detailed data formed part of the analysis of this dissertation.

facilities and the former Durban International Airport (DIA) constitute 70 percent of Durban's heavy industry (Scott *et al*, 2002). Linked to South Africa hosting the FIFA 2010 World Cup, Durban's airport relocated to the north of the city in 2010, which meant that the former DIA site in the SDB was potentially freed for further industrial development (Scott and Barnett, 2009). Furthermore, the SDB industrial zone has recently been consolidated by the construction of the largest container terminal in the southern hemisphere in this vicinity, as well as numerous investments in the chemical sector (Scott and Barnett, 2009; Brooks *et al*, 2010).

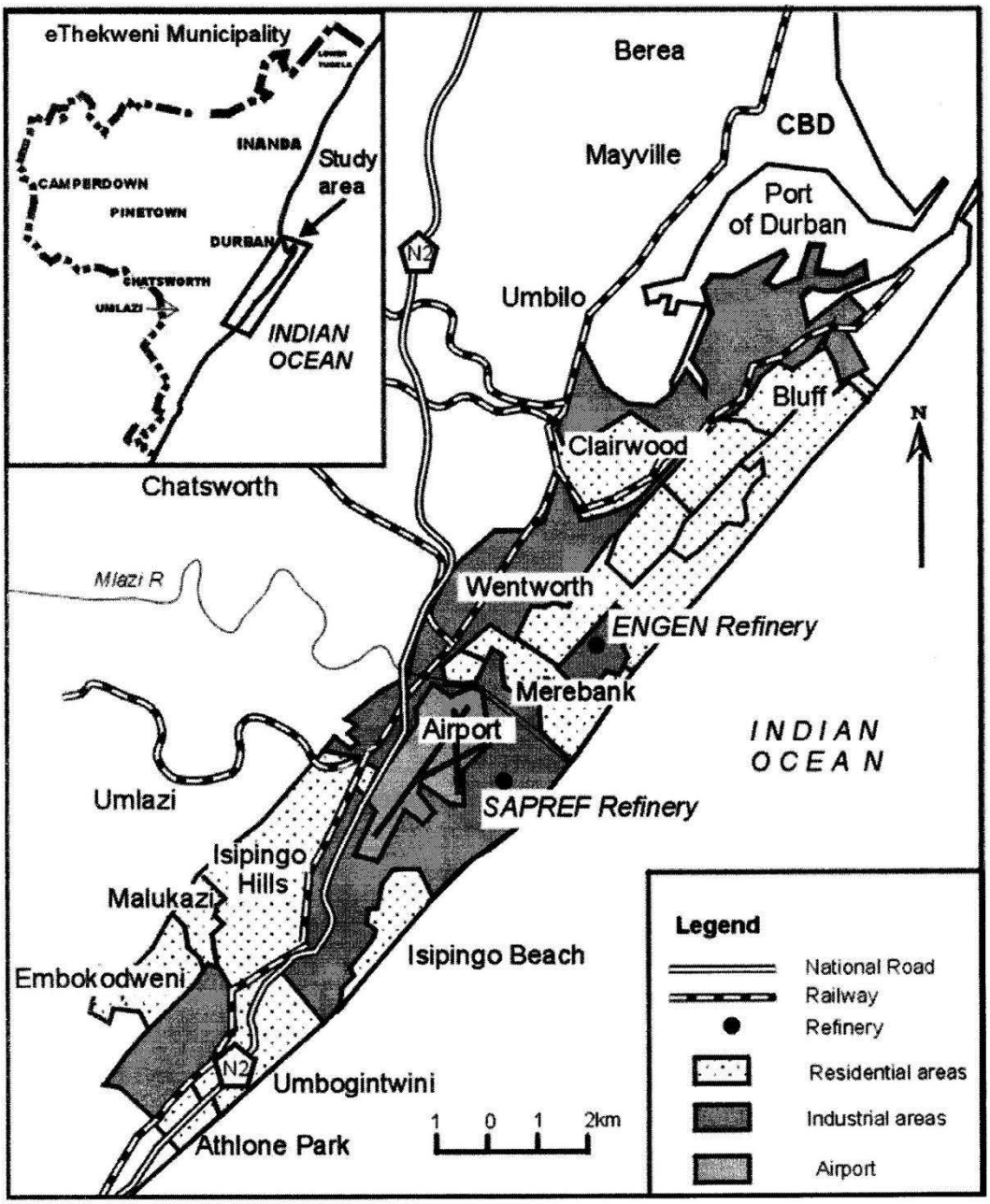

Figure 4.1: Map of South Durban Basin depicting industrial and residential areas

Source: Scott and Barnett (2009: 376)

Despite the industrial characteristics of this area, there are a large number of people living in the SDB. According to groundWork (2003) approximately 285 000 people reside in this space, juxtaposed next to around 600 industries. South Durban Community Environmental Alliance (2008) maintain that approximately 500 000 people reside in the SDB, as well as in the adjacent townships of Umlazi, Lamontville, Montclair and Woodlands. All of the residentially zoned areas within the SDB currently reflect the historical impact of apartheid planning, where race groups were spatially segregated by legislation and the implementation of race-based land use policies. Apartheid planning policy resulted in the incompatible juxtaposition of residential areas with heavy industry, port infrastructure and the former DIA, with virtually no consideration for the quality of life of the SDB residents (CSIR, 1998). This juxtaposition is depicted in Figure 4.1, which is a map of South Durban's residential and industrial layout.

Overall, there is a high demand for space in the SDB, which makes this area intensely utilised and highly contested. The SDB contains complex spatial relations as a result of the competing needs of industry and residents. The following section explores how the SDB came to its current state, with a particular focus on how Durban changed in character from the early 20th century.

4.2.1 Durban evolving as an industrial city – a focus on South Durban

The past activities and processes linked to the industrialisation of Durban, particularly in the SDB, have impacted on present land uses, and will continue to impact on the future development planning of this urban space. Durban became established in the colony of Natal[22], which was declared a South African province in 1910, and its development is solely attributed to economic factors, as it has never been a capital city or administrative centre in the province (Freund and Padayachee, 2002). At the turn of the 20th century, Durban was primarily a town that functioned as a port centre (Valodia, 1999). The role of the Port of Durban has been an integral factor in Durban's development and evolution as an industrial city.

After the First World War (WWI), there was a strong industrial drive in Durban, with the goal of evolving this town into an industrial city. Consequently, local authorities placed great importance on industrialisation processes to the south of the Port (Brooks *et al*, 2010), as the SDB was planned with an emerging modernist discourse (Scott, 2003). Harvey (1989b) stated that the early modernist planning discourse originated in the early 20th century within colonial societies, when local governments engaged with industrialisation processes and attempted to dynamically shape industrial growth. The utopian ideals of spatial ordering and control were exported from Britain and Europe to colonies, albeit that the colonies had different social, political and physical contexts (Scott, 2003). Therefore the planning concepts which became prominent in South Africa in the early 20th century were heavily shaped by British planning concepts, and consequently legislation was promulgated, where the functional role of planning was to

[22] In present day, Natal has been amalgamated into the KwaZulu-Natal province.

control land use and development (Scott, 2003). This was particularly evident in Durban, as it had strong colonial ties with Britain (Freund and Padayachee, 2002).

According to Scott (2003), two important industrial developments prior to 1920 were the municipal reclamation and construction of the first industrial zone in Durban, known as Maydon Wharf; and shortly thereafter, the Congella Industrial Estate. The reclamation at Maydon Wharf entrenched Durban's port-city character (Valodia, 1999). Concurrently, further reclamation enabled Island View to be established as a fuel storage facility to the south of the Port (Scott, 2003). The growth of industry in South Durban was a product of the mutual interests of a range of industrial role-players[23] (Scott, 2003). This resulted in initial industrial development in areas directly adjacent to the Port of Durban.

By the 1930s, both Maydon Wharf and Congella were fully developed, and with the lack of significant land development opportunities to the north and west of the Port, there was further impetus to develop to the south, namely in South Durban (Scott, 2003). However this area largely consisted of neglected informal development, primarily due to its environmental characteristics. This low-lying alluvial corridor was swampy and prone to periodic flooding (Scott, 2003). Consequently, this instigated the draining of large wetlands, as well as the canalising of rivers in South Durban (Wiley *et al*, 2002). During the 1930s, the topographic attractiveness[24] and low cost of land in the SDB, as well as its close proximity to the Port, created an opportunistic rationale for the Durban Town Council to methodically acquire any land to the south of the bay, which was subsequently assigned for industrial and residential purposes (Scott, 2003). Any settlements which were in the path of proposed industrial development were conceived as an obstacle to growth, and were consequently abstracted out of the local authority's plans to develop this space as an industrial node for Durban (Scott, 2003). This was the start of a poor relationship between the local government and the SDB communities. During these early periods, Durban's industrial character was prominent as the initial industrial nodes became further established, whilst there were new developments at Isipingo, Wentworth, Merebank, Umbilo, Jacobs, the Bluff, Umbogintwini and Clairwood (Scott, 2003). This placed Durban, with South Durban as its industrial core, on the path towards becoming an industrial city.

4.2.2 Apartheid planning in the South Durban Basin

Following this industrial drive, the SDB was declared a productive zone for heavy industry by the Durban Town Council in 1938; and adjacent to this zone, residential areas were conceptualised as racially demarcated labour pools for industries (Scott *et al*, 2002; Wiley *et al*, 2002; Scott, 2003; Brooks *et al*,

[23] These industrial role-players included the Natal Manufacturer's Association, the Durban Town Council and the national department known as South African Railways and Harbours (Scott, 2003).
[24] The SDB has a basin-like configuration, having a flat coastal plain which is delineated by ridges in the east (known as the Bluff) and the west (King, 2004). As these ridges are fairly steep, they were deemed to be unsuitable for industrial activities, however they were appropriate for residential activities.

2010). These residential labour pools represented a cheap labour source, as they were in close proximity to industries (Valodia, 1999). Thereafter, the Group Areas Act of 1950 was used to legislate and enforce apartheid planning[25], with the aim of racial separation and segregation (Landman, 2002). This form of social engineering reinforced the city's rationale that Africans, Coloured and Indians were an important industrial workforce in Durban, and their proximity and accessibility to SDB industry were crucial in order to sustain the industrial growth during this period (Freund, 2002; Brooks *et al*, 2010). In addition to the 'white' precincts of Athlone Park and the Bluff, segments of Clairwood and Isipingo, as well as Merebank and Wentworth were classified as residential areas in the SDB (King, 2004). It is important to note that there was limited buffering between industrial and residential land uses, particularly in 'non-white' residential areas in the SDB.

In 1951, a large tract of flat land was developed into the DIA. This airport heightened Durban's industrial character, and coupled with the Group Areas Act, there were ramifications for the spatial layout of the SDB (Brooks *et al*, 2010). A further development which strongly influenced the industrial nature of South Durban was the establishment of two refineries in this locality[26]. Although these were initially small scale, these refineries grew and shaped the economic character of the area, as well as its environmental conditions (Robbins, 2004). Currently, these refineries are viewed by the adjacent communities as the root of environmental problems in the area, due to their adverse impact on air quality[27]. For the local communities, these refineries are an emblem of social injustice, and historically environmental lobbyism in the SDB was orientated around the air pollution which they generate. Therefore, the juxtaposition of these incompatible land uses, coupled with inadequate transition or buffer zones, resulted in high levels of social conflict and land use tensions, as well as contributed to the community's lack of trust of the local government and industries[28].

4.2.3 The growth of manufacturing industries

After the Second World War (WWII), manufacturing industries quickly grew in Durban (Valodia, 1999). By the mid-20th century, land located to the south of the Port of Durban was predominantly used for manufacturing-related activities (Robbins, 2004; Hall and Robbins, 2006). The SDB industries catered predominantly for the national market, as South Africa faced international sanctions during the apartheid years (Valodia, 1999; Freund, 2002). From the 1960s to the 1990s, a national trade policy was

[25] Apartheid planning drew on the Garden City concept developed in England by Ebenezer Howard, as well as the neighbourhood unit model from the United States of America (Landman, 2002). Spaces, particularly in South Durban, were reconstructed through processes of abstraction and simplification, where aspects which were important to the ruling white minority were incorporated into plans (Scott, 2003).

[26] The Standard Vacuum Refinery Company of South Africa (currently known as the Engen Refinery) and the SAPREF Refinery (joint venture between Shell SA Refining and BP Southern Africa) were accommodated in the SDB due to pressure from the national government in the 1960s (Valodia, 1999; Robbins, 2004).

[27] The basin-like topographic configuration of the SDB results in poor dispersal conditions, which promotes the accumulation of air pollution in this locality (Matooane and Diab, 2003).

[28] Incompatible land uses and the residential industry interface are discussed in Section 4.2.4.

implemented, which focused on import-replacement industrial strategies (Valodia, 1999). This resulted in nominal tariffs being charged on all imports, with the overall goal of reducing the South African economy's reliance on imports. A further critical feature of national trade policy during the 1960s and 1970s focused in import restriction, which sought to generate local industrial expansion within South Africa (Valodia, 1999). This had implications for the SDB, as manufacturing industries continued to grow. However, these industries were disconnected from the global economy and its high levels of competitiveness.

Within Durban, the Port still had an influential role in determining the types of industries which developed. The areas surrounding the Port were conceptualised as logical sites for the agglomeration of industries which focused on import replacement, as these industries were reliant on the import of raw materials (Valodia, 1999). Therefore service businesses with a strong manufacturing bias were further attracted to this space, which included engineering firms, and at a later stage, businesses associated with warehousing, clothing, textiles and metal-works (Robbins, 2004). This also resulted in the growth of industries such as the fertiliser, paints, plastic and rubber industries (Valodia, 1999).

Throughout the post-WWII period, industrialisation was intensified and market industrial estates became prominent in the SDB (Robbins, 2004). The expansion of Durban's demarcated boundary during this period afforded the local authority with the opportunity to purchase and subsequently sell or lease out large tracts of flat land to industries, which ultimately led to the establishment of the Mobeni and Jacobs industrial estates (Freund, 2002). The local authority had control over the activities occurring on this land and encouraged the further establishment of manufacturing and industrial activities, in order to stimulate employment (Freund, 2002; Robbins, 2004). These industrial estates still form the heart of Mobeni and Jacobs, which are part of the BoP Project's study area. These spaces became a catalyst for industrial development and consequently the SDB became further entrenched as the economic powerhouse of Durban.

Market industrial estates had different spatial requirements to the traditional industrial areas of the SDB, as they were functional from a railway transportation perspective. With these industrial estates, most of the bulk-infrastructure and buildings were focused on servicing the needs of large-scale industry, which relied heavily on railway transportation (Robbins, 2004). Therefore during this time period rail transport became prioritised, however linkages and connectivity to the Port of Durban were not deemed as critical as they are in present times (Robbins, 2004). Instead, internal connections to other economic centres within South

Africa, particularly Johannesburg[29], became prioritised and rail transportation was considered to be an ideal mode of transport.

In the late 1960s the Toyota plant in Prospecton was developed. This showed an appreciation of the requirement for more flexible site sizes and factory buildings, and also reflected the increasing importance of road transport, which was at the expense of rail transportation (Robbins, 2004). Prospecton developed differently to Mobeni and Jacobs, however these developments still revealed that connectivity to the Port during this period of time was not considered to be as critical as it is in contemporary times (Robbins, 2004). Furthermore, the development formats and spatial layouts of the industrial areas further away from the Port were different to the initial industrial precincts, which first developed around the Port. These physical differences remain apparent in their spatial layouts and development formats, which has implications for future planning of this space.

Integration into the world economy - implications for the South Durban Basin

Integration into the world economy post-1994 had implications for South African cities. Exposure to economic globalisation resulted in the implementation of a range of neoliberal economic policies at the national level, and these sought to open up South Africa to international trade and investment (Wiley *et al*, 2002). The national economic structure consequently changed and favoured an export-orientated policy (Hall and Robbins, 2006).

However, the opening up of the economy exposed South African industries to global economic pressures (Hall and Robbins, 2002). This had a range of implications at the local level. Although Durban had developed a wide manufacturing base which produced a diverse range of goods, the majority of these goods were not capable of competing in global markets (Valodia, 1999; Marx and Charlton, 2003). During the mid-1980s employment in the SDB reached its peak, however after this time, the economy changed from primary commodity production to export-orientated manufacturing, which resulted in the loss of jobs (Freund, 2002; Robbins, 2004). Industries in Durban traditionally produced for the domestic market, however when the South African economy opened up, these industries struggled to export goods into the competitive global market (Valodia, 1999). Furthermore, late in the 20th century, numerous industries left the SDB due to favourable land opportunities in other parts of the city, and relocated in close proximity to highway routes, which improved their accessibility to Gauteng (Freund, 2002; Robbins, 2004). This, when coupled with erratic local government attention and the poor regulation of economic activities, resulted in the perception that the SDB was an area in decline (Robbins, 2004).

[29] Johannesburg is located in the Gauteng province. Gauteng is the economic heartland of South Africa, due to the prominence of mining, commercial activities and a large source of labour.

Adopting an urban entrepreneurialism approach, the eThekwini Municipality's role as "an economic agent, a mediator of economic processes and provider of economic services" has become increasingly important in this space[30] (Hall and Robbins, 2002: 43). In order to change and repair the image of the SDB, the Municipality took steps to enhance economic activities in South Durban, with the goal of reverting it back to being Durban's economic powerhouse. The South Durban industrial zone was declared a Spatial Development Zone, and was conceptualised as having a significant role in strengthening the metropolitan economy, due to its proximity to the Port (Scott, 2003, eThekwini Municipality, 2008a). Therefore, Durban's local government initiated a re-industrialisation programme in the SDB, which was linked to the South Durban Spatial Development Framework[31] (Scott and Barnett, 2009). These interventions by the Municipality revealed the influence of globalisation forces on this local space, as the Municipality sought to respond by strengthening the local economy, with the goal of repositioning Durban in the global economy.

4.2.4 Incompatible land uses and the residential industry interface

Apartheid planning and more recently forces of globalisation have meant that South Durban is characterised by the juxtaposition of incompatible land uses. In the SDB, industrial zones and activities are contiguous to residential land uses, which results in stress being placed on the latter due to incompatibilities (eThekwini Municipality, 2006b). In recent times, planning schemes have been unable to respond adequately to forces of globalisation, as there is a high demand for commercial and industrial land throughout Durban. As residential land uses are less economically productive than commercial or industrial land uses, market forces have created pressure to convert residential to other market-orientated land uses. The lack of enforcement of zoning and land use regulations resulted in the opportunistic invasion of industrial and commercial activities into residentially zoned areas, which collectively threatens social amenity in the SDB (eThekwini Municipality, 2006b). This illegal invasion of non-prescribed land uses has resulted in the agglomeration of economic sectors, such as the automotive, rubber/plastic, freight logistics and maritime sectors, which were not historically catered for in this space (eThekwini Municipality, 2006a). Market forces and industrial interests have also placed pressure on open spaces in the SDB. This includes private 'green' spaces, such as the Clairwood race-course (76 ha), and public open spaces, such as sports fields (eThekwini Municipality, 2006b).

As a result of this juxtaposition, SDB residents experience a variety of environmental impacts and negative externalities, with the most documented impact being related to air pollution (see Table 4.1). Critical environmental issues associated with this juxtaposition of incompatible uses in the SDB have resulted in this area being conceptualised as a high risk space. Post-1994, democracy coupled with South Africa's new

[30] The local authority in Durban was re-named from the Durban Metropolitan Unicity Municipality to the eThekwini Municipality in 2000.
[31] A Spatial Development Framework highlights the desired spatial development patterns for an area (Landman, 2002).

Constitution has meant that people can claim their right to have a safe and healthy living environment (Scott *et al*, 2002). This is particularly relevant for the SDB, which is well known for its extensive environmental pollution.

Table 4.1: Critical environmental issues attributed to the juxtaposition of residential and industrial land uses in SDB

Critical Issues in the SDB	Description
Air quality issues	Poor air quality is attributed to industrial pollution and vehicles – includes pollutants such as SO_2, lead, smoke, NO_x and VOCs.
Health problems	A high occurrence of health problems in the SDB, which is largely attributed to environmental pollution.
Criminal activity	Crime is a common occurrence in open spaces and vacant industrial lots in the SDB.
Poor access to information	A lack of access to information highlighting the level of pollutants emitted from smaller industries.
Water quality problems	Water pollution is evident in streams and rivers.
Noise pollution	Industries emit high levels of noise pollution on a frequent basis, as numerous industries are 24 hour operations.
Contaminated water and soil	Contamination due to industrial accidents, spillages and dumping.
Intrusion of heavy vehicles into residential areas	Lack of enforcement, trucks using short-cuts, permeation of businesses into residentially zoned areas – which ignores zoning.
High levels of risk	There are high levels of risk exposure for SDB residents, particularly those in close proximity to heavy and chemical industries.
Cumulative impacts	SDB is exposed to a high level of cumulative impacts, due to the industrial nature of this area.

Sources: Nurick and Johnson (1998); Scott *et al* (2002); King (2004); Barnett and Scott (2007)

The main concerns of people living in this area have traditionally centred on environmental risks, where vulnerable individuals and communities are responding to: industrial pollution and its adverse health impacts; noise; the movement of heavy trucks through their area; and the fear of explosions and other industrial accidents (Oelofse *et al*, 2008; Brooks *et al*, 2010). Poor environmental conditions and high levels of air pollution have become key emblems of resistance in the SDB, and this represents the riskscape[32] experienced by those residing in South Durban (Brooks *et al*, 2010). Additionally, it has been argued that this riskscape in the SDB has widened, and includes 'hidden' risks such as crime, drug abuse, an uncontrollable youth and other social ills (Oelofse *et al*, 2008; Brooks *et al*, 2010). Another emerging issue relevant to the BoP Project is the illegal use of roads by heavy vehicles, particularly through residentially zoned areas. The death of a motorist in the Bluff (on 09/08/2008), as a result of a large truck moving through this residential area, resulted in an outcry from South Durban residents, and has heightened people's awareness and resistance to transport and traffic issues. This sets the scene of the social environment, where there is hostility towards trucking and logistics activities in the SDB.

Despite this polluted environmental context, communities in South Durban have a strong attachment to place, and also have strong community networks and organisations that bind them together. Two recent studies, focusing on Merebank (CSIR, 1998) and Clairwood (Ipsos Markinor, 2008), have revealed that

[32] Riskscape is defined as the factors which frame a resident's concept of risk, and how they experience risk in a particular area (Brooks *et al*, 2010).

communities in the area do not want to move away from their homes in South Durban, despite the poor environmental conditions, as the social and economic value derived from their living environments is considered to be high.

The relationship between the SDB community and the local government, as well as local industries can be described as volatile (Iyer Rothaug and PR Africa Team, 2005), and is characterised by extreme mistrust (CSIR, 1998; Freund, 2001; King, 2004). Scientific data produced by the government or industries is treated with great scepticism by the local communities (Scott and Barnett, 2009). This has negative implications for processes which require the interaction and involvement of the state, industries and communities. This lack of trust is attributed to apartheid planning, as well as the fact that secrecy was promoted by the National Key Points Act of 1980, where nationally important installations used this legislation to conceal various details from the general public, such as the emission levels from the two refineries (Scott and Barnett, 2009). Furthermore, there is a general community consensus that the eThekwini Municipality is trying to remove people residing in the SDB, with a particular emphasis on Clairwood. This heightens the mistrust between communities and the local government, and has the potential to impede future planning and public participation processes in this space.

4.2.5 Possible futures for the South Durban Basin

A number of possible development scenarios for the SDB were proposed around the turn of the 21st century, by a variety of national actors (Scott and Barnett, 2009). In 1996 the South Durban Strategic Environmental Assessment was commissioned, which included an assessment of the range of future development options for the SDB (CSIR, 1998). This assessment considered the following potential options for the SDB: mixed use, petrochemical, port option and a combination of port and petrochemical development (CSIR, 1998). Overall, this assessment had a limited impact on the future development of the SDB (Iyer Rothaug and PR Africa Team, 2005).

With South Africa being selected as the host of the FIFA 2010 World Cup, there was impetus to move the airport to the north of the city, in order to cater for increasing passenger and air-cargo traffic (Vancometrics and Imani Development, 2006). In 2006, Vancometrics and Imani Development (2006) completed a study focusing on the decision-making framework for the redevelopment of the DIA site. This study evaluated three possible options for this site in the SDB, and ultimately the dig-out port option was recommended[33] (Vancometrics and Imani Development, 2006). Hereafter there was realisation that the Port of Durban and its associated maritime sector was the largest and most critical driver of the local economy

[33] The other two options considered were: the best industrial/logistics mix; and for the DIA to remain as Durban's second airport.

(van Coller *et al*, 2007). Therefore a range of possibilities have been considered with regards to the future development of the SDB[34].

Thus the SDB represents a highly contested space, which has been influenced by industrialisation processes and reflects the legacy of apartheid planning. In contemporary times, the Port of Durban has a significant influence on this space. The following section explores the evolution of the Port.

4.3 The Port of Durban – An Introduction

During the 20th century, the Port of Durban became the dominant trade facility in South Africa (Hall and Robbins, 2006). The Port is currently the leading container port within Southern Africa, holding a 53 percent market share of the region and has achieving an average container growth of eight percent between 1985 to 2010 (Fraser and Notteboom, 2012). It is the largest port in Southern Africa in terms of the value of cargo handled per annum and is the second largest in terms of cargo tons handled (van Coller *et al*, 2007). Additionally it is considered to be the principal general cargo port of the African continent, as well as the dominant container hub port of the western Indian Ocean (Jones, 2002). The Port of Durban is viewed as a key distribution node, thereby providing trade linkages between developed countries and emerging Asian markets (Scott, 2003). Despite the Port's dominance, it is being challenged by other South African ports. This includes the additional development and diversification of the port at Richards Bay, investments in the Maputo port corridor, and port development at Coega[35] in the Eastern Cape (Jones, 2002). Furthermore, in the adjacent SDB there are spatial constraints, as well as high levels of environmental lobbyism which oppose any port expansions (Jones, 2002). These challenges threaten the Port of Durban's dominance in sub-Saharan Africa.

According to Mather and Reddy (2008), the Port of Durban has two important roles. Firstly, Durban's regional economy is sustained by port activity, as well as the high levels of diverse cargoes transported through the port facilities (Mather and Reddy, 2008). The Port of Durban provides importers, exporters and shipping companies with a variety of terminals, with each terminal designed to handle a specific form of cargo type (van Coller *et al*, 2007). The Port's cargo is diverse and it is well represented by oil and petroleum products, containerised cargo, conventional breakbulk cargo and bulk traffic, which are the fundamental cornerstones of sea trade (Jones, 2002). The Port also focuses on high value-added consumer and intermediate products (van Coller *et al*, 2007).

[34] A strategic plan which influences the future development of the SDB is the eThekwini Municipality's Integrated Development Plan (IDP). This municipality-wide plan is required as part of the Municipal Systems Act (Act 32 of 2000), which guides and informs all planning processes, activities, decision-making, budgeting and management (eThekwini Municipality, 2011). IDP-related content relevant to the SDB and BoP Project is briefly outlined in Section 4.3.3.

[35] The Port of Ngqura is located in Coega.

The second important role is that the Port of Durban is the main international gateway to the heartland of the South African economy, namely Gauteng (Mather and Reddy, 2008). After WWII, the Port of Durban effectively acquired significant and continual state investment, and consequently became the principal port which served Gauteng, where the nucleus of South Africa's mining and industrial activities are located (Hall and Robbins, 2006). The Port of Durban is therefore an important gateway node through which cargoes are transported to and from Gauteng, and is important to the local, provincial and national economies. The following section explores how the Port of Durban spatially evolved over time into a railway port in the 1960s, and how this resulted in congestion after the container revolution. The Port of Durban's evolution shapes how cargoes are currently transported to and from the Port, which is relevant to the BoP Project.

4.3.1 The root of congestion at the Port of Durban

The Port of Durban grew steadily throughout the 20th century. By the mid-1960s, the city frontages adjacent to the Port were heavily saturated with port developments, which constrained further port-related expansions (Jones, 2002). During this period the Port of Durban was classified as a railway port, where "conventional and most dry-bulk cargo was handled either directly between rail wagons and vessels, or from vessels into wharfside cargo sheds and thence into rail wagons (and road vehicles) for distribution" (Jones, 2002: 72). The cargo-handling techniques associated with railway transportation required high levels of stevedoring labour; however it could be handled effectively in the constricted and confined hinterland adjacent to the active berths at the Point and Maydon Wharf (Jones, 2002). Consequently, large open space was not considered to be a critical requirement for this mode of transportation around the Port of Durban.

By the 1970s the container revolution[36] had changed global shipping, and modified transportation requirements for the shipping industry (Iannone *et al*, 2007). The ever-expanding container shipping industry became global in nature, and was structured around sophisticated regional networks and round-the-world services (Jones, 2002). In order to benefit from this lucrative growth, ports throughout the world invested in cargo handling infrastructure (Dresner, 2007). The Port of Durban was no exception to this trend. During the 1970s, the Port's investment in sophisticated cargo handling technologies ensured that it had a competitive advantage over other South African ports, in terms of handling containerised cargoes (Jones, 2002). Although the Port of Durban was better suited to handling containerised cargoes than other South African ports, there were a number of challenges encountered by the Port. This is revealed by Jones (2002: 73), who noted that the:

[36] The container revolution was presented in Section 3.7.1.

> "…handling of conventional general cargo is now dominated by unitised techniques that require large open spaces for the stacking of containers, while certain neo-bulk cargoes such as steel, granite and forest products (which loom large in Durban's traffic base) now require large open spaces for consolidation and pre-assembly prior to loading. The old configuration of the port's general cargo berths made immediate adaption to these techniques difficult if not impossible, and essentially required both that existing facilities be re-modelled and that entirely new terminals be developed, particularly for container traffic".

Therefore, more space and re-development were needed in order to deal efficiently with the space-intensive requirements of containerisation. As stated before, the Port of Durban functioned as a railway port where the requirement for open space was not viewed as critical to the port's functioning. However as shipping transportation technology and the associated spatial requirements changed, the Port was on the back foot in terms of adapting to this containerisation demand, due to the permanent development in and around the Port (Jones, 2002). This represents the root of the Port of Durban's congestion problem.

Although the increased growth of containerised cargoes was the central reason for the Port of Durban becoming the dominant player in the Southern African port system, it also became a significant challenge to the Port (Jones, 2002). With containerisation coming to the forefront of maritime economics and the associated increases in the size of vessels, the Port of Durban began to require more investment and inventive approaches to port management (Hall and Robbins, 2006). However, during this period the Port and railways were unable to respond to changing containerisation requirements, and consequently road transport became preferential to rail transportation (Freund, 2002; Hall and Robbins, 2006). Road transportation of containers is considered to be more convenient for shippers than rail transportation, due to its flexibility. Therefore, the transport of containerised cargoes by road became an integral operational feature of the Port of Durban. However, the Port and adjacent SDB were not specifically designed for this mode of transportation. This exacerbated congestion at the Port of Durban.

4.3.2 The Port of Durban and the congestion crisis

During the 1990s container volumes gradually experienced growth rates greater than 10 percent per annum and this exposed the Port's inadequacies, such as inappropriate investment strategies and ineffective management (Hall and Robbins, 2006). These increasing growth rates were attributed to the opening up of the South African economy after democracy, where there was the removal of international sanctions, reduction of import tariffs, gradually increasing economic growth rates, increases in the number of small businesses and significant growth in consumer spending power (van Coller *et al*, 2007). Moreover, the level of trade between South Africa and its international partners from Europe, North America and South East Asia remained at a sustained elevated level, and accordingly, this resulted in exceptional growth in the volume of cargoes moving through the Port (Mather and Reddy, 2008). However, the Port is often unable

to cope with high volumes of cargoes (Freund, 2002). The continued growth of port activities has increased pressures on the city, and consequently there was a desire to expand the harbour, as well as re-evaluate the physical and economic space held by the Port within the city context (Hall and Robbins, 2002). This growth also resulted in the opportunistic invasion of logistics and container-related activities into the residentially zoned areas, particularly Clairwood, which are in close proximity to the Port (Merk, 2013). These challenges have intensified landside congestion, and when coupled with the inadequate rail network, this has hindered containerised cargoes transportation (Hall and Robbins, 2006). This has resulted in congestion within the Port of Durban and the adjacent spaces in the SDB.

In the late 1990s, it was projected that by approximately 2010, the Port of Durban would have insufficient container handling capacity[37] (CSIR, 1998). In addition, the projected cargo demand forecast for the Port of Durban revealed that a sustained growth rate would be experienced in the medium term, which created the demand for further expansions to the Port[38] (Mather and Reddy, 2008). As a result, the demand for the Port is expected to increase, and it is anticipated that this growth will exacerbate the congestion problem and the demand for space in close proximity to the Port. Thus this section has briefly presented the characteristics of the congestion crisis experienced at the Port of Durban. In addition, it is important to have an understanding of the institutional context within which the Port is located.

4.3.3 Relationship between the National Port Authority and the eThekwini Municipality

South Africa has adopted the port service model, where an independent state operator owns all port infrastructure and controls port operations (Kaselimi, 2012). The independent state operator is known as Transnet, and they have two separate divisions respectively known as the Transnet National Ports Authority and Transnet Port Terminals[39] (IUDS and GMA, 2012). Transnet also controls all rail freight business in South Africa, which creates a unique situation, as this means that they have an integral role in the country's maritime supply chains (Fourie, 2007; Notteboom, 2010). Transnet is therefore both a player and referee in terms of South Africa's cargo handling operations (Jones, 2002). They have remained a centralised national parastatal organisation, regardless of the general trend for devolution in post-apartheid South Africa (Hall and Robbins, 2006). Therefore, as Transnet control port planning and decision-making in South African ports, Hall and Robbins (2002) note that they have an influential role in determining the economic development agenda for local governments. This has implications for the relationship between Transnet and local governments within South Africa.

[37] This did not materialise due to the global economic recession (Maharaj, 2013).
[38] These expansions at the Port of Durban are explored in Section 4.3.4.
[39] The Transnet National Port Authority functions as a landlord for South Africa's seven major ports and provides infrastructure, development, safety and security, environmental protection and marine and lighthouse services (IUDS and GMA, 2012). However, Transnet Port Terminals are responsible for terminal operations at these ports (Hall and Robbins, 2006; van Coller *et al*, 2007).

In the case of Durban, the relationship between the eThekwini Municipality and Transnet was strained throughout the 20th century (Freund, 2002; Merk, 2013). In South Africa there are three tiers of government, namely national, provincial and local governments, which operate at different scales. Transnet operates at a national scale and this has implications for local government in terms of decision-making, as it is a completely different policy arena. Consequently planning and operational decisions related to the Port of Durban have always been made by powerful actors or institutions outside of Durban (Jones, 2002; Morris *et al*, 2002; Merk, 2013). Decisions pertaining to capital development projects and infrastructure investments for the Port are made at the national level, where the main players have been Transnet, the Department of Public Enterprises and the Department of Transport Services (van Coller *et al*, 2007). This means that local governments have had limited influence on strategic port development processes, which is problematic as these processes significantly impact the local context (Hall and Robbins, 2002).

Since the Port became operational, the Municipality and Transnet have both developed plans in isolation from one another (Mather and Reddy, 2008; Merk, 2013). Furthermore, infrastructure which is located on the interface between the Port and the city of Durban has often been an area of conflict in terms of cost accountability (van Coller *et al*, 2007). When either institution attempted to execute cross-jurisdiction projects, their poor relationship meant that there was a lack of co-operation between these institutions (Merk, 2013). This conflict was also extended to land use responsibilities and control, which exacerbated disputes between the Municipality and Transnet. Thus, there was little desire to harmonise the local and national planning interests, and this resulted in tensions, particularly due to divergence between the local government's economic policy implementation plans and Transnet's developmental views (Morris *et al*, 2002).

This collectively meant that issues which were of national concern dominated the manner in which the Port of Durban was operated, with no real focus on the local actors and their developmental interests. In addition, local commerce and industry has resented this poor relationship, which has had an adverse effect on them (Jones, 2002). Thus in the late 20th century there were little or no institutional relations between the port authorities, local government and important local industrial sectors (Morris *et al*, 2002). The lack of co-ordinated planning between Transnet and the Municipality is largely responsible for the creation of an informal logistics cluster in the residentially zoned area in the SDB known as Clairwood (Merk, 2013). In a globalised world, the lack of relations between these institutions is economically detrimental to the growth and competitiveness of the Port of Durban, both from a port authority and local government perspective.

However, as a result of increases in port traffic, coupled with changes of leadership, there was an improvement of the port-city relationship in Durban (Merk, 2013). These two entities began to engage with one another due to the value of the Port to the local and national economies. Consequently, the port-city forum between the eThekwini Municipality and Transnet began intermittently in 1997 (Hall and Robbins,

2006). As part of a later port-city forum in 2003, these entities signed a Memorandum of Understanding, which laid the foundation for a joint planning initiative (Merk, 2013).

Despite the fact that these institutions were beginning to communicate with one another, in 2002 Transnet began developing a draft Masterplan for the Port of Durban, which spatially dictated the future development requirements of the Port, which would satisfy the parastatal's objectives (Mather and Reddy, 2008). However no external stakeholders were involved in this process and the fact that this plan was developed "in isolation from key stakeholders is reflective of on-going governance challenges of a parastatal system which still carries the baggage of hierarchically imposed solutions that were the order of the day under apartheid" (Hall and Robbins, 2006: 18). This plan set out to increase the container handling capacity of the Port from 2.7 million to 8 million Twenty-foot Equivalent Units (TEU's), however this clashed with the eThekwini Municipality's plans for future development of the adjacent SDB (Mather and Reddy, 2008).

After 2005, there was a realisation from both institutions that they needed to plan in conjunction with one another, and that a common vision was needed for the sustainable expansion of the Port and its city frontages (Mather and Reddy, 2008). This formally established the foundation of the Transnet eThekwini Municipality Planning Initiative (TEMPI), which is a cooperative planning initiative. TEMPI sought to addresses strategic port issues, particularly with regards to the future development of the Port of Durban (eThekwini Municipality, 2008a). This would promote sustainable port-related growth in the Port (Mather and Reddy, 2008). Subsequently, cooperative structures were established in 2006, which attempted to address the aforementioned conflict, clarify responsibilities and propose joint decision-making between these two entities, with the common goal of improving the Port of Durban (van Coller *et al*, 2007; Mather and Reddy, 2008). As part of TEMPI, five work streams were identified, namely: economic, environment, port engineering, Point/Precincts planning and transport (Mather and Reddy, 2008). TEMPI resulted in modifications to the Masterplan of the Port, and it was proposed that port expansions over the first half of the 21st century would secure additional capacity for the Port (Mather and Reddy, 2008).

The port-city relationship thereafter became a priority for the Municipality, and has been increasingly incorporated into the eThekwini Municipality's Integrated Development Plans (IDP). In the 2003-2007 IDP, it was first mentioned that port facilities needed to be secured in order to accommodate the next generation of ships, whilst a BoP area needed to be created for an advanced, integrated logistics platform (eThekwini Municipality, 2002). In the 2005/2006 IDP Review, it was noted that a logistics platform was required to improve connectivity near the Port, with the aim of enhancing economic activity (eThekwini Municipality, 2005). In the 2006 IDP, logistics and port-related activities were strategically conceptualised as the greatest job creating opportunities in the city of Durban, and the development of a logistics platform and the prioritisation of the port-city partnership were identified as strategic focus areas (eThekwini

Municipality, 2006c). In the 2007/2008 IDP Review, there is mention of a land use management strategy to complement the Port, in order to improve the port-city relationship (eThekwini Municipality, 2007). Overall, this reveals the realisation by the Municipality that the port-city relationship is critical, as co-operation between Transnet and the eThekwini Municipality could secure economic benefits for the city of Durban.

Aside from this relationship, a further important consideration influencing the institutional context is Transnet's impending 'port of choice' decision. At the national scale, Transnet had two options to consider for the Port of Durban and its role within the South African port system. Firstly, the Port could be developed as an internationally competitive container hub and become further entrenched as South Africa's 'port of choice' for containerised cargoes. Secondly, container traffic could be diverted to other ports in sub-Saharan Africa, which would mean that the Port of Durban would be less prominent in the South African port system. At the inception of the BoP Project, this debate was on-going for the relevant national and local role-players, which created high levels of uncertainty[40]. Nonetheless, the following section outlines the current and potential future layouts of the Port of Durban.

4.3.4 Current and potential future layouts for the Port of Durban

Transnet's Masterplan for the Port of Durban acknowledges that cargo capacity is the primary obstacle facing the Port of Durban, due to the expected growth in demand for containerised and motor vehicle cargoes (IUDS and GMA, 2012). Over the last decade, the Port of Durban's cargo handling capacity has experienced a range of upgrades and expansions in order to cope with the increased demand (Mather and Reddy, 2008). Bearing in mind the current layout of the Port (see Figure 4.2), the central challenges to future expansion are identified as: the adjacent city developments; existing long-term property leases; environmentally sensitive areas in the harbour; and inadequate infrastructure servicing current traffic volumes within and around the Port (IUDS and GMA, 2012).

In 2009 Transnet commenced a R2.7 billion project to widen and deepen the entrance of the Port, which meant that larger vessels could be accommodated[41] (Mather and Reddy, 2008; Dludlu, 2009). TEMPI (2010) also highlights that there are two expansion proposals which would provide additional container capacity for the Port, and this would ensure that the Port was capable of handling 3.6 million TEUs per annum. The first proposal is the infilling of the harbour between Pier One and Salisbury Island, whilst the second proposal would reconvert Maydon Wharf into a container terminal for smaller vessels (TEMPI,

[40] By 2011, Transnet made the decision that the Port of Durban would be South Africa's 'port of choice'.

[41] This project was aimed for completion in 2010 (Dludlu, 2009). Larger ships are now able to access the Port, such as Post Panamax and Super Post Panamax vessels. The money for this redesign was loaned to Transnet by the Japan Bank for International Cooperation (Dludlu, 2009).

2010). The former would increase container capacity by 0.7 million TEU, whilst the latter would provide an additional 0.6 million TEU (TEMPI, 2010).

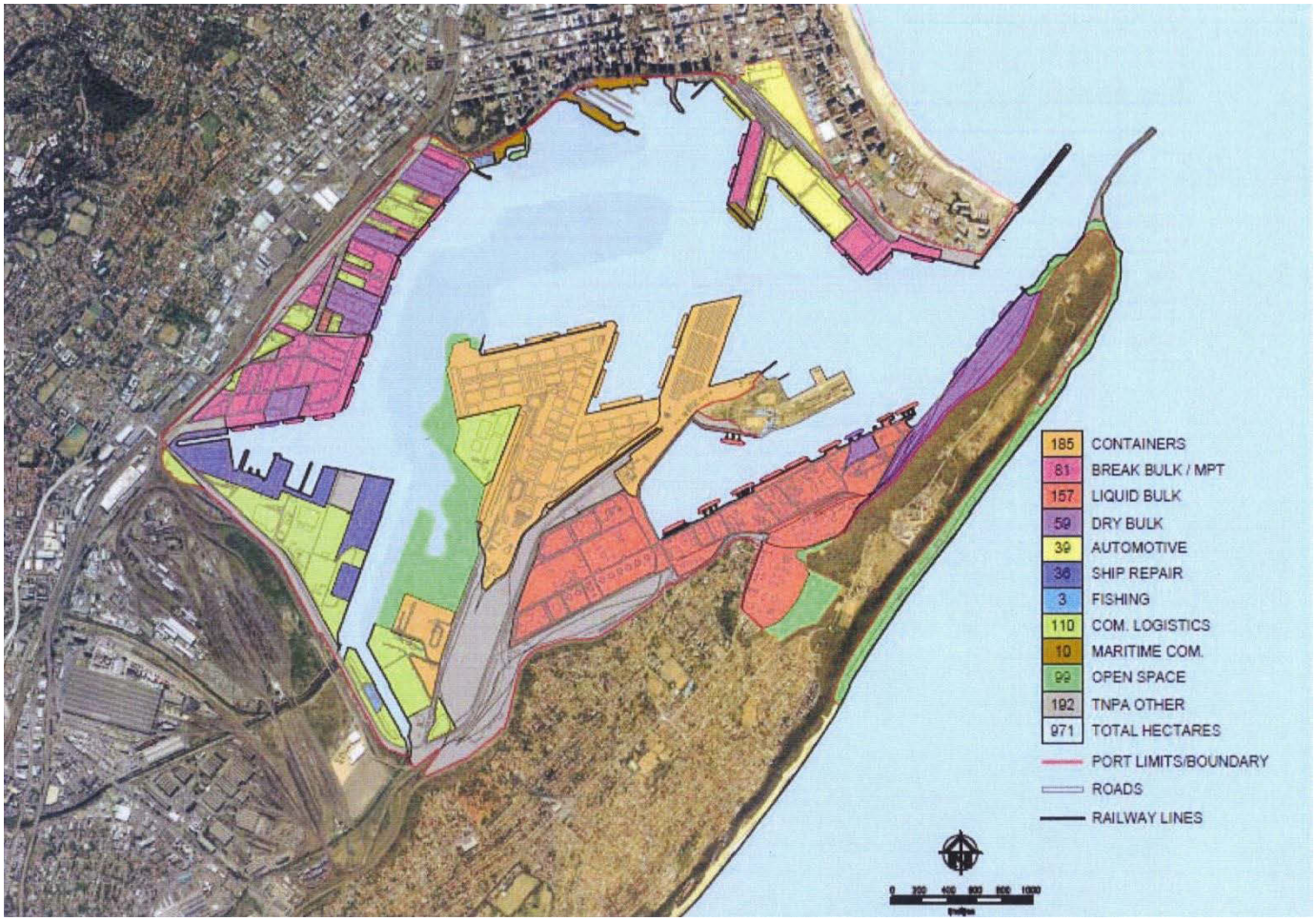

Figure 4.2: Current projects (2010-2020) in the Port of Durban

Source: Transnet (2014: 13)

During the time that data were collected for this research, no decision had been made on the future of the former DIA site. However, there was a general impression that Transnet was interested in purchasing this land for a planned dig-out port, which would complement the current Port of Durban. The negotiation processes with regards to purchasing of the former DIA site were controlled by Transnet, and these negotiations occurred largely outside of the BoP policy arena, albeit that they were going on at the same time as the BoP Project. Consequently there were high levels of uncertainty and speculation associated with the future of the former DIA site and the planned dig-out port. However, in 2012 Transnet purchased the former DIA site for R1.8 billion from the Airports Company of South Africa (Merk *et al*, 2014). Consequently, the latest development plans for the Port of Durban have focused on the dig-out port (See Figure 4.3), since the airport has relocated to the King Shaka International Airport.

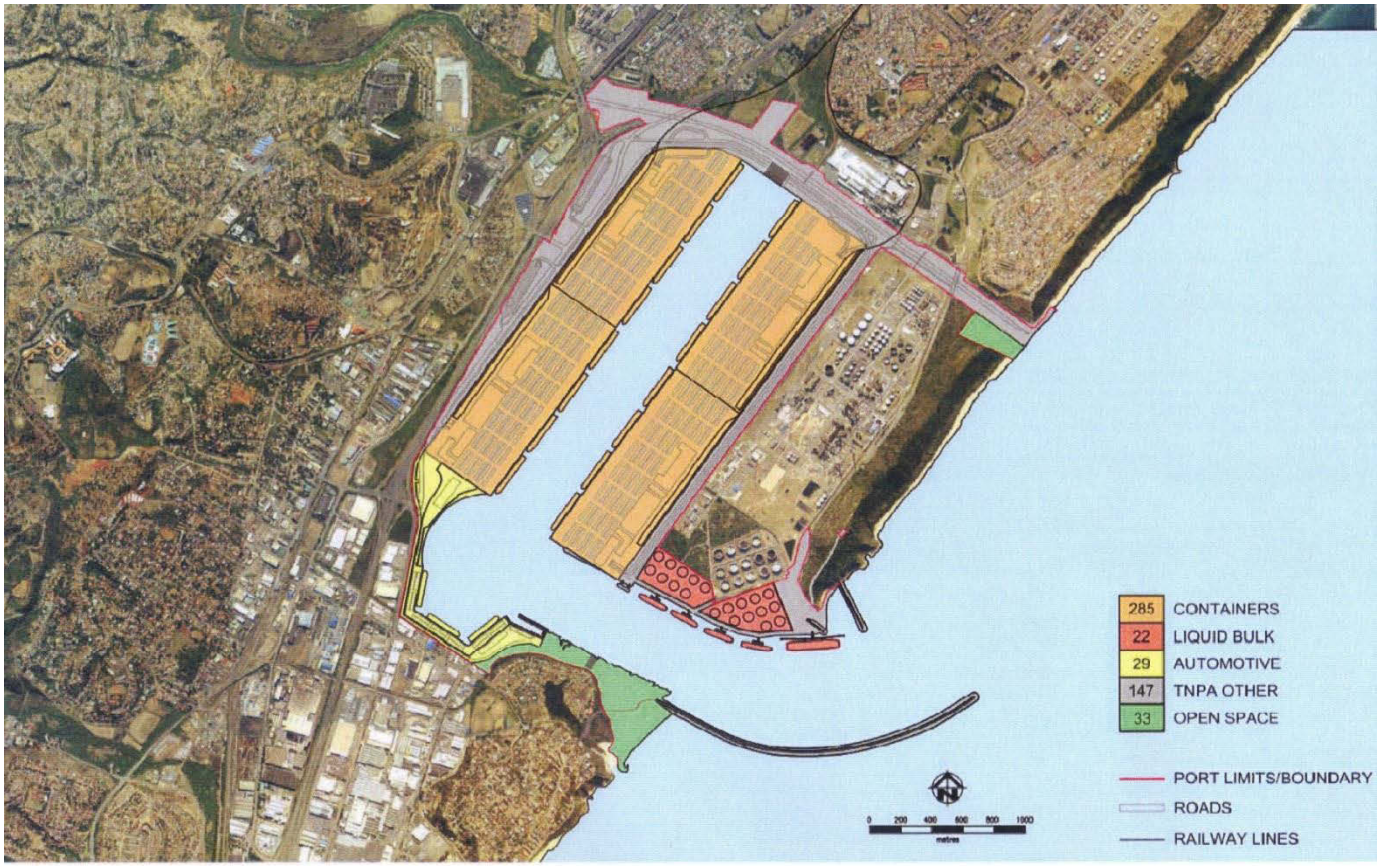

Figure 4.3: The proposed layout of the planned dig-out port at the former DIA site

Source: Transnet (2014: 18)

The plans show that the dig-out port would add approximately 9.6 million TEU to the South African port system, and this strategic project would be completed by dredging out 75 million cubic metres of earth and constructing a 1.2km breakwater into the Indian Ocean (Merk *et al*, 2014). This represents the port development context within which the BoP Project occurred.

4.4 The Back of Port Project – an outcome of TEMPI

With the changing nature of cargo logistics due to the introduction of containerised cargoes, there have been significant changes to cargo handling technologies, warehouse designs, transport carrier designs and spatial planning within and around port cities (van Coller *et al*, 2007). The ability of a port to respond to these changes in the shipping industry has direct implications for the port's ability to compete in the global economy. As a result, BoP operations are becoming more prominent and complex, particularly in Durban (van Coller *et al*, 2007). These are often located in close proximity to the Port, typically in highly sought after brownfield spaces.

The TEMPI process used studies generated by the five work streams (environment, economic, port engineering, Point/precinct planning and transport) to create potential developmental layouts for the Port of

Durban, as well as for the former DIA site. The first option was the potential Bayhead dig-out which would provide for a further 2.5 million TEU's in terms of container capacity; whilst the second option was a dig-out at Island View (Mather and Reddy, 2008). Further options included the aforementioned planned dig-out port at the former DIA site (see Section 4.3.4) (Mather and Reddy, 2008). These potential layouts required further analysis, which ultimately led to the inception of the BoP Project.

Due to the pressures on the Port of Durban and ensuing congestion crisis in the BoP zone, the BoP Project was initiated in late 2007 by the Development Planning, Environment & Management Unit (DPEMU) in the eThekwini Municipality. The BoP Project's main purpose was to develop a distinct framework for the management and development of land use in the BoP area, which would ultimately be implemented as a Local Area Plan (LAP) and Land Use Management Scheme (LUMS) for the BoP zone (eThekwini Municipality, 2008a; 2008b). It was implied that the new land use zonings for this study area would be orientated towards logistics and port-related land uses, with the goal of complementing the Port of Durban.

The BoP study area focused on four precincts in the SDB, namely Clairwood, Congella, Jacobs and Mobeni, which are illustrated in Figure 4.4[42]. All of these precincts are in close proximity to the Port of Durban, ranging in distance from 3 to 5 km away from this critical economic node. The LAP and LUMS created by the BoP Project would fall within the framework of the eThekwini Municipality's IDP, the Southern Spatial Development Plan and the South Durban Basin Plan (eThekwini Municipality, 2008a; 2008b). This spatial planning exercise consequently aimed to transform the intentions of these higher order plans into a greater level of detail, which could be applied at the local scale.

In order to satisfy the aims of the BoP Project, the eThekwini Municipality contracted a consultant consortium to complete this critical neoliberal project. The consultant consortium consisted of professional experts in the fields of: spatial planning and land use analysis; development economics with a focus on maritime and port economics; property economics; transportation planning; facilitation and public participation; environmental management; and social assessment (eThekwini Municipality, 2007). The lead consultants were the economic consultants, and they provided the economic framework for the study. The municipal departments which were required to give input into the BoP Project included the: Development Planning Department; Economic Development Unit; eThekwini Transport Authority; Coastal Engineering Stormwater Catchment Management Department; Environmental Management Department; eThekwini Health – Pollution; SDB Area Based Management; and various eThekwini Service Departments such as Electricity (eThekwini Municipality, 2008a). The eThekwini Municipality was therefore both the developer and regulators of the BoP Project.

[42] In Figure 4.4, Mobeni is divided into Mobeni East and West.

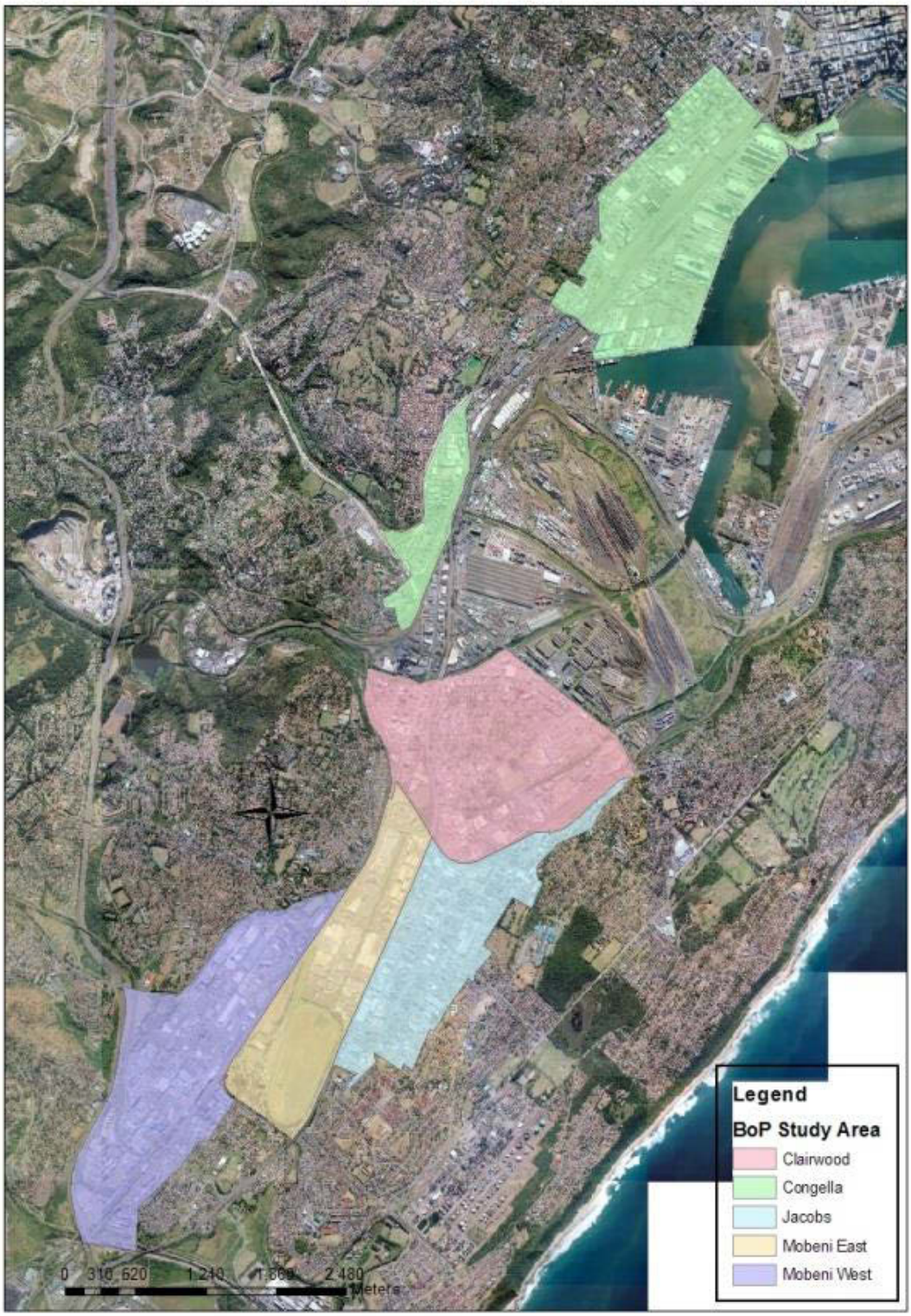

Figure 4.4: The initial four precincts of the BoP Project planning area

At the onset of the BoP Project, a number of project milestones were identified by the eThekwini Municipality, in order to complete this strategic project. These milestones included producing reports for

the four distinct phases of the BoP Project: Inception, Best Practice, Situational Assessment and Concept Plan Phases. A description of these phases is outlined in Table 4.2.

Table 4.2: The four phases of the Back of Port Project

Phase	Product and description
Inception	Inception Report - Outline the work plan, methodology and outcomes of the BoP Project
Best Practice	Best Practice Report - Investigates national and international literature on BoP case studies
Situational Assessment	Situational Assessment Reports - A description of the status quo of the study area by the economic, environmental, planning, social and transportation consultant teams
Concept Plan	Develop a Concept Plan - Represented an integrated solution in the form of a plan - The product from this phase was a report which detailed the Overall Concept, Spatial Framework and Precinct Plans for the study area

The reports appearing in Table 4.2 were generated by the consultant consortium, and thereafter reviewed by representatives of the eThekwini Municipality. The knowledge production process of this spatial planning exercise, from the inception to concept plan phase, forms the focus of this research, and this is analysed in Chapters Six, Seven and Eight.

4.5 Summary

Chapter Four examined the context within which the BoP Project is situated. First, the landside history was explored, which revealed how the city of Durban evolved throughout the 20th century. This evolution resulted in the growth of manufacturing industries, particularly in the SDB; whilst the impact of apartheid planning produced the incompatible juxtaposition of residential and industrial land uses. After the demise of apartheid, the integration of South Africa into the global economy exposed the low levels of competitiveness within local industries, and left the SDB classified as an area of decline. The second focus of this chapter was concerned with the Port of Durban. In recent times, high levels of growth in containerised cargoes have exposed the Port's inadequacies, and resulted in a congestion crisis. The relationship between the National Port Authority, Transnet, and the local government, the eThekwini Municipality, has shaped how the Port has evolved, as well as influenced its future port development options. This context set the scene for the third focus of the chapter, which introduced the BoP Project.

Understanding context is important to the discourse analysis methodology. The following chapter presents the methodology that was used to collect, order and analyse the data related to the BoP Project, which is the focus of this study.

CHAPTER FIVE: METHODOLOGY

5.1 Introduction

According to Mouton and Marais (1996: 16), methodology is defined as:

> "…the study of the research process in all its broadness and complexity, the various methods and techniques that are employed, the rationale that underlies the use of such methods, the limitations of each technique, the role of assumptions and presuppositions in selecting methods and techniques, the influence of methodological preferences on the types of data analyses employed and the subsequent interpretation of findings".

This research adopts a qualitative methodology, using discourse analysis as the main research method. Discourse analysis can be classified within the interpretive or social constructivist tradition. The critical assumption of this tradition is that there are multiple realities which are socially constructed, and that the meanings attached to these constructions are important (Hajer and Versteeg, 2005). Discourse analysis, as a methodology, is first presented in this chapter. Second, the nature of data collection and the particular methods which were used are discussed. The methods for data collection included participation in and observations from the Back of Port (BoP) Project meetings, interviews with main actors and the acquiring of BoP-related documents produced by these actors during the period of research.

A discussion on the analysis of data forms the third focus of this chapter. Analysis is concerned with how the data were sorted, interpreted and given meaning in the context of the study. Hajer's discourse analysis framework is introduced, which is based on both his earlier (Hajer, 2003a) and more recent work (Hajer, 2005b) on discourse analysis. Many of the concepts which are central to this framework were explored in Chapter Two. This framework was combined with Dey's (1993) approach for qualitative data analysis. This was useful since Dey's (1993) approach provides an iterative framework for data analysis, which entails describing the data, classifying the data into meaningful categories and then providing connections between these categories.

The final focus of the methodology chapter highlights constraints and limitations of this study. This includes criticisms levelled against the discourse analysis methodology, issues around subjectivity and positionality in action research, problems with the BoP Project's timeframe and the unavailability of certain actors to be interviewed. The way in which these limitations were addressed is also outlined.

This research can be classified as action research, as the researcher was part of the social assessment team in the BoP Project; and through this involvement, had the potential to influence the outcomes of this spatial

planning exercise. Action research is based on the attempts to simultaneously change the social system and create knowledge about it (Kitchin and Tate, 2000). It also aims to generate new knowledge by solving practical problems (Kitchin and Tate, 2000). The advantage of action research in this study is that the researcher became an 'insider' in what Mickez (2012) refers to as 'back stage' meetings, which enhanced the data collection process.

5.2 Qualitative research

The methodology selected for this dissertation can be categorised as qualitative research, as discourse analysis is a language-based and interpretive approach. Qualitative research is defined as "those approaches in which the procedures are not strictly formalized, while the scope is more likely to be undefined, a more philosophical mode of operation is adopted" (Mouton and Marais, 1996: 155). Thus it does not involve an a priori set of research techniques. Research questions are problem-driven instead of method-driven (Mottier, 2005). In this dissertation, the knowledge production process of the BoP Project is explored using qualitative methods.

A qualitative methodology affords the researcher the possibility to engage with meaningful aspects of research and facilitates deeper understanding of various issues (Cook *et al*, 2010). One of the goals of qualitative research is to provide a more relational, contextual understanding of an issue (Robinson, 1998). Understanding the meaning of an issue is central to this approach. Concepts and constructs are viewed as being comprised of meaningful words that can be analysed in their own right to enhance the comprehension of a given concept (Mouton and Marais, 1996; Mottier, 2005). Dey (1993) states that meaning is only accurately conveyed if the context is comprehended. With interpretive qualitative research, there are multiple constructions and interpretations of reality which vary over time (Merriam, 2002; Mottier, 2005). Qualitative research considers these interpretations at a particular point in time, and in a particular context (Merriam, 2002). This means that interpretations can be seen as a snapshot of a particular phenomenon, at a specific time and within a certain context.

Furthermore, qualitative research allows for the core of a situation or problem to be assessed and analysed (Kitchin and Tate, 2000). Merriam (2002) highlights that there are four dominant characteristics which cut across all qualitative research designs. She notes that all "qualitative research is characterised by the search for meaning and understanding, the researcher as the primary instrument of data collection and analysis, an inductive investigative strategy, and a richly descriptive end product" (Merriam, 2002: 6). The first characteristic, pertaining to the understanding of meaning which actors have constructed about reality and their experiences, can be linked to social constructivism.

5.2.1 The social constructivist perspective

It is critical to consider the philosophical framework within which this study is based, since any claim to knowledge provokes philosophical questions pertaining to the validity of these claims (Graham, 1997). In the domain of social sciences, discourse analysis emerged in the context of the wider post-positivist interpretative tradition; however it can be historically linked to the analysis of ideology, the sociology of science and language philosophy (Hajer, 1995; Porta and Keating, 2008). As discourse analysis is an interpretive qualitative approach, it focuses on the understandings which are constructed by people within a specific context. Discourse analysis has an anti-essential ontology, with the critical assumption that multiple, socially constructed realities exist, and therefore denounces the existence of a single reality which is governed by immutable natural laws (Hajer and Versteeg, 2005).

Social constructivism is one of the ways in which researchers perceive or 'see' science (Rein, 1983, cited in Driedger and Eyles, 2003). There are multiple varieties of social constructivism, however all varieties place emphasis on the conceptual construction of reality, rather than focusing on tangible reality (Kratochwil, 2008; Porta and Keating, 2008). According to Porta and Keating (2008: 350), the epistemology of social constructivism is that "our knowledge consists of concepts – that is, abstract representations of the world whose value is based on their usefulness rather than their correspondence to reality". Hence, reality is perceived to be the product of our conceptualisations (Kratochwil, 2008), and can be perceived or interpreted in a number of ways (Rydin, 2003). This study explores the conceptualisations which influenced the BoP Project's knowledge production process.

The social world is continually being formed, and therefore emphasis is placed on understanding the production of reality, and its associated meaning (Elliot, 2006). Consequently, a phenomenon in its own right is not significant, but rather the meaning attached to the phenomenon is critical (Hajer and Versteeg, 2005). Meaning is generated through various social and cultural processes (Rydin, 2003), as well as identifiable practices (Elliot, 2006). Consequently, communication, referring to meaning generated through language and pictures, as well as the context, is central to this approach (Rydin, 2003; Hajer and Versteeg, 2005). The meaning attached to language is important as it is a functional constituent in the construction of reality, and is not passive in these processes (Hajer, 1995). This study focuses on the meanings of written documents, words spoken and other visual aspects used by main actors in the BoP Project, from the Inception to the Concept Plan Phases. These meanings had the potential to shape the outcomes of the BoP Project, and could therefore potentially influence spaces in and around the study area.

The cultural, political and historical context within which a particular truth about reality originates, is central to discourse analysis (Hajer and Versteeg, 2005). Context influences how society makes sense of things, and therefore influences how decisions are made. Consequently, statements made in different contexts have different roles and functions (Mouton and Marais, 1996). Context is critical, since it is either

constraining or enabling with regards to the interpretation of an issue (Rydin, 2003). Context therefore influences how reality is socially constructed, and shapes how issues are conceptualised and resolved. Hajer (1995: 17) notes that reality "is always particular, it is always dependent on subject-specific framing or time-and-place specific discourses that guide our perceptions of what is the case". Thus language, and the context in which it is communicated, is important to social constructivism, and therefore discourse analysis.

Within the social constructivist perspective, concepts and theories can never be refuted by reference to a separate reality; instead they are challenged by alternative concepts and theories (Porta and Keating, 2008). Furthermore, theories or concepts are partial ways of understanding reality, and when compared to one another, they have the potential to reveal valuable insight related to our world (Kratochwil, 2008). Hence, the primary aim of social constructivist research is to "show how versions of the social world are produced in discourse, and to demonstrate how these constructions of reality make certain actions possible and others unthinkable" (Terre Blanche and Durrheim, 1999: 6). This study therefore explores the different conceptualisations held by the main actors of the BoP Project in a specific context and time, which ultimately contributed to the knowledge production process of this spatial planning exercise. The philosophical approach underpinning a research methodology has a direct implication on what tools should be used for data collection.

5.3 Data collection

Merriam (2002) highlights that in qualitative research there are three major sources of data, namely observations, interviews and documents. All three of these complementary sources were used for data collection, and ensured that suitable data were available for the analysis phase of this dissertation.

5.3.1 Participation in meetings

In terms of primary data collection, during 2008 and 2009 the researcher collectively participated in sixteen meetings between the BoP Project's consultant consortium and the eThekwini Municipality officials, as well as between the various teams within the consultant consortium. These meetings were attended by main actors of the BoP Project, and also included a field trip (28/07/2008) to the study area. The planned future of the study area was debated in this policy arena, and the main actors' language and opinions were observed by the researcher. The details of these meetings appear in Table 5.1, which reveals that the meetings were held either at municipal buildings or the planning team's offices.

Table 5.1: Details of the sixteen Back of Port Project meetings attended

Date	Description	Place[43]
12/06/2008	Inception to Steering Committee[44]	City Engineers
29/07/2008	Field Trip with Consultants and Officials	South Durban Basin (SDB)
22/08/2008	Port Scenario Workshop with Transnet	City Engineers
27/08/2008	Consultant Consortium	Planning Consultant's Offices
08/09/2008	Social Assessment team meeting with the South Durban Basin Area Based Management (SDB ABM) team	SDB ABM offices in South Durban
17/09/2008	Consultants and Planning Officials	City Engineers
27/10/2008	Consultants and Planning Officials	City Engineers
29/10/2008	Steering Committee	City Engineers
06/11/2008	Consultant Consortium	Planning team's offices
18/02/2009	Steering Committee	City Engineers
05/03/2009	Consultant Consortium	Planning Consultant's Offices
19/03/2009	Consultant Consortium	Planning team's offices
01/04/2009	Steering Committee	Botanical Gardens
05/05/2009	Consultant Consortium	Planning team's offices
17/06/2009	Steering Committee	Burman Bush
06/10/2009	Steering Committee	City Engineers

The researcher was directly involved in all of the meetings presented in Table 5.1. This participation ensured that the researcher could effectively observe the knowledge production and decision-making processes within this spatial planning exercise, and subsequently make notes, with particular emphasis on specific phrases which were used by the main actors. The researcher had studied the requirements for discourse analysis, and these phrases proved to be useful in the analysis phase of this study, especially when identifying story lines and the underlying discourses. The observations did not include nuances or changes in speech patterns, but rather the focus was on the language used by the actors. The researcher was given permission by the municipal officials and consultant teams to write down these notes and use them for this dissertation. These notes are considered to be a form of participant observation, which is described by Mouton and Marais (1996) as the process through which the researcher establishes a link between reality and theoretical assumptions. This represents a first-hand encounter with the phenomenon of interest (Merriam, 2002), as these main actors influenced the knowledge production process of this strategic project.

These meetings represented the 'back stages' of the BoP Project, where negotiations took place, issues were discussed by the actors in the policy arena and ultimately decisions were made. By being part of the social assessment team, the researcher became an 'insider' in what Mickez (2012) refers to as the 'back stage', which helped in gaining access, trust and established rapport with the main actors. Thus observations from these meetings were valuable for data collection. Furthermore, being an 'insider' was advantageous with regards to other forms of data collection, particularly securing interviews with these main actors.

[43] The City Engineers, Burman Bush, Botanical Garden and SDB ABM venues are owned by the eThekwini Municipality.
[44] Steering Committee meetings were attended by high ranking municipal officials from all relevant departments.

Another form of primary data collection included obtaining the PowerPoint presentations, which were presented by the main actors during these meetings. These aided in the identification of discourses and story lines in the analysis phase of this study. These presentations highlighted the most important features and concepts of the BoP Project, as well as what the presenters considered to be important in their specific policy fields.

5.3.2 Main actor interviews

Interviews enable the production of a rich and variable data set, through social interaction in a less formal setting (Kitchin and Tate, 2000). They allow for experiences, feelings or opinions to be thoroughly examined in a less formal manner (Kitchin and Tate, 2000). In terms of primary data collection, structured interviews were conducted with 7 members of the consultant consortium, as well as 3 municipal officials. The list of consultants and municipal officials that were interviewed appears in Table 5.2, whilst the interview questions for these respective actors can be found in Appendix A1 and A2. A form of non-probability sampling was used to identify respondents, namely purposive sampling. Purposive sampling is suitable to this methodological approach because the knowledge production process was influenced by a specific closed network of actors[45]. Interviewing these actors ensured that the greatest possible understanding of the BoP Project was obtained. The interviews consisted of open-ended questions. Kitchin and Tate (2000) highlight that these forms of questions enable interviewees to answer the questions in any manner they please, and the participants are not constrained by the interviewer's categories.

Table 5.2: The consultants and municipal officials interviewed

Actor	Interview location	Date Interviewed
Economic Consultant 1	Economic team's office	07/03/2010
Economic Consultant 2	Economic team's office	18/03/2010
Economic Consultant 3	Economic team's office	07/03/2010
Engineering Official 1	Office at City Engineers	20/04/2010
Planning Consultant 1	Planning team's office	21/04/2010
Planning Consultant 2	Residence	10/05/2010
Planning Official 1	Office at City Engineers	09/06/2010
Planning Official 2	Office at Rennies House	24/06/2010
Social Consultant 2	En route to Scottburgh	24/02/2010
Transport Consultant 1	Transport team's office	19/04/2010

Interviews were conducted at the offices of these influential actors, and were completed once the Concept Plan Phase of this spatial planning exercise had been finalised, and specific outcomes had been negotiated. This ensured that the interplay of hegemonic discourses and story lines would be apparent for the analysis phase, whilst some of the interview questions were reflection-based, and examined the BoP Project over time. Similar to the observations made during meetings, the focus was on the language used by the

[45] Certain actors were unable to be interviewed for various reasons, namely Social Consultant 1 (she was the supervisor of this dissertation, and therefore this would have been a conflict of interest), Environmental Consultant 1 (did not respond to numerous requests for an interview) and Engineering Official 1 (unavailable). Nonetheless, what these actors said in the meetings and wrote in reports was used to overcome this challenge.

interviewees and not their nuances or changes in speech. Interviews took approximately 40 minutes to be conducted. Furthermore, Mickez (2012) states that by conducting interviews at the interviewee's office, this tends to reflect the bureaucratic position of the elite actor, as well as the public relation version of responses. It was therefore imperative to supplement this form of data collection with note-taking from the meetings, as the meetings reflected the actors' social constructions and thinking at a particular point in time, and within a different, less bureaucratic context.

The structured interviews were recorded and subsequently transcribed by the researcher. Permission was obtained from the interviewees to record the interviews, which ensured that the interview was accurately recorded word for word with the minimum amount of effort (Kitchin and Tate, 2000). This was advantageous as it enabled the interviewer to concentrate fully on the discussion, as opposed to attempting to balance conversation with note-taking (Kitchin and Tate, 2000). The transcription of interviews was beneficial for this research, as it allowed for the identification of specific phrases which were analysed through the application of the discourse analysis methodology. This resulted in the production of a rich data set.

5.3.3 Review of relevant documents

In terms of secondary data collection, the documents which were generated by the consultant consortium throughout the BoP Project were examined. These documents became available to the public on Wednesday, 20 June 2012 via a public notice issued on the eThekwini Municipality's website (www.durban.gov.za, accessed 04/02/2013). These documents reflect the social constructions generated mostly by the consultant teams, and were shaped by inputs from certain municipal officials. A list of the twelve reports that were used in this dissertation is presented in Table 5.3.

Table 5.3: Reports compiled by the consultant consortium

Document title	Authors
Terms of Reference Document	eThekwini Municipality (2008a)
Inception Report	GMA Consortium (2008a)
Best Practice Report	GMA Consortium (2008b)
Economic Status Quo Assessment	GMA (2009)
Back of Port Planning Assessment	IUDS (2009)
Traffic and Transport Status Quo Assessment	ARUP (2009a)
State of Civil Infrastructure Status Quo Assessment	ARUP (2009b)
Social Impact Assessment (SIA)	Sutherland *et al* (2009)
Environmental Status Quo Assessment	EPD (2009)
Summary of Status Quo Assessment	GMA Consortium (2009)
East-West Corridor Study	IUDS and GMA (2010)
Concept, Framework, Precinct Plans and Zoning Framework Report	IUDS and GMA (2012)

Merriam (2002) notes that documents are a particularly useful data source, as they do not alter the setting. This refers to the fact that with other forms of data collection, such as meeting observations or interviews,

the researcher's presence could potentially alter the setting. Thus, the collective use of observations, interviews, and documents for data collection ensured that a rich data set was obtained. These data were also triangulated by using the three different forms of data collection. This enabled appropriate data to be available for data analysis.

5.4 Data analysis

Since qualitative data are not as rigidly defined as quantitative data, the analysis of qualitative data lacks the formal rigour of standardised procedures (Dey, 1993; Kitchin and Tate, 2000). Consequently there are a number of approaches associated with the analysis of qualitative data, and these are selected according to the researcher's preferences and purposes (Dey, 1993). Nonetheless, in order to make sense of these unstructured data, all qualitative analysis approaches attempt to categorise or make connections within these data (Kitchin and Tate, 2000). For this dissertation, the qualitative data which were analysed were in the form of words, and the context within which they were said.

5.4.1 Hajer's discourse analysis framework

Jacobs (2006) states that discourse analysis has been employed by researchers as a methodology in order to gain understanding of the urban policy implementation process, as well as how influential actors exercise their power. Lees (2004) notes that when undertaking discourse analysis, researchers aim to highlight two things: firstly, the interpretative context, which is essentially the social setting within which a discourse is situated; and secondly, the rhetorical organisation of the given discourse, which refers to the argumentative structure which co-ordinates a text and determines its authority (Lees, 2004). This section focuses on the methodological and interpretive frameworks used for analysis in this dissertation.

There are multiple varieties of discourse analysis, each with their different assumptions. The approach selected for this dissertation is based on Maarten Hajer's methodology. He used discourse analysis as a means to examine the construction and production of dominant discourses, and explore the institutional practices within which these discourses are produced (Hajer, 2003b). His approach has less of a linguistic focus than other discourse analysis theorists (Hajer, 2003b). Hajer's (2003a) earlier insights on discourse analysis were combined with his more recent work (Hajer, 2005b), in order to create a methodological framework for the analysis of this study, which is presented in Table 5.4. In his earlier work, Hajer (2003a) identified three critical elements of his discourse analysis framework: namely shifts in the terms of policy discourse, the formation of discourse-coalitions and the specific institutional practices in which various discursive conflicts occur. Two years later, in his more recent work (Hajer, 2005b), these were referred to as the discursive dimension of policy analysis. Hajer (2005b) added to these elements of discourse analysis by incorporating the dramaturgical and deliberative dimensions of policy analysis.

Table 5.4: Hajer's discourse analysis framework

Discursive dimension	
Terms of Policy Discourse	*Story lines, metaphors and myths* - Generative statements that bring together previously unrelated elements of reality - Facilitates the formation of discourse-coalitions *Policy vocabularies* - Refers to a clear set of concepts structuring a particular policy - These are consciously developed by policy-makers *Epistemic notions* - Certain rules of formation that underpin theories and policies, but are not formulated in their own right - Actors are not necessarily aware of epistemic notions, but their understandings of reality and behaviours are structured by them
Discourse-coalitions	- This is comprised of three elements, namely: a series of story lines; various actors which subscribe to and promote particular story lines; as well as the distinguishable institutional practices within which discourses are generated, modified and transformed - Story lines act as the cement which binds discourse-coalitions, and can be used to create new coalitions
Institutional practices	- Operational routines and mutually accepted rules and norms which give coherence to social life - Refers to the domain in which discoursing, contestation and argumentation occur
Dramaturgical dimension	
Setting	- The physical situation in which the interaction takes places, and also includes the artefacts which are brought into the situation
Scripting	- An effort to create a setting, by controlling which actors participate - Provides cues for appropriate actor behaviour
Staging	- The deliberate organisation of an interaction, which draws on existing symbols and invents new ones - Makes the distinction between active players and passive audiences
Performance	- Conceptualised as a series of staged events where actors interactively determine and negotiate the way forward - The way in which the contextualised interaction itself produces social realities such as understanding of the problem at hand, knowledge, and new power-relations
Deliberative dimension	
Reciprocity	- Discussions must be conducted through an argumentative exchange, hearing both sides, and responding to one another's arguments
Inclusiveness	- Debates require that stakeholders are made part of the argumentative exchange
Openness	- The way in which the debate is staged and conducted should avoid unnecessary barriers
Integrity	- The debate requires honesty and no double play
Accountability	- Those involved are accountable to political bodies and to the public at large, also with regards to the degree to which the rules as laid out have been guaranteed
Dialogue	- Learning through an iterative process in which knowledge is mobilised and enriched through confrontation with a variety of stakeholders

Source: Adapted from Hajer (2003a; 2005b)

It is important to note that the research objectives of this dissertation are based on the three dimensions of policy analysis highlighted by Hajer (2005b). Certain concepts presented in Table 5.4 have been discussed in Chapter Two, including discourses, story lines, discourse-coalitions and practices. Overall, this analytical framework is considered to be an appropriate methodology for examining the BoP Project's knowledge production process.

When applying Hajer's discourse analysis framework to the data collected, certain features of this framework were more applicable. Retrospectively, the discursive dimension of this analytical framework became highly relevant in the analysis phase, followed by the dramaturgical dimension. However the deliberative dimension was less prominent, due to two main reasons. Firstly, data from the BoP Project were generated within a closed network, consisting of 'expert' consultants and experienced municipal officials. All of these members had a 'voice' or some power in this strategic project, and their discourses could emerge within this network. Secondly, when this dissertation was being compiled, no decision had been made by the eThekwini Municipality with regards to the implementation of the outputs of the BoP Project, and no information was available pertaining to the possible impacts of the public participation process on this spatial planning exercise. This therefore reduced the applicability of applying the deliberative dimension of this framework to the BoP Project. After identifying Hajer's discourse analysis framework as an appropriate means to analyse the knowledge production process of this spatial planning exercise, the researcher sought to find an additional framework to aid in the interpretation of the data.

5.4.2 Data interpretation: the framework for data analysis

Dey's (1993) approach to qualitative data analysis was selected as an additional framework for data analysis. This was combined with Hajer's (2003a, 2005b) discourse analysis framework, in order to satisfy the aims and objectives of the study. For Dey (1993), the crux of qualitative analysis is associated with the iterative processes of describing the researched phenomena, classifying it and finally observing how various concepts interrelate with one another. This process appears in Figure 5.1, where description, classification and connecting ensures that data are disassembled into separate fragments, and links are then explored between these fragments, which results in a new explanation of the data (Dey, 1993).

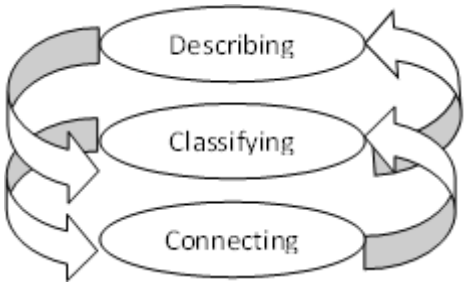

Figure 5.1: Dey's framework for qualitative data analysis (adapted from Dey, 1993)

The arrows in Figure 5.1 depict that qualitative analysis is an iterative process, with interaction occurring between the different phases of analysis. Starting off with the describing phase of analysis, the data are disassembled into separate fragments. In this study this was achieved by the transcription of the interviews and observations from the meetings, followed by comments and reflections made by the researcher on the transcriptions, bearing in mind the various analytical components of Hajer's (2003a; 2005b) discourse analysis framework. These comments and reflections were also made in relation to the documents

collected. Under the description phase, a timeline of the BoP Project was compiled, which briefly described events over the lifespan of the BoP Project, and explored what was produced in each stage. These data fragments were split in a manner which ensured that they were easy to interpret, which helped to reveal the main arguments and conceptualisations of the BoP Project. Important aspects of description include the context in which action takes place, actor intentions and the entrenched institutional processes which influence action (Dey, 1993).

The second step involved classifying data in order to make sense of it. Classification entails the disassembly of data into separate fragments, and subsequently bringing these fragments together again into meaningful categories (Dey, 1993). This establishes the conceptual basis for analysis and enables comparison, by revealing inherent similarities and differences (Dey, 1993). During this phase, the researcher explored the evolution of the main arguments and conceptualisations over time. By redefining categories, more accurate conceptualisations can be generated, which are guided by the research objectives (Dey, 1993). The aforementioned comments and reflections proved to be useful in the classification phase of analysis, as the transcriptions and documents were made sense of by using Hajer's (2003a; 2005b) discourse analysis framework. This resulted in the identification of preliminary story lines, as well as the broad epistemic notions. Preliminary underlying discourses, which were associated with these story lines, were also identified when related to the theoretical framework of this study. Understanding the meanings of these various discursive elements was imperative to this phase of analysis.

Subsequently, the categories were further refined into sub-categories, which Dey (1993) refers to this process as 'splitting'. 'Splitting' into sub-categories provides greater resolution and detail for the categories (Dey, 1993). 'Splitting' allowed the preliminary story lines to be sub-categorised into distinctive components, and revealed their descriptive aspects and underlying meanings. The next step is 'splicing', whereby categories are joined by interweaving different strands of analysis (Dey, 1993). The goal of 'splicing' is to enable improved integration and scope of the analysis (Dey, 1993). In the context of this study, 'splicing' resulted in the further examination of the meanings of the discursive elements identified, and resulted in the identification of definitive discursive elements. This was an iterative process and was completed on a number of occasions. In addition, at a later stage the researcher also explored the coalescing of different story line components, which resulted in the identification of discourse-coalitions.

The third stage of data analysis connected the categories and sub-categories of the analysed data. Classification allows the researcher to ascertain logical connections between various categories, as well as identify patterns within the data and how it interacts (Dey, 1993). Dey (1993) stated that substantive connections can be revealed by highlighting associations between variables, such as regularities, variations and singularities in the data. The researcher re-examined all of the described and categorised data, and explored the linkages between these data and the specific outcomes of the BoP Project. This was also

linked to the dramaturgical and deliberative elements noted in the collected data. In addition, theoretical concepts presented in Chapter Two and Chapter Three were connected to the analysed and categorised data. Thus, 'connecting' considered the BoP Project over time, and explored how the different strands of the various analytical components interacted with one another, for the discursive, dramaturgical and deliberative dimensions of this research. The BoP Project was examined over its four different phases, as well as its final output. This enabled the holistic and effective analysis of collected data using Hajer's (2003b; 2005b) discourse analysis framework. Thus a thorough analytical method and data interpretation framework were selected for this dissertation.

5.5 Limitations of the study

In undertaking any research, limitations are encountered, and these will be briefly explored in terms of this study. There are limitations associated with the discourse analysis method and positionality in action research, whilst further limitations were faced in terms of the extended timeframe of the BoP Project, and the availability of certain actors to be interviewed. However, these limitations were overcome, and did not adversely affect the overall validity of this dissertation.

5.5.1 Criticisms of the discourse analysis method

Jacobs (2006) states that discourse analysis is often criticised for having limited utility in a practical context. Linked to this statement, Lees (2004) criticises discourse analysis for not promoting social justice, and argues that it therefore has a limited role in terms of urban activism. However Jacobs (2006) maintains that it is useful for highlighting organisational inequalities and contested dynamics of power, and it therefore can be potentially useful in practical contexts. Discourse analysis was useful in highlighting the drivers of the BoP Project, and also revealed knowledges which were rejected or side-lined. These are important considerations when attempting to make sustainable decisions.

A further criticism levelled against discourse analysis is concerned with bias and distortion, referring to the fact that some researchers select particular evidence to support their arguments and disregard opposing evidence (Jacobs, 2006). These biases are particularly evident in interviews and their subsequent analysis (Mickez, 2012); however, this can be overcome by using the full range of data collection techniques. Jacobs (2006) argues that the only way to overcome this is to be explicitly clear about the criteria pertaining to the selection of discursive evidence and the framework of analysis. Mickez (2012) states that comparing and contrasting interviews with official documents also helps to eliminate these biases. Thus the researcher used a range of data collection techniques, and additionally selected a robust methodological framework in order to overcome this challenge associated with discourse analysis.

Kitchin and Tate (2000: 212) note that the "researcher is an objective scientist producing data in a neutral fashion and for no other purpose than to increase understanding of a particular phenomenon". However, due to the nature of social constructivism, the research process can often be affected by subjectivity. Researchers undertaking qualitative research are fundamentally constructing interpretations of interpretations (Mottier, 2005). With interpretive qualitative analysis subjectivity is an issue, due to the inherent social construction of data, whereby data collection is fundamentally the mutual construction of meaning, rather than passive extraction of information (Mottier, 2005). Therefore, qualitative analysis is often criticised for being too subjective (Dey, 1993). Bearing in mind that subjectivity is a criticism levelled against discourse analysis, the researcher endeavoured to be as objective as possible.

5.5.2 Positionality in action research

As this research is classified as action research, it is imperative to explore the issue of positionality. Positionality refers to the dynamic between the researcher and interviewee, and is central to all forms of qualitative research (Ganga and Scott, 2006). The adoption of an action research approach ensured that the researcher was an insider in this strategic project. However, by being part of the social assessment team, the researcher had a pre-existing relationship with the setting and main actors of this spatial planning exercise. By being an insider, researchers are able to easily identify common problems or social subtleties and build rapport with participants; however, this pre-existing relationship will also shape how the participant perceives the researcher and answers the researcher's questions (Ganga and Scott, 2006).

Positionality is now however accepted as good practice in social science research, and is considered to enhance the research process (Ganga and Scott, 2006; Bourke, 2014). Being an insider was beneficial with regards to securing interviews with high-profile actors involved in the BoP Project. In order to overcome the challenges associated with being an insider, the researcher applied theory in order to remain objective in the analysis. Furthermore, the range of data collection techniques employed ensured that a wide range of data were collected. This overcame any data omissions in the main actor interviews, which may have been caused by the pre-existing dynamic between the researcher and respondents.

5.5.3 The scope and timeframe of the Back of Port Project

This limitation refers to the fact that although the BoP Project was initiated in late 2007, it has not been influenced, finalised and formalised by public participation, which only began in July 2012. This is because the BoP Project was put on hold, as a result of the FIFA 2010 Soccer World Cup, Municipal Elections in 2011, as well as the need to study and understand the East-West Corridor[46]. Furthermore, no information is available regarding the potential impact of public participation processes on this spatial planning exercise, and whether this strategic project will be implemented.

[46] The East-West Corridor Study explored the future development of a dedicated freight route which linked Durban's port area to an inland intermodal terminal facility at Cato Ridge.

As a result, the policy arena analysed in this dissertation only included the actor network comprised of the municipal officials and the consultant consortium, and did not include other stakeholders such as the general public. However, the concerns and perceptions of SDB residents were collected and incorporated into the *Social Impact Assessment* (*SIA*), which formed part of the documents reviewed for this study. Furthermore, the researcher was directly involved in interviewing SDB residents and community organisations, and this experience helped to enhance the researcher's insights into the SDB's living environment[47]. Therefore, by adopting an action research approach, the perceptions and positions of SDB residents and community organisations did influence the interpretation of the data.

The lack of direct input from other stakeholders had implications in terms of the deliberative dimension of the BoP Project, as these could not be fully explored outside of the already defined policy arena. If the BoP Project had been finalised, and adjusted, implemented or ultimately rejected, that would have added an extra dimension to this dissertation. However, the researcher believes that this did not compromise the validity of this dissertation, as it facilitated a greater, in-depth analysis of the discursive and, to a lesser extent, the dramaturgical dimensions of this strategic project.

5.5.4 Availability of certain actors to be interviewed

The researcher was unable to interview all of the actors, such as the BoP Project's project manager, the Head of Engineering, eThekwini Transport Authority's representatives and the environmental consultant involved in the project. Numerous attempts were made to interview these individuals; however they were unsuccessful due to municipal staff turnover and high workloads linked to other projects associated with the FIFA 2010 World Cup, as well as the unwillingness of some actors to be interviewed. It is imperative to note that interviews represent one form of data collection, and this challenge was overcome by using observations in meetings as a supplementary form of data collection. In the case of the environmental consultant's unwillingness to be interviewed, the environmental team's report was collected and analysed in this study. Overall, ten actors were interviewed, which provided valuable data for analysis.

5.6 Summary

Chapter Five has detailed the particular methodology which was adopted for this dissertation. Qualitative research was introduced; followed by social constructivism, the philosophical framework in which the discourse analysis approach is situated. The researcher was part of the social assessment team, and importantly became an 'insider' at the 'back stage' meetings of the BoP Project. This was advantageous for data collection, and enabled the researcher to attend main actor meetings and compile hand-written notes,

[47] Primary data for the SIA were collected through conducting 359 resident interviews, and 17 interviews with important social organisations within the study area (see Sutherland *et al,* 2009). The researcher was part of the team that conducted interviews with residents, and was also involved in all of the interviews with the social organisations.

as well as interview main actors and have access to documents associated with the BoP Project. The focus during the data collection phase of the study was on the language used by main actors in this project, rather than the nuances or changes in speech. In addition, the context in which this language was used was noted. Discourse analysis was selected as the methodological framework for analysis of this study, and this framework was established by combining Hajer's (2003b; 2005b) work on discourse analysis. In order to promote effective data interpretation and analysis, Dey's (1993) interpretive framework of qualitative data analysis was selected. The combination of these robust frameworks enabled the collected data to be analysed, in order to satisfy the aim and objectives of this study. Finally, the limitations of the study were discussed; however the issues encountered did not reduce the validity of this dissertation, as a number of techniques were used to overcome these challenges. Thus, the way in which analysis occurred in this study was explored, in order to ascertain how the results of this dissertation were discerned.

The next chapter is the first results chapter, which explores the analytical dimension of the BoP Project. Firstly the unique context of the BoP Project is outlined; whilst secondly, epistemic notions influencing this strategic project are discussed. The bulk of Chapter Six focuses on the analysis of the story lines identified within the planning and transportation policy fields, and reveals their underlying discourses. These 'framing' story lines influenced the knowledge production process of this spatial planning exercise.

CHAPTER SIX: THE CONTEXT, EPISTEMIC NOTIONS AND FRAMING STORY LINES OF THE BACK OF PORT PROJECT

6.1 Introduction

Discourse analysis provides the researcher with a set of tools which facilitates the interpretation of urban policy, as it reveals important insights, deeper understandings and the ways in which actions are embedded in language (Jacobs, 2006). The results presented in Chapters Six, Seven and Eight emerged from the analysis of the main actor interviews, meeting observations and the relevant Back of Port (BoP) related documents. Chapter Six has three sections. It firstly focuses on the unique context of the BoP Project, as context is critical to any discourse analysis. It is important to have an understanding of the context, as meaning is only accurately conveyed if the context is understood (Dey, 1993). Reality is perceived to be the product of our conceptualisations, and interpretations can be seen as a snapshot of a particular phenomenon, at a given time and in a specific context (Kratochwil, 2008). In the second section, three epistemic notions are identified within this policy arena. Epistemic notions influenced the thinking of actors participating in the BoP policy arena; however they were not formulated in their own right. These extensive framing concepts refer to the conformity in thinking and understanding during a specific period of time, which influences an actor's interpretation of reality (Hajer, 2003a). The epistemic notions identified had implications for the BoP Project's knowledge production process, as they influenced which conceptualisations became hegemonic and counter-hegemonic in this project. The third section briefly highlights the six story lines that were identified within the five policy fields of this spatial planning exercise. Thereafter, the transport and planning story lines are deconstructed using the discourse analysis methodology into various components and descriptive aspects. These story lines were identified as framing story lines within the BoP Project. In addition, their underlying discourses are revealed. These story lines shaped the various conceptualisations within the BoP policy arena, and the interactions of their components shaped the outcomes of this spatial planning exercise. Overall, the identification of these discursive elements provides insight into understanding the conceptualisations and rationalisations which influenced this project, and consequently shaped its knowledge production process.

6.2 The unique context of the Back of Port Project

When applying the discourse analysis methodology, a phenomenon is not significant in its own right, but rather the meaning attached to the phenomenon is considered to be important (Hajer and Versteeg, 2005). Meaning is shaped by context, and understanding the context within which any development occurs is critical, as it heavily influences the way in which a development is planned and implemented. A summary of the general context of the BoP Project, which was presented in Chapter Four, appears in Table 6.1.

Table 6.1: A summary of the general context of the Back of Port Project

Description
• The geography and context of the South Durban Basin (SDB) is shaped by the impact of apartheid planning on the complex social environment • A long history of failed planning projects in the area has caused mistrust between citizens and the local government • The move of the Durban International Airport (DIA) to the north of Durban has opened up this site for redevelopment • The environmental problems in the area have led to the development of highly polarised social movements in the SDB (Scott and Barnett, 2009)

However, according to Hajer (1995: 17), reality "is always particular, it is always dependent on subject-specific framing or time-and-place specific discourses that guide our perceptions of what is the case". Material reality, which includes the social, economic and physical characteristics of place, forms part of the context. Although the general context of the study area was influential in the BoP Project, certain aspects became more prominent in the BoP policy arena, and shaped the eThekwini Municipality's and consultant consortium's perceptions of the study area, as well as the perceived 'way forward'. It is therefore important to explore the time-and-place specific context of the BoP Project, which was specifically acknowledged by the main actors throughout the project. This unique context influenced how the BoP Project was conceptualised throughout its phases, and shaped how meaning and understanding was ascribed to this spatial planning exercise. This section examines the unique context of the BoP Project, as this influenced the rationalisations, and hence the knowledge production and decision-making processes associated with this project.

6.2.1 Transnet's 'port of choice' decision

The South African port governance system can be described as monopolistic, as the state owned enterprise Transnet governs strategic port planning decisions, such as the location of port operations and functions for ports throughout the country[48] (Kaselimi, 2012). Traditionally, the Port of Durban was Transnet's 'port of choice' for containerised cargoes and the main gateway to the economic hub of Gauteng (Merk *et al*, 2014) (See Chapter 4). However at the inception of the BoP Project, Transnet was reviewing its strategic port planning options for the South African port system, bearing in mind their mandate to stimulate economic growth and efficiency in South Africa. This created a context of uncertainty for the Port of Durban and the adjacent eThekwini Municipality, as secondary ports at Richards Bay, Cape Town, Coega and Maputo could potentially be selected as South Africa's new 'port of choice' for containerised cargoes, and could become the main gateway to Gauteng (Economic Consultant 1, 07/03/2010; Planning Official 1, 09/06/2010). This represented a threat to the Port of Durban's dominance over the region (Planning Official 1, 09/06/2010). Furthermore, the general consensus was that the Port was experiencing a congestion

[48] Transnet's goal is to become a focused freight transport company, which has the ability to deliver integrated, efficient, safe, reliable and cost-effective services to stimulate economic growth in South Africa (www.transnet.co.za, accessed 20/04/2015).

crisis[49], and when coupled with high levels of inefficiency, this seemingly reduced the attractiveness of the Port with regards to Transnet's impending decision (Social Consultant 2, 24/02/2010). This intensified the context of uncertainty within the BoP Project and further motivated the eThekwini Municipality to deal with the congestion crisis.

Despite the context of uncertainty surrounding the Port of Durban, Transnet still had various port development options for the Port (see Section 4.3.4). These included various infilling options at either Bayhead or Island View, as well as the potential for a dig-out port at the former Durban International Airport (DIA) site (Transport Consultant 1, 19/04/2010). The timing or phasing of these potential port development scenarios was unknown, which further heightened uncertainty and added to the complexity of the BoP Project (Social Consultant 2, 24/02/2010; Transport Consultant 1, 19/04/2010; Planning Official 1, 09/06/2010). The context of uncertainty was prevalent throughout the BoP Project. Uncertainty is a defining characteristic of a mega-project (Lehrer and Laidley, 2009).

6.2.2 The complex relationship between Transnet and the eThekwini Municipality

The structuring of South Africa's port governance system has created a tension between Transnet and local governments, as Transnet is a powerful port decision-making institution, whilst local governments have had little power in port-related matters within their local setting[50] (Planning Official 2, 24/06/2010). In Durban, this resulted in Transnet and the eThekwini Municipality historically planning in isolation from one another (Engineering Official 1, 20/04/2010; Planning Official 2, 24/06/2010). Thus there was a poor, ineffective and dysfunctional relationship between Transnet and the eThekwini Municipality, which led to uncoordinated and uncooperative planning around the Port of Durban (Social Consultant 2, 24/02/2010; Transport Consultant 1, 19/04/2010; Engineering Official 1, 20/04/2010; Planning Consultant 1, 21/04/2010). This contributed to the congestion crisis.

However, by 2000 there was a mutual realisation that planning initiatives undertaken by the eThekwini Municipality adjacent to the Port of Durban were in conflict with Transnet's draft Port Masterplan, which was having an adverse impact on the Port (eThekwini Municipality, 2008b). Due to this realisation, Transnet and the eThekwini Municipality began to engage with one another at a strategic level (Planning Official 2, 24/06/2010). Subsequently it was rationalised that joint planning between these institutions was required, in order for the Port of Durban to function effectively and efficiently (Planning Official 2, 24/06/2010). Consequently, the Transnet eThekwini Municipality Planning Initiative (TEMPI) was created, which was a cooperative, joint planning exercise between these institutions. Planning Official 2

[49] ***Solving the congestion crisis*** is identified as a story line in the transport policy field (See Section 6.4.1).
[50] Planning Official 2 (24/06/2010) noted that ports in South Africa are "managed, operated and owned by agencies outside of the city", which is contrary to global port-city trends, where "95 percent of ports in the world are managed by the city they are located within".

(24/06/2010) acknowledged that the eThekwini Municipality "was the first [municipality] in South Africa to look at a joint planning exercise [for ports]... So we basically set a best practice for the rest of the cities in South Africa". This meant that these two entities began to strategically engage with one another in terms of port development and planning.

This was the start of a constructive relationship between Transnet and the eThekwini Municipality, resulting in the alignment of planning interests between these two institutions (Economic Consultant 2, 19/03/2010; Planning Consultant 1, 21/04/2010; Planning Official 2, 24/06/2010). However, according to Social Consultant 2 (24/02/2010), "Transnet isn't forthcoming with any of their plans. And this puts the municipality in a very difficult position to plan for every eventuality. They don't know phasing of ports, but we have to plan for both ports. This relationship is a key obstacle to the whole project". In contrast, other main actors believed that this relationship had improved over time and in the latter stages of the BoP Project, this relationship was described as healthy and strong (Economic Consultant 3, 07/03/2010; Transport Consultant 1, 19/04/2010; Planning Consultant 1, 21/04/2010; Planning Official 1, 09/06/2010; Planning Official 2, 24/06/2010). It was however noted that tensions still existed between these two institutions (Economic Consultant 2, 19/03/2010), and these were attributed to top management issues, as well as the spill over of conflicts from other Port-City projects (Engineering Official 1, 20/04/2010; Planning Official 1, 09/06/2010). This highlights the complicated nature of the relationship between Transnet and the eThekwini Municipality, and reveals the complex institutional setting in which this project was situated.

TEMPI created the underlying rationale for the eThekwini Municipality to examine the land uses in the BoP zone adjacent to the Port of Durban. At the inception of this project, the Municipality recognised that there was a lack of co-ordinated planning around the Port and no formal logistics zone to support this economic asset (Transport Consultant 1, 19/04/2010). This was the rationale driving the BoP Project, with the goal of making the Port of Durban attractive to Transnet with regards to their impending 'port of choice' decision, as well as appealing to the global shipping industry (Economic Consultant 1, 07/03/2010). The initiation of the BoP Project meant that the local government was starting to "think and play like a port-city" (Planning Official 1, 09/06/2010). A BoP zone would be created by restructuring land use and movement systems in the study area, which would create synergy with the Port (Social Consultant 2, 24/02/2010). Thus the BoP Project was situated in a complex institutional setting, with the goal of restructuring land uses in the study area for the benefit of the Port.

6.2.3 The 'break' in planning in the South Durban Basin

From the mid-2000s, municipal studies which focused on the South Durban Basin (SDB) reflected a shift in terms of their understanding of planning and management of this area (IUDS, 2009). Conceptual shifts result in an issue being seen in a different light, and create a range of new options available for policy-

making (Hajer, 2003a). Prior to this 'break'[51], studies had a greater focus on the current problems of the SDB, and promoted interventions to retain the status quo of this area (IUDS, 2009). However, this 'break' meant that there was a shift in the conceptualisation of the SDB, and consequently it was questioned whether planning and other interventions should maintain the area as it is, or whether the local government should recognise that the SDB was undergoing change, and actively accommodate and support these changes (IUDS, 2009). The latter option was favoured by the eThekwini Municipality throughout this spatial planning exercise.

Overall, these three aspects contributed to the unique context within which the BoP Project occurred, and also influenced the range of understandings within this spatial planning exercise. Thus the BoP Project is a large scale, strategic project, which exists in a context characterised by high levels of uncertainty and institutional complexity. Furthermore, the shift in approach related to the planning and management of the SDB meant that different planning ideas could be applied to the study area. A discursive element which also shaped conceptualisations in the BoP policy arena was the epistemic notions in place at the time, and these are explored in the following section.

6.3 Epistemic Notions

Epistemic notions are defined as specific rules of formation which form the basis of theories or policies. However, these rules of formation are not created in their own right (Hajer, 2005b). Epistemic notions denote the conformity of thinking during a particular time period, which shapes an actor's interpretation of reality (Hajer, 2003a). Three epistemic notions which influenced the understandings of reality during this spatial planning exercise were identified, and these are presented in the following sections.

6.3.1 Sustainability

Sustainability is a highly complex concept, and represents the prevailing thinking regarding the ideal approach to both global and local development. It considers the needs of the current and future generations, and has four dimensions: economic, environmental, social and institutional (Spangenberg *et al*, 2002). Sustainability calls for an integrated approach, and it was a structuring element of the BoP policy arena[52]. This meant that the BoP Project was configured in such a way that economic, environmental, social and governance concerns would be holistically considered in this spatial planning exercise, primarily through the inclusion of multi-disciplinary consultants and their discipline-specific knowledges. This structuring meant that these knowledges had the potential to influence decision-making in this project. Sustainability was not formulated by the actors participating in the BoP Project. However this normative concept

[51] 'Break' was the term used by the planning team to describe the shift in the planning and management of the SDB.
[52] Sustainability is embedded in South African politics, as it is entrenched in the South African Constitution, and therefore influences the three tiers of government through legislation, laws and policies.

influenced their practices, actions, interactions with other actors, interpretations of reality and ultimately the knowledge production process[53].

The majority of actors accepted sustainability as being integral to the BoP Project. Economic Consultant 1 (12/07/2008) acknowledged that "sustainability has been accepted nationally as a framing discourse in environment, planning and development in South Africa". Although the BoP Project, which was initiated by the eThekwini Municipality, could be categorised as a pro-growth, neoliberal project, other counter disciplines, such as the social and environmental policy fields, were also represented in this spatial planning exercise. From the outset of the BoP Project, the accepted goal was to resolve issues "within the framework of sustainability" (GMA Consortium, 2008a: 42).

Concerns about sustainability were also evident in the Best Practice and Situational Assessment Phases of this strategic project. Economic Consultant 2 (18/03/2010) stated that the Best Practice Phase was "a learning curve in terms of how to make these [international best practice learnings] sustainable within the context of Durban and South Africa". In particular, the social team drew from sustainability, and in the *Best Practice Report*, they noted that "[s]ince *sustainability* is the overarching normative conceptual framework of the study, concepts, principles and best practices related to the integration of economic, social, ecological and governance issues will also be drawn on" (GMA Consortium, 2008b: 95). The social team's goal was to ensure "procedural, intergenerational and intragenerational equity", and they therefore called for sustainable decisions to be made in this project (GMA Consortium, 2008b: 95). During the Situational Assessment Phase, the social team interpreted data in terms of social sustainability. They noted that the "results of this study will reflect on both the high and low levels of social sustainability that are present in the area, and these need to be taken into account in the planning process for the Back of Port" (Sutherland *et al*, 2009: 9). Sustainability, as an epistemic notion, was therefore influential throughout the BoP Project, particularly for the social team, who used concepts of sustainability to verify their findings and to promote the inclusion of local concerns into this spatial planning exercise.

The *Back of Port Concept, Framework, Precinct Plans and Zoning Framework Report* (*BoP Final Concept Report*) included the ecological, economic and social elements of sustainability as specific headings (IUDS and GMA, 2012). Although sustainability considerations were evident throughout the BoP Project, the degree of sustainability in the outcomes was questionable, and the 'hotspot' area of Clairwood became an emblem of how the economic agenda dominated decision-making in the BoP policy arena. Due to Clairwood's close proximity to the Port of Durban, it was envisaged that this area was ideal for restructuring to logistics and port-related land uses. However findings from the social team revealed that residents wanted to remain in this precinct, due to their attachment to the area and strong social networks

[53] Evidence of the sustainability epistemic notion is outlined in Appendix B1.

(Sutherland *et al*, 2009). At the end of the Concept Plan Phase, the consultant consortium recommended that the centre of Clairwood be retained as the residential core, and that it should be surrounded by logistics uses. However, this vision for Clairwood was rejected by city management and officials, and a logistics dominant option was selected as the future of Clairwood[54]. This decision highlighted that the economic imperative of the local government was a critical driver in the BoP Project, and became dominant over dimensions such as social sustainability. Sustainability was therefore compromised within the final outcomes of the BoP Project, despite the initial acknowledgement that issues would be resolved "within the framework of sustainability" (GMA Consortium, 2008a: 42). The second epistemic notion identified through the analysis is urban entrepreneurialism.

6.3.2 Urban entrepreneurialism

Urban entrepreneurial strategies undertaken by cities support neoliberalism, and attempt to take advantage of capitalist processes in order to create a 'good business climate' (Harvey, 1989a). City authorities no longer solely have a managerial role, but they are now also the facilitators of economic growth at the local level. Urban entrepreneurialism was identified as the second epistemic notion influencing the BoP policy arena, and it was a critical driver underlying the initiation of this spatial planning exercise[55]. Urban entrepreneurialism is not exclusive to the port-city of Durban, but rather it is a common city strategy used throughout the world. This epistemic notion framed the eThekwini Municipality's understanding of the Port's role within the city, as well as their strategic planning response, which was the inception of the BoP Project. In the *eThekwini Economic Review 2006/07* (GMA, 2006), the Port of Durban was understood as being critical to the local economy[56]. It was understood that the Port of Durban was "a gold mine that is largely untapped at the moment… [where the] potential for growth and development … can actually be three to four fold" (Planning Official 2, 24/06/2010). The Port therefore represented a natural asset to the Municipality and its local economy; however this asset was under threat due to Transnet's impending 'port of choice' decision and the continuing congestion crisis.

The rationale driving the BoP Project therefore sought to strategically address the Port's congestion issues. By creating landside spaces which complemented port activities, the Port of Durban would become more attractive to Transnet, and this intervention would therefore influence their impending decision by enhancing the efficiency of the Port. The study area was therefore understood as "an area of unrealised potential" (Economic Consultant 1, 07/03/2010), which was "valuable and strategic to the City"[57] (Economic Consultant 2, 18/03/2010), as it could "stimulate economic growth" (Planning Official 2,

[54] This is further discussed in Section 8.6.4.
[55] Additional evidence of the urban entrepreneurialism epistemic notion is presented in Appendix B2.
[56] eThekwini's local economy focuses predominantly on port-related transport and logistics activities, domestic and export-orientated manufacturing and tourism (GMA, 2006).
[57] The 'City' refers to the eThekwini Municipality.

24/06/2010). Reflecting the urban renewal developmental logic, this spatial planning exercise would strategically create a 'good business climate' and enabling political economy, which according to Harvey (1989a) are defining features of urban entrepreneurialism.

As the BoP Project was initiated and scripted by the eThekwini Municipality, an entrepreneurial approach was always destined to be the structuring factor in terms of decision-making for this spatial planning exercise. The urban entrepreneurial approach adopted by the local government therefore shaped the consultant consortium's interpretations during the BoP Project. This approach was not initially revealed to the consultant consortium, but over time the entrepreneurial goals of the local government became apparent. Social Consultant 2 (24/02/2010) described this process as the "City putting its cards on the table", with this pro-growth rationale coming to the fore in the BoP Project. Overall, this approach meant that the space adjacent to the Port of Durban would be rationalised and restructured for logistics and port-related land uses. It was envisaged that this urban space would become a created asset that would complement the Port and its activities. Identifying and using specific advantages possessed by a place highlights the pursuit of urban entrepreneurial objectives (Harvey, 1989a). Therefore the urban entrepreneurialism approach ensured that a strong economic, neoliberal agenda was deeply embedded within the BoP Project, and this economic rationale became an influential criterion for decision-making.

Urban entrepreneurialism was therefore a critical underlying driver within the BoP policy arena, and this epistemic notion shaped the knowledge production processes, decision-making criteria and outcomes of this project. It therefore influenced and constrained the consultants' thinking and actions during this spatial planning exercise. The third epistemic notion identified through discourse analysis is known as the spatial or functional knowledge requirement of spatial planning.

6.3.3 Spatial or functional knowledge requirement of spatial planning

As the BoP Project was a spatial planning exercise, actors had to conform to the epistemic notion associated with spatial planning. This epistemic notion was identified as the spatial or functional knowledge requirement of spatial planning[58]. With the overall aim of generating a Local Area Plan (LAP) and Land Use Management Scheme (LUMS)[59], the outcomes needed to be spatial, and therefore be able to appear on a map; or they needed to have a functional purpose, which was closely aligned to the goals and objectives of the BoP Project. This implicit requirement was not pointed out to actors; however it did influence their contribution of knowledge to this project. It shaped how knowledge would be interpreted

[58] This is also referred to as the spatial or functional knowledge requirement in this dissertation.
[59] A LAP provides a distinct framework for the management of development and land use in a particular local area (eThekwini Municipality, 2008a), whilst a LUMS is informed by the LAP, and has greater detail at the local level with regards to managing and promoting development in an area (eThekwini Municipality, 2011).

and evaluated in this process, as well as how it would potentially be incorporated into these spatial planning outcomes.

In the *Terms of Reference Document*, the stages of a LAP process were presented, which drew primarily from the eThekwini Municipality's Framework Planning Department document titled *Local Area Plan Guidelines* (eThekwini Municipality, 2008a). The first stage of a LAP requires a situational assessment to be conducted for a particular area, whilst the second stage focuses on the role of the area and the subsequent development of a spatial framework. In terms of defining the role of the area, the broad purpose of the area is stated, and next this role is unpacked for each sub-area, which is based on functionality, movement corridors and natural boundaries (eThekwini Municipality, 2008a). Linked to the role of the area, economic, social and environmental goals are developed in order to improve and support the area and sub-areas (eThekwini Municipality, 2008a). Subsequently, the roles, goals and objectives are translated into a spatial framework for the area. The spatial framework includes greater detail on features such as the desired movement system; hierarchy of nodes; key assets; range of land uses; range of residential densities and sizes; public spaces; service levels; linkages with other areas; the urban edge; impacts; and development phasing (eThekwini Municipality, 2008a). These requirements reiterate the importance of spatial and functional knowledge in spatial planning exercises in this context. If knowledge is spatial or functional, it can be influential and powerful in the second stage of the LAP process, and therefore has the potential to influence spaces in cities.

Bearing these stages of the LAP process in mind, Planning Consultant 1 (21/04/2010) highlighted that planning "integrates other sectors and puts it down into a summary. It captures the issues, but at the same time it tries to give direction and resolve". Economic Consultant 3 (07/03/2010) revealed that "in terms of working towards a spatial solution and plan, the functional elements came to the fore and were dominant". Actor behaviour and the knowledge produced were therefore framed by this epistemic notion. For example, in the Best Practice Phase, the economic team referred to their Best Practice concepts as the 'Back of Port Functions Case Studies', whilst the planning team ordered land uses according to their functional relationship with the port, in order to achieve a functional solution. This revealed that the spatial or functional knowledge requirement of spatial planning was an epistemic notion, which shaped thinking and knowledge production in this project, and influenced the planning products emerging from the BoP Project.

Throughout the BoP Project, issues and ideas were evaluated in terms of whether or not they were 'functional' for the BoP zone, reflecting the overall mandate of this neoliberal project. This epistemic notion therefore had implications for the knowledge production process, and influenced which knowledge became hegemonic or counter-hegemonic. Reflecting on the relative hegemony of the different disciplines in the BoP Project, Social Consultant 2 (24/02/2010) stated:

> "…because it was a planning exercise to construct a LUMS, everything had to be converted into a planning discourse of nodes and corridors and zoning. These are very much physical structures in the landscape. Because of this, the more qualitative and social issues fell between the cracks. And it's very difficult. We tried to find ways to materialise social issues".

This statement reiterated that if issues or knowledge were not spatial or functional, bearing in mind the aim to develop a logistics and port-related LAP, they 'fell between the cracks' and did not influence the spatial planning outputs. Although some social goals, assumptions and objectives were noted as trends and issues in the final output of the BoP Project (IUDS and GMA, 2012), some of the deeper social concerns were not reflected. Importantly, maps are representations of power, and therefore the inability of certain social issues to be translated into spatial concepts meant that these issues lacked power (Harvey, 1989a). This is concerning, given the history of apartheid planning in the SDB, and the context of Durban as a city in a developing country, where it is imperative that social issues are given equal consideration in decision-making processes.

Thus, the spatial or functional knowledge requirement was the third epistemic notion, which influenced which knowledge became hegemonic and counter-hegemonic during the decision-making processes in the BoP policy arena. If concerns and conceptions conformed to the spatial or functional knowledge requirement, they had greater potential to be translated into the spatial framework, and consequently influence spaces within the study area.

This section has presented the three epistemic notions which were identified by applying a discourse analysis methodology to the data collected related to the BoP Project. The final section of Chapter Six, and Chapter Seven, present the five policy fields, as well as the six story lines and underlying discourses which emerged when analysing main actor interviews, meeting observations and BoP-related documents. These story lines influenced the knowledge production process of this project.

6.4 Policy field story lines and discourses

Story lines are understood as concise narratives which help actors to include their piece of knowledge, experience and expertise in the policy arena (Hajer, 2003a). They represent the coherent combination of elements from different discourses. However the complexities of discourses are generally hidden from actors participating in the policy arena (Hajer, 1993). Story lines facilitate shared understandings and are critical in forming discourse-coalitions (Hajer, 2003a). Within the BoP policy arena, five policy fields were identified, namely: transport, planning, economic, social and environmental. By applying the discourse analysis methodology to the data collected, six story lines, as well as their underlying discourses, emerged from these policy fields at different stages throughout the BoP Project. These ultimately shaped the various

rationalisations and understandings of this spatial planning exercise. These story lines are presented in Table 6.2, which also highlights their main components[60] and underlying discourses.

Table 6.2: The six story lines, their components and associated discourses

Policy field	Story lines	Components of story line	Discourses
Transport	Solving the congestion crisis	• Understanding the root of congestion • Creating a new movement lattice	• Pro-growth • Economic efficiency • Urban competitiveness • Mobility network • Urban renewal • Spatial order
Planning	The BoP Project as a rationalisation exercise	• Identifying the 'best' land uses • Adoption of a new industrial classification system • Planning on the ground	• Urban competitiveness • Spatial order • Economic efficiency • Urban renewal • Pro-growth
	The functional use of the environment	• Planning for the public realm • Buffering	• Urban renewal • Spatial order
Economic	Retaining the Port of Durban as the premier hub port in South Africa	• Creating a 'state of the art' port • Port of Durban as a strategic national asset • Port regionalisation for the Port of Durban • Clustering of activities	• Pro-growth • Urban competitiveness • Economic efficiency • Mobility network • Spatial order
Social	Live, work and play in the SDB	• Creating liveable cities • Acknowledging the SDB's residential systems • Defending Clairwood • Widening riskscapes	• Socio-economic integrity • Social capital • Social justice
Environmental	Biodiversity value	• Biodiversity conservation • Environmental management	• Environmental conservation • Open space systems • Environmental services • Ecological modernisation

Table 6.2 highlights that actors introduced a wide range of story lines and underlying discourses into the BoP policy arena. The economic, transport and planning story lines became powerful in the BoP Project, whilst the social and environmental story lines tended to be counter-hegemonic, although certain components were influential in this spatial planning exercise. The following sections in Chapter Six and Chapter Seven will explore these six story lines in greater detail, by explaining their components. The remainder of this chapter presents the story lines from the transport and planning policy fields. The prominent story lines within these policy fields initially framed the problems associated with the Port of Durban and the adjacent urban spaces, as well as revealed the way solutions were rationalised in the BoP Project[61]. The story line from the transport policy field is presented first.

[60] When analysing story lines, they are deconstructed into components. In order to aid the reader, story lines in the text are bold and italicised, whilst components are italicised.

[61] The second story line identified in the planning policy field did not frame the BoP Project; however it presented a solution in relation to the functional use of the environment.

6.4.1 Transport policy field story line: solving the congestion crisis

The story line which emerged from the transport policy field in the BoP Project was concerned with ***solving the congestion crisis*** *(**congestion crisis*** story line*)* at the Port of Durban. An analytical breakdown of this story line (Figure 6.1) revealed that it was comprised of two main components (red) and four descriptive aspects (green)[62].

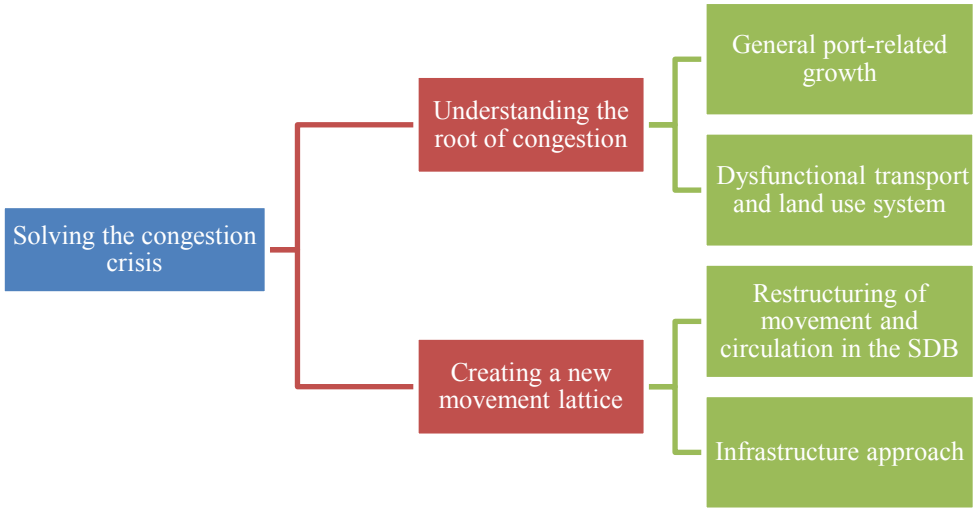

Figure 6.1: An analytical breakdown of the *solving the congestion crisis* story line

The ***congestion crisis*** story line was considered to be a 'dystopian myth', as according to Hajer's (2003a) definition, this framing story line made people unite in order to avoid catastrophe. In this project, the catastrophe would be the economic losses incurred by the local economy if Transnet selected another port in South Africa to be their 'port of choice', which was a possibility throughout the BoP Project. The following section presents the two components of the ***congestion crisis*** story line.

Understanding the root of congestion

When using discourse analysis to analyse the ***congestion crisis*** story line, *understanding the root of congestion* at the Port of Durban and its surrounding landside area was a critical component. Municipal officials believed that the congestion crisis originated as a consequence of general port-related growth and the opening up of the economy in post-apartheid South Africa (eThekwini Municipality, 2008a). It was believed that the Port of Durban could not adequately cope with this growth[63]. Congestion was attributed to the increased demand for harbour facilities, the change in the nature of logistics and the inability of the transportation system to cope with the growth of port-related traffic (eThekwini Municipality, 2008a). Therefore the congestion crisis placed the Port of Durban in an unfavourable position with regards to its attractiveness for shippers and Transnet's 'port of choice' decision. Overall, the general understanding was

[62] Additional evidence from main actors reflecting the ***congestion crisis*** story line appears in Appendix B3.
[63] The highest growth at the Port of Durban was experienced in the following categories: containerised cargoes, motor vehicles, bulk liquid chemicals and bulk petroleum products (eThekwini Municipality, 2008a).

that the "Port [of Durban] is handling more and more cargo... So this crisis is getting worse and worse and impacting on the city" (Social Consultant 2, 24/02/2010). The pro-growth, economic efficiency and urban competitiveness discourses drove the *understanding the root of congestion* component. These discourses created a strong economic rationale to solve the inefficiencies caused by congestion, for the benefit of the Port, the SDB, the local and national economies, as well as for the local government. This rationale reiterated the potential value and strategic role of the BoP Project.

As the BoP Project progressed, the economic, transport and planning teams examined the transportation and land use context of the SDB. Their perspectives reflected a more in-depth, expert understanding of the congestion crisis. The economic analysis reiterated that the number of containers passing through the Port had increased, and that the majority of these containers were 'sorted' within logistics facilities in close proximity to the Port, which created substantial levels of congestion (GMA, 2009). Additionally, the transportation context of the SDB was described as "a really chaotic situation…with [a range of] private and heavy vehicles" (Transport Consultant 1, 19/04/2010). Further analysis revealed that critical road intersections in the study area operated at "poor service levels… [as well as exhibited] signs of excessive congestion [and]…stress" (ARUP, 2009a: 3). Importantly, the planning team highlighted that residential, commercial and industrial land uses relied on similar systems of movement, and this placed stress on the transport infrastructure and resulted "in varying levels of dysfunction" (IUDS, 2009: 42). From a land use planning perspective, it was understood that market forces had resulted in the opportunistic and disorganised infiltration of logistics and port-related activities, as well as the service industry into the study area. Furthermore, the planning and transport teams noted that the road system in the SDB was not designed for the traffic associated with these land uses and activities[64]. It was therefore rationalised that the shared use of movement systems contributed heavily to congestion along major roads in the SDB (IUDS, 2009). In addition, congestion was attributed to the dysfunctional and incompatible land uses in the study area (IUDS, 2009). This created inefficiencies in terms of the movement of cargoes from the Port, and had adverse impacts on the residential system in the SDB (IUDS and GMA, 2012). *Understanding the root of congestion* was therefore closely linked to the mobility network discourse.

Therefore, when *understanding the root of congestion* in the SDB, the ***congestion crisis*** was attributed to general port-related growth, as well as transport and land use conflicts. These resulted in a situation of inefficiency and disorder in the study area, and consequently created a strong rationale related to the need for the BoP Project to address these congestion problems. The second component of the ***congestion crisis*** story line focused on the planning response to Durban's congestion crisis, through the creation of a new movement lattice.

[64] Market forces are discussed under the ***BoP Project as a rationalisation exercise*** story line (see Section 6.4.2).

Creating a new movement lattice

After gaining an in depth understanding of the root of the congestion crisis at the Port of Durban, the focus of the BoP Project shifted to finding a functional solution to the conflict which exists between the SDB's transport and land use systems. When describing how their understanding of the BoP zone evolved over time, Economic Consultant 3 (07/03/2010) acknowledged that the BoP Project was "all about logistics. It's very difficult to define a back of port zone spatially... It's really about connections". The best practice case studies presented by the economic team highlighted that logistics facilities were attracted to areas with good accessibility and connectivity to major roads[65] (GMA Consortium, 2008b). Therefore connectivity was considered to be a critical concept in terms of the response to the congestion crisis, and this resulted in the generation of a rationale associated with *creating a new movement lattice* in the SDB.

Social Consultant 2 (24/02/2010) noted that as "the process continued, it became obvious that the transport network, the connections between the Port and other places were important". Therefore the BoP Project began to focus on "linkages and efficient movements of freight in and out of the Port" (Economic Consultant 3, 07/03/2010); and evolved, as "it changed from [focusing on] a BoP zone, it became a BoP zone and a network" (Social Consultant 1, 06/10/2009). This called for the restructuring of the movement and circulation structure in the SDB, in order to address these dysfunctional inefficiencies. The new movement lattice would have the potential to induce clarity, renewal, development and growth opportunities in the study area (IUDS and GMA, 2012), as well as make this zone more ordered and less chaotic (Transport Consultant 1, 19/04/2010). The planning team rationalised that "connectivity is [the] fundamental basis for change", and infrastructure became the "basis to support and induce a world class system" (IUDS, 2009: 103). Importantly, the understanding of movement throughout the SDB became "the backbone to the entire plan", as a new network of movement was created (Planning Consultant 1, 06/10/2009). When commenting on the road structure for the BoP Project, Economic Consultant 3 (07/03/2010) stated that it "structurally gave us a template and framework… a skeleton around which everything had to work". As the BoP Project progressed, the mobility network discourse became increasingly dominant, as this was ingrained in this component of the story line.

In order to improve connectivity, the infrastructure approach became integral to the BoP Project. The infrastructure approach reflects the 'aidez-fare' characteristic of neoliberalism, as described by Purcell (2009), as this would result in the reorganisation and mobilisation of capital in order to promote economic benefits for the local and national economies. The general belief was that the use of infrastructure to create the 'right' movement structure was critical to the BoP Project, and that land use systems would respond according to this movement structure (IUDS, 2009). It was understood that infrastructure would induce the "correct" land use response, as "market forces will result in redevelopment... and attract port-related

[65] This was for inland container depots in the proximity of the Ports of Melbourne, Vancouver and Sydney (GMA Consortium, 2008b).

activities to South Durban" (Economic Consultant 1, 01/04/2009). Thus *creating a new movement lattice* represented an endeavour to improve the disordered SDB, and simultaneously stimulate urban renewal in this area. Therefore, this component of the ***congestion crisis*** story line also reflected the discourses of urban renewal and spatial order. The rationalisations associated with this component were functional and spatial, and conformed to the spatial or functional knowledge requirement of the BoP Project.

When calling for the *creation of a new movement lattice*, three proposals were advocated in the Spatial Framework. These proposals sought to enhance the road network in the study area, and called for upgrades to existing roads, as well as the building of new roads, dedicated routes and associated infrastructure (IUDS and GMA, 2012)[66]. Importantly, the infrastructure approach drew on recommendations made in previous transport studies, particularly the review of the Integrated Transport Plan[67]. In addition, existing heavy industry would be linked into the new movement lattice, and this would facilitate the complete separation of heavy industrial traffic and port-related traffic from residential and local business traffic (IUDS and GMA, 2012). This separation would "increase the mobility throughout the South Durban Basin, and improve access to residential and other areas" (Transport Consultant 1, 06/10/2009). Planning Consultant 2 (06/10/2009) highlighted that "infrastructure is key to achieve our goals of the project... The aim is to improve accessibility for all kinds of vehicles". Therefore the infrastructure approach was envisaged as a means to alter the movement structure in the SDB for the benefit of the Port, local industries and residents. Thus, infrastructure was critical to the arguments associated with creating a new movement lattice, and was therefore imperative to the ***congestion crisis*** story line.

Therefore *understanding the root of congestion* in the SDB revealed that the ***congestion crisis*** was attributed to general port-related growth, as well as transport and land use conflicts. This in turn helped to establish the main focus of the solution to the congestion crisis. Additionally, the creation of *a new movement lattice*, through the infrastructure approach, sought to restructure the movement and circulation system in the SDB, and therefore represented a functional response to the ***congestion crisis***. The following discourses influenced this hegemonic story line: pro-growth, economic efficiency; urban competitiveness; mobility network; spatial order; and urban renewal. The dominant transport policy field story line has been explored, and the following sections will present the two story lines which were influential in the planning policy field.

[66] Further details on these proposals appear in Section 8.6.3.
[67] The previous studies were compiled by ARUP and recommended a Long Term Infrastructure Plan for Durban over the next three decades (ARUP, 2009a). This included the building of the Khangela Bridge, Umhlatuzana Arterial; and South Corridor Capacity Enhancement (IUDS, 2009).

6.4.2 Planning policy field story line: The Back of Port Project as a rationalisation exercise

As the BoP Project was a planning project, planning was destined to have a critical role. Planning, in the context of the BoP Project, was understood as an integrating spatial discipline, which drew on various aspects and knowledges from the economic, environmental, social and planning policy fields. Bearing this in mind, two planning story lines emerged through analysis, namely the ***BoP Project as a rationalisation exercise*** (***rationalisation***) story line, and the ***functional use of the environment*** (***functional use***) story line. The ***rationalisation*** story line, as presented in Figure 6.2, is explored first in this section. It became hegemonic in the BoP policy arena, and was deconstructed into three main components, and a number of aspects. The ***rationalisation*** story line explores how the BoP Project was understood and conceptualised in the planning policy field, and provides the framing for the planning solutions when applied to the planning context.

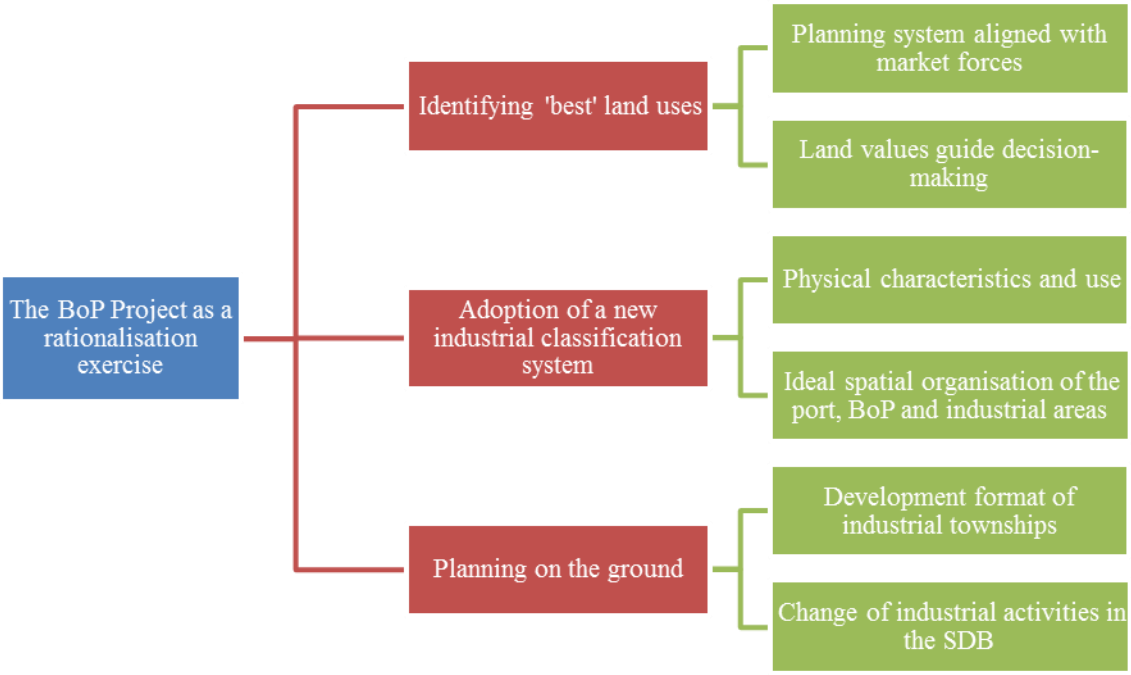

Figure 6.2: An analytical breakdown of the *rationalisation* story line

The ***rationalisation*** story line was introduced into the BoP policy arena during the Terms of Reference negotiation, and was prominent during all phases of this project. The three components of this story line are examined in greater detail, to gain understanding of the underlying conceptualisations of this story line.

Identifying the 'best' land uses

The first component of the ***rationalisation*** story line was classified as *identifying the 'best' land uses* (*'best' land uses*) for the BoP zone. This was heavily influenced by the planning context, which was characterised by a number of factors: Transnet's impending 'port of choice' decision; port development options for the Port; the improved institutional relationship between Transnet and the eThekwini Municipality; and the 'break' in planning and management of the SDB (See Section 6.2). This context influenced what was

considered to be rational, appropriate and desirable characteristics of the BoP zone, from the eThekwini Municipality's perspective. Bearing this context in mind, the identification of the *'best' land uses* component was linked to the planning goals of the BoP Project, which were scripted into this spatial planning exercise by the eThekwini Municipality through the *Terms of Reference Document*. The overall aim of the BoP Project was to create a LAP and LUMS for the BoP zone; however this was implicitly broken down into two goals for the planning team. The first goal was concerned with identifying the *'best' land uses* for the study area, whilst the second goal focused on how and where the restructuring of land uses should occur in the study area (Planning Official 2, 24/06/2010).

In terms of this first goal, market forces were an important aspect for identifying the *'best' land uses* for the study area. Associated with the 'break' in planning and management of the SDB, there was a general perception that market forces were "acting ruthlessly… and invading" land in the SDB (Economic Consultant 1, 01/04/2009). This was mentioned by the economic team and planning officials throughout the early stages of the BoP Project. It was believed that certain land uses in the study area did not complement the Port of Durban, and that planning against market forces was a futile exercise, due to the study area's proximity to the Port (Engineering Official 1, 20/04/2010; Planning Official 2, 24/06/2010). It was argued that these *'best' land uses* should "enable synergy and a proper working relationship between the Port, Back of Port area... [and the] South Durban Basin" (Transport Consultant 1, 19/04/2010). Therefore the focus of the BoP Project was "to really identify what opportunities there are in the land outside of the Port, to complement port activities" (Engineering Official 1, 20/04/2010). The restructuring of land uses represented an attempt to create synergy with the Port of Durban, as well as to order the disordered SDB and foster economic growth associated with this strategic economic asset.

This reasoning had a structuring effect on the planning outcomes of the BoP Project, as it was believed that economics should determine the location of certain activities in the SDB. This was linked to the rationalisation that "market forces have, and continue to displace planning intentions" (eThekwini Municipality, 2008a: 10). Consequently, there was a general perception that the land uses in the study area would inevitably be dictated by market forces, which created the rationale for aligning the planning system with the requirements of contemporary market forces. This effectively meant that logistics and port-related uses were predestined for the study area. These connotations conformed to the urban entrepreneurialism epistemic notion, as the free market would efficiently dictate the activities adjacent to the Port of Durban, and the local government could align the planning system and land uses to these activities. This component was therefore linked to the economic efficiency and pro-growth discourses, whilst the discourse of urban competitiveness was also an underlying driver of these conceptions.

This had implications for the planning team's second goal, as these *'best' land uses* would need to be translated into a spatial plan for the study area. These conceptualisations would benefit the city of Durban

by improving its synergies with the Port. Furthermore, the discourse of spatial order was linked to this component. With the underlying belief that economics should guide land uses in the study area, the value of land became important for decision-making in the BoP policy arena. It was proposed that economics should guide how and where land use restructuring should occur in the study area. During the Situational Assessment Phase of the BoP Project, the economic and planning teams classified the study area according to economic value. This endeavour created a spatial order according to economic value. It revealed that land values throughout the SDB were relatively high[68], and reinforced the rationale that areas with the lowest land values should be targeted for conversion to logistics and port-related uses. Subsequently it was argued that the "lowest land prices are generally found in activities that produce little or no economic return… although several non-intense manufacturing activities occupying large plots also have low land prices" (GMA, 2009). The economic team consequently concluded that the only areas which offered opportunities for redevelopment based on land value were: government owned properties[69]; certain large business sites with low prices[70]; and the residential component of Clairwood. With the market forces rationale, it was understood that the land with the lowest value would be the first land targeted by the free market with regards to the change of land uses. Therefore, by aligning the planning system with the logic of market forces, the land use structure could be efficiently restructured in the study area, through the BoP Project's Spatial Framework and Precinct Plans.

Thus, identifying the 'best' land uses component of the ***rationalisation*** story line was a hegemonic conceptualisation in the BoP Project, as it was believed that the free market, coupled with the alignment of the planning system, would efficiently ensure that logistics and port-related activities would be rationally located in the study area. This economic rationalisation was powerful in the BoP policy arena. The second component of the rationalisation story line was also hegemonic in this strategic project.

Adoption of a new industrial classification system

After identifying the *'best' land uses* for this spatial planning exercise, the focus shifted to how and where these land uses could be introduced as land use categories in the BoP Project. It is imperative to note that logistics and port-related land use categories were not previously included as separate land use planning categories in the SDB (Planning Consultant 2, 10/05/2010). As a result, the second component of the ***rationalisation*** story line was introduced into the BoP policy arena during the Best Practice Phase, and this was identified as the *adoption of a new industrial classification system*.

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[68] Congella and Jacobs had average land values in excess of R400 000 per square metre (Planning Consultant 1, 27/10/2008).

[69] These included the Transnet Freight Rail Diesel Depot and Fresh Produce Market in Clairwood, as well as the military stores and Telkom warehouse in Mobeni.

[70] This included the Clairwood Racecourse, Clairwood sports fields and the Tongaat Huletts refinery.

In the past, industrial buildings were classified according to their "implicit impacts on adjacent developments", and included a continuum of categorisations such as noxious, general, heavy, light and service industries (GMA Consortium, 2008b: 72). Learning from planning case studies in the United States of America, the planning team discovered that a new industrial classification system had been adopted, which categorised industrial land uses according to physical characteristics and use (GMA Consortium, 2008b). This reflected a fundamental change in the conceptualisation of the industrial classification system, as core and ancillary differentiating features[71] were used to define the physical characteristics of industrial uses. This classification was applicable to the goals of the BoP Project, and rationally enabled new categorisations to be introduced into the BoP policy arena, namely warehouse, manufacturing and 'flex'[72], as well as freight forwarding and multi-tenant industrial categorisations. This had implications for areas which were selected as being preferential for logistics and port-related activities, as the *adoption of a new industrial classification system* meant that their land uses could be restructured according to these *'best' land uses*.

Furthermore, in the Best Practice Phase, the planning team organised these new categories according to their functional relationship with the port, and developed an ideal port configuration diagram (see Figure 6.3) (GMA Consortium, 2008b). The spatial organisation of the industrial categories in the general port zone reflected that there was a continuum of industrial development surrounding the port (Planning Consultant 1, 22/08/2008). It was presented that freight forwarding should be the closest cluster of activities to the port, followed by warehousing, whilst traditional manufacturing was located at further distances from the port (Planning Consultant 1, 22/08/2008). In addition, manufacturing, flex and multi-tenant categories did not need to be in close proximity to the port (GMA Consortium, 2008b). The improved spatial organisation of the port and its adjacent industrial areas was rationalised as a means to enhance the BoP zone's functionality and efficiency, which highlighted that this component drew from the discourses of spatial order and economic efficiency.

[71] Core differentiating features refer to the particular physical characteristics present within all buildings of the same category, whilst ancillary differentiating characteristics refer to common features within a given category, albeit that these features may not always be present (GMA Consortium, 2008b).
[72] 'Flex' refers to a new category of buildings which have an attractive physical appearance, flexible design and a high percentage of office space (Planning Consultant 1, 22/08/2009).

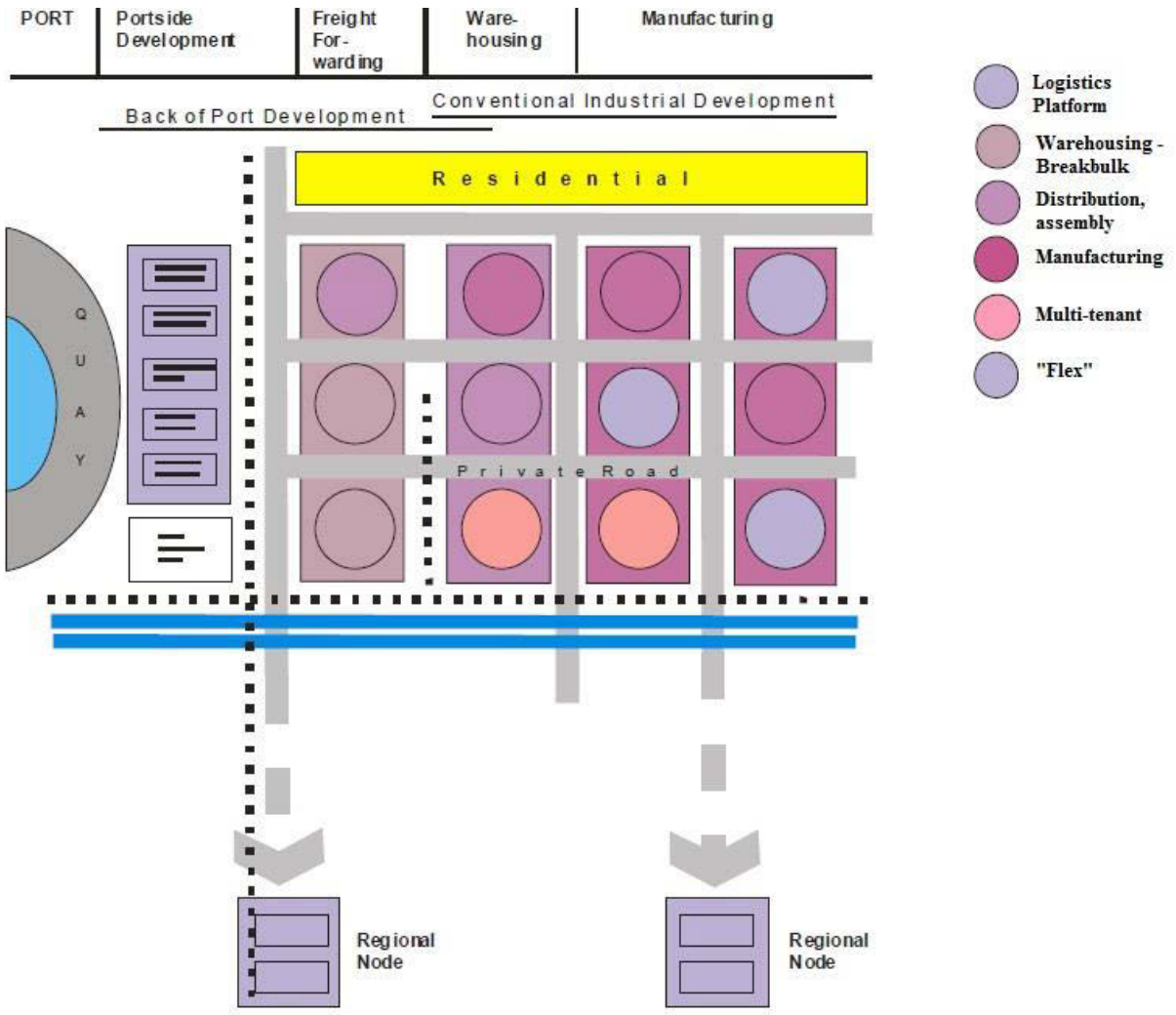

Figure 6.3: The ideal spatial organisation of a port

Source: Adapted from GMA Consortium (2008b:83)

By adopting a new method of classifying industrial activity, and introducing new industrial categories into the BoP policy arena, the planning team identified the ideal spatial organisation of a port, BoP zone and adjacent industrial areas. This understanding was subsequently applied to the study area, with the goal of functionally restructuring the land use system. Therefore the *adoption of a new industrial classification system* component of the ***rationalisation*** story line was conceptual in nature, and in order to progress these concepts and apply them to the study area, there needed to be an in-depth analysis of the existing land use structure and activities. This led to the final component of the ***rationalisation*** story line, which was identified as *planning on the ground*.

Planning on the ground

The *planning on the ground* component had two main aspects, namely the development format of the industrial township and the change of industrial activities in the SDB. These aspects were introduced by the

planning team during the Situational Assessment Phase of the BoP Project, and reflected the SDB's contemporary planning context with regards to industrial activities. This deconstructed component explored how and where land uses in the study area could be restructured in a rational manner.

The planning team considered the development format of industrial townships as a critical element in the BoP Project. It was acknowledged that the "development format of each of the various Local Scale areas tends to reflect the age of each of the areas and the layout system applied at the time of development" (IUDS, 2009: 100). Therefore it was understood that "the industrial areas are actually not all identical. They are totally dependent on the times in which they evolved" (Planning Consultant 2, 10/05/2010). The planning team noted that the oldest areas, such as Congella, were characterised as early industrial formats, and most sites had high levels of industrial coverage, and limited on-site parking and loading (Planning Consultant 2, 29/10/2008). In contrast, the industrial estate format was present in Jacobs and Mobeni, and had "buildings set back from roads and levels of on-site loading and parking" (IUDS, 2009: 15). Jacobs was a slightly older industrial estate with smaller sites, whilst in Mobeni the majority of sites and buildings were larger and set back further from the site boundaries, which enabled on-site loading and off-loading (Planning Consultant 2, 29/10/2008).

When considering how to restructure land uses, the planning team had to consider the contrasting development formats throughout the study area, bearing in mind that logistics and port-related activities require large tracts of land (Planning Consultant 2, 10/05/2010). The industrial estate development format in Mobeni (East and West) was considered to be the most suitable for logistics and port-related uses, whilst the unsuitable early industrial formats in Congella, Umbilo and Rossburgh were deemed to be unsuitable[73]. These unsuitable sites could not deal "with the on-site loading, off-loading and parking, which is part and parcel of logistics" (Planning Consultant 2, 10/05/2010). However the large spaces on sites in Mobeni were suitable to logistics, and thus "the [potential] transition to logistics is much more successful than in the other older areas" (Planning Consultant 2, 10/05/2010).

Therefore, it was argued in the BoP policy arena that it would be easier for the newer forms of industrial estates to be rezoned to logistics uses, when compared to the early industrial formats[74] (Planning Consultant 2, 10/05/2010). Therefore, when *planning on the ground* in the study area, considering the development format of industrial townships was a decisive aspect in the ***rationalisation*** story line, and had a critical impact on proposed land use changes in the BoP Project. This reflects the discourse of spatial order.

[73] The rezoning of Clairwood was due to the proximity of this precinct to the existing Port of Durban, coupled with low land values, rather than according to its industrial format and layout. Despite Clairwood having smaller sites, the low land values throughout the residential component of this area meant that the re-development to logistics and port-related land uses in this precinct was an attractive option (Planning Consultant 2, 10/05/2010).
[74] Further evidence of these arguments appears in Appendix B4.

However, a further aspect which influenced *planning on the ground* was the argument that there had been a change of industrial activities in the SDB. In previous studies on the SDB, this area was categorised as the 'heartland' of industrial development in Durban, with the general assumption that most industrial uses were manufacturing activities (IUDS, 2009). However, during the Situational Assessment Phase, the planning team discovered that the type of industrial activities in the SDB had changed, as there had been a relative decline of manufacturing activities. This was reflected upon by Planning Consultant 2 (10/05/2010), who stated that: "this was the industrial heartland of the metropolitan area, of KZN [KwaZulu-Natal]... and I suppose the first big surprise was to discover how little manufacturing there actually was in relative terms... as one expected far more". With the relative decline of manufacturing activities in the SDB, it was acknowledged that "a much more mixed range of activities" had increased in the area, particularly service industrial activities, as well as logistics and port-related activities (IUDS, 2009: 58). Therefore the study area was conceptualised as an area of change, and this was attributed to market forces impacting on the local industrial sector.

Moreover, the planning team used Birch's (1971) stage theory of urban growth to theoretically explain the change of land use and activities which were occurring in the study area[75]. The planning team stated that as "areas go through these stages, they tend to be stable for relatively long periods, and then shift quite quickly to the next stage" (IUDS, 2009: 14). In addition, it was reasoned that "[t]he beginnings of "Recapture" are found in almost all the areas, as newer forms of industrial development, viz. logistics, have redeveloped and/or rehabilitated sites" (IUDS, 2009: 100). Therefore the change of industrial activities in the SDB was conceptualised as moving from one stage of urban growth to the next. Consequently, it was rationalised that these new industrial uses infiltrating the SDB represented a natural progression, and that the planning system, through the restructuring of land uses, should be aligned with these new industrial uses. This was aligned to the general planning conceptualisation that there needed to be a 'break' or shift in the planning and management of the SDB. Therefore this aspect of the ***rationalisation*** story line was linked to the discourses of urban renewal and spatial order.

With the growth of both logistics and service industrial activities in the SDB, it was argued that there was "conflicting and competing demands" between these industrial categories (IUDS, 2009: 103). The planning team rationalised that "there is a limited supply of industrial land" in the SDB (IUDS, 2009: 100), and that service industrial activities did "not appear to possess a relationship to the activities of the port" (IUDS and GMA, 2012: 76). It was therefore rationalised that service industrial activities did not have to be in the BoP zone, as they did not have any relationship to the Port of Durban, and contributed to congestion[76]. As

[75] Birch maintained that there were six stages of urban development, namely: rural; first wave of development; fully developed; packing; thinning; and recapture (IUDS, 2009).

[76] The planning team argued that service industrial activities were "taking up less space than their activities actually need", and these activities were "bleeding out of those spaces, making use of the pavement... for parking, storage, and in some cases the activities themselves" (Planning Consultant 2, 10/05/2010).

logistics and port-related activities were considered to be the *'best' land uses* for the study area, land uses aligned to these activities were selected as dominant industrial categories in the BoP Project's Spatial Framework and Precinct Plans.

Therefore, by acknowledging the development format of industrial townships in the SDB, as well as the changes of industrial activities in this area, *planning on the ground* became a prominent component of the ***rationalisation*** story line, and directly shaped the outcomes of the BoP Project. *Planning on the ground* explored how land uses in the study area could be restructured in a rational manner. The following section presents the second planning policy field story line.

6.4.3 Planning policy field story line: The functional use of the environment

The ***functional use of the environment*** (***functional use***) story line acknowledged how the environment was functionally conceptualised in public spaces, in an attempt to create some form of benefit to society. It presented a solution in relation to the functional use of the environment. This story line was introduced into the BoP policy arena by the planning team, and was rooted within the planning and urban design disciplines. An analytical breakdown of the ***functional use*** story line is shown in Figure 6.4, and its two deconstructed components are discussed in the following section.

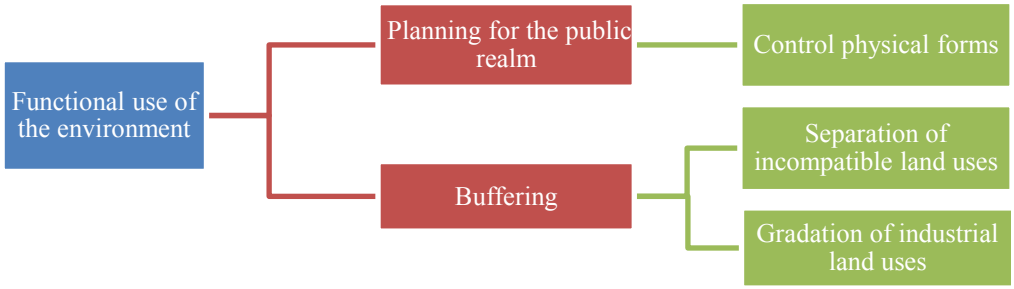

Figure 6.4: An analytical breakdown of the *functional use of the environment* story line

Planning for the public realm

During the Inception Phase, the planning team acknowledged that the LUMS process was located within the framework of urban renewal, and reiterated that a LUMS should not only focus on formalising the status quo, but should also focus on the future possibilities of a space (GMA Consortium, 2008a). It was believed that these future possibilities would be based on the overarching framework established by the LAP, which in turn was driven by a specific vision (GMA Consortium, 2008a). As part of this vision, the planning team proposed that *planning for the public realm* should be a guiding urban design principle, as "[p]lans must translate into real places of quality and function" (GMA Consortium, 2008a: 45). The public realm is more than the fixed typology created for public spaces, such as parks and plazas; it is rather a form of place-making made possible through human construction, which is formulated by specific values,

contextual needs and related behaviour (Adhya, 2008). Consideration of the public realm facilitates the possibility to change the ambience, experiences and impressions of an area, by creating some form of utility, amenity, benefit or value from the design of spaces in this area. *Planning for the public realm* was therefore a component of the ***functional use*** story line, as it is associated with applying urban design principles to the built environment, which opened up the possibility of recreating high quality and functional spaces in the study area.

During the Inception Phase, the planning team stated that a predictable public realm could be created by controlling physical forms in the study area, rather than only focusing on land uses (GMA Consortium, 2008a). It was believed that form based codes[77] were international best practice, which would ensure greater levels of control of the private realm; which in turn, would improve the quality and functioning of the overall physical environment (GMA Consortium, 2008a). Thus, it was understood that consideration of the overall physical environment was integral to processes of urban regeneration, and it was consequently "important that care is given to developing management schemes that are focused on the public realm" (GMA Consortium, 2008a: 44). The general perception held by the planning team was that planning for the public realm could improve the image of the SDB, so that it would not be conceived as a space of disinvestment and decline (GMA Consortium, 2008a), but rather as an area of regeneration and prosperity. Overall, this reflects that *planning for the public realm* was based on the discourses of urban renewal and spatial order.

The strategic role of the planning discipline within the BoP Project meant that features associated with *planning for the public realm* appeared in the BoP Project's Spatial Framework, and were associated with the proposed parkway system along the Amanzimyama canal[78], as well as the tree planting strategy and securing of open spaces throughout the study area. *Planning for the public realm* therefore had an environmental focus in the outcomes of this project. For the parkway system, it was envisaged that this would improve the aesthetics of the area, as well as support the functioning of the open space system. This system would add recreational value and sought to create an attractive space, which would stimulate investment and redevelopment in the SDB (IUDS and GMA, 2012). In the Spatial Framework, it was envisaged that the tree planting strategy proposed along major routes would "assist in the public realm upliftment and aesthetic appeal" of the area, and promote the use of walkways along planned public transport routes (IUDS and GMA, 2012: 145). Furthermore, the *planning for the public realm* component of the ***functional use*** story line materialised predominantly in the Precinct Plans, where it was largely included as built form considerations (see Table 6.3). These built form considerations were highly

[77] Form based codes stipulate the regulatory framework; public space standards; building form standards; administrative processes; architectural standards; landscaping standards; signage standards; and environmental resource standards (GMA Consortium, 2008a).

[78] The Amanzimyama Canal extends from the existing Port of Durban, through Jacobs and to the Clairwood Racecourse.

functional, and hence they conformed to the spatial or functional knowledge requirement epistemic notion. In addition, built form considerations would also be applied to the private realm, as these potentially impact on the public realm.

Table 6.3: Built form considerations in the Precinct Plans

Built form considerations
• Significant landscaping introduced along specific routes. • The retention of the existing character of heritage items within the various precincts. • New developments should not block or diminish existing view potentials. • Upgrading of public spaces with paving and lighting. • All handling of goods and parking to be encouraged at the rear of sites, which will allow the free flow of traffic. • Potential review of coverage factors within areas, so as to allow for on-site parking and handling of goods. • A co-ordinated approach for signage in the precincts. • Restoration and maintenance of heritage or character features on prominent street corners, in order to positively contribute to the streetscape. • Building to the front edge of sites is encouraged, with other activities at the rear of sites. Allow continuity in the built fabric along street edges. Provides visual connection as well as safety for pedestrians. • Implementation of appropriate urban management.

Source: Adapted from IUDS and GMA (2012)

Although *planning for the public realm* was evident in the outputs of the BoP Project, the planning team felt that economic cost and engineering viability were factors which downgraded the potential of this component. This contestation was noted by Planning Consultant 1 (21/04/2010) who stated that "the project managers didn't really buy into the softer side of things". Moreover, the following quote highlights Planning Consultant 1's (21/04/2010) frustrations with regards to planning for the softer elements in the study area:

> "I'm quite tired of the fact that you have to fulfil everything, 150 percent from a technical / environmental / ecological point of view. Even if that means ruling out 50 percent of the social environment which you can create from an urban design point of view. The form and experience is severely compromised because of that. There is no compromise, say we'll give you ten percent of land. Or can we improve it and make it function 100 percent performance wise".

Despite these challenges, the *planning for the public realm* component of the ***functional use*** story line was influential and shaped the outcomes of the BoP Project. Thus the various considerations associated with this component sought to enhance the functionality of the physical environment, particularly by controlling physical and built forms in the study area. The second component of this story line had a greater focus on land uses, and how they interacted with one another.

Buffering

Buffering was the second component of the ***functional use*** story line, and was also prominent in the BoP policy arena. *Buffering* was understood by the social team as: "a physical space with a boundary in which

specific planning and land use conditions are established to minimise the impact of the port and at the same time promote public amenity and allow urban development to continue" (GMA Consortium, 2008b: 112). *Buffering* was therefore based on the discourse of spatial order, and sought to promote the spatial integration of land uses and activities. This spatial concept was acknowledged by the economic, planning and social teams during the Best Practice Phase. The case study of the Port of Fremantle, Australia was used to highlight the use of buffers in determining the restrictions, building requirements and limitations on sensitive land uses by area. These buffers were planned around the Port of Fremantle to reduce social impacts within zones of sensitive use, so as to promote land use compatibility between this port and surrounding urban area[79] (GMA Consortium, 2008b). This conformed to the spatial or functional knowledge requirement epistemic notion, which consequently raised the status of this case study and its recommendations.

Buffering therefore became an important concept for the BoP Project, as the planning team used buffering to separate incompatible land uses and enhance the functionality of this urban space. The social team argued that buffers should be introduced into the interfaces between industrial and residential land uses, in order to reduce impacts on residents (Sutherland *et al*, 2009). This spatial concept was therefore considered to be beneficial for the SDB and its residents, bearing in mind the impact of apartheid planning on the area, which caused the juxtaposition of incompatible land uses.

In the Spatial Framework, the concept of *buffering* was used by the planning team as a rationale to secure public open spaces along industrial perimeters, in order to separate incompatible residential and industrial land uses in the study area (IUDS and GMA, 2012). Furthermore, in the Precinct Plans, it was envisaged that zoning should be amended to allow for the gradation of zoning from the Port and industrial areas to residential areas (IUDS and GMA, 2012). This conceptualisation was extended throughout the study area, and it was planned that low impact industrial activities would be located closer to residential areas; whilst higher impact uses, such as noxious and heavy industry, would be located at further distances from residential land uses (IUDS and GMA, 2012). Linked to the gradation of industrial uses, different transition or interface zones were proposed within the BoP Project's Spatial Framework and Precinct Plans. These were known as Interface or Transition zones A, B and C[80].

Therefore *buffering* was an important component of the ***functional use*** story line, and was evident in the outcomes of this spatial planning exercise. This component was based on the discourse of spatial order, and was powerful in the BoP policy arena. Thus the two components of the ***functional use*** story line reveal that

[79] Higher building safety standards were enforced closer to the Port of Fremantle (GMA Consortium 2008b).
[80] Interface/Transition A was a buffer zone created by houses, which could be converted into offices. Interface/Transition B allowed for the redevelopment of houses to higher density and redevelopment of low rise offices. Interface/Transition C was within industrial areas and permitted office and distribution type uses.

this story line was prominent and influential in the BoP policy arena, as it was reflected in the outcomes of this spatial planning exercise.

6.5 Summary

The results pertaining to the discursive dimension of the BoP Project have been presented in this chapter. Firstly, the unique context influencing the BoP Project was identified and explored. This context influenced the range of understandings within this spatial planning exercise. The context within which the BoP Project exists was characterised by high levels of uncertainty and institutional complexity. Furthermore, the shift in approach related to the planning and management of the SDB meant that different planning ideas could be applied to the study area. Secondly, three epistemic notions were identified, where these rules of formation shaped proceedings in the BoP policy arena. The epistemic notions identified had implications for the BoP Project's knowledge production process, as they influenced which conceptualisations became hegemonic and counter-hegemonic in this project.

In the final section of this chapter, six main story lines as well as their underlying discourses were identified. Thereafter, three of these story lines and their underlying discourses were explored within the transport and planning policy fields. These story lines framed the BoP Project, and revealed the prominent rationales driving this spatial planning exercise, as well as the planning responses to BoP-related issues. By using the discourse analysis methodology, these three story lines were analysed and deconstructed into components and their descriptive aspects. This analysis therefore provides insight into understanding the conceptualisations and rationalisations which influenced this project, and consequently shaped its knowledge production process.

The next chapter presents the dominant economic, social and environmental story lines which were identified using the discourse analysis methodology. Adopting the same structure as Chapter Six, these three story lines are analysed and deconstructed into a number of components and aspects. The exploration of these story lines completes the analysis of the discursive dimension of the BoP Project.

CHAPTER SEVEN: THE DOMINANT ECONOMIC, SOCIAL AND ENVIRONMENTAL STORY LINES IN THE BACK OF PORT PROJECT

7.1 Introduction

In complex policy situations, story lines are often the only things that actors have in common with one another, and hence consensus, understanding and ultimately policy are built around story lines (Hajer and Laws, 2006). Story lines are constructed statements which assemble formerly disparate elements of discourse, and these are presented as a series of symbolic references that enable the creation of new meanings and understandings of an issue (Hajer, 1995; 2000). In Chapter Six, the application of the discourse analysis methodology to the data collected enabled three story lines to be identified within the transport and planning policy fields. These represented the framing story lines of the Back of Port (BoP) Project; however other story lines were also influential in this strategic project. Extending this approach, Chapter Seven presents the dominant economic, social and environmental story lines, which shaped the knowledge production and decision-making processes in the BoP Project. The story lines within the economic, social and environmental policy fields are analytically deconstructed into components and descriptive aspects. Within the BoP policy arena, these story lines shaped understandings, and the interaction of their components influenced the outcomes of this strategic project. The results presented in this chapter emerged from the analysis of the main actor interviews, meeting observations and the relevant BoP-related documents.

7.2 The economic, social and environmental policy field story lines

7.2.1 Economic policy field story line: Retaining the Port of Durban as the premier hub port of Southern Africa

A single story line was identified in the economic policy field, and it is known as ***retaining the Port of Durban as the premier hub port of Southern Africa (premier hub port*** story line). Analysis of this story line (Figure 7.1) revealed that it was comprised of four main components (red), as well as a number of associated descriptive aspects (green). The premier hub port story line is classified as a responsive story line in this research, as it responds to the framing created by the ***congestion crisis*** story line (See Section 6.4.1). The ***premier hub port*** story line was closely related to the port development context in Durban, and more specifically the eThekwini Municipality's (the client) understanding of this context. This understanding was linked to the belief that it was in the local government's best interest to ensure that the Port of Durban became South Africa's 'port of choice' (See Section 6.2.1). The scripting of the BoP Project by the client ensured that this story line became powerful; and by being aligned with the goals of urban entrepreneurialism, it became the underlying rationale of this spatial planning exercise. This neoliberal project was therefore associated with the pro-growth, economic efficiency and urban competitiveness discourses.

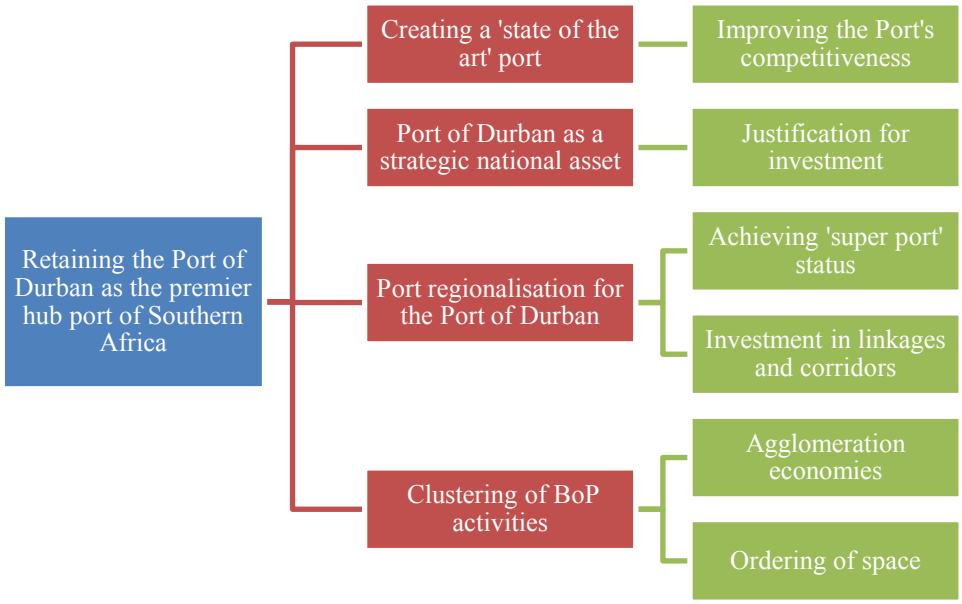

Figure 7.1: An analytical breakdown of the *premier hub port* story line

As this story line was scripted into the *Inception Report* of this spatial planning exercise, it became established and was recognised by the main actors participating in the BoP Project. The economic connotations of the ***premier hub port*** story line resulted in the economic team being its main proponent, where the "higher objective [for the eThekwini Municipality] was to retain Durban's position as the premier port of sub-Saharan Africa" (Economic Consultant 1, 07/03/2010). This story line therefore represented a response to the challenge that the Port of Durban was "reaching maximum capacity", and was experiencing a congestion crisis (See Section 6.4.1) (Economic Consultant 1, 17/06/2009). The following sections explain the ***premier hub port*** story line, by deconstructing it into four highly interrelated components. This story line is based on the general argument related to retaining the Port of Durban as the premier hub port of Southern Africa.

Creating a 'state of the art' port

From the inception of the BoP Project, the ***premier hub port*** story line was closely associated with arguments of making the Port of Durban 'state of the art', 'world class' and a 'premier' port. These were powerful arguments as they were desirable outcomes from the eThekwini Municipality's point of view. According to the social team, "[t]he City therefore wishes to develop local area plans for a zone known as the Back of Port that will be used to position the Port of Durban as a 'state of the art', globally competitive port" (GMA Consortium, 2008a: 30). It was reasoned that *creating a 'state of the art' port* would be a suitable solution to the congestion crisis, and this further legitimised the BoP Project, as it was rationalised that a BoP zone would organise land uses and activities in a 'state of the art' manner.

With the envisaged land uses and activities surrounding the Port of Durban being potentially 'state of the art', the social team argued that this would enable the Port to be repackaged as "a modern, efficient and successful port" (GMA Consortium, 2008a: 31). The eThekwini Municipality strongly promoted *creating a 'state of the art' port,* as it was believed that 'world class' planning would benefit the local economy and influence Transnet's impending 'port of choice' decision. The ***premier hub port*** story line was further legitimised through the *Economic Status Quo Assessment*, where economic tools, such as Cost-Benefit Analysis, Cost Effectiveness Comparison and Macro Economic Impact Analysis revealed that in terms of Transnet's 'port of choice' decision, "it is obvious that the Durban Port option is, for the wider economy, the better option"[81] (GMA, 2009: 63). It was therefore rationalised that it was essential to "plan the BoP to ensure that Durban becomes the premier hub port for Southern Africa" (Economic Consultant 1, 05/03/2009). This would help Transnet reduce logistics costs, which was one of their main goals (Engineering Official 1, 20/04/2010). This understanding meant that the selection of the Port of Durban as South Africa's 'port of choice' represented the 'better option' as it would cost the least and generate the most economic growth for the local, provincial and national economies. Therefore the BoP Project represented "an opportunity for the Municipality to develop a 'state of the art' space in conjunction with Transnet and its associated goals" (Sutherland *et al*, 2009: 9). This line of thinking revealed that the pro-growth, economic efficiency and urban competitiveness discourses were central to the ***premier hub port*** story line.

During the Best Practice Phase, the ***premier hub port*** story line was influenced by the economic team's 'Back of Port Functions Case Studies', where extensive lessons were drawn from world-leading ports such as Barcelona, Melbourne and Vancouver. Functional conclusions were drawn from these international best practice case studies, where there was an understanding that successful ports were investing to enhance their competiveness on the global scale (Economic Consultant 1, 17/06/2009). When this understanding was applied to the port development context of Durban, Economic Consultant 1 (18/02/2009) stated that "an appropriate infrastructure platform would be required to support and induce a world class system". Therefore the ***premier hub port*** story line was associated with the functional belief that major infrastructural investment would be required, both seaside and landside, in order for the Port to become 'state of the art', and subsequently retain its premier hub port status.

Port of Durban as a strategic national asset

As the BoP Project progressed over time, the strategic nature and importance of this spatial planning exercise became integral to the ***premier hub port*** story line. Conceptualising the *Port of Durban as a strategic national asset* was closely associated with the benefits of *creating a 'state of the art' port*. The Port was described by the planning team as "the largest gateway in Southern Africa" and an "international

[81] The Economic Status Quo Assessment explored supply chain and logistics related comparisons for the Ports of Durban, Richards Bay and Coega.

connector for the country" (IUDS, 2009: 7). It was noted that the Port had "connections to national and international corridors", and was important to the functioning of the South African economy due to its connections to Gauteng (Planning Official 2, 24/06/2010). The Port of Durban and potential BoP zone therefore became increasingly understood as a "national strategic asset… which would influence the future economic growth of the region" (Engineering Official 1, 20/04/2010). Linked to these conceptions of national importance, the economic team noted that "[i]nefficiencies in the logistics chains at the Port of Durban affect costs at a national level and prejudice the competitiveness of exports" (GMA, 2009: 97). Thus from a strategic perspective, the understanding was that the compromised efficiency of the Port of Durban and its logistics chains reduced the competitiveness of South African exports. Consequently it was strategically rationalised that significant investment would be required in the Port and BoP zone, as this would collectively benefit the local, provincial and national economies, and simultaneously "enhance the city's claim to be developed into a super port / hub port" (GMA, 2009: 94). These arguments once again revealed that the ***premier hub port*** story line was associated with the pro-growth, economic efficiency and urban competitiveness discourses. By addressing these inefficiencies, and particularly the congestion crisis, there would be "many reasons for shippers, importers and exporters to come to [the Port of] Durban" (Economic Consultant 1, 17/06/2009). Conceptualising the *Port of Durban as a strategic national asset* therefore created a tactical and functional rationale for investment, and thus formed an important component of this story line.

Port regionalisation for the Port of Durban

During the Best Practice Phase of the BoP Project, the economic team introduced port regionalisation theory, which formed an important component of the ***premier hub port*** story line. Port regionalisation is regarded as the fourth stage of port development[82], focusing on the inland distribution of cargoes from competitive ports, and is associated with the emergence of inland terminals, logistics poles and transport corridors (Notteboom and Rodrigue, 2005). Port regionalisation theory is rooted within transport geography, and interprets port development from a transport chain perspective (see Section 3.8.2). In this project, the discourse around port development was firmly couched within a framework of neoliberal economic growth in a global context.

When exploring port regionalisation theory, the economic team coined the term 'super port', which metaphorically describes a dominant hub port which has efficient connections to inland terminals, as well as distinct corridors surrounding the nodes in the port and hinterland system. According to Dryzek (1997), metaphors are rhetorical devices which are used to convince an audience to look at something from a specific perspective. A 'super port' has a large sphere of influence, as distant inland nodes are influenced by port activities. Notteboom and Rodrigue's (2005) diagram, which depicts the port hinterland and the

[82] Bird's Anyport model had three stages of port development, namely setting, expansion and specialisation (Notteboom and Rodrigue, 2005) (see Section 3.8.1).

formation of 'island-based' corridors, became the visual emblem of the *port regionalisation* component in the BoP Project (See Figure 7.2). This diagram was used by the economic team to illustrate *port regionalisation*, and the various characteristics of a 'super port', which were understood as a means of *creating a 'state of the art' port*. This meant that "the building of a 'super port [was understood by the BoP consultant consortium as] a critical national objective" (Economic Consultant 1, 07/03/2010). This reiterates that *port regionalisation* was also linked to conceptualising the Port as a *strategic national asset*.

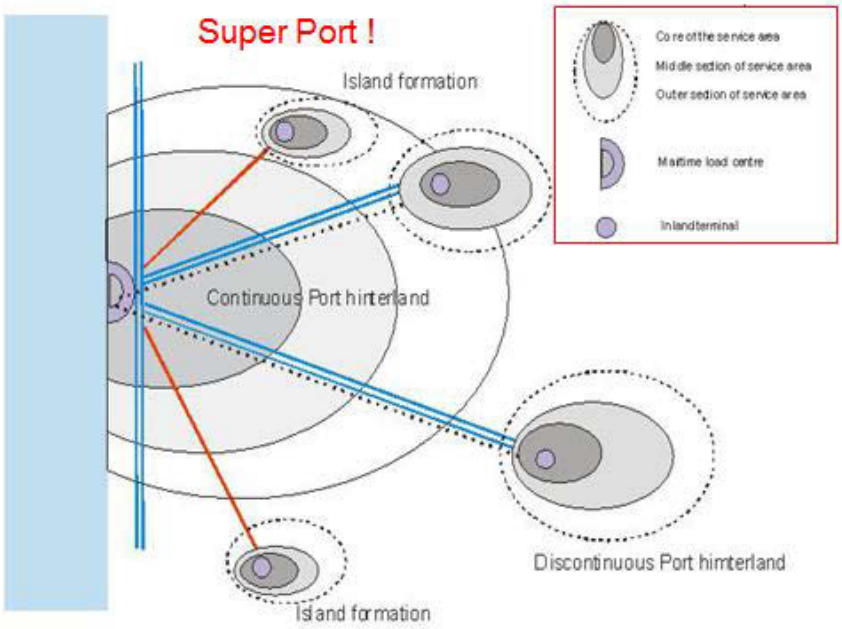

Figure 7.2: The 'super port' and port regionalisation

Source: Muller (22/08/2008: slide 18)

By introducing port development theory, the economic team reasoned that the connectivity of corridors between the different nodes were critical to creating a 'super port' and facilitating *port regionalisation*. This perspective resulted in the introduction of the mobility network discourse to the ***premier hub port*** story line, where the landside transport system was considered to consist of nodes and networks, as depicted in Figure 7.2. The BoP was conceptualised as a zone adjacent to the main 'super port' node, and would be located within the continuous port hinterland.

Subsequently, the economic team used port development theory to classify the Port of Durban. They categorised the Port of Durban as being "somewhere between the expansion and specialisation phases... described by Bird's Anyport model" (IUDS and GMA, 2012: 14). *Port regionalisation* was a possibility for the South African port system, provided that the Port of Durban became a 'super port'. However, there needed to be significant investment in corridors, starting with the BoP zone in the South Durban Basin (SDB), as well as investment into linkages between Durban and Gauteng. These sentiments were supported by Economic Consultant 1 (07/03/2010), who stated that:

> "…the sub-continent has to have a super port as defined by Notteboom at some point. And the region needs to be planning and building towards this ideal, otherwise the region is going to suffer economically… very severely in the future. We believe that as a result of our research, that Durban is the optimal location [for a 'super port']".

The economic team therefore argued that it was "absolutely essential that the back of port be prioritised in the short and medium term for redevelopment and road and rail upgrades" to support a 'super port' in Durban (IUDS and GMA, 2012: 14). One of the main elements of road corridor investment would be the construction of a dedicated freight route, which would link the Port of Durban with a planned intermodal terminal at Cato Ridge[83] (IUDS and GMA, 2010). In addition, the economic team argued that the "regionalisation phase should therefore only be prioritised in the medium to long term", as infrastructural planning and upgrading takes long periods of time (IUDS and GMA, 2012: 14). Hence *port regionalisation* and the associated notion of a 'super port' was a central component of the ***premier hub port*** story line. The analysis of this component revealed what the Port of Durban should aspire to become.

Clustering of Back of Port facilities

When examining the 'super port' diagram, the nodes within the port system can be separated into different zones, namely the core, middle and outer service areas (see Figure 7.2). This created an argument that certain activities needed to occur in an organised, clustered fashion in these zones, in order to facilitate the development of a 'super port'. Consequently, *clustering* became an important component of the ***premier hub port*** story line. This concept was introduced by the economic team, and thereafter supported by the planning team due to its spatial and functional connotations. Clusters refer to the geographic concentration of interrelated businesses, suppliers, service providers and institutions in a given industry, where these entities compete and collaborate with one another (Porter, 2000). When applying this concept to the BoP Project, it was rationalised that logistics and port-related activities needed to be concentrated in a central area within close proximity to the Port (see Section 6.4.2). It was envisaged that this would promote agglomeration economies, create a 'good business climate', and other synergies, which reflect an urban entrepreneurial approach.

The economic team's 'Back of Ports Functions Case Studies' reiterated the benefits of agglomeration economies, which were attributed to the clustering of certain land uses and activities around ports, as well as the value of having a designated BoP zone (GMA Consortium, 2008b). These case studies focused on the Ports of Melbourne, Vancouver and Barcelona, and highlighted how their BoP areas were initially non-existent, fragmented and inefficient; however planning interventions resulted in clustered logistics and port-related zones, albeit at varying degrees (GMA Consortium, 2008b). These interventions represented an

[83] Cato Ridge is located along the East-West Corridor, and is on the outskirts of the eThekwini Municipality.

endeavour by their respective authorities to secure and accommodate future port growth. They were also considered to be examples of 'state of the art' ports that addressed congestion issues, as well as the issue of 'empty' containers[84]. For example, the Port of Melbourne encouraged import, export and logistics companies to be located in a central area within close proximity to this port, with the understanding that this form of *clustering* would result in the decreased movement of empty containers around Melbourne, and consequently reduce congestion (GMA Consortium, 2008b). For the Port of Barcelona, the economic team noted that the *clustering* of importers and exporters in a distinct BoP zone was efficient, as the cost of infrastructural investment was significantly reduced by clustering logistics and port-related activities in a single area (GMA Consortium, 2008b). The clustering of BoP facilities therefore reflected the discourses of economic efficiency and spatial order.

Bearing these functional best practice lessons in mind, the planning team developed a diagram (Figure 7.3) showing the ideal clustered layout of a port. This diagram includes transport linkages, and depicts "the key best practice characteristics of a state-of-the-art port / back of port interface zone" (GMA Consortium, 2008b: 72).

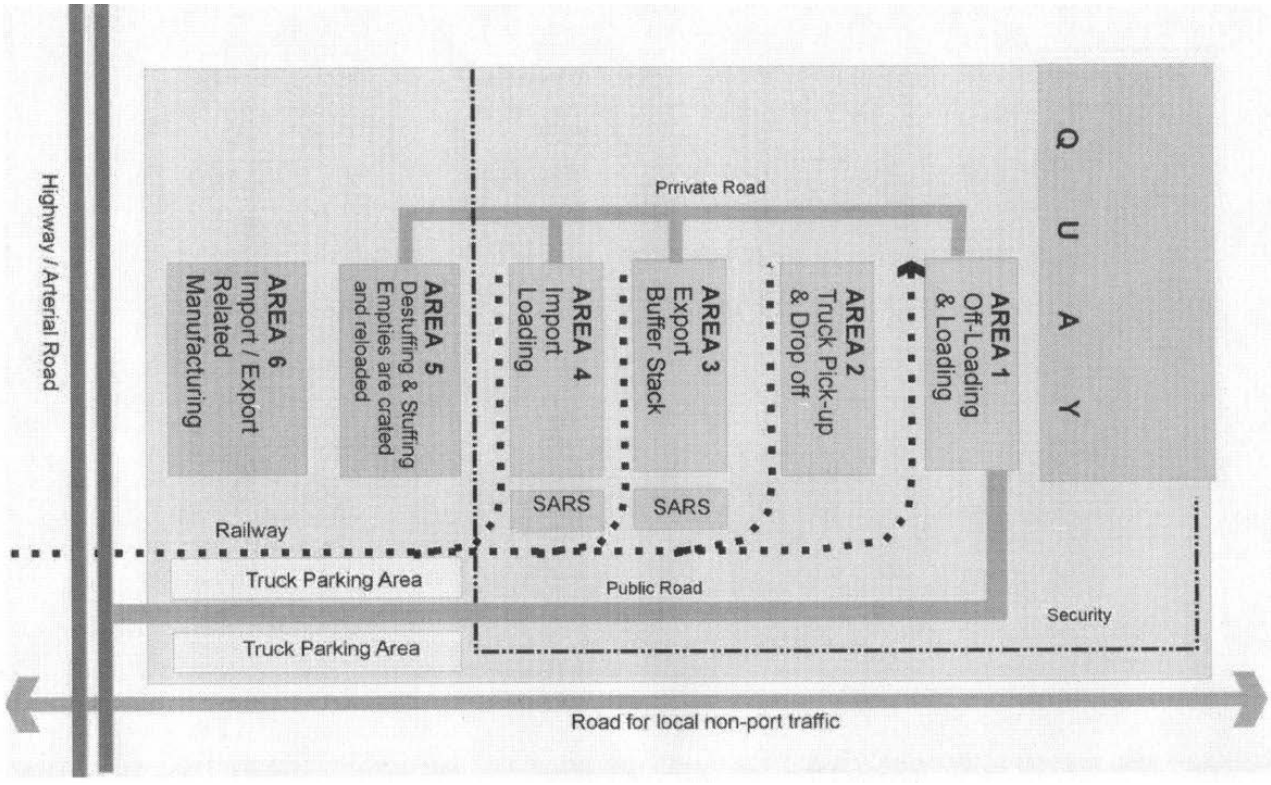

Figure 7.3: Back of Port facilities diagram developed by the planning team

Source: GMA Consortium (2008b: 71)

[84] 'Empty' containers are containers which have no contents, and are considered to be an economic inefficiency.

Figure 7.3 identified six 'areas', which would structure activities and realise the ideal layout of a 'state of the art' port, as well as create synergies between the different areas. This reflects the discourse of spatial order. Areas 5 and 6 were located outside of the port boundary, and this created the rationale for the *clustering* of logistics and port-related activities in the stipulated BoP zone adjacent to the central port node in Durban. When applying this concept to the BoP Project, this meant that the BoP zone adjacent to the Port would include: destuffing and stuffing of containers[85]; the reloading of empty containers; import and export related manufacturing activities; and spaces for logistics activities. This perspective held by the planning and economic teams determined what were considered to be economically desirable activities in a BoP zone (see Section 6.4.2). This had significant implications for the outcomes of this spatial planning exercise, particularly in terms of restructuring land uses in the study area. Therefore, *clustering* was an important component of the ***premier hub port*** story line, which emerged from the pro-growth, urban competitiveness, economic efficiency and spatial order discourses.

Overall, the ***premier hub port*** story line was shaped by a plurality of discourses, which influenced the conceptualisations associated with this economic story line. Analysis revealed that four interrelated components, as well as their underlying discourses formed this economic story line. The ***premier hub port*** story line was powerful in the BoP Project. It shaped conceptualisations and understandings of what the Port of Durban should aspire to become, as well as the ways of achieving this. However, story lines from the social and environmental policy fields tended to oppose these dominant conceptualisations. The following section explores the story line emerging from the social policy field.

7.2.2 Social policy field story line: Live, work and play in the South Durban Basin

The ***live, work and play in the South Durban Basin*** (***live, work and play***) story line was driven by the social team, and was often the source of counter arguments to the hegemonic economic, transport and planning story lines. The findings and proposals from the social team represented a range of counter arguments, which continually needed to be justified in order to ensure that social concerns were adequately considered in the BoP Project's decision-making processes. Consequently, the social team developed multiple 'layers of arguments', all of which were classified under the components of the ***live, work and play story*** line[86]. This story line recognised that there was a cohesive, functioning social system within the study area, and called for the inclusion and acknowledgement of this system in the outcomes of the BoP Project. This reflected an alternative path to neoliberal development in the SDB. An analytical breakdown of this story line appears in Figure 7.4.

[85] Stuffing refers to the loading of goods into a container, whilst destuffing refers to the unloading of cargo from containers.
[86] Further quotations supporting and acknowledging components and aspects of the ***live, work and play*** story line appear in Appendix C1.

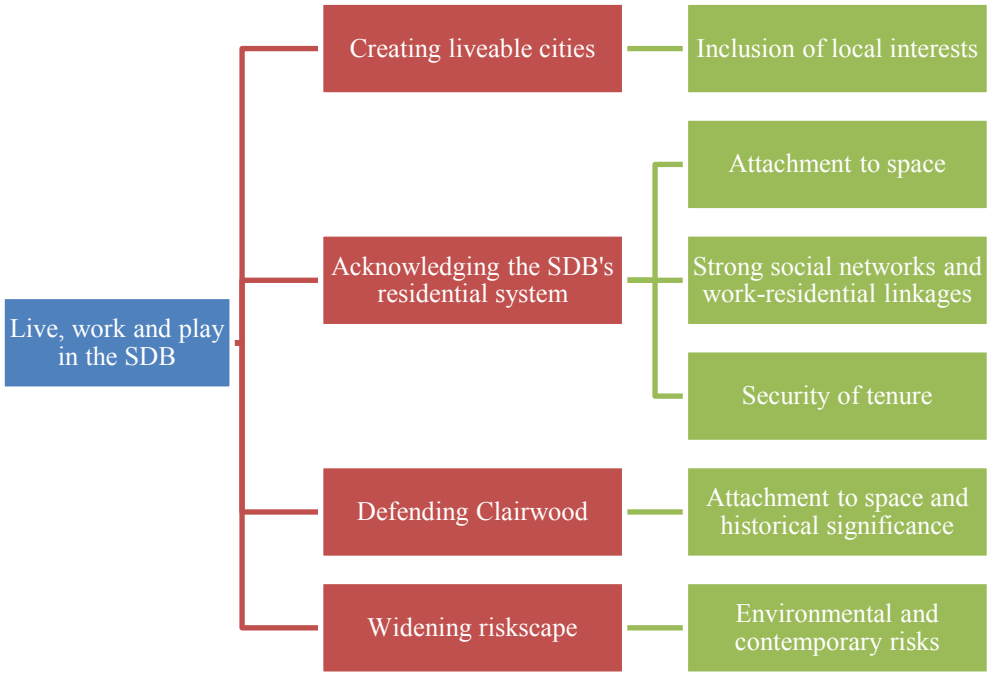

Figure 7.4: An analytical breakdown of the live, work and play in SDB story line

The ***live, work and play*** story line can be deconstructed into four components, which were used as arguments to justify and advance this story line. The underlying conceptualisations of this story line drew on knowledge from a previous SDB study completed in 2003, namely the Strategic Agenda for the South Industrial Basin (Iyer Rothaug and PR Africa Team, 2005)[87]. A 'new' understanding of the SDB emerged from this study, and it was presented that the SDB was "a place for industry, economic development, work, transport and residential neighbourhoods… [It should be] considered as a dynamic, complex place in which people, industry and the environment interact and co-exist" (Social Consultant 1, 29/10/2008). The connotations of this 'new' understanding were attractive to the BoP Project's social team, which ultimately created an 'institutionally accepted' basis for the ***live, work and play*** story line. Therefore the SDB was understood by the social team as a dynamic space characterised by conflicting land uses, where "all [these conflicting land uses and activities] need to be there, all want to be there" (Social Consultant 1, 29/10/2008). Bearing this in mind, the following sections examine the ***live, work and play*** story line, by explaining its four components.

Creating liveable cities

Creating liveable cities was identified as the first component of this story line. This was a central theme and goal for the social team, and its logic permeated throughout their arguments. This component was associated with an alternative understanding of the BoP Project, when compared to perspectives of the

[87] Some members of the BoP Project's planning team were involved in the Strategic Agenda for the South Industrial Basin study. This study was used to establish the basic framework for future development planning in the SDB (Iyer Rothaug and PR Africa Team, 2005).

other policy field story lines. The social team reasoned that "[g]lobal interests should not prevail over local interests in urban development projects and local interests need to be integrated into these projects" (GMA Consortium, 2008b: 118). *Creating liveable cities* was based on the principles of sustainable development, and called for the balancing of economic, environmental and social needs in the BoP Project.

During the Best Practice Phase, the social team called for a deliberative approach to be applied in the BoP Project, in order to include local interests into the decision-making processes of this spatial planning exercise. Social best practice case studies revealed that pro-growth planning initiatives in innovative cities throughout the world were increasingly considering wider community interests in planning, and not focusing solely on business interests[88] (GMA Consortium, 2008b). The social team therefore created the argument that the BoP Project should not be based only on economics or transport requirements, but rather wider societal issues could also be addressed through the implementation of this spatial planning exercise. They consequently called for a participative planning approach to be adopted, which would include all stakeholders, encourage extensive participation, and ensure open and deliberative processes (GMA Consortium, 2008b). This component was therefore based on the discourses of socio-economic integrity and social justice. The second component of this story line is linked to *creating liveable cities*.

Acknowledging the SDB's residential system

The second component of the ***live, work and play*** story line focused on *acknowledging the SDB's residential system*, which revealed the conceptualisation that people wanted to stay in the SDB, and consequently called for their inclusion and consideration in the future development planning of this space. This understanding was initially derived from two previous studies conducted in Merebank (CSIR, 1998) and Clairwood (Ipsos Markinor, 2008). Linked to this understanding, findings from the *Social Impact Assessment* (*SIA*) revealed that people were highly attached to the SDB and wanted to remain in the area (Sutherland *et al*, 2009). This was because the social and economic values derived by SDB residents were high, despite significant levels of environmental pollution and other social hazards in this area (Sutherland *et al*, 2009). It was noted that "there is often the assumption that people want to move out [of the SDB]. But in reality, people want to stay" (Social Consultant 1, 27/02/2009). Findings from the SIA reiterated that there were "high levels of social cohesion… [which contributes to] 'good' functioning neighbourhoods" (Social Consultant 1, 28/10/2008). Planning Consultant 1 (21/04/2010) also acknowledged that "the sense of community [in the SDB] is very powerful". These arguments revealed that *acknowledging the SDB's residential system* was a component of the ***live, work and play*** story line, and was linked to the discourse of socio-economic integrity. Furthermore, this component reveals that the ***live, work and play*** story line was counter to the logic of the ***BoP Project as a rationalisation exercise*** story line (see Section 6.4.2), as it argued that the market forces should not be the only factor dictating land use planning in the SDB.

[88] The case studies from Sydney, Minneapolis and Ireland's Dockland Development were used to show how planning could serve wider community interests (Sutherland *et al*, 2009).

Social networks in the SDB had previously formed around the community's resistance to environmental issues, particularly air pollution, which were attributed to the incompatible juxtaposition of residential and industrial land uses. The environmental context was described by the planning consultants as reflecting "poor planning [which resulted in]…several areas of dysfunction" in the SDB (IUDS, 2009: 24). Furthermore, the social team noted that these strong social networks and associated organisations had the resources to mobilise and oppose the BoP Project (Social Consultant 1, 28/10/2008). The SDB was described as having religious character, with churches, temples and mosques forming part of the social capital in the SDB (Sutherland *et al*, 2009). The social team presented that these religious organisations provide youth facilities, and therefore the argument was created to consider this social capital in the BoP planning process, as "[r]eligious groups and sport plays a key role in social cohesion and quality of life in the area" (Sutherland *et al*, 2009: 96). This reflected that the social capital discourse was used to strengthen the ***live, work and play*** story line, and sought to ensure that social capital was retained in the BoP zone.

Findings from the SIA highlighted that there were also strong work-residential linkages within the SDB, which meant that many people resided in close proximity to their place of work (Sutherland *et al*, 2009). Consequently Social Consultant 1 (01/04/2009) argued that "people stay close to work [in the SDB], they like living there... It's convenient... A lot of the people don't go outside the Basin". This created the rationale for the argument that "social displacement, especially of work places is critical in this project… [as the] displacement of businesses will therefore have high social impacts" (Sutherland *et al*, 2009: 96). It was believed that the strong work-residential linkages could potentially be disrupted by the implementation of the BoP Project, and that the change of land uses and activities could adversely affect the SDB's stable social system. Strong work-residential linkages were therefore an important aspect of *acknowledging the SDB's residential system*, and reiterated the discourse of socio-economic integrity.

Although many residents had resided in the SDB for generations, this area was still impacted by the legacy of apartheid planning, the juxtaposition of residential and industrial activities, and the lack of buffering between incompatible land uses. Collectively, this resulted in residential land uses being under constant threat of being displaced by market forces. This created a context of uncertainty for residential tenure, as the "stable residential system [was] under threat" (Social Consultant 1, 01/04/2009). Acknowledging this perspective, the social team reasoned that security of tenure needed to be ensured for residents, as uncertainty "breaks down social cohesion in communities" (GMA Consortium, 2008b: 104). The concept of vulnerability was also introduced into the BoP policy arena by the social team, with the perspective that vulnerable communities should not be 'loaded' with further problems. The concept of vulnerability also revealed the social justice discourse.

Thus the social team presented that a strategic issue for the BoP Project was to recognise the SDB as having "a key residential system within an industrial zone of national significance" (Sutherland *et al*, 2009:

95). The social team therefore proposed that the "City needs to maintain and enhance positive attributes of stable neighbourhoods where residents have a sense of belonging. [The] City needs to create partnerships with well-established social organisations in the area" (Sutherland *et al*, 2009: 95). This emphasised that residents were highly attached to the SDB, and *acknowledging the SDB's residential system* was a critical local concern which needed to be incorporated into the BoP Project, in order to ensure community buy-in and support. Thus the examination of the second component of the ***live, work and play*** story line revealed that the social team used a wide variety of evidence to ensure that the residential system in the SDB was acknowledged in the BoP Project.

Defending Clairwood

As previously noted, the strong neoliberal agenda entrenched in the BoP Project meant that this social story line represented a counter argument to the hegemonic conceptualisations of this spatial planning exercise. This was particularly evident for the third component of the ***live, work and play*** story line, which represented a local level add-on to *acknowledging the SDB's residential system*. From the onset of the BoP Project, Clairwood was acknowledged as the place where the difficult decisions needed to be made (Planning Official 1, 09/06/2010). It was therefore considered to be the 'hotspot' of the BoP Project by all of the consultants and city officials interviewed. Clairwood's location in relation to the existing Port of Durban was ideal for logistics and port-related activities, whilst market forces had 'ruthlessly' infiltrated Clairwood, and this infiltration was believed by some actors to be beyond repair. As a counter argument to these dominant conceptualisations of the BoP Project, this component was known as *defending Clairwood,* and it emerged from the social team's argument that people wanted to continue residing in this area. *Defending Clairwood* recognised the local community's attachment to Clairwood, its historical significance and created a specific rationale to conserve the residential core of this precinct.

The context of Clairwood was effectively summed up by the planning team, who stated that it was "a historical residential area experiencing the diseconomies of being located in a growing Back of Port, logistics and business zone" (IUDS, 2009: 34). This challenge was also acknowledged by Social Consultant 1 (06/10/2009), who stated that "Clairwood becomes a polarised situation. It is ideal for the BoP zone logistically, but residents want to remain. This is a really serious problem". Therefore there was uncertainty about the residential future of Clairwood, and this was epitomised by Social Consultant 1 (01/04/2009) who stated: "We need to know - what is the City's agenda? Can we keep Clairwood?". There were a number of competing perspectives about the future of Clairwood, and the *defending Clairwood* component of the ***live, work and play*** story line reasoned that the residential core of Clairwood should be conserved due to residents' attachment to this space and its historical significance. This had implications

for the initial outcomes of the BoP Project[89], which were proposed by the consultant consortium, but later rejected by city management.

From the inception of the BoP Project, Social Consultant 2 (24/02/2010) noted that the social team "put upfront the ideas of social justice and equity. We were really trying to represent the community and what is best for them… To represent them fairly. That's why we fought for Clairwood". This statement therefore highlights that there are nuances of the social justice discourse apparent in this component of the ***live, work and play*** story line. Furthermore Social Consultant 1 (01/04/2009) argued that "Clairwood needs a clear future. Heritage spaces need to be secured. We need to keep the core because of its historical significance. Long term decisions need to be made about that. The 'hard decisions' need to be made". This reflected the social team's perspective that local interests needed to be integrated into urban development projects, and not be overshadowed by global neoliberal interests (GMA Consortium, 2008b). The social team created the argument that retaining the residential core of Clairwood was a local and community interest, since it was presented that people were highly attached, and "[m]any people identify with Clairwood, and its heritage value" (Social Consultant 1, 06/10/2009). This created the underlying rationale of the *defending Clairwood* component of the ***live, work and play*** story line.

From the social team's perspective, it was deemed socially unjust for the residential uses of Clairwood to be abstracted out of the plans associated with the BoP Project. Therefore any discussions around relocation in Clairwood were countered by arguments drawing from the social justice discourse. For example, Social Consultant 1 (06/10/2009) stated that "allowing market forces to decide Clairwood's future is socially unjust.... Relocation is seen as unjust and unacceptable. There needs to be compensation for the bigger social group". The term 'compensation' draws on the concept of equity, which is embedded within the social justice discourse. Within the SIA, it was highlighted that Clairwood was "the most vulnerable neighbourhood in [the SDB] and residents here strongly defend their right to live here" (Sutherland *et al,* 2009: 15). This reinforced the argument to retain the residential component of Clairwood within the BoP Project, which was counter to the dominant economic, transport and planning conceptualisations of this project.

The social team highlighted that a possibility existed to "create a historical precinct out of Clairwood and to ensure its protection through the National Heritage Act, and to incorporate it as a special residential zone with indefinite protection as part of the BoP development" (Sutherland *et al,* 2009: 96). This reasoning from the social team attempted to use legislation to ensure the conservation of the residential core of Clairwood. Thus Social Consultant 1 (06/10/2009) argued that Clairwood had the "potential to form an 'Urban Conservation Precinct' in a negotiated space". Therefore from the social team's perspective, this

[89] The initial outcome proposed by the consultant consortium was to conserve the residential core of Clairwood. This is further discussed in Section 8.6.4.

meant that properties and buildings in Clairwood which had historical significance should be retained as an area of heritage value.

South Durban Basin's widening riskscape

The SDB's *widening riskscape* emerged as the fourth component of this story line, and was also introduced by the social team into the BoP policy arena. A riskscape defines a resident's concept of risk, and how they experience risk in a particular area (Brooks *et al*, 2010). Riskscape is an adaptation to the conventional conceptualisation of risk, and the focus is on peoples' lived experience of risk in the SDB. Traditionally, the dominant narrative describing risk in the SDB refers to this area as a pollution hotspot, with pollution being an emblem of this space, as a result of the juxtaposition of residential and industrial land uses (Brooks *et al*, 2010). This understanding of the SDB was described in the SIA as the 'environmental health riskscape', and was largely accepted by actors in the BoP policy area (Sutherland *et al,* 2009).

In addition, recent research by Oelofse *et al* (2008) and Brooks *et al* (2010) provided evidence that the riskscape had become far more complex and challenging than the dominant 'environmental health' narrative of the SDB, and that this riskscape had widened, as risks of a social nature had become more prominent in this space[90]. Reflecting on this research, the social team argued that the 'contemporary riskscape' in the SDB was more socially based, and this included risks such as crime, drugs and alcohol abuse, overcrowding, poor housing and dangerous roads, as well as the deviant youth (Sutherland *et al,* 2009). These 'contemporary' risks were understood as being "just as pervasive and dangerous as the well-established risks of pollution" (Sutherland *et al*, 2009: 8). The social team therefore reasoned that socially based interventions, which sought to reduce some aspects of the 'contemporary riskscape', needed to be included in the BoP Project. The *widening riskscape* component of the ***live, work and play*** story line was acknowledged by Social Consultant 1 (01/04/2009), who highlighted that:

> "In South Durban we have two spaces... Firstly there are stable, coherent neighbourhoods, which are functioning well, with good services and facilities and good neighbourhood bonds. On the counter side, we have a 'darker world' creeping into South Durban. These are newer sites of risks, with many 'social ills'... The BoP Project can't stop all of these problems, but can try to limit them".

This statement also recognised the *acknowledging SDB's residential system* component of the ***live, work and play*** story line, and hinted that a 'darker world' with numerous social conflicts would "undermine and shift the neighbourhood stability and quality of life" (Sutherland *et al*, 2009: 96). In addition, Social Consultant 1 (05/03/2009) maintained that this "riskscape has intensified", and was associated particularly

[90] Members of the social team were involved in this riskscape research.

with the deviant youth[91]. As a result, Social Consultant 1 (01/04/2009) reasoned that "we need interventions for [the deviant youth]. There is a calling for facilities to redirect the youths' energy". They proposed that providing sports fields and other recreational activities would help to mitigate against some of these social ills, and could be packaged as part of the BoP Project, for example, recreational activities in the proposed buffer zones (Sutherland *et al*, 2009). The social team noted that these interventions should be part of Social Enhancement Plans[92], and that the maintenance and monitoring of these recreational facilities would be crucial with regards to the successful implementation of these interventions (Sutherland *et al*, 2009). Linked to the argument to provide open space for the SDB residents, the social team's best practice findings revealed that "[r]esidents were willing to trade off against the proximity to industry with the provision of high quality open space" [93] (Social Consultant 1, 29/10/2008). Therefore the *widening riskscape* component of the ***live, work and play*** story line recognised that there were new 'contemporary' risks in the SDB, and the social team therefore called for the provision of spaces for recreational activities as part of the BoP Project, in order to ameliorate some of these social risks.

Thus the ***live, work and play*** story line called for alternative possibilities and social concerns to be considered in the BoP Project, which were counter to the dominant economic, transport and planning story lines. The preceding exploration of this social story line and its components highlighted that the dominant discourses influencing the BoP policy arena were the discourses of socio-economic integrity, social capital and social justice. This reveals that there was a plurality of discourses shaping this story line. The following section explores the story line identified in the environmental policy field.

7.2.3 Environmental policy field story line: Biodiversity value

An examination of the environmental policy field yielded the ***biodiversity value*** story line, which appears in Figure 7.5. In order to explore the ***biodiversity value*** story line, it is important to examine the environmental team's approach within the BoP Project. The environmental team noted that they used existing information for the environmental dimension of the BoP Project, and this was supplemented with their personal observations and knowledge of the study area (EPD, 2009). This approach had implications for what was introduced into the BoP policy arena from the environmental policy field, as only pre-existing information and knowledges were drawn from. Consequently, the eThekwini Municipality's environmental policy for open space planning and the brownfield context of the study area became useful to this discipline.

[91] More than 60 percent of SDB residents were under the age of 35 (Sutherland *et al*, 2009).
[92] Social Enhancement Plans would attempt to "maximise the social opportunities and to minimise the social costs of the Back of Port zone(s) under a number of alternative scenarios" (Sutherland *et al*, 2009: 2). At the conclusion of the Concept Plan Phase of the BoP Project, the Social Enhancement Plans did not feature.
[93] This was from a study at the Schiphol Airport in Amsterdam, Netherlands (GMA Consortium, 2008b).

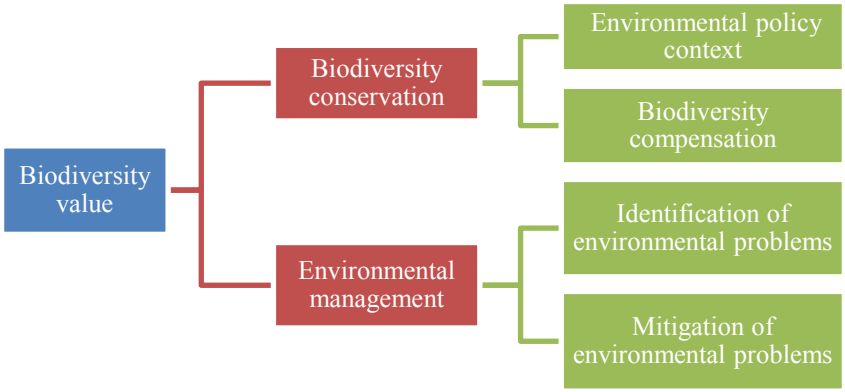

Figure 7.5: An analytical breakdown of the *biodiversity value* story line

This approach is indicative of the set of well-established practices associated with environmental management in South Africa, which tends to be reactive. This characteristic resulted in the environmental input being somewhat limited when compared to the other policy fields (Planning Consultant 2, 10/05/2010). The general perception from the planning team was that the environmental team focused more on "what we couldn't do with our plans, rather than influencing us" (Planning Consultant 2, 10/05/2010). In addition, the environmental team's approach in the BoP Project focused on the mitigation of impacts, rather than shaping the future planning of the SDB. It was therefore considered to be more reactive than proactive.

The recognition of the importance of biodiversity within this policy field enabled the ***biodiversity value*** story line to become entrenched in environmental reporting throughout the BoP Project. This was evident through the emergence of the two main components of this story line: *biodiversity conservation* and *environmental management*.

Biodiversity conservation

From the inception of the BoP Project, the eThekwini Municipality and consultant consortium acknowledged that the consideration of environmental factors in planning studies was important, as it was imperative for the maintenance of biodiversity, and also impacted upon the quality of life of stakeholder communities (GMA Consortium, 2008a). The *biodiversity conservation* component was based on the premise that biodiversity had value, particularly when considering the brownfield context of the study area, and this value created a rationale for conserving the environment. As the SDB was understood as an intensely contested space facing high development pressures, the limited biodiversity and the low number of open spaces in the study area were considered to be important and highly valuable. The common rationale for the conservation of biodiversity is based on both the intrinsic value (value of biodiversity in its own right) and amenity value of biodiversity (the value people derive from the environment through the

provision of goods and services). This component was primarily introduced into the BoP policy arena due to the distinct environmental policy context in the eThekwini Municipality.

The *biodiversity conservation* component was linked to the dominant environmental policy for open spaces and the natural resource base in the eThekwini Municipality, which is known as the Durban Metropolitan Open Space System (D'MOSS)[94]. D'MOSS endeavours to satisfy biodiversity conservation needs, and also aspires to secure ecosystem goods and services for the benefit of current and future generations (eThekwini Municipality, 2009; 2013). Reflecting the discourses of environmental conservation, environmental services and open space systems, this approach identified environmental service assets in the Municipal Area, which require protection and management, and determined the ecological value of open spaces[95] (eThekwini Municipality, 2013). As a policy, D'MOSS was formally integrated as a spatial planning layer into the eThekwini Municipality's town planning schemes in 2010 (eThekwini Municipality, 2013). This integration occurred at the same time as the BoP Project, and consequently the conceptualisation of using zoning as a tool to conserve biodiversity was applied to the study area by the environmental and planning teams. Furthermore, the underlying thinking behind D'MOSS conforms to the sustainability epistemic notion, due to the holistic concern for intergenerational and intragenerational equity. This was subsequently imbued in the *biodiversity conservation* component of the ***biodiversity value*** story line.

When applying this concept to the study area, the boundary of the environmental system was delineated by the D'MOSS boundary. In addition, they used the Ezemvelo KZN Wildlife C-Plan[96] to supplement the D'MOSS delineations. Consequently, the environmental team created a map which highlighted important, non-negotiable habitats, and therefore identified 'no-go areas' for development[97] (EPD, 2009). This revealed the prevalence of the environmental conservation, environmental services and open space system discourses in the ***biodiversity value*** story line.

A further aspect of the *biodiversity conservation* component was related to the high value of biodiversity within this brownfield context (EPD, 2009). Consequently, the rationale was created that if biodiversity was lost due to any BoP related developments in the study area, some level of compensation would be required (EPD, 2009). This was argued by the environmental team, who reasoned that "the importance of

[94] D'MOSS was introduced into the Durban's environmental policy in 1989. In 2003, the current version of this plan, known as the eThekwini Environmental Services Management Plan, was adopted (eThekwini Municipality, 2003).
[95] Open spaces contain different biodiversity types, and these are considered to be environmental assets which have value, as they provide a range of environmental goods and services.
[96] The Ezemvelo KZN Wildlife C-Plan identified endangered species within the study area, which were described as irreplaceable (EPD, 2009).
[97] This spatially established the 'non-negotiables' from an environmental perspective, which was based on the ICUN (World Conservation Union) Red List, which uses categories and criteria to classify species according to levels of threat and risk of extinction.

all existing and potential habitats will increase and more intensive protection and careful management of all natural areas will be required in [the] future" (IUDS and GMA, 2012: 41). The environmental team also stated that more than 300 hectares would be lost to port redevelopment, and this was primarily grasslands and wetlands of a high biodiversity value (Environmental Consultant, 05/03/2009). They argued that there needed to be compensation for the loss of biodiversity and that biodiversity compensation could occur within the study area, however due to spatial constraints, compensation could also potentially occur outside of the SDB (EPD, 2009). Therefore the argument was created to conserve biodiversity in this brownfield context through open spaces; and if conservation was not possible, then there needed to be some form of compensation.

The *biodiversity conservation* component of the ***biodiversity value*** story line was prominent in the BoP Project's Concept Plan, Spatial Framework and Precinct Plans. As D'MOSS could be depicted on a map, this conformed to the spatial or functional knowledge requirement of the BoP Project. In terms of the Concept Plan, the *biodiversity conservation* component was reflected in the argument to reinforce and upgrade significant open spaces in the study area. The main focus of this argument was to create a water-based parkway which would run along the Amanzimyana canal, through the logistics belt (IUDS and GMA, 2012). This open space parkway system was argued to contribute to the overall environmental quality, as well as perform the environmental service of draining the area (IUDS and GMA, 2012). The goal was to also create a network of connections between open spaces (Planning Consultant 1, 06/10/2009). This reflected the important role of corridors in the open space system, which connected open spaces, as well as increased environmental services and biodiversity value within the system. This is because a connected open space system has greater environmental synergy than separated and isolated natural environments. Therefore the *biodiversity conservation* component of this story line was based on the discourse of open space systems.

The *biodiversity conservation* component of the ***biodiversity value*** story line was entrenched in the BoP policy arena from the initiation of this project, and was reflected in the outcomes of this spatial planning exercise. When looking at the potential implementation of the BoP Project, the intensification of BoP activities meant that the environment in the study area would possibly be subject to further pressures. As a result, the environment needed to be managed, which leads on to the second component of this story line.

Environmental management

The approaches to environmental management in South Africa are often described as reflecting weak ecological modernisation[98], which is technocentric, reactive and justifies the trade-off of the environment

[98] Ecological modernisation uses the language of business and science, and rationalises that environmental pollution is attributed to problems of efficiency, rather than conceptualising it as a threat to the environment in its own right (Christoff, 1996, cited in Oelofse *et al*, 2006).

for capitalistic development (Oelofse *et al*, 2006). The *environmental management* component of this story line was introduced by the environmental team during the Best Practice Phase of the BoP Project. In this phase, the environmental team used international case studies to highlight that environmental problems compound if they are not addressed, and that environmental management measures therefore need to be implemented during the early stages of projects (GMA Consortium, 2008b). This reinforced the rationale for *environmental management* related arguments, as it was believed that environmental measures needed to be implemented at an early stage during the operational phase of the BoP Project.

Subsequently, during the Situation Assessment Phase, the principles of environmental management were applied to the study area. Environmental management practices in the BoP Project conformed to standard environmental practice in South Africa, which aims to identify environmental problems and then reduce or mitigate these problems through scientific techniques during the operational phase of projects. Thus, the *environmental management* component of the ***biodiversity value*** story line was based on the ecological modernisation discourse. Based on conventional environmental practice, the current environmental problems of the study area were first identified and acknowledged during the Situational Assessment Phase. The BoP Project's study area was described as a brownfield location, as 85 percent of the study area had been transformed into urban land uses, and the overall environment was degraded and greatly stressed in this highly developed and urbanised context (IUDS and GMA, 2012). Furthermore, issues related to poor air and water quality were identified in the study area (EPD, 2009). This reinforced the planning team's argument that this degraded and highly stressed environment needed to be managed, which reflected the *environmental management* component. As a result, mitigation methods were proposed to minimise and address the existing environmental problems, so as to not compromise the biodiversity value within the study area. These would be addressed during the potential operational phase of the BoP Project. Mitigation methods identified included the monitoring of water and air quality (EPD, 2009). In addition, anticipated problems associated with the implementation of the BoP Project were also provisionally addressed, such as the creation of wash bay areas for trucks in order to reduce water pollution (EPD, 2009). The environmental process followed therefore reflected that the discourse of ecological modernisation was at the root of the *environmental management* component of the ***biodiversity value*** story line.

This component was reflected in the outcomes of the BoP Project as a set of assumptions, such as: sensitive environments will be respected; no further reduction of natural areas will be permitted without adequate mitigation; and where possible, natural areas will be enhanced and expanded (IUDS and GMA, 2012). Therefore the *environmental management* component was associated with environmental mitigation plans, which included environmental protection, rehabilitation, expansion and enhancement, clean-up and

greening (IUDS and GMA, 2012). It is anticipated that the *environmental management* component will have a more critical role in the operational phase of the BoP Project[99].

Thus the *environmental management* component of the ***biodiversity value*** story line was associated with identifying environmental problems, and subsequently mitigating these issues. Overall, this story line was based on four discourses: environmental conservation, open space systems, environmental services and ecological modernisation. This reveals that a plurality of discourses shaped the environmental policy field, and this is indicative of the standard approach to South African environmental management and policy.

7.3 Summary

Through applying the discourse analysis methodology to the BoP Project, this chapter has examined the three story lines from the economic, social and environmental policy fields. These story lines interacted with the transport and planning story lines in the BoP policy arena, and were similarly based on a plurality of discourses. Within the economic policy field, the ***premier hub port*** story line had powerful aspirational connotations. It shaped conceptualisations and understandings of what the Port of Durban should aspire to become, as well as the ways in which this could be achieved. However, the ***live, work and play*** story line emerging from the social policy field tended to oppose the hegemonic story lines within the BoP Project. This story line acknowledged that a range of activities wanted and needed to be located in this contested urban space, and argued for local social concerns to be included in this strategic project. The dominant story line in the environmental policy field focused on ***biodiversity value***. This reactive story line was reflective of standard environmental practices in South Africa, and primarily drew from pre-existing environmental policy and information. The deconstruction of these story lines has enhanced the understanding of the range of economic, social and environmental conceptualisations within this spatial planning exercise. These shaped the BoP Project's knowledge production process and outcomes. Chapters Six and Seven have therefore examined the discursive dimension of the BoP Project.

The following chapter is the final results chapter. This chapter adopts a temporal outlook by using the elements of discourse analysis to examine the context, processes and politics of the BoP Project over time. It additionally examines the evolution of the knowledge production process in this strategic project, by using the four phases of this spatial planning exercise as a framework. It also examines the 'rules of the game' which established the context for these phases. The discourse-coalitions which formed throughout these phases are examined, as well as the negotiation of knowledge that resulted in the final output of this spatial planning exercise.

[99] The operational phases of the BoP Project are yet to commence.

CHAPTER EIGHT: THE EVOLUTION OF THE KNOWLEDGE PRODUCTION PROCESS IN THE BACK OF PORT PROJECT

8.1 Introduction

An important goal of this dissertation is to understand the process of knowledge production in the Back of Port (BoP) Project, using discourse analysis as a methodology, so as to gain an understanding of how decisions are made in large scale urban planning projects in the city of Durban. After identifying the unique context of the BoP Project, as well as the epistemic notions, story lines and discourses of the BoP policy arena in the previous chapters, Chapter Eight adopts a temporal approach to examine the context, processes and politics of the BoP Project over time. The various interpretations identified by this approach represent time and context-specific 'snapshots' of the prevailing understandings of the BoP Project.

This chapter examines the evolution of the knowledge production process in the BoP Project, by using the four phases of this complex spatial planning exercise as a framework, as well as examining the 'rules of the game' which preceded these phases. This chapter is divided into five sections. The first section examines the 'rules of the game', which provides the context within which this spatial planning exercise occurred. The four phases of the BoP Project are then discussed in the subsequent sections. These phases are the Inception, Best Practice, Situational Assessment and Concept Plan Phases. Each section explores the dominant story lines, discourses, actors and discourse-coalitions at various points in time, and explains how knowledge emerged and evolved during the different processes of the BoP Project. The knowledge production process is examined from the initial negotiation phase, to the phase where the stabilising of knowledge and discourse structuration occurred in this spatial planning exercise.

8.2 'Rules of the game'

On 23 November 2006, the Metropolitan Council of the eThekwini Municipality passed a resolution with regards to developing a Local Area Plan (LAP) and Land Use Management Scheme (LUMS) for the BoP interface zone (GMA Consortium, 2008a). This resolution led to the generation of the *Terms of Reference Document* for the BoP Project (eThekwini Municipality, 2008a) in late 2007, which was iteratively compiled by the Development Planning, Environment & Management Unit (DPEMU) of the eThekwini Municipality. This created the script for this project and established the 'rules of the game'[100]. These 'rules' determined which knowledges, outputs and outcomes were considered to be appropriate in this spatial planning exercise. The BoP Project was closely linked to the Transnet eThekwini Municipality Planning Initiative (TEMPI), which considered current land use practices and the future demands of the Port of

[100] Cues for appropriate actor behaviour were defined in this document, which identified: the project aim; main outputs; important project milestones; project objectives; project management and reporting structure; approach and methodology; scope of work; public participation; project phasing and timeframes; project budget; and the technical and financial proposals of the BoP Project (eThekwini Municipality, 2008a).

Durban, within the context of a spatially constrained, rapidly evolving and developing city (eThekwini Municipality, 2008a). Importantly, the output of the BoP Project was to develop a LAP and LUMS to facilitate the development and management of the BoP zone, with the underlying goal of securing port-related benefits for the city of Durban. This would be achieved by restructuring land uses adjacent to the Port of Durban, in order to create a synergy between the Port and the neighbouring city spaces in the South Durban Basin (SDB). The BoP Project fell within the framework of the eThekwini Municipality's Integrated Development Plan (IDP), which increasingly reflected the value of the Port to the functioning of the city of Durban (See Section 4.3.3). This strategic project was therefore framed in a planning discourse, with the specified output being a planning product. Although not explicitly acknowledged by the main actors participating in this project, this framing implied that in order for knowledges or discourses to become accepted or integrated into the output of the BoP Project, they needed to be spatial or functional.

Prior to the inception of the BoP Project, the eThekwini Municipality (2008a) acknowledged that there was little alignment between the approved planning directives for the SDB, and the strategic economic role of this area in relation to the Port of Durban. However, the Municipality recognised that market forces associated with the Port of Durban were dominant in shaping activities in the areas that were in close proximity to the Port (eThekwini Municipality, 2008a). The precincts in these areas consequently formed the study area for the BoP Project, and were envisaged as being a suitable space to create a 'world class' BoP zone[101]. The BoP Project therefore represented a location-specific strategy, as certain spaces were selected for the application of neoliberal strategies. Bearing this planning context in mind, urban renewal became the main development logic of the BoP Project, and this is reflected in Table 8.1. This development logic sought to align land uses in the envisaged BoP zone with the Port of Durban, and it therefore shaped the 'rules' of the BoP Project.

This urban renewal development logic conforms to contemporary port development literature, as ports need to invest significant amounts of capital in order to adapt to changing port dynamics, with the goal of remaining globally competitive (Palmer, 1999; Cullinane *et al*, 2006; Dresner, 2007). By being conceived as a rationalisation exercise, this meant that new discourses would be introduced into the BoP policy arena, and these discourses would have the potential to influence this critical space adjacent to the Port of Durban. The Port was increasingly conceptualised as a critical economic asset for the city and country. As a result, the BoP Project represented a strategic endeavour by the eThekwini Municipality, with the goal of reconnecting the city to this economic asset (Engineering Official 1, 20/04/2010; Planning Official 1, 09/06/2010; Planning Official 2, 24/06/2010). Planning Consultant 1 (21/04/2010) highlighted that although the BoP Project was given high priority in the Municipality, no clear vision was developed to establish a framework regarding how to deal with the dysfunctions of competing land uses in the study

[101] The BoP Project's study area consisted of Clairwood, Congella, Jacobs and Mobeni.

area. Nonetheless, this spatial planning exercise received strong backing and support from the Municipal Manager[102] at the time (Economic Consultant 1, 07/03/2010). Thus, from the outset of the BoP Project, the development logic evident in the *Terms of Reference Document* meant that this project was imbued with the pro-growth, economic efficiency, urban competitiveness and spatial order discourses. It also revealed that this neoliberal project proposed by the Municipality was underpinned by the urban entrepreneurialism epistemic notion.

Table 8.1: The urban renewal development logic entrenched within the Back of Port Project

The eThekwini Municipality's development logic which shaped the 'rules of the game'
• High levels of growth at the Port of Durban meant that the Port was experiencing a change in port dynamics[103]. • The inability of the Port to adapt to changing port dynamics resulted in a congestion crisis and a decrease in its global competitiveness, which adversely impacted the Port and city of Durban from an economic perspective. • The BoP Project represented a strategic spatial planning exercise which examined real estate factors, and thereafter sought to rationalise and restructure land uses to complement the Port of Durban. • A synergy could be created by aligning the land uses in the BoP zone with the Port of Durban. This would improve the Port's ability to compete on the global stage. • The BoP Project was conceptualised as a means to improve the local government's relationship with Transnet, and therefore influence Transnet's impending 'port of choice' decision for containerised cargoes. • An adequate land supply was required in the BoP zone for port-related activities, in order to sustain and promote high levels of port-related growth. It was envisaged that this would address the congestion crisis. • This project represented an opportunity to reconceptualise the economic role of the SDB in Durban. This space could once again become an economic catalyst for the city of Durban.

Source: Adapted from eThekwini Municipality (2008a)

Under new conditions of governance, consultants provide professional solutions to problems which are faced by their clients (Creplet *et al*, 2001; Reihlen and Nikolova, 2010), and act as 'knowledge brokers' in the decision-making process (Creplet *et al*, 2001). Reflecting these conditions, a tender was advertised by the DPEMU to undertake this spatial planning exercise. After completing the tendering process and reviewing a number of applications, the eThekwini Municipality selected Graham Muller Associates (GMA), an economic consultancy, as the lead consulting firm responsible for the completion of the BoP Project. It was stipulated that specialist economic, environmental, planning, public participation[104], social and transport consultant teams needed to be contracted to form a broader consultant consortium. This team would work together in order to satisfy the objectives of the BoP Project, under the guidance of the lead consulting firm and the DPEMU. The knowledge production process therefore occurred in a closed

[102] The Municipal Manager holds the highest position in local government. The Municipal Manager during the initial stages of the BoP Project, Dr Michael Sutcliffe, was replaced in late 2011. Trained as a planner and geographer, Dr Sutcliffe held this position for ten years and had a significant influence on the development of Durban.

[103] Changing port dynamics refer to the increased demand on ports due to a range of factors and changes in technology, such as larger ships, larger containers and the need to be cost effective and globally competitive. With port-related growth, logistics has become increasingly important in supply chains. Consequently ports and their adjacent areas have become core areas of logistic activities, with the goal of promoting efficiency.

[104] Public participation was identified as being critical with regards to the implementation of the BoP Project. However, throughout the period of study for this dissertation, the public participation team had little impact on the knowledge production processes of this project.

network, consisting of the expert knowledge from the consultant teams and the expert and tacit knowledge of the municipal officials, who in this case were both developers and regulators.

According to the literature, consultants are often selected using informal processes both within and outside existing networks, and they are expected to introduce new knowledges to the client for decision-making purposes (Creplet *et al*, 2001). The eThekwini Municipality modified the consultant consortium initially proposed by GMA, and changed the planning, engineering and social consultants (Economic Consultant 3, 07/03/2010; Planning Consultant 2, 24/06/2010). Reflecting this theoretical insight, these actions represented a form of scripting by the eThekwini Municipality, who regulated this spatial planning exercise and had the power to determine which actors would participate in the BoP policy arena. In addition, it was stipulated that the consultant consortium had to sign confidentially agreements, as the BoP Project was not meant to be public knowledge[105]. The knowledge production process of the BoP Project therefore occurred within a closed actor network, consisting of the consultant consortium and municipal officials.

8.3 Inception Phase

After the *Terms of Reference Document* established the 'rules of the game' for this project, the Inception Phase followed; whereby the lead consultants, in consultation with the other consultant teams, compiled the *Inception Report* (GMA Consortium, 2008a). This report outlined the methodologies adopted by the consultant consortium, as well as key deliverables, project milestones and timeframes[106] (GMA Consortium, 2008a). Policy-making often results in the redefinition of a known social problem in such a way that a solution can be found for it. This is typically achieved through the use of experts from diverse fields, who redefine the issue and its particular parameters (Hajer, 1995). Each consultant team developed their own methodology for the collection and analysis of data pertaining to their specialist field. Knowledge would therefore be collected independently by the different consultant teams during the Best Practice and Situational Assessment Phases, which signified that knowledge was initially generated in silos by each discipline.

In terms of the organisation of the BoP Project, economic and planning research was respectively known as Task 1 and 2, whilst the social and environmental research was classified as Task 3a and 3b[107]. This classification reflected the relative power of the economic and planning disciplines from the inception of this project. The hegemonic position of the economics and planning disciplines in the BoP Project was noted by Planning Consultant 1 (12/06/2008), who stated that "as a consequence of the economic analysis

[105] The BoP Project became public knowledge in 2012, when public participation processes were initiated.
[106] The *Inception Report* included a general introduction, description of the SDB study area and potential BoP layouts, and also detailed the BoP Project's structuring, organisation and methodology.
[107] The BoP study area was recognised as being extremely difficult with regards to stakeholder engagement and the discussion of potential future developments, primarily due to the sensitivities associated with the juxtaposition of residential and industrial areas, and the high environmental value of certain locations (GMA Consortium, 2008a).

of the Port, the situational analysis, and the review of existing plans and proposals, it will be possible to commence formulating a planning vision for the study area". Therefore from the outset, the organisation, scripting and structuring of the BoP Project established the social and environmental disciplines as 'outside' or counter to the hegemonic economic and planning disciplines. The relative hegemony of the different policy fields therefore had an impact on the knowledge production process, as knowledges from these disciplines were considered to be powerful.

Preceding the *Inception Report*, an inception workshop was held on 18 April 2008 between the consultant consortium and representatives of the DPEMU, where some of the 'rules of the game' were negotiated. Within policy processes, actors negotiate relevant signifiers, and effectively establish the 'rules of the game' (Hajer, 2006b). For this negotiation, various consultant teams argued that the spatial extent of their study area needed to be extended. For example, the transport team had to consider the wider road network outside the predefined study area (Transport Consultant, 19/04/2010). Similarly the social team extended the size of their study area to the entire SDB, as impacts from the BoP Project would be experienced by people outside of the stipulated study area (Social Consultant 2, 24/02/2010). Furthermore, Merewent was added as a fifth area to be considered in the BoP Project[108] (GMA Consortium, 2008a). These extensions, and the addition of Merewent, were agreed to by the representatives of the eThekwini Municipality. Changes were therefore made to the *Inception Report* and these were critiqued, amended and approved by the eThekwini Municipality's Steering Committee during a meeting at the City Engineers on 12 June 2008.

In addition, during the Inception Phase a field trip was organised on 29 July 2008 by the BoP Project's project manager from the DPEMU. The purpose of this field trip to the BoP zone was for municipal officials, predominantly from the DPEMU, to impart their experiential knowledge and understandings of the study area to the consultant consortium. This represented the imparting of knowledge-as-substance (Bouwen and Taillieu, 2004; Bouwen *et al*, 2005). Furthermore, on 28 August 2008, all of the consultant consortium members were given access to technical reports produced as a result of various TEMPI engagements. These reports were from 2000 onwards[109].

One of the issues prominently discussed during the Inception Phase of the BoP Project was raised by Social Consultant 1 (18/04/2008). This question related to whether a decision had already been made by the eThekwini Municipality regarding the future of the study area. In particular, the question posed by Social Consultant 1 (18/04/2008) asked whether the LUMS would have to specifically create a BoP zone, or if the

[108] The rationale behind the addition of Merewent was that "planning imperatives may require the addition of additional neighbourhoods", and Merewent was in close proximity to the former Durban International Airport (DIA) site, which had the potential to be used as a dig-out port (GMA Consortium, 2008a: 4).

[109] A call for this information was made by Economic Consultant 1 at the Port Scenario Workshop on 22 August 2008, which was held at the City Engineers buildings. This was attended by the consultant consortium, the Municipality's Steering Committee and representatives of Transnet's planning division.

BoP zone could be shifted to more distant locations, such as Cato Ridge, if findings from the BoP Project suggested that the study area could not support all BoP activities. The second part of this question therefore queried whether the LAP and LUMS could include other land uses and activities in the study area, especially if certain areas were not conducive to BoP-related activities. Although much time was spent discussing this question, no conclusive answers were provided by the client, and the BoP Project continued.

During the Inception Phase, the unique context of the BoP Project resulted in uncertainty being imbued throughout the BoP policy arena (See Section 6.2). This was particularly related to Transnet's impending 'port of choice' decision, as well as the phasing of the port development options for the Port of Durban[110]. This project was therefore characterised by high levels of uncertainty, which increased its overall complexity.

8.3.1 Framing of the Back of Port Project

The BoP Project was framed in four distinct ways by the consultant consortium during the Inception Phase. These framings were largely influenced by the 'rules of the game' established by the eThekwini Municipality. Firstly, the general conception held by the consultant consortium was that a BoP zone represented a physical space with certain characteristics. This space would contain high quality container terminals, as well as intermodal and warehousing facilities (Economic Consultant 3, 07/03/2010), which would collectively support the Port of Durban (Economic Consultant 2, 18/03/2010; Planning Consultant 1, 21/04/2010). The BoP zone was therefore initially understood as a space characterised by logistics facilities, which needed to be located in close proximity to the Port (Social Consultant 2, 24/02/2010; Planning Consultant 2, 10/05/2010; Planning Official 2, 24/06/2010).

Secondly, a noticeable step in the *Inception Report* was the commitment to sustainability. The commitment to sustainable development is mandated in eThekwini Municipality's IDP, and this framing was primarily introduced by Social Consultant 1 (12/06/2008) during the 'Inception to Steering Committee' meeting. The lead consultants subsequently adopted the methodology of using sustainability as a framework for the BoP Project, and acknowledged that the principles of improving social, economic and environmental quality would guide the process of developing the LAP (GMA Consortium, 2008a). The rationale behind using sustainability as a framework for this spatial planning exercise was that it would induce a more democratic form of governance, by using a range of methods to include a diverse range of stakeholder interests and values (GMA Consortium, 2008a). It was envisaged that "planning would be directed in a way that more optimal land use was achieved [in the study area] from an economic, environmental and social point of view" (Economic Consultant 1, 07/03/2010).

[110] Throughout the duration of the BoP Project, articles appeared in the local newspapers indicating certain issues around Transnet's decision-making process regarding the development of ports in South Africa, but this knowledge circulated in an arena outside of the BoP project.

Thirdly, the BoP Project was conceptualised by the lead actors as a spatial planning exercise which occurred within the framework of neoliberal economic growth in a global context. This appealed to the economic imperative of the eThekwini Municipality[111], as the city of Durban could potentially improve its competitive position in the global economy by successfully implementing the BoP Project. Within the *Inception Report*, it was argued that the "prime deliverable will be an immediately implementable plan aimed at realising the objective of an efficient, globally competitive hub port over an optimal time period" (GMA Consortium, 2008a: 9). Much of the emphasis of the *Inception Report* was focused on the impending congestion crisis at the Port of Durban, and attention was increasingly placed on container transportation, due to the rapid increase in the number of containerised cargoes entering and leaving the Port (GMA Consortium, 2008b). In addition, the SDB was recognised as an economic catalyst for the local government (GMA Consortium, 2008b), which could be harnessed to improve the city's competitive position. It was rationalised that the five areas comprising the BoP zone required "a holistic set of structured responses rather than ad hoc and unrelated responses to each area separately" (GMA Consortium, 2008a: 8). It was understood that the proximity of these areas to the Port of Durban and the potential dig-out port at the former Durban International Airport (DIA) site, meant that their land uses could ideally be restructured to logistics and port-related uses, as "certain [BoP] functions can't happen elsewhere" (Economic Consultant 1, 18/04/2008). This reveals that the urban renewal development logic was a significant driver in this spatial planning exercise.

Finally, the planning team recognised that physical form and other controls could be used to plan for the public realm in the BoP zone (See Section 6.4.3). This framing was acknowledged in the *Inception Report*, and sought to create high quality and functional spaces in the study area, by simply using urban design principles to control the physical form of buildings. These four framings represent the dominant ways in which the consultant consortium understood the BoP Project during the Inception Phase.

8.3.2 Initial formation of the functional discourse-coalition

The preceding sections examined the preliminary context and dominant framings of this project during the Inception Phase. This section explores the initial formation of the functional discourse-coalition. Conceptualising the BoP Project within the framework of neoliberal growth in a global context led to the initial formation of the functional discourse-coalition. As presented in Chapter Two, a discourse-coalition refers to a group of actors who subscribe to a particular set of story lines over a period of time, within a context of distinguishable institutional practices where discourses are generated, modified and transformed (Hajer, 2006b). The grouping of story lines produces discourse-coalitions, and these coalitions are formed in order to uphold a specific discourse or outlook (Hajer, 1995; Illsley and Richardson, 2004). In Chapter Six, the story lines were deconstructed into different components. Further analysis revealed that these

[111] This refers the eThekwini Municipality's urban competitiveness and entrepreneurial goals.

storylines were then used by different actors to form discourse-coalitions, through the discursive processes that were taking place in the BoP Project.

The functional discourse-coalition was the dominant discourse-coalition influencing the knowledge outputs of the BoP Project, and this coalition was formed around a number of story lines from the economic, transport and planning policy fields. This hegemonic discourse-coalition was formulated around the rationale driving the BoP Project[112]. The components of the story lines which coalesced to initially form the functional discourse-coalition are presented in Table 8.2[113].

Table 8.2: The initial formation of the functional discourse-coalition[114]

Story line	Components	Main proponents
Retaining the Port of Durban as the premier hub port in South Africa	• Creating a 'state of the art' port • Port of Durban as a strategic national asset	Economic team
Solving the congestion crisis	• Understanding the root of congestion	Economic, planning and transport teams
The BoP Project as a rationalisation exercise	• Identifying the 'best' land uses	Economic and planning teams

A discourse-coalition is considered to be dominant when the main actors recognise the rhetorical power of the discourse rooted in story lines forming the foundation of the discourse-coalition, and also when policy processes are performed according to the rules of this hegemonic discourse (Hajer, 1993; 2006a). During the Inception Phase of the BoP Project, the pro-growth, economic efficiency, urban competitiveness and spatial order discourses were dominant. Thus, discourse-coalitions exert power in the policy arena, and are consequently influential in policy processes (Illsley and Richardson, 2004; Hajer, 2005b). Discourse-coalitions shifted throughout the BoP Project, and new ones formed around different story lines. This was evident in the subsequent phase of the BoP Project, namely the Best Practice Phase.

8.4 Best Practice Phase - Normative knowledge of port development

The production of the *Best Practice Report*, a form of normative knowledge, was a critical product of the Best Practice Phase of the BoP Project. The scripting of this phase brought together the consultant consortium, with the goal of finding best practices and success stories from their different disciplines pertaining to the development of BoP zones throughout the world[115]. Knowledge emerging from the Best

[112] The aim was "to provide a comprehensive Local Area Plan and Land Use Management Scheme for the re-development of the Back of Port Interface Area based on current land use practices and future demands within the context of an expanding Port" (eThekwini Municipality, 2008a: 13).
[113] The tables referring to discourse-coalitions in this chapter evolve and contain more detail as the knowledge production process of the BoP Project becomes more complex.
[114] These story lines were introduced in Chapters Six and Seven, and their abbreviated versions are used in this chapter.
[115] The consultant consortium teams producing knowledge in the Best Practice Phase were the economic, environmental, planning and social teams. Although no Best Practice knowledge was produced by the transport consultants, transport-related best practices were researched by the economic team.

Practice Phase represented the 'ideal situation' (GMA Consortium, 2008b). It is important to note that the best practice case studies were selected based on the consultant teams' expert opinions. Therefore the specific consultants that are involved in a project have an important influence on the selection of case studies, and the lessons which can be learnt from them. These international best practice case studies predominantly focused on 'state of the art' BoP areas, with the aim of identifying critical experiences from these ports, and then applying the lessons learnt from these experiences to the local context of the Port of Durban (GMA Consortium, 2008a). The majority of these international best practices endeavoured to make the respective ports and port-cities more attractive, efficient, cost-effective, innovative and globally competitive. This represented the conceptual phase of the BoP Project, and was the first phase where 'new' knowledge was produced by the consultant consortium. Openness, reciprocity and inclusiveness were evident during the consultant consortium meetings, as there was an 'open-floor' policy with regards to discussions.

As the economic team was the lead consultancy, these actors were dominant in this phase. They were the main presenters of best practice case studies, and held the stage during numerous meetings between the DPEMU, Steering Committee and consultant consortium[116]. As a result of these dramaturgical acts, the understandings of best practice case studies presented during these meetings had an economic bias, and focused on functional best practice examples from the Ports of Barcelona, Melbourne, Sydney, Vancouver and Fremantle. In addition, the planning team's focus on the ideal spatial configuration of a 'state of the art' port was attractive to the economic team, and was also aligned with the requirements of the BoP Project. Consequently the planning team's examples were also presented during these meetings. The case studies of 'state of the art' ports provided detailed analyses of economic efficiency, and identified the ideal port design, layouts and management requirements to achieve a 'state of the art' port. It must be noted however, that from the earliest phase of the development of Best Practice norms, the planning team created the 'basic elements' of a concept plan. This plan was iteratively changed as the BoP Project proceeded through its various phases, and new knowledge was fed into the system. These 'basic elements' were directly fed into the Concept Plan Phase.

Although the economic and planning teams were prominent during this phase, the environmental and social teams also contributed discipline-specific knowledge and case-studies on port-related best practices. Knowledge production in the Best Practice Phase therefore occurred in disciplinary silos, and this knowledge was amalgamated in the *Best Practice Report*, however this was not combined in an integrated manner. The knowledge produced was classified as knowledge-as-substance, as it was viewed as a substance which could be transferred from one team to another (Bouwen and Taillieu, 2004; Bouwen *et al*, 2005).

[116] This included meetings on 18/04/2008 and 12/06/2008.

8.4.1 Discourse-coalitions in the Best Practice Phase

Using the discourse analysis methodology to examine the *Best Practice Report* and the associated meetings, three discourse-coalitions were evident in the Best Practice Phase. As the functional discourse-coalition was initially established in the Inception Phase, this discourse-coalition's hegemonic position became strengthened in the Best Practice Phase. In addition, the societal and environmental discourse-coalitions emerged as the counter-hegemonic discourse-coalitions in this project, as their knowledges did not conform to the dominant functional discourse-coalition. The components of the story lines which coalesced to form the three discourse-coalitions are outlined in Table 8.3, as well as the knowledge produced, the discourse-coalition's status and its main proponents.

Table 8.3: The analysis of the three discourse-coalitions identified in the Best Practice Phase

Discourse-coalition	Story line and components	Knowledge produced	Status	Main proponents
Functional	*Retaining the Port of Durban as the premier hub port in South Africa* • Creating a 'state of the art' port • Port regionalisation • Clustering of activities	• Investment is required to improve connectivity to inland terminals • Planning of clustered corridors	Hegemonic	Economic and planning teams
	The BoP Project as a rationalisation exercise • Adoption of a new industrial classification system	• Physical characteristics and use • Ideal clustered configuration for a 'state of the art' port	Hegemonic	Planning team
	The functional use of the environment • Buffering	• Separation of uses for improved spatial integration • Minimise social impacts	Hegemonic	Planning; economic; and social teams
Societal	*Live, work and play in the SDB* • Creating liveable cities	• Incorporate social concerns in pro-growth projects • Adopt a participatory planning approach	Counter-hegemonic	Social team
Environmental	*Biodiversity value* • Environmental management	• Environmental management interventions are required during the implementation stage	Counter-hegemonic	Environmental team

Functional discourse-coalition

The knowledge produced by the functional discourse-coalition during this phase was shaped by the understandings of this coalition, which were generated during the Inception Phase. This meant that the knowledge production process was structured by the initial understandings of the ***solving the congestion crisis***, ***rationalisation exercise*** and ***premier hub port*** story lines. These story lines became the underlying rationale which drove this coalition. The main proponents of the functional discourse-coalition during the Best Practice Phase were the economic and planning teams, whilst the use of buffering to separate incompatible land uses was also supported by the social team.

For the functional discourse-coalition, the introduction of the *port regionalisation* component of the ***premier hub port*** story line (See Section 7.2.1) was particularly powerful in the Best Practice Phase. The main argument associated with port regionalisation was that the Port of Durban should endeavour to become a 'super port'. The 'super port' emblem became an idealised, theoretical response to the congestion crisis, and it was argued that this would ensure that the Port of Durban became Transnet's 'port of choice', as well as having positive economic spin-offs for the local economy. This emblem helped to create the argument that investment in linkages would be required to improve connectivity between the Port and Gauteng.

Furthermore, it was rationalised that the clustering of activities should be promoted. This was also aligned to the main arguments of the ***rationalisation*** story line (See Section 6.4.2). By introducing the concept of clustering, the planning team identified the ideal continuum of port-related activities, which were classified according to their proximity to the 'state of the art' port. In addition, the planning team identified the main characteristics of the 'state of the art' port and interface zone, whilst the economic team highlighted thirteen functional trends which epitomised 'state of the art' port planning and management (see Appendix D1). These trends reflected a functional perspective and understanding of the requirements for the BoP Project, and were presented at a number of meetings (22/08/2008; 28/08/2008; 17/09/2008; 06/11/2008) between the consultant consortium and eThekwini Municipality officials[117].

The planning team also introduced the knowledge that physical characteristics and use could be used to create new industrial categories, and that these new categories could be spatially organised according to their functional relationship with the port. Adopting this outlook, the planning team developed a diagram which depicted the ideal spatial organisation of the port (See Figure 6.3 in Section 6.4.2).

In addition, buffering was introduced by the economic, planning and social teams as a functional best practice concept. Related to the functional use story line, the introduction of buffering would separate incompatible land uses, as well as establish different restrictions, distinctive building requirements and limitations on sensitive land uses (GMA Consortium, 2008b). As three consultant teams supported the concept of buffering, this consequently raised the status of the Fremantle best practice case study, as well as the recommendations stemming from it (See Section 6.4.3). For the economic and planning teams, buffering was interpreted as the spatial management of areas in a 'state of the art' BoP zone, which would represent an efficient and effective organisation of land uses. The social team had a slightly different understanding of buffering, where it was conceptualised as a means to separate incompatible land uses, so as to minimise social impacts (GMA Consortium, 2008b). Nonetheless, the concept of buffering reflected

[117] These thirteen trends also appeared in the final report containing the BoP Project's Concept Plan, Spatial Framework and Precinct Plans (*BoP Final Concept Report*), and were called 'key best practices' (IUDS and GMA, 2012).

the discourse of spatial order, which was evident in the arguments of these three consultant teams. This highlights that in complex projects, even relatively 'simple' well defined concepts are interpreted differently by individuals from different policy fields. This reflects discursive affinity, as these arguments have different meanings, however they are able to conceptualise the world in a similar way (Hajer, 1993; 2006a; 2006b).

Societal discourse-coalition

During the Best Practice Phase, certain arguments made by the social team initiated the societal discourse-coalition[118], which became more prominent at a later stage in the BoP Project. These arguments were associated with the *creating liveable cities* component of the ***live, work and play*** story line, and were based on the discourse of socio-economic integrity. The Best Social Practices were generated by the social team, and consisted of theoretical concepts, normative principles and lessons learned[119]. These actors sought to facilitate a deeper understanding of social processes through a qualitative and interpretive approach, as social processes were becoming increasingly evident in port-city interfaces throughout the world (GMA Consortium, 2008b). These arguments were counter to the rationalisations proposed by the functional discourse-coalition, as the social team maintained that emphasis should be placed on *creating liveable cities*. The use of best practice case studies revealed how local residential populations could be accommodated and benefit from the development of a BoP zone[120]. Despite the BoP Project being a neoliberal spatial planning exercise, the social team argued that social concerns needed to be integrated and considered in decision-making around the BoP Project (GMA Consortium, 2008b). It was reported that these concerns are regularly neglected in large scale urban development projects (Swyngedouw *et al*, 2002; GMA Consortium, 2008b).

During the Inception Phase, it was accepted that sustainability would be used as a framework for planning the BoP Project. The knowledge produced by the social team during the Best Practice Phase was aligned to this framing, as social and environmental justice principles were used to guide best practice, with the goal of ensuring procedural, intergenerational and intragenerational equity (GMA Consortium, 2008b). The social team argued that alternatives to the pro-growth discourse in large scale projects were possible (GMA Consortium, 2008b). Although they were sometimes more difficult to achieve, these alternatives would lead to the equal consideration of business, residential and quality of life concerns, which in turn would create a liveable city and a quality port (GMA Consortium, 2008b). The Best Social Practices also identified five themes to provide understanding for social processes in the port-city interface, namely: the politics of urban processes; urban planning and liveable urban environments; social processes; focus on

[118] The societal discourse-coalition adopted the outlook that the SDB community needed a voice, and should be considered in this spatial planning exercise.
[119] The two main social consultants from the social team worked in academia, which influenced the manner in which the Best Social Practices were presented, as a vast array of theoretical literature was drawn from.
[120] The case studies were from Sydney, Minneapolis and Ireland's Dockland Development.

social impacts of ports and mega-projects, and their planning processes; and the procedural issues around port expansion and decision-making (GMA Consortium, 2008b). In addition, the social team proposed eighteen social principles, and recommended that the BoP Project's outputs and outcomes should strive to include these principles (see Appendix D2).

With a distinct focus on urban governance, the social team recommended that a participatory planning approach should be adopted, which would include all stakeholders, encourage extensive participation, and ensure open and deliberative processes (GMA Consortium, 2008b). This would help gain consensus from the general public, as the specific context, histories, amenities and cultural heritage would be considered, which would prevent global forces from overruling local trends, and in turn, would reduce public conflict (GMA Consortium, 2008b). Therefore the social team created the argument that stakeholders needed to be included in the decision-making process from the outset of the BoP Project, as this would improve trust, and "a participatory, deliberative approach will lead to more sustainable outcomes" (GMA Consortium, 2008b: 105). Therefore these arguments associated with *creating liveable cities* established the societal discourse-coalition, which was a counter-hegemonic discourse-coalition in this spatial planning exercise.

Environmental discourse-coalition

The main proponent of the environmental discourse-coalition was the environmental team, and this counter-hegemonic coalition initially formed around the *environmental management* component of the ***biodiversity value*** story line (See Section 7.2.3). In terms of the *Best Practice Report*, the environmental team provided an Environmental Review of Ports and Practices, which primarily focused on ports in general, and not specifically on BoP zones. Firstly the environmental team highlighted issues which existed in the Port of Durban's current situation. This included: the pressures on natural habitats and corridors; reduction in estuarine functions; poor water quality; BoP areas being subject to flood risk; congestion resulting in pollution; juxtaposition of industrial and residential uses which causes air pollution, noise pollution and increased risk; and the lack of access to the Port of Durban for recreational purposes (GMA Consortium, 2008b). These issues collectively represented problems which required environmental management interventions. The dominant paradigm for managing environmental problems falls within ecological modernisation in South Africa. This theory therefore framed the ***biodiversity value*** story line.

Secondly, the environmental team highlighted the legal context in South Africa, and discussed various aspects of the Constitution, the National Water Act (Act No. 36 of 1998); the National Environmental Management Act (Act 107 of 1998); Environmental Impact Assessment Regulations of 2006; and Major Hazard Installations Regulations[121]. The aforementioned legislation embodies concepts of ecological

[121] The Major Hazard Installation Regulations are noted within the Occupational, Health and Safety Act of 1993.

modernisation, as it was acknowledged that development was considered to be acceptable, provided that there were appropriate environmental management interventions (Oelofse *et al*, 2006).

Thirdly, two case studies were presented by the environmental team within the *Best Practice Report*, with Kaohsiung, Taiwan representing an example of 'what not to do', whilst Darwin, Australia provided an example of 'what to do' (GMA Consortium, 2008b). The Kaohsiung case study revealed that environmental problems compound if they are not adequately addressed; whilst in Darwin, environmental management measures were implemented from an early stage, and when coupled with a long history of cooperative governance and sound environmental planning, this resulted in positive environmental outcomes (GMA Consortium, 2008b). The various interventions in both of these case studies once again reflected the theory, principles and practices of ecological modernisation. Thus the environmental discourse-coalition initially formed around the *environmental management* component of the ***biodiversity value*** story line. As additional knowledge and understandings were introduced into the BoP policy arena during the Situational Assessment Phase, the environmental, functional and societal discourse-coalitions continued to evolve.

8.5 Situational Assessment Phase

The Situational Assessment followed on from the Best Practice Phase, and its aim was to describe and analyse the current situation within the study area and its surroundings. The consultant teams were the dominant actors in this phase, as they undertook 'on the ground' studies pertaining to their disciplines, whilst the practical and experiential knowledge of certain municipal officials was used to inform these studies. The Situational Assessment Phase constituted knowledge-as-substance, as each consultant team separately produced discipline-specific reports pertaining to the status quo of the study area and its surroundings. This 'basic knowledge' was produced by the consultants using the discourses and practices inherent in their professional disciplines. This can be classified as an application of their expert knowledge to the study area. The list of reports produced by the consultant consortium during this phase is presented in Table 8.4.

During the Situational Assessment Phase, the 'rules of the game' stipulated that the BoP Project should not be public knowledge. Although studies were conducted 'on the ground', the details of this project could not be shared with interviewees and other respondents, due to confidentiality and contractual obligations established by the eThekwini Municipality. This was clarified during a meeting on 17 September 2008, which included the consultant consortium and eThekwini Municipality representatives; and a statement, which detailed what needed to be communicated to the interviewees, was produced on 22 September

2008[122]. It was stipulated that interviews could only be conducted if this statement was read to the interviewees. During the same meeting on 17 September 2008, it was revealed that there was a directive from the City Manager that the Situational Assessment needed to focus on what currently existed in the study area, and that no questions should be asked about what the community would like, in terms of the future development of this area (Economic Consultant 1, 17/09/2008; Planning Official 1; 17/09/2008). This had implications, particularly for the social team, who interacted with the general public and interviewed residents throughout the SDB. It was additionally noted that there would only be public participation once the final concept plan had been developed (Economic Consultant 1, 17/09/2008). This limited the possibility for deliberative policy practices and extensive participation, which were recommended by the social team in the Best Practice Phase, and were aligned to the framework of sustainability proposed for the BoP Project.

Table 8.4: Reports produced during the Situational Assessment Phase

Report Title	***Authors***
Economic Status Quo Assessment	GMA (2009)
Back of Port Planning Assessment	IUDS (2009)
Traffic and Transport Status Quo Assessment	ARUP (2009a)
State of Civil Infrastructure Status Quo Assessment[123]	ARUP (2009b)
Social Impact Assessment (SIA)	Sutherland *et al* (2009)
Environmental Status Quo Assessment	EPD (2009)

During this phase, it was also revealed to the consultant consortium that Transnet would not release any of its port-related land for this spatial planning exercise (Economic Consultant 1, 27/08/2008; 17/09/2008; 17/06/2009). This had implications for the BoP Project, as any future plans for BoP-related logistics platforms would have to occur outside of the Port's boundary, in the spatially constrained SDB. This also revealed that the issues of turf and territory were still problematic for Transnet and the eThekwini Municipality (Sutherland *et al*, 2009), and the tensions between officials from these two institutions were evident during the Port Scenario Workshop on 22 August 2008.

8.5.1 Discourse-coalitions

The three discourse-coalitions which emerged in the Best Practice Phase evolved further during the Situational Assessment Phase, as 'on the ground' knowledges were introduced into the BoP policy arena. The introduction of 'new' knowledge resulted in the evolution of the respective story lines. The societal discourse-coalition became the main opponent to some of the arguments created by the functional

[122] The interviewers from the social team had to introduce themselves to respondents as being from the University of KwaZulu-Natal, and thereafter explain that in light of changes to the Port of Durban and the DIA land becoming available, they were working on the social aspect of a planning study for the eThekwini Municipality (Sutherland *et al*, 2009). Along with the devised statement, these were the only details which could be divulged to interviewees.

[123] This report did not have an impact on the knowledge production of the BoP Project, and merely stated that there were numerous failed attempts to meet with the appropriate officials from the eThekwini Municipality.

discourse-coalition, as the social team used a wide variety of information to reiterate that people live, work and play in the study area, and therefore needed to be considered in this spatial planning exercise. The environmental discourse-coalition had more of a reactive approach, focusing on what could not be done in the study area, and did not contribute directly to the strategic future planning of the area (Planning Consultant 1, 21/04/2010).

Functional discourse-coalition

An analysis of the story lines associated with the functional discourse-coalition during the Situational Assessment Phase appears in Table 8.5. The main proponents of this discourse-coalition were the economic, planning and transport teams.

Table 8.5: An analysis of the functional discourse-coalition during the Situational Assessment Phase

Story lines	Components	Knowledge produced
Retaining the Port of Durban as the premier hub port in South Africa	• Creating a 'state of the art' port • Port of Durban as a strategic national asset • Port regionalisation for the Port of Durban	• The use of economic tools (Cost Benefit Analysis and Cost Effectiveness Comparison) revealed that the Port of Durban should be Transnet's 'port of choice'. • Creating a 'super port' would lead to the spreading of wealth to a wider geographic network of communities, remove non-port related activities which were in close proximity to the Port of Durban, and improve the Port's attractiveness to shipping liners.
Solving the congestion crisis	• Understanding the root of congestion	• The majority of container packing, unpacking and storage of 'empties' occurred in the SDB. • Activities throughout the SDB had similar systems of movements, which created a dysfunction between the transport and land use systems, and contributed to the congestion crisis. • Certain transport routes operated beyond capacity, which exacerbated congestion. • The storage of 'empties' needed to be considered in the design of a BoP zone[124]. • The logistics sector was fragmented throughout the study area. • 'Heavy' vehicles were parking randomly throughout the study area.
The BoP Project as a rationalisation exercise	• Identifying the 'best' land uses • Planning on the ground	• The study area was mostly characterised by high land values, however certain areas had lower land values[125]. • The Noxious, General and Light Industry zoning categories were inappropriate for the needs of contemporary industrial development. • There was a juxtaposition of incompatible land uses in the study area due to apartheid planning. • Precincts within the study area had different development format characteristics. • There was a change in the composition of industrial land uses, with a relative decline in manufacturing, whilst there was an increase in service industrial, as well as logistics and port-related activities in the study area. • Logistics was a major employer in the SDB.

[124] There was an oversupply of empty 12m containers at the Port of Durban, due to high levels of imports, whilst there was a significant demand for exporters to utilise 6m containers (GMA, 2009). This imbalance, related to the supply and demand of different sized containers, was an example of inefficiency within the Port (GMA, 2009). Consequently more land would be required for empty container storage (GMA, 2009).

[125] The properties which had the lowest opportunity cost for redevelopment based on land value included Transnet's Diesel Depot, the Fresh Produce Market in Clairwood, the residential component of Clairwood, and large 'unproductive' businesses with relatively low land values in Mobeni and Clairwood (GMA, 2009).

When analysing the 'new' knowledge and arguments produced by the functional discourse-coalition during this phase, three categories could be discerned, and these are presented in Table 8.6. These included the strategic economic rationale, restructuring the movement and circulation system, and the restructuring of land uses and zoning of the study area. The functional discourse-coalition recognised that the SDB was undergoing change, and consequently called for planning to accommodate these changes, and enhance the new roles of the SDB (IUDS, 2009). The functional discourse-coalition therefore accepted that there was a 'break' in planning in the SDB (See Section 6.2.3), and the coalition consequently incorporated this contextual understanding into their main arguments.

Table 8.6: A summary of the main arguments from the functional discourse-coalition

Strategic economic rationale to implement the BoP Project
• Reiterated the importance of the Port of Durban to the local, provincial and national economies. • The Port of Durban was the 'best option' as Transnet's 'port of choice', as it had the lowest costs in terms of capital investment, operating costs and transport costs. • The Port of Durban should strive to achieve 'super port' status, which would reinforce the rationale for investment in infrastructure. • As logistics was a major employer in the study area, growth in the logistics sector would be more beneficial, in terms of employment, than growth in any other economic sector.
Restructuring the movement and circulation system in the SDB
• Restructure the movement and circulation structure in the SDB to address the congestion crisis. • Infrastructure and other built upgrades could be used to improve connectivity in the study area. • Construction of new road networks to solve the congestion crisis. This was the rationale which called for investment in a dedicated freight route and the upgrading of intersections. • Connectivity was understood as the fundamental basis of change. It was rationalised that activities would respond to increases in connectivity, by being attracted to certain locations with high connectivity. • Proposed separation of routes for heavy industrial and port-related traffic, and residential and local business traffic. • Need for the consolidation of logistics facilities, which catered for the storage of 'empties' and truck stops.
Restructuring of land uses and zoning in the study area
• The SDB was conceptualised as an area of change. • Restructure land uses and zoning in the study area in order to be more suitable to the needs of contemporary industrial development. • The introduction of new industrial categories to promote logistics and port-related activities. • Restructure land uses and zoning according to the development format present in the respective precincts. • Land values to guide land use planning in the study area. Target areas with low land values for the conversion to logistics and port-related uses, as they have the lowest opportunity cost for redevelopment[126].

Arguments supporting the strategic economic rationale of the BoP Project were clearly aligned to conceptualising this spatial planning exercise within the framework of neoliberal economic growth in a global context. The strategic economic rationale was therefore associated with the pro-growth discourse, as well as the discourses of urban competitiveness and economic efficiency. When looking at the understandings associated with the restructuring of movement and circulation in the study area in order to solve the ***congestion crisis***, this reflected the increasing prominence of the mobility network discourse in driving the urban renewal development logic of the BoP Project. This discourse was imbued within the *creating a new movement lattice* component of the ***congestion crisis*** story line, which sought to use

[126] For example, the residential component of Clairwood was described as "completely unproductive from an economic perspective" (GMA, 2009: 17). It was therefore an attractive redevelopment option for this coalition.

infrastructure to restructure movement and circulation in the study area. Furthermore, the rationalisations pertaining to the restructuring of land uses and zoning in the study area were indicative of the discourse of spatial order. Therefore the arguments emerging from the functional discourse-coalition were based on discourses which had strong spatial and functional connotations, and were also aligned to the overall goals of this spatial planning exercise.

With the prominence of the mobility network discourse, which was dominating the conceptualisations of the functional discourse-coalition, the BoP Project became less focused on creating a high quality space for logistics activities, and rather focused on the creation of a well-connected transport network. This represented a significant shift in thinking, which shaped the possible planning responses of the BoP Project. Consequently it was believed that connectivity was the fundamental basis of change, and by improving connectivity through the infrastructure approach, land uses would respond accordingly, as logistics and port-related activities would be attracted to the area (Economic Consultant 1, 18/02/2009; 27/02/2009; Planning Consultant 1, 18/02/2009; IUDS, 2009). However as the understandings of the functional discourse-coalition developed, the focus shifted to using infrastructure to construct an effective and efficient mobility network. *Creating a new movement lattice* therefore represented the backbone of the planning response for the BoP Project (Planning Consultant 2, 10/05/2010). Consequently, there was increased involvement of the Municipality's Engineering Department, and the general conception was that transport planning and engineering would 'make or break the project' (Transport Consultant, 19/04/2010). The design therefore shifted away from a conceptual approach which was embodied in a spatial frame, towards a functional approach[127].

In terms of the restructuring of land uses, 'staging' by the economic team contributed to the arguments of the functional discourse-coalition during the Situational Assessment Phase. When conducting the Situational Assessment, the economic team walked through the 'hotspot' of Clairwood[128], and completed a site-by-site basic (and non-scientific) assessment in order to ascertain the level of invasion of businesses into the residentially zoned portion of this precinct. This resulted in the creation of a symbolic image (see Figure 8.1), which reinforced the argument that Clairwood had been illegally invaded by businesses, due to market forces.

[127] Evidence revealing this shift in thinking appears in Appendix D3.
[128] The controversy surrounding Clairwood is presented in Section 8.6.4.

Figure 8.1: The economic team's map illustrating the invasion of businesses into residentially zoned Clairwood

Source: GMA (2009: 30)

It was therefore argued that Clairwood had been ruthlessly invaded by market forces, and that this residentially zoned area was beyond repair (Economic Consultant 1, 01/04/2009). Acknowledging the 'break' in planning in the SDB, and based on this 'quick assessment', it was rationalised that Clairwood should be zoned to more appropriate land uses which complemented the Port of Durban. However the social team opposed the use of this symbolic image revealing the infiltration of Clairwood by businesses, and highlighted that "it was dangerous", as it did not reflect the reality that people regularly lived and worked on the same properties, and that the methodology used to construct it was not scientifically verifiable (Social Consultant 1, 27/10/2008). This reveals that there was contestation within the knowledge production process of the BoP Project. The knowledge and arguments associated with the hegemonic functional discourse-coalition during the Situational Assessment Phase have been explored in this section. The next section examines the societal discourse-coalition during the Situational Assessment Phase.

Societal discourse-coalition

The societal discourse-coalition became established as the main counter-hegemonic coalition during the Situational Assessment Phase, and centred primarily on the social concerns of people residing in and around the study area. As depicted in Table 8.7, the societal discourse-coalition was based on the ***live, work and play*** story line. This coalition's main proponent was the social team.

Table 8.7: The analysis of the societal discourse-coalition during the Situational Assessment Phase

Story line	Components	Knowledge produced
Live, work and play in the SDB	• Creating liveable cities • Acknowledging the SDB's residential system • Defending Clairwood • Widening of riskscapes	• Communities had a strong attachment to place. • Neighbourhoods in the SDB were coherent and stable, with strong community networks. • SDB had religious character, which contributed to the social capital of the area. • People worked in close proximity to their places of residence. • There were high levels of uncertainty over the security of tenure, particularly in Clairwood. • The juxtaposition of industrial and residential land uses has resulted in an environmental health riskscape. Poor environmental conditions have adversely impacted on residents' quality of life, and created tension in the SDB. • Residential zones were being affected by newer risks, such as crime, drug and alcohol abuse, overcrowding and poor housing, dangerous roads and a deviant youth. This was described as the contemporary riskscape. • There was a lack of facilities, particularly for the youth. • Social problems, linked to the contemporary riskscape, have undermined and shifted neighbourhood stability and quality of life. • There was sharing of transport routes by heavy industrial and port-related traffic, with residential and local business traffic.

When presenting the social findings from the Situational Assessment Phase, the social team included various emotive images in their presentations. Some examples of these images appear in Plate 8.1. These images reveal the juxtaposition of residential and industrial land uses in the SDB due to apartheid planning (left), as well as the argument that people call the SDB home (right) (Social Consultant 1, 29/10/2008). This represented a form of staging, which reiterated that people resided in this industrial zone of national significance, and that the residential system and its concerns needed to be considered in this pro-growth planning exercise.

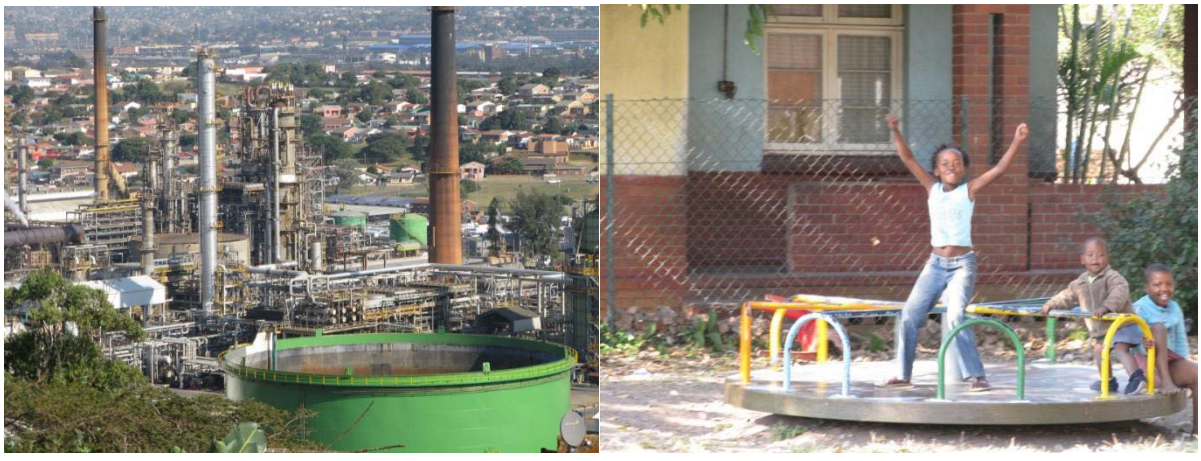

Plate 8.1**: Images associated with the *live, work and play in SDB* story line**

Source: Sutherland (29/10/2008: Slides: 13&21)

The main arguments developed by the societal discourse-coalition appeared in the *Social Impact Assessment*[129] (*SIA*) by Sutherland *et al* (2009), and were constructed using data collected in the large social survey undertaken in the SDB for this spatial planning exercise. They were also prominent in the observations from meetings, and were also acknowledged during the main actor interviews. These arguments are presented in Table 8.8, where five categories were identified. These categories were all linked to the understanding that the residential system should be considered in, and shape the Concept Plan, and that the reduction of social problems needed to be a by-product of the BoP Project (Sutherland *et al*, 2009). These arguments sought to make the SDB a more liveable space.

Table 8.8: The main arguments from the societal discourse-coalition during the Situational Assessment Phase

Recognition of the SDB's residential system within this important industrial zone
• Acknowledgement and inclusion of the SDB's residential system in the BoP Project's output. • Social capital should be enhanced by the BoP Project interventions. Important heritage sites needed to be recognised and protected. • Provision of open spaces and recreational facilities for the SDB's youth. • The SDB's work-residential relationship should ideally not be disrupted, in order to promote socio-economic integrity. • Provide residents with certainty in terms of the future planning of Clairwood.
Interventions to improve social cohesion
• Consideration of the contemporary riskscape in the BoP Project's output. • Interventions were required which focused on the control of crime, the reduction of drug and alcohol abuse, the provision of open space and recreational facilities for the youth, and the maintenance of services and facilities in these social zones. • These interventions would improve the social cohesion within the social zones identified.
The use of buffering
• Consideration of the environmental riskscape in the BoP Project's output. • Buffers need to be introduced between incompatible land uses (residential and industrial).
Separation of transport routes
• Functionally separate residential and commercial traffic from industrial and heavy traffic. • Residents would therefore have lower risk with regards to having an accident with heavy vehicles, and their quality of life would potentially be enhanced.
A call for extensive public participation
• Meaningful public participation was required, as social organisations in the SDB had the potential to mobilise and derail the BoP Project.

Examining the main arguments produced by the societal discourse-coalition revealed the discourses of socio-economic integrity, social capital and social justice. The first two categories of arguments were associated with acknowledging the residential system in the outcomes of the BoP Project, and called for commitment to, and investment in socially based interventions. The categories related to the use of buffering and the separation of transport routes were respectively aligned to the ***functional use of the environment*** story line, and the *creating a new movement lattice* component of the ***congestion crisis*** story line. Knowledges associated with these two categories were spatial and functional, and therefore had the

[129] The *SIA* was the social team's situational assessment. The aim of the *SIA* was to determine the current value, opportunities, challenges and constraints of the social environment present within the BoP zone, and also to generate Social Enhancement Plans to maximise the social opportunities and minimise the various social costs within the BoP zone (Sutherland *et al*, 2009).

potential to become influential in the Concept Plan Phase. As previously noted, the BoP Project was not public knowledge, and therefore the call for extensive public participation during the Situational Assessment Phase did not comply with the script of the BoP Project. This had adverse implications for adopting sustainability as the framework for this project, as in terms of sustainable urban governance practices, widespread public participation should be included to promote sustainable outcomes. This limited the use of lay or local knowledges in the BoP policy arena, as expert knowledge was favoured. The analysis of the societal discourse-coalition during the Situational Assessment Phase has been presented in this section, and the following section examines the evolution of the environmental discourse-coalition during this phase.

Environmental discourse-coalition

The environmental discourse-coalition was also counter-hegemonic to the functional discourse-coalition in the Situational Assessment Phase; however its arguments were not as prominent as the societal discourse-coalition. This was because the knowledge produced by the environmental team, who were the main proponents of this coalition, was based on secondary data analysis. The environmental discourse-coalition had more of a reactive approach, and highlighted various environmental restrictions in the study area (Planning Consultant 1, 21/04/2010). This approach reflects the standard practice associated with environmental management in South Africa. As depicted in Table 8.9, the environmental discourse-coalition formed around the ***biodiversity value*** story line. This story line was based on the discourses of ecological modernisation, environmental services, open space systems and environmental conservation.

Table 8.9: An analysis of the environmental discourse-coalition during the Situational Assessment Phase

Story line	Components	Knowledge produced
Biodiversity value	• Environmental management • Biodiversity conservation	• Five environmental issues were highlighted in the brownfield context of the study area, including threats to biodiversity, water quality concerns, air quality problems, the presence of contaminated land and risk from industries. • The Durban Metropolitan Open Space System (D'MOSS) was used to identify areas of high biodiversity value, whilst Ezemvelo KZN Wildlife's C-Plan was used to highlight rare, endangered and endemic species throughout the study area. • The cleaning of trucks along the roadside contributed to water quality problems in the study area. • An examination of the Major Hazardous Installations in the study area revealed areas which ideally required lower population numbers. • Industrial risk was considered to be a minor constraint to development in the study area.

Bearing in mind the knowledge produced by the environmental discourse-coalition during the Situational Assessment Phase, Table 8.10 highlights the main arguments created by this coalition. Three main categories of arguments were identified, namely arguments pertaining to the increased biodiversity value of the environment in the study area; the possibility of compensation measures; and recommendations related to a range of environmental management interventions for the study area.

Table 8.10: The main arguments from the environmental discourse-coalition during the Situational Assessment Phase

Increased biodiversity value of the environment in the study area
• The biodiversity value of the environment in the BoP zone was raised due to a range of natural and environmental features in this brownfield context. Examples of these features included large areas of undeveloped land around Clairwood and the DIA site; relatively undisturbed coastal dunes; the number of estuaries, water courses and wetland areas; and the extent of coastal grassland within the study area. • Delineation of the open space system identified areas which could not be developed within the study area.
Compensation measures
• Compensation measures needed to be implemented, to ensure that biodiversity levels would be maintained and possibly improved inside the study area. • Compensation could occur outside of the study area.
Environmental management interventions
• The restructuring of the study area may provide an opportunity for rectifying the problem of roadside truck washing, and this would have to be enforced in the future. • Called for an efficient road network to help reduce air pollution. • Called for the effective management of contaminated land. Contaminated land would result in time delays and cost increases at a later stage in the BoP Project. • Developed the argument that logistics and transport uses were better suited to the study area than residential uses, as lower population densities would ensure that less people would be impacted by the potential threats of industrial risks.

Although the environmental discourse-coalition was counter-hegemonic in this spatial planning exercise, the delineation of the open space system represented powerful spatial knowledge in the BoP policy arena, as this drew on the eThekwini Municipality's environmental policy for open space planning. Therefore well established 'no-go areas' with important and non-negotiable habitats were identified (EPD, 2009). As the SDB was understood as a highly contested space facing significant development pressures, the limited biodiversity in the study area and low number of open spaces were therefore considered to be important and valuable. This created a rationale to secure existing open spaces in the study area.

The arguments stemming from the functional, social and environmental discourse-coalitions were subsequently negotiated in the final phase of the BoP Project, where the outcomes of this spatial planning exercise were produced. Section 8.6 presents a synthesised and integrated analysis of the final project output of the knowledge production process of the BoP Project, which occurred during the Concept Plan Phase.

8.6 Concept Plan Phase

During the final stages of the Situational Assessment, the consultant consortium identified the prominent challenges, possibilities and strategic issues within their specific policy fields. These were combined and resulted in the creation of the *Composite Summary and Strategic Issues* report[130]. Bearing these important factors and the knowledge from the Best Practice Phase in mind, it was the planning team's responsibility

[130] This report by GMA Consortium (2009) identified relevant challenges, possibilities and strategic issues and structured these according to the National, Provincial, Metropolitan, South Durban and Planning Area spatial scales.

to translate this knowledge into a spatial format (Planning Consultant 2, 05/03/2009). This was completed during the Concept Plan Phase of the BoP Project. The general objective of the Concept Plan Phase was to develop the Overall Concept, Spatial Framework and Precinct Plans for the study area, which would be implemented by the eThekwini Municipality as a LAP and LUMS in this space. These spatial products, if implemented, would have great potential to influence the urban landscape in the south of Durban.

The Concept Plan Phase represented the negotiation phase of the BoP Project, as this was the stage where the basic layer of the Overall Concept and Spatial Framework were negotiated; firstly by the different consultant teams within the consultant consortium, and secondly between the consultant consortium and representatives of the eThekwini Municipality[131]. These meetings represent the 'back stages' where negotiations took place, issues were discussed by the actors in the policy arena and ultimately decisions were made (Mickez, 2012). The first negotiation of knowledge was a highly complex process, and the meetings (29/02/2009; 05/03/2009) between the different consultant teams took place predominantly at the planning team's offices[132]. Economic Consultant 2 (18/03/2010) felt that these meetings were defining for the BoP Project, as the different consultant teams discussed, deliberated and attempted to provide solutions to important issues, such as the future planning of Clairwood and the various transport route proposals. Openness, reciprocity and inclusiveness were once again evident during the consultant consortium meetings. Once deliberated in the consultant consortium meetings, this knowledge was converted into knowledge-as-participation, as explained by Bouwen and Taillieu (2004). This basic knowledge subsequently formed the foundation layer of the Overall Concept and Spatial Framework Any characteristics of the study area, such as quality of life, social sustainability, and transport accessibility, which could not be captured in a physical spatial form, 'dropped through the net' during this phase, resulting in these issues not being effectively considered (Social Consultant 2, 24/02/2010). These findings conform to Bouwen *et al*'s (2005) opinion, that within different communities of practice, some knowledge will be preferred and included, whilst other knowledges will become unfavourable and be excluded.

The second negotiation of knowledge occurred when this 'first layer' of basic knowledge was presented to representatives of the eThekwini Municipality, who further refined the layers of the Concept Plan[133]. The planning team subsequently incorporated these changes into the final policy document, which consisted of the Overall Concept, Spatial Framework and Precinct Plans. This also represented knowledge-by-

[131] Although Transnet was linked to the BoP Project, the consultant consortium was informed by the lead consultant that Transnet only wanted to comment on the final plan, and not be involved in its negotiation.
[132] This setting reinforced the planning team as powerful actors in the BoP Project. Furthermore, the planning team's offices were located in close proximity to the Port, and it was reiterated on numerous occasions that buildings and businesses in this area were changing (Economic Consultant 1, 27/08/2008; 06/11/2008; 05/03/2009; Planning Consultant 2, 06/11/2008; 05/03/2009).
[133] The negotiations with eThekwini Municipality representatives took place at the City Engineers Building in K.E. Masinga Road (06/10/2009), as well as at earlier meetings at the Botanical Gardens (01/04/2009) and Burman Bush (17/06/2009) venues in Durban. These venues are all owned by the eThekwini Municipality.

participation, as knowledge was created through interactions between the range of actors (Bouwen and Taillieu, 2004). It is important to note that knowledge from the Best Practice and Situational Assessment Phases did not feed directly into the final policy document of the Concept Plan as conceptualised in the 'rational paradigm' of knowledge, but rather through the meetings between the consultant consortium and municipal officials. Therefore the knowledge paradigm shifted to one of 'pluralism and opportunism', as acknowledged by Jones (2009) in Chapter Two. This was due to the fact that the municipal officials present at each meeting varied and introduced pragmatic considerations derived from their professional experience relevant to the local context[134]. This changed the flow of knowledge from a linear rational construction to a more plural form of knowledge, as their tacit knowledge was applied to the BoP Project.

This situated knowledge therefore consisted of the basic knowledge produced by the consortium specialists, integrated with practical experiential knowledge from the municipal officials, about how the city and its 'rules' work. An added process of 'politics and legitimation' converted the knowledge so that it would reiterate and maintain existing power structures (Jones, 2009). Actors who have become accustomed to operating within the frame of the institutionalised discourse will use their standing to impose their institutionalised ideas and perspectives onto other actors, thereby making them interpret and approach reality according to their beliefs (Hajer, 1993). The discourses contained in the plans and reports emerging from the BoP Project needed to be structured in a specific way in order to gain support from the political and administrative elite, whose political goals were not always apparent. The exertion of power in the deliberation processes with the eThekwini Municipality representatives revealed a strong goal of neoliberal urban growth and the economic imperative of the local government. This tended to marginalise normative knowledge, such as the potential effects of BoP-related developments on residential communities and the environmental assets in the SDB. Thus through the negotiation processes, the basic knowledge produced in the rational paradigm was influenced by both pluralism and opportunism, as well as the workings of politics. The knowledge production process of the BoP Project can therefore be described as complex and nuanced, as it involved consultants as policy-influencers and the eThekwini Municipality representatives as policy-makers.

8.6.1 Dominance of economics and planning in the final policy report

In the *Back of Port Concept, Framework, Precinct Plans and Zoning Framework Report* (*BoP Final Concept Report*) by IUDS and GMA (2012), the disciplines of economics and planning were prominent.

[134] There were four changes in the eThekwini Municipality's project management team for the BoP Project, as well as a range of different municipal officials involved in this spatial planning exercise. Social Consultant 2 (24/02/2010) felt that the constant change of representatives hampered the progress of meetings between the consultant consortium and these representatives, and recommended that the eThekwini Municipality should have one dedicated employee from each department to work on future spatial planning exercises. This would mean that there would be greater continuity in the process. Economic Consultant 3 (07/03/2010) shared these sentiments, and stated that changes to the project team created nuances in the BoP Project, as there was often conflicting feedback from municipal officials.

This reflected the hegemony of the two disciplines driving the functional discourse-coalition. Economic findings were prevalent in this report, as the 'rules of the game' established the economic team as the lead consultants, and logically, the lead consultants would have a significant influence on the BoP Project. The economic findings and arguments associated with the functional discourse-coalition were elevated to form the rationale driving the BoP Project, and conformed to the economic imperative of the local government.

When looking at the *BoP Final Concept Report* by IUDS and GMA (2012), the planning team's *Planning Assessment*[135] was particularly powerful (Planning Consultant 1, 21/04/2010). The entire *Planning Assessment* was repeated within this final report, which highlights the significance of the planning team's contributions in the BoP Project. Throughout the *BoP Final Concept Report* it was argued that there needed to be a new movement lattice in the SDB, and it was believed that this would induce changes to the land use structure (IUDS and GMA, 2012). These arguments were predominantly put forward by the planning team, and additionally supported by the transport team. Therefore, in this spatial planning exercise, the spatial and functional knowledge provided by the planning team became prominent in the outputs of this project.

Furthermore, in the Introductory and Background Section of the *BoP Final Concept Report*, only the best practices from the economic and planning teams were presented (IUDS and GMA, 2012). It was noted that the findings from these two disciplines were "key points noted in the best practice report" (IUDS and GMA, 2012: 20). The presentation of the economic and planning best practice findings reiterated the power of the functional discourse-coalition in the BoP Project, as only their knowledges were presented in this report. It is important to note that social and environmental best practice findings and arguments were omitted, as they were not deemed to be important by the functional discourse-coalition. It is therefore evident that the 'rules of the game', that were established during the initial stages of the BoP Project, had a strong influence in the latter stages of this project. These 'rules' stipulated that the social and environmental disciplines would have a more peripheral role than the planning and economic disciplines. This was clearly reflected in the *BoP Final Concept Report* (IUDS and GMA, 2012), as the environmental and social findings were brief, and the social and environmental teams were not acknowledged as authors. These findings reiterate that within different communities of practice, certain knowledges will be preferred and included, whilst other knowledges become unfavourable and are excluded (Bouwen *et al*, 2005).

8.6.2 The increased involvement of engineering

During the Concept Plan Phase, there was an increased involvement of the Head of Engineering due to the recommendations and potential outcomes of this spatial planning exercise (Economic Consultant 1, 07/03/2010; Economic Consultant 3, 07/03/2010; Planning Official 2, 24/06/2010). It therefore became

[135] The *Planning Assessment* was the planning team's Situational Assessment report.

increasingly apparent that engineering would be instrumental in the implementation phase of the BoP Project, and consequently the Head of Engineering chaired the Steering Committee meeting on 6 October 2009 (Social Consultant 2, 24/02/2010; Economic Consultant 1, 07/03/2010; Engineering Official 1, 20/04/2010). The increased involvement of engineering municipal officials further promoted the inclusion of 'hard', technical and functional knowledges into this project. It was also rationalised that the BoP Project had evolved into a "collaborative planning-engineering initiative" (Planning Official 2, 24/06/2010), as the eThekwini Municipality began to conceptualise the BoP Project "as being more than just a planning project" (Planning Official 1, 09/06/2010). This spatial planning exercise therefore evolved beyond land use planning, to include infrastructural development.

8.6.3 The Overall Concept and Spatial Framework

The previous phases of the BoP Project were explained according to the evolution in thinking associated with the different discourse-coalitions in each phase. However for the Concept Plan Phase, the *BoP Final Concept Report* was influenced by plural inputs from the series of meetings, the 'politics' of deliberation with the representatives of the eThekwini Municipality, and the stabilising of the hegemonic discourses, which formed the backbone and rationale of the Concept Plan. The Overall Concept and Spatial Framework revealed the policy vocabularies[136] which were selected after the negotiation of knowledge in this spatial planning exercise.

When explaining the Overall Concept and Spatial Framework, the focus is on the policy produced, and more importantly, the underlying discourses and discourse-coalitions which drove the knowledge production process in this phase. Due to the great level of detail and vast array of knowledges introduced by the actors participating in the BoP policy arena, it is important to take a broader view and examine the Overall Concept and Spatial Framework at the discursive level. This revealed that the prominent discourses driving the outputs of this spatial planning exercise were largely associated with the functional discourse-coalition.

The Overall Concept

The six main features of the Overall Concept represented the 'big ideas' of the BoP Project, which sought to create order in the disordered study area (Planning Consultant 2, 18/02/2009). The Overall Concept acknowledged that cities change and adapt, and recognised how the city of Durban could reposition itself in the medium to long term (Planning Consultant 1, 06/10/2009). This meant that the 'break' in planning in the SDB was recognised and accepted by actors participating in the BoP policy arena, as the study area

[136] Policy vocabularies refer to a series of concepts or ideas which structure a given policy, and are knowingly created by policymakers (Hajer, 2003a). They subsequently guide what is deemed legitimate and illegitimate policy action (Hajer, 2003a).

would potentially be rezoned according to its current activities and uses. Therefore, the implementation of the Overall Concept would bias land uses in the study area to logistics and port-related activities, whilst the restructuring of the movement and circulation system would improve the efficiency and functioning of the area. These interventions would ultimately set the Port of Durban on the path to becoming a 'world class' port (Economic Consultant 3, 07/03/2010). The six main features of the Overall Concept, as well as the driving discourses and discourse-coalitions, are outlined in Table 8.11.

Table 8.11: An analysis of the Concept Plan

Concepts	Descriptions	Prominent discourses driving the concept	Discourse-coalitions
1. Acknowledgement of the existing systems in the study area	• The following systems were recognised: - Coastal corridor (environmental) - Residential corridor - Business/economic corridor - Transport corridor	• Spatial order • Urban competitiveness • Pro-growth • Socio-economic integrity • Environmental conservation	• Functional • Societal • Environmental
2. Acknowledgement of two anchors of space in the study area	• Existing port and planned dig-out port at Reunion were recognised as city scale economic generators	• Spatial order • Urban competitiveness • Pro-growth • Economic efficiency	• Functional
3. Dedicated access systems	• Construction of dedicated freight routes linking national routes to the existing port and planned dig-out port • Planned route linking the two ports	• Mobility network • Spatial order • Urban competitiveness • Economic efficiency	• Functional
4. Linking of heavy industries into this movement system	• Improve the connectivity between heavy industries and the new movement lattice • The separation of residential and business traffic from port-related and heavy industrial traffic	• Mobility network • Spatial order • Urban competitiveness • Economic efficiency • Pro-growth • Socio-economic integrity	• Functional • Societal
5. Reinforce and upgrade significant open spaces	• Securing of open space for: - Functional buffering between land uses - Enhancing the attractiveness and image of the area - Green 'lungs' and improved environmental quality - Recreational activities	• Spatial order • Environmental conservation • Urban renewal • Socio-economic integrity	• Functional • Societal • Environmental
6. Rationalisation of the land use structure	• Rationalisation and restructuring of the existing land use structure according to its proximity to the Port and current activities • Establishment of interface zones between industrial and residential land use systems • Incorporation of new zones into the zoning framework, which reflects the contemporary needs of industries within the study area, and the demands of these new uses	• Spatial order • Urban competitiveness • Urban renewal	• Functional • Societal

The policy vocabularies of the Overall Concept reflected all three discourse-coalitions; however the functional discourse-coalition was hegemonic and evident in all of these 'big ideas'. From Table 8.11, it is apparent that the discourses of spatial order, urban competitiveness and urban renewal were the most prominent in the Overall Concept. In addition, the importance of the mobility network discourse to the arguments of the functional discourse-coalition meant that this discourse was also considered to be influential in the Overall Concept. These discourses had spatial or functional elements, and were aligned with the economic imperative of the eThekwini Municipality, as well as the goals of the BoP Project. The discourse of urban competiveness was driven by the economic team, and this discourse evolved into the underlying rationale of the BoP Project's Overall Concept. The mobility network and spatial order discourses would result in the restructuring of movement systems and land uses in the study area, subject to the implementation of the Overall Concept. The discourse of urban renewal would result in the functional upgrading of spaces in the BoP study area, from an economic and urban design perspective. This was expected since the 'rules of the game' ensured that an urban renewal development logic was driving the BoP Project. The main proponents of these discourses were the economic, planning and transport teams.

Some of the knowledges from the peripheral discourse-coalitions also influenced the Overall Concept. Solutions provided by the societal and environmental discourse-coalitions gained credibility in the BoP policy arena, provided that they had spatial or functional undertones. This reiterated that any spatial or functional knowledge in the BoP Project, which was aligned to functionally improving the spatial integrity of the BoP zone, became prominent.

By being reflected in the Overall Concept, the knowledges associated with these prominent spatial and functional discourses became stabilised in the BoP policy arena. This represents discourse structuration, as defined by Hajer (1993; 1995), as these discourses dominated the way in which reality was conceptualised by the actors participating in the BoP policy arena[137].

The Spatial Framework

The Spatial Framework and Precinct Plans[138] represented the second and third outputs from the BoP Project, and were bound by the broad 'umbrella' concepts stipulated in the Overall Concept. The Spatial Framework identified three systems which need to be implemented, in order to achieve the envisaged concepts articulated in the Overall Concept. These were concerned with the movement and circulation system, open space system and the land use structure. By being aligned to the Overall Concept, the functional discourse-coalition's policy vocabularies were most prominent in terms of restructuring the

[137] If the Concept Plan is implemented, discourse institutionalisation would occur, as these discourses would become entrenched within institutional arrangements and practices of society.
[138] The Precinct Plans will not be discussed as the level of detail is too great for this dissertation. The Precinct Plans reiterated the planning principles and concepts of the Spatial Framework at the localised precinct spatial scale.

movement and circulation system, as well as the land use structure in the study area[139]. The securing of the open space system was proposed by the environmental discourse-coalition, and this spatial and functional feature of the Spatial Framework was evident due to the power of D'MOSS in the eThekwini Municipality's institutional practices. The three systems of the Spatial Framework, as well as the driving discourses and discourse-coalitions, are outlined in Table 8.12.

Table 8.12: An analysis of the Spatial Framework

System Features	Explanation from IUDS and GMA (2012)	Prominent discourses	Discourse-coalitions
Restructuring of movement and circulation	• Development of a new movement lattice which serves as the backbone of the study area - This would induce clarity, urban renewal, development and growth opportunities • Use of the existing movement network • Introduction of new networks, and the separation of road users • Movement system to be aligned with the land uses	• Mobility Network • Urban competitiveness • Spatial order • Urban renewal	• Functional • Societal
Restructuring of land uses	• Create a continuum of industrial land uses, including: - Interface zones between industrial and residential uses - Light and Service Industrial uses, and logistics uses - General industrial activities - Noxious industries • Planning of a linear belt of logistics-orientated uses traversing the study area, which were aligned with the new movement lattice	• Spatial order • Urban renewal • Urban competitiveness	• Functional • Societal
Open Space Structure	• Retain all existing areas of open space • Prioritise the linkages between open spaces • Initiate corridor planting strategies along main transport routes • Creation of a parkway system along the Amanzimyama Canal, through the logistics belt	• Environmental conservation • Urban renewal • Spatial order	• Environmental • Functional • Societal

From Table 8.12, it is apparent that the discourses of spatial order and urban renewal were heavily embedded throughout the Spatial Framework. The creation of a *new movement lattice* was the backbone of the Spatial Framework, due to its ability to provide additional transportation choices, as well as improved accessibility and mobility (IUDS and GMA, 2012). Therefore the mobility network discourse was also highly influential. Associated with the fourth feature of the Overall Concept, the idea was advanced in the Spatial Framework that a dedicated freight route would result in the consolidation of all heavy industrial traffic. It was further envisaged that when these routes were linked to existing heavy industries, there would be a "complete separation of heavy industrial traffic and port related traffic from residential and local business traffic" (IUDS and GMA, 2012: 138). It was argued that this represented a social spin-off, and consequently signified an aspect of social sustainability. This was noted in the following quote by Economic Consultant 3 (07/03/2010): "Bearing in mind that the transport element was about segregating routes which had a strong social objective. They blur a lot. You can wear a social and economic hat as a transport planner, which is what happened". By functionally having the potential to address the congestion crisis, the concept of separating road user routes gained power in the BoP policy arena, and thus it was

[139] The zoning framework proposed in the BoP Project is outlined in Appendix D4.

spatially depicted in the Spatial Framework and the Precinct Plans. It was also envisaged that the restructuring of the movement and circulation system in the study area would support and drive land use changes, and attract the 'right' kind of businesses to the area (IUDS and GMA, 2012). The planned zoning of a linear belt of logistics through the study area also reinforced this potential outcome, which would efficiently locate logistics and port-related businesses in close proximity to the Port of Durban.

Furthermore, these discourses had a spatial component. The discourse of urban competitiveness became a rationale driving the functional restructuring of the movement and circulation system, and land uses in the BoP zone. By having a spatial and functional component, these discourses conformed to the third epistemic notion of the BoP Project, namely the spatial or functional knowledge requirement of this spatial planning exercise. When examining the open space structure, the discourse of environmental conservation was powerful, and this was due to the importance of D'MOSS in the eThekwini Municipality's Town Planning Scheme. This therefore collectively represented discourse structuration of these powerful discourses, as defined by Hajer (1993; 1995), which were associated with spatial and functional knowledges.

Therefore, by examining the features of the Concept Plan and Spatial Framework, it is evident that discourses which were spatial or functional became hegemonic in the BoP policy arena. This was particularly evident when these discourses were aligned to the aim of the BoP Project, as well as the economic imperative of the eThekwini Municipality. Knowledges associated with these hegemonic discourses became part of this project's output.

8.6.4 Clairwood: an area of controversy

The greatest area of controversy was concerned with the future planning of the Clairwood precinct, which fuelled rigorous debate throughout the BoP Project[140] (see Section 7.2.2). From the beginning of the BoP Project, there was the perception that the eThekwini Municipality did not have a clear vision for Clairwood, which was the social hotspot of the study area (Economic Consultant 1, 05/03/2009; Planning Consultant 1, 21/04/2010). The proximity of Clairwood to the Port of Durban meant that this precinct was under continuous pressure to convert to port-related and logistics land uses. However, the controversy arose because people have resided in Clairwood for many years, and were highly attached to this residentially zoned space (Social Consultant 1, 18/02/2009; 27/02/2009). At the beginning of the BoP Project, the eThekwini Municipality did not specifically state that Clairwood should be rezoned to 'best' land uses, however there was a sense of inevitability that the rezoning of Clairwood would occur. Consequently, when looking at the future planning and development of Clairwood, no straightforward solution was

[140] This was acknowledged by the following consultants and municipal officials: Social Consultant 2 (24/02/2010); Economic Consultant 1 (07/03/2010); Economic Consultant 3 (07/03/2010); Economic Consultant 2 (18/03/2010); Transport Consultant (19/04/2010); Engineering Official (20/04/2010); and Planning Consultant 1 (21/04/2010).

apparent (Engineering Official 1, 20/04/2010), which fuelled 'heated' debate (Economic Consultant 2, 18/03/2010). The eThekwini Municipality's decision regarding the future development of Clairwood was therefore considered to the 'big choice' of the BoP Project (Economic Consultant 1, 01/04/2009).

Reporting back on a meeting between the project managers and city management on 25 February 2009, Economic Consultant 1 (27/02/2009; 05/03/2009) conveyed to the consultant consortium that the City Manager's response was that the heart of Clairwood's residential area was resisting change, but the rest of Clairwood had been lost due to the infiltration of market forces. Furthermore, it was conveyed that the City Manager had stated that the eThekwini Municipality would not expropriate residential properties, but a critical decision needed to be made with regards to either rezoning or retaining residential land uses in Clairwood in the long term (Economic Consultant 1, 27/02/2009; 05/03/2009). Nonetheless, it was reported that any areas which were already blighted due to the infiltration of market forces, with irretrievable damage, could be targeted for BoP Project interventions (Economic Consultant 1, 05/03/2009). As a consequence of these statements, the economic team's map (See Figure 8.1 in Section 8.5.1) produced during the Situational Assessment Phase became particularly powerful. This map illustrated properties which had non-residential, 'blighted' land uses, and was used to argue that the infiltration of Clairwood by market forces was severe.

However, the strong arguments presented by the social team resulted in alternative options being generated for the Clairwood precinct. Despite the pro-growth connotations of the BoP Project, the social team called for a different vision for this precinct; where the residential system could become a feature of the BoP zone, and represent a heritage space with historical significance (Social Consultant 1, 18/02/2009; 27/02/2009; 01/04/2009). This represents a 'cultural' project, which is a typical strategy used in promoting port-city development (Merk and Dang, 2013). This was acknowledged as the *defending Clairwood* component of the ***live, work and play*** story line, and was accepted by the consultant consortium. It was rationalised that the historical context, which created racial zoning around the SDB's industrial areas, and the environmental racism inherent in the past planning policies and practices, further served to emphasise that residents had already been impacted by their close proximity to industry, and should not be doubly impacted (Social Consultant 2, 24/02/2010).

This seemed to be accepted by the powerful planning and economic teams, and when discussing the preliminary planning of the study area with the Municipal Steering Committee on 1 April 2009, Planning Consultant 2 (01/04/2009) stated that there was no intention to rezone residential to non-residential uses. Bearing this in mind, Planning Official 1 (01/04/2009) acknowledged that the heritage value of Clairwood should be retained, and that market forces should not decide the future of this area. It was subsequently presented that the heart of Clairwood would be preserved as a historical district in the short term, with buffers around this precinct, whilst initial logistics platforms would be developed to the South of Clairwood

(Planning Consultant 2, 05/05/2009). It was however stated, that in the long term, the residential component of Clairwood would be phased out into potential office spaces for logistics activities (Planning Consultant 2, 17/06/2009). This was because it was argued that market forces would 'inevitably take up land' in Clairwood (Economic Consultant 1, 18/02/2009). However the residents of Clairwood would still possess existing use rights, until any redevelopment was initiated (Economic Consultant 1, 05/03/2009).

Nonetheless, during the Concept Plan Phase negotiations, three options were presented for Clairwood, including the 'Residential Dominant Option', 'Logistics Dominant Option' and the 'Cluster Precinct Option'[141] (IUDS and GMA, 2012). During a meeting on 17 June 2009, Planning Consultant 2 (17/06/2009) highlighted that the consultant consortium recommended to representatives of the eThekwini Municipality that the 'Residential Dominant Option' was the most viable option for Clairwood in the short term.

However at a later stage, the eThekwini Municipality's perception of Clairwood changed, as they rejected the consultant consortium's recommendation and instead adopted a hard line regarding potentially rezoning this area to a logistics zone. It was rationalised that the 'Residential Dominant Option' for Clairwood would result in the economic potential of the area being 'locked' and therefore reduced, and that the ultimate state of development for Clairwood needed to be defined, which would provide landowners with certainty regarding the future use of Clairwood (Planning Official 1, 17/06/2009). The selection of the 'Logistics Dominant Option' was favoured by the Municipality, and would therefore result in the complete redevelopment of Clairwood, which would maximise land value in the area (Planning Consultant 1, 06/10/2009). The land use system was argued to be functioning inefficiently, and there was belief that investing resources in retaining the current residential system in Clairwood was problematic, as market forces would inevitably penetrate the residential component of Clairwood (Planning Official 1, 18/02/2009). There was a strong economic rationale driving this decision-making, as Durban could not afford to lose out with regards to Transnet's 'port of choice' decision, and wanted to become a 'super port' (Economic Consultant 1, 18/02/2009). The residential attachment to Clairwood was downplayed and described as an 'emotional tie' (Engineering Official 2, 18/02/2009), and a 'sentimental attachment' (Planning Official 1, 18/02/2009).

The controversy pertaining to Clairwood revealed that although there was negotiation of knowledge in the BoP policy arena, powerful actors regulating large scale, neoliberal projects have the capacity and capability to change the outcomes of these projects. This decision reflects the influence of urban

[141] The 'Residential Dominant Option' was referred to as the 'donut' option, which would retain the residential core of Clairwood as an area of historical significance, with logistics activities surrounding this core. The 'Logistics Dominant Option' would result in the conversion of Clairwood to logistics uses, whilst the 'Cluster Precinct Option' would result in the retention of a smaller heritage area and residential uses, which would be surrounded by large logistics sites (IUDS and GMA, 2012).

entrepreneurialism on decision-making in the city of Durban, as the local government managed this urban area in a business-like manner. The contested nature of the future planning and development of Clairwood was noted by Social Consultant 2 (24/02/2010), who stated the following:

> "With Clairwood, the City took the lead and said that Clairwood must be completely rezoned as an economic [logistics] area.... Because of that issue which was put on the table, it was very hard to argue against. Because you were coming from behind in a way, as you were trying to argue against the City's goal. They put their goal out there and the study had to follow and do what the City wanted. And to my mind, the whole team needed to produce something which was scientifically worked out. The City putting its cards on the table and the political will of the City made it really difficult to shift those discourses".

Therefore, by acknowledging the 'break' in planning in the study area, the regulating officials from the eThekwini Municipality decided that Clairwood should be rezoned to 'best' land uses, due to its proximity to the Port of Durban, and the strategic value of the Port to the local, provincial and national economies. This outcome was clearly reflected in the Spatial Framework and Precinct Plans.

8.6.5 The discarding and altering of knowledge

During the knowledge production process, only some of the knowledge which was produced was 'absorbed' into the *BoP Final Concept Report*. During the Concept Plan Phase, certain knowledges were discarded, as other ideas superseded them during negotiation processes; whilst other knowledges were modified. The former refers to the rejection of ideas associated with transhipment at the Port of Durban, whilst the latter is related to the modification of the proposed waterway, which became a negotiated urban design feature of the BoP Project (See Appendix D5). There was a vast array of knowledges introduced into this spatial planning exercise, and the knowledges that emerged as powerful were those that supported the dominant epistemic notions and discourses. These knowledges were politically acceptable at a particular point in time, and were aligned with the 'rules of the game'.

8.6.6 Back of Port Project hiatus and the current status

After the period of study covered by this dissertation, there were a number of developments regarding the BoP Project. In late 2009, towards the latter stages of this research, there was a shift in interest on the part of the eThekwini Municipality with regards to this spatial planning exercise. This resulted in a loss of impetus, and the project was put on hold for a number of reasons. Firstly, there was a realisation that the large, contested brownfield study area provided insufficient space to plan an effective BoP zone, and that planning would result in conflict. This meant that there was the need to complete a city-wide investigation, which focused on the future planning opportunities for logistics. As a result, the Municipality

commissioned a study on the East-West Corridor, and this study needed to be completed before the BoP Project could be finalised and implemented[142]. It was rationalised that this study was a time-trade off, which sought "to get the right inputs together to inform the BoP Project" (Planning Official 1, 09/06/2010). This would provide more information and inform the critical decisions linked to the BoP Project, which would inevitably alter the urban landscape in the SDB. Secondly, with South Africa hosting the FIFA 2010 Soccer World Cup, municipal resources were redirected to projects and developments associated with this global event, which resulted in diminished focus on the BoP Project (Social Consultant 2, 24/02/2010). Thirdly, on 18 May 2011 local elections took place throughout South Africa, and it was believed by representatives of the eThekwini Municipality that the controversial nature of the BoP Project may have an impact on how people in the study area voted (Economic Consultant 1, 07/03/2010; Transport Consultant, 19/04/2010; Social Consultant 2, 24/02/2010).

Nonetheless, in late 2011 the BoP Project regained momentum, and on 20 June 2012 the eThekwini Municipality released a public notice, calling for comment on the Draft BoP Plan (eThekwini Municipality, 2012). This process can be classified as 'end of pipe' deliberation, as noted by Hajer (2003a). This is because policy-makers had reached consensus with regards to the contents of the BoP Project, before there was public participation. All of the consultant consortium's reports from the Best Practice and Situational Assessment Phases were made available online, as well as the *BoP Final Concept Report*. Subsequently, a sixty day period of public comment commenced from 1 July 2012 to 31 August 2012. However, due to the controversies associated with the BoP Project, the period for comment was extended and closed on 21 November 2012. At the time of writing, the BoP Project and its associated LAP and LUMS were pending decision.

Another critical development related to the context of the BoP Project occurred on 6 December 2012, when Transnet took ownership of the former DIA site from the Airports Company of South Africa for R1.8 billion, with the plan of creating a dig-out port at Reunion (Transnet, 2012; Merk, 2014). Previously, Transnet (2010) had released a statement which expressed their interest in acquiring the DIA site; however they did not make a formal bid due to projected capacity constraints. However, Transnet recommended to the Department of Public Enterprises that the DIA site should be retained under government control, with port development being envisaged for this strategic area (Transnet, 2010). This strategic purchase by Transnet created certainty that the planned dig-out port would materialise on the DIA site, and increased the importance of the BoP Project in the SDB.

[142] The East-West Corridor study explored the dedicated freight route and implications for the BoP Project, and was completed by the planning and economic teams in December 2010 (IUDS and GMA, 2010). This study recommended a three phased approach for logistics planning in the eThekwini Municipality (IUDS and GMA, 2010). Firstly, there should be the redevelopment, rezoning and enhancement of the BoP zone in the SDB (IUDS and GMA, 2010). Secondly, there should be an extension of the BoP zone along the mandatory dedicated freight route (IUDS and GMA, 2010). Thirdly, there should be the establishment of a decentralised logistics hub, which could be located anywhere between Pinetown and Johannesburg (IUDS and GMA, 2010).

During the BoP Project's hiatus, the Presidential Infrastructural Coordination Commission launched the National Infrastructure Development Plan in 2012, which focused on 17 Strategic Infrastructure Projects (SIP) throughout South Africa. Of relevance to this study, SIP2 was concerned with the Durban – Free State – Gauteng Corridor, as well as the National Department of Transport's 2050 Vision. These both called for port expansion at the Port of Durban (phase 1), and the construction of the dig-out port at the former DIA site (phase 2), as well as sought to build new rail terminals and road networks in this corridor (TEMPI, 2010). In addition, there would also be a dig-out at the Bayhead site (phase 3) (TEMPI, 2012). This therefore provided certainty regarding the timing and phasing of port development options at the Port of Durban, which were clearly lacking throughout the various phases of the BoP Project. This decision also had positive economic implications for the Port of Durban, as it would become further entrenched as South Africa's premier port (TEMPI, 2010), and was therefore Transnet's 'port of choice' for South Africa.

Bearing these developments in mind, there was a strategic reframing of the *BoP Final Concept Report*, as the BoP zone would form the initial part of corridor development between Durban, the Free State and Gauteng. This reframing gave the BoP Project national importance, and therefore raised its status. This conceptualisation was linked to the findings of the East-West Corridor Study, which was completed in 2010 (IUDS and GMA, 2010). Subsequently, it was argued that the Durban to Gauteng Freight Corridor "forms the backbone of South Africa's freight transportation network and is a vital national asset, facilitating economic growth for the country and the entire southern Africa region", and will consequently help South Africa reach its short, medium and long term economic goals (IUDS and GMA, 2012: 40). According to Notteboom and Rodrigue (2005), corridors are the cornerstone of port regionalisation. This reframing meant that the Port of Durban was on the path to becoming a 'super port'. In addition, by strategically couching the BoP Project within SIP2, this seemingly established the mechanism for this spatial planning exercise to have access to resources and funding from the national government, agencies and institutions. Having access to resources and funding was considered to be vital for the successful implementation of the BoP Project (Engineering Official 1, 20/04/2010; Planning Official 1, 09/06/2010; Planning Official 2, 24/06/2010). A hiatus in the BoP Project therefore occurred between late 2009 and late 2011 for a variety of reasons; however currently there is renewed impetus for the completion of this strategic spatial planning exercise in the city of Durban.

8.7 Summary

Chapter Seven adopted a temporal outlook and used the features of discourse analysis to examine the context, processes and politics of the BoP Project over time. This study initially analysed the 'rules of the game', as well as the Inception, Best Practice, Situational Assessment and Concept Plan Phases of this project. Discourse analysis was used as a methodology to reveal the knowledge production process of this

spatial planning exercise, and highlighted the range of actors, story lines, discourses, discourse-coalitions and the various ideas which were hegemonic and counter-hegemonic throughout this project.

The BoP Project represents a highly complex spatial planning exercise, which has the potential to significantly alter urban landscapes to the south of Durban. By examining the knowledge production process and the discourse-coalitions associated with this spatial planning exercise, the main drivers of knowledge production and the decision-making processes in the BoP Project were revealed.

The following chapter presents the conclusion of this study, which provides an overview of the BoP Project and illuminates the ways in which the aim and objectives were achieved. The nuanced knowledge production process of this project is explored, whilst the value of using discourse analysis as a methodology to understand this spatial planning exercise is examined. In addition, the relevance of this study for planning in the city of Durban is discussed, and recommendations for future studies are presented.

CHAPTER NINE: CONCLUSION

The Back of Port (BoP) Project has emerged as an important and influential spatial planning exercise within the city of Durban. Its pending implementation will have significant impacts on the urban landscape to the south of the city. It is therefore imperative to understand the ways in which knowledge was produced and negotiated, and subsequently incorporated into the decision-making processes of this complex spatial planning exercise. Discourse analysis was used as the methodological means to explore the knowledge production process of the BoP Project, and it is considered to be an appropriate analytical tool to satisfy the aim and objectives of this study. This chapter presents the conclusions of this dissertation.

9.1 The Back of Port Project as a case study

The focus of this study was the knowledge production process of the BoP Project, a spatial planning exercise initiated by the eThekwini Municipality for the land adjacent to the Port of Durban, KwaZulu-Natal. The Port of Durban has become established as South Africa's main port for containerised cargoes, as it is the main gateway to the country's economic hub in Gauteng. However, this has resulted in the Port and its adjacent spaces experiencing significant congestion. Additionally, Transnet began to re-evaluate their strategic port planning options for South Africa in the mid-2000s, which created a context of uncertainty regarding which port in the country would be its 'port of choice' for containerised cargoes. Port governance in South Africa is unique, as Transnet is an independent state operator that control port planning and decision-making in all South African ports. Consequently, they have an influential role in shaping the economic development agendas for local governments. With this context in mind, the BoP Project represents a large scale spatial planning exercise undertaken by the eThekwini Municipality, via a consultant consortium, which sought to use spatial planning to: address landside port congestion; cater for port-related growth; and rationalise land uses in the areas adjacent to, and south of, the Port of Durban. This intervention therefore sought to create synergy between the Port of Durban and adjacent land uses by addressing the 'congestion crisis', as this would place the Port in a favourable position for Transnet's impending 'port of choice' decision, as well as potentially stimulate the local and national economies. The study area for the envisaged BoP zone was within the South Durban Basin (SDB), a highly contested, brownfield urban space affected by the legacy of apartheid planning, which compounded the complexity of this case study.

The structuring of the BoP Project resulted in the consultant teams being the knowledge producers of this spatial planning exercise, whilst representatives of the eThekwini Municipality regulated the knowledge which was produced. Collectively, the negotiation of knowledge between these important actors resulted in the formulation of the Overall Concept, Spatial Framework and Precinct Plans for the study area. The main focus of these spatial outcomes was to create a well-connected and enhanced transportation system in the

SDB, as well as to align land uses in the study area with the Port of Durban, so as to complement the functioning of the Port.

9.2 The study

The aim of the study was to examine the knowledge production process of the BoP Project, from the Inception Phase to the Concept Plan Phase. In order to satisfy this aim, four objectives were identified. Discourse analysis was subsequently selected as the appropriate analytical methodology to achieve the aim and objectives, by exploring the discursive, dramaturgical and deliberative dimensions of this spatial planning exercise. Adopting a qualitative approach, data pertaining to the BoP Project were collected through observations at meetings, main actor interviews and the review of relevant documents. The researcher was part of the social assessment team; and through action research, collectively attended and observed a total of sixteen meetings between the consultant consortium and the eThekwini Municipality officials, as well as meetings between the various consultant teams within the consultant consortium. Seven members of the consultant consortium, as well as three municipal officials, were interviewed in order to gain further information and insight into the BoP Project. In addition, twelve reports, which were generated by actors participating in the BoP policy arena, were analysed.

Hajer's (2003a; 2005b) discourse analysis framework was subsequently used to analyse the data collected. Dey's (1993) approach to qualitative data analysis was selected as an additional framework for data analysis. For Dey (1993), the crux of qualitative analysis is associated with the iterative processes of describing the researched phenomena, classifying it and finally observing how various concepts interrelate with one another. Bearing these frameworks in mind, the focus was firstly placed on identifying the discursive features of the BoP Project, which entailed the description of epistemic notions, story lines and discourses. This was coupled with a brief description of the unique context within which this project is situated, which shaped rationalisations of actors participating in the BoP policy arena. Secondly, the BoP Project was analysed from a temporal perspective, which used the establishment of the 'rules of the game' and the four phases of the BoP Project as a framework to highlight the evolution of the knowledge production process throughout this project. This temporal analysis revealed that discourse-coalitions formed and evolved during the BoP Project. It also highlighted the context, processes and politics affecting the knowledge production process of this spatial planning exercise. Furthermore, throughout both parts of the analysis, aspects of dramaturgy and deliberation were identified within this research. Thus, by examining the knowledge production process of this complex spatial planning exercise through the use of Hajer's (2003a; 2005b) discourse analysis framework, the main drivers of knowledge production that shaped decision-making processes in the BoP Project were revealed. These drivers have the potential to significantly alter urban landscapes, economic activities and social livelihoods to the south of Durban, through the implementation of the BoP Project. Thus, the realisation of the study's objectives allowed for

the knowledge production process of this project to be critically examined through discourse analysis, thereby meeting the aim of the study.

9.2.1 The Back of Port Project as a neoliberal exercise

Contemporary cities regularly undertake neoliberal interventions to improve their competitive position in the global urban network. The BoP Project emerged from the Transnet eThekwini Municipality Planning Initiative (TEMPI), and was initiated by the Development Planning, Environment and Management Unit (DPEMU) of the eThekwini Municipality. This spatial planning exercise can be classified as a neoliberal project, which had the goal of creating a Local Area Plan (LAP) and Land Use Management Scheme (LUMS) to facilitate neoliberal port-related economic growth and development. The Port of Durban was conceptualised as an asset for the city of Durban, and this spatial planning exercise represented an endeavour by the eThekwini Municipality to recognise and maximise economic opportunities for its Port. The BoP Project became about enhancing this strategic asset, particularly by using land uses and transportation as a means to promote the location-specific competencies and competitiveness of the study area. The outcomes of the BoP Project would be applied as a spatial planning and development framework to the areas adjacent to the Port of Durban. In the context of urban entrepreneurialism, it was envisaged that the implementation of the outcomes of the BoP Project would create a 'good business climate' for logistics and port-related activities in the study area. These location-specific interventions would in turn benefit Durban's local economy, as well as the provincial and national economies.

The study area in the SDB was conceptualised by the local state as an area under pressure to change, due to relentless market forces, which opened up the possibility of new planning strategies to be considered for this space. This shift in conceptualisation of the study area meant that new planning ideas could be introduced to alter the future development trajectory of this brownfield urban space. The restructuring of land use and mobility systems in the study area would collectively complement the Port of Durban, and align the planning system with the market forces impacting on the SDB.

This neoliberal project was influenced by multi-scalar governance, and particularly the relationship between the local state and national role-players. South Africa's unique port governance system, Transnet's impending 'port of choice' decision and the relationship between Transnet and the eThekwini Municipality created a context of uncertainty, which was imbued throughout the phases of the BoP Project. This added to the complexity of this spatial planning exercise.

9.2.2 The 'rules of the game'

The 'rules of the game' organised the BoP Project, by structuring what was considered to be imperative to the goals of this neoliberal project, and alternatively, what was inconsequential. These 'rules' were created by the DPEMU, which meant that the BoP Project was classified as a planning project, and therefore planning was placed in a central position. These 'rules' were established by the Terms of Reference report, and were a highly influential factor in the knowledge production process, since they determined which actors and networks could participate in the BoP policy arena. In addition, the 'rules of the game' were critical, as they acted as the script for this neoliberal project and determined which discourses, enacted through story lines, were powerful in the BoP Project policy arena. These 'rules' were shaped by institutionalised discourses emerging from institutionalised practices, as well as the various actors involved in their generation.

South Africa is characterised as being reflective of a consultant state, where consultants are vital to policy-making and other knowledge production processes. A consultant consortium was therefore created for the BoP Project. During the Inception Phase, the consultant teams negotiated and changed some of the 'rules of the game', such as increasing the spatial extent of the study area. Overall, these 'rules' resulted in the consultant teams being the knowledge producers of the BoP Project, whilst representatives of the eThekwini Municipality regulated this knowledge. Resultantly the consultants introduced different knowledges into the BoP policy arena, with the goal of contributing to the outcomes of this project. This also had implications for the deliberative dimension of this spatial planning exercise, as expert and tacit knowledge generated within this closed network was the dominant form of knowledge considered in the decision-making processes of the BoP Project.

As part of the 'rules of the game', the economic team was appointed as the lead consultants, which reiterated the economic focus of the BoP Project. Furthermore, planning was scripted into the policy process as being the discipline which would integrate the various knowledges, and thereafter generate a spatial output for this neoliberal project. Although a wide range of discourses were introduced into the BoP policy arena for this multi-disciplinary project, their relative power was determined by the 'rules of the game'. If discourses, story lines and knowledges were aligned to these 'rules' and the goals of the BoP Project, they became hegemonic in this policy arena.

The 'rules of the game' structured the BoP Project and ensured that there were four phases of this spatial planning exercise. Each phase was completed one at a time, and then elements were fed into the subsequent phase. The Best Practice Phase introduced knowledge from international, best practice case studies related to BoP zones, whilst the Situational Assessment introduced knowledge based on the current situation in the study area. The discursive elements and knowledges introduced by actors competed against, or complemented one another, and also facilitated the introduction of aligned knowledges into the BoP policy

arena. Therefore over time, understandings evolved within the BoP Project. This meant that this project could be analysed temporally, which revealed the influential actors, discourses, discourse-coalitions, story lines, knowledges and shifts of the 'rules of the game' over time.

9.2.3 The planning outcomes of the Back of Port Project

During the Concept Plan Phase, the negotiation of knowledge between the consultant teams within the consultant consortium, and the negotiation of knowledge between the consultant consortium and representatives of the eThekwini Municipality, resulted in the generation of the Overall Concept, Spatial Framework and Precinct Plans for the study area. Importantly, the planning team translated this negotiated knowledge into a spatial format, so as to satisfy the goals of the BoP Project.

The Overall Concept had six main features, and sought to: build on inherent structures (economic, environmental and social systems) in the SDB; acknowledge key anchors (the Port and planned dig-out port) in space; construct dedicated access systems; link existing heavy industrial areas to the dedicated access systems; reinforce and upgrade significant open spaces; and rationalise the land use structure in the study area. The Spatial Framework for the entire study area was derived from the Overall Concept, and had three major components: restructuring the movement and circulation system; securing the open space system; and restructuring the land use structure of the study area. The Precinct Plans were derived from the Spatial Framework, and applied the various concepts and components in greater detail, at the precinct spatial scale.

What are the implications of the Back of Port Project for Durban?

The implementation of the outcomes of the BoP Project would have significant impacts on the city of Durban, as well as the Port of Durban. In particular, this would substantially restructure the transport system to the south of Durban; whilst in terms of land uses, there would be an increase in port-related and logistics activities in the study area. From an economic perspective, the implementation of these outcomes would re-entrench the Port of Durban as South Africa's 'port of choice' for containerised cargoes, by making it 'state of the art' with high levels of efficiency and landside connectivity. The creation of synergy between the Port and adjacent land uses would improve the attractiveness of the Port of Durban, and would additionally spur economic growth in the local and national economies. From a planning perspective, the implementation of the outcomes of this spatial planning exercise would result in alignment between the approved planning directives for the BoP zone, and the envisaged strategic economic role of the area. This would create a highly functional space, linked to the Port of Durban. From a transportation perspective, the restructuring of the movement and circulation system in the SDB would result in a more efficient transport system, which would functionally complement the Port by reducing congestion.

From a social perspective, despite existing uses being retained, the rezoning of Clairwood in particular would be highly controversial, and it is anticipated that the implementation of the BoP Project will encounter great opposition and public resistance in this urban space. In Clairwood, there would be a decrease in residential land uses, which is the prime source of social conflict. However, the gradation of industrial activities and the inclusion of buffers would mitigate the harsh juxtaposition between residential and industrial activities from apartheid planning, whilst the separation of various transport users would be beneficial to the SDB residents. From an environmental perspective, the main arguments called for the environment in the study area to be effectively managed during the implementation of this spatial planning exercise.

9.3 Nuanced knowledge production

By using Hajer's (2003a; 2005b) discourse analysis framework as a tool to analyse the knowledge production process of this project, it became apparent that the knowledge negotiation processes in large scale spatial planning exercises are nuanced and complex. The 'rules of the game' positioned the planning team in a strategic position, as it was their job to iteratively develop concepts during the various phases of the BoP Project, which would thereafter be negotiated in the BoP policy arena. As the outcomes of the BoP Project needed to appear in a spatial format, knowledges had to be spatial and therefore able to appear on a map; or they needed to have a functional purpose, which was closely aligned to the goals and objectives of the BoP Project. If conceptions of the study area conformed to the spatial or functional knowledge requirement, they had greater potential to be translated into the Overall Concept and Spatial Framework.

Furthermore, knowledge from the Best Practice and Situational Assessment Phases did not feed directly into the final policy document of the Concept Plan as conceptualised in the 'rational paradigm' of knowledge production, but rather through the meetings between the consultant consortium and municipal officials. Therefore the knowledge paradigm shifted to one of 'pluralism and opportunism'. This was due to the fact that the municipal officials present at each meeting varied, and introduced pragmatic considerations derived from their professional experience. This changed the flow of knowledge from a linear rational construction to a more plural form of knowledge, which was relevant to the local context. This situated knowledge therefore consisted of the basic, expert knowledge produced by the consultant consortium, integrated with expert and tacit knowledge from municipal officials about how the city and its 'rules' work. An added process of 'politics and legitimation' converted the knowledge so that it would reiterate and maintain existing power structures (Jones, 2009). The exertion of power by the dominant actors in the deliberation processes with the municipal officials revealed that neoliberal urban growth in a global context was driving the process. This tended to marginalise normative knowledge, such as the effects of BoP related rezoning on residential communities in the SDB. However, it is important to note that a large degree of knowledge was integrated into the final planning outcomes of the BoP Project. Thus through the process,

the basic knowledge produced in the rational paradigm was influenced by both pluralism and opportunism, and the workings of politics.

The negotiation of knowledge in this spatial planning exercise was therefore influenced by a range of actors and other factors over time. Hajer (1995: 17) notes that reality "is always particular, it is always dependent on subject-specific framing or time-and-place specific discourses that guide our perceptions of what is the case". The exact outcomes produced by the BoP Project were therefore related to a particular place and time, and were dependent on the participating actors and their various knowledges. Consequently, rather than following a linear process, the knowledge production process was nuanced and highly complex.

9.4 The value of discourse analysis as a methodology

Discourse analysis is an appropriate tool for the analysis of policy and policy-making processes, and was useful when unravelling the knowledge production process of this spatial planning exercise. Planning processes are highly complex and have the potential to significantly alter urban spaces, activities and social livelihoods. It is therefore important to gain an understanding of how knowledge is produced in planning exercises, and subsequently incorporated into decision-making processes. The identification of the various discursive elements provided critical insight into understanding the conceptualisations and rationalisations which influenced the BoP Project, and consequently shaped the outcomes of this project.

The predominant analytical focus of this study was on the discursive dimension of the BoP Project, which was the first objective of this dissertation. This focused particularly on the context, 'rules of the game', epistemic notions, actors, story lines, discourses and discourse-coalitions, as well as the relative hegemony of these discursive elements throughout the BoP Project. By focusing on the discursive dimension, the knowledge basis and ideologies of the actors participating in the BoP policy arena were revealed, as well as the dramaturgical dimension of the BoP Project. These were the second and third objectives of this dissertation. Furthermore, adopting a temporal outlook in the analysis of the BoP Project enabled deliberative processes to be identified. This focused particularly on the negotiation of knowledge within the consultant consortium, and between the consultant consortium and the representatives of the eThekwini Municipality, and how deliberative processes shifted over time and were influenced by the introduction of new knowledges that were introduced.

By applying Hajer's (2003a; 2005b) discourse analysis framework, it was possible to identify three epistemic notions which were critical with regards to the knowledge production process of this spatial planning exercise. The epistemic notions identified were urban entrepreneurialism, sustainability, and the spatial and functional knowledge requirement of the BoP Project. Although not formally acknowledged by actors involved in this project, the epistemic notions helped to establish which conceptualisations became

hegemonic and counter-hegemonic in the BoP policy arena, and shaped the thinking and behaviour of the participating actors.

The structuring of the 'rules of the game' determines which epistemic notions become dominant in the policy arena of large scale spatial planning exercises. In the BoP policy arena, the epistemic notions of urban entrepreneurialism, and the spatial and functional knowledge requirement of the BoP Project became more powerful than the sustainability epistemic notion. Knowledges, story lines and discourses aligned to these dominant epistemic notions were powerful in the BoP policy arena, as the 'rules of the game' stipulated that a spatial and functional solution was required, which would alter urban space so as to improve the Port and the city of Durban's competitive positions.

In complex spatial planning exercises, a vast array of discourses and story lines, and their associated knowledges, are introduced into the policy arena. These concise narratives competed against or complemented one another, as well as enabled aligned knowledges to be introduced into the BoP policy arena. Six story lines were identified in the five policy fields of this spatial planning exercise, and they shaped the various conceptualisations in the BoP Project. These included the: ***congestion crisis***; ***rationalisation exercise***; ***functional use***; ***premier hub port; live, work and play***; and ***biodiversity value*** story lines. The analysis of these story lines over time enabled their various components to be identified, as well as their underlying discourses. In the outcomes of the BoP Project, the following discourses were evident: urban competitiveness; pro-growth; economic efficiency; mobility network; spatial order; urban renewal; socio-economic integrity; environmental conservation; open space systems; and ecological modernisation. Discourses which were spatial and functional became hegemonic and stabilised in the BoP policy arena, provided that they were aligned with the goals of the BoP Project. By being present in the outcomes of this strategic project, this represented discourse structuration, as the main conceptions emerging from the BoP policy arena were structured by these hegemonic discourses.

An understanding of the interaction of the story line components in the BoP policy arena was critical with regards to understanding the formation of the three discourse-coalitions identified in this spatial planning exercise. These story line components coalesced with one another, and formed the functional, societal and environmental discourse-coalitions. If the story lines of a discourse-coalition are based on the dominant conceptualisations of a large scale spatial planning exercise, the discourse-coalition has the potential to become hegemonic in the policy arena. In the BoP Project, the functional discourse-coalition became the hegemonic coalition, as it was based on story lines which sought to provide a spatial and functional solution to the challenges encountered in this spatial planning exercise; whilst the social and environmental discourse-coalitions were counter-hegemonic. Actors subscribing to the functional discourse-coalition presented arguments concerned with: the strategic economic rationale of the BoP Project; the restructuring of the movement and circulation system; and the restructuring of land uses in the study area.

Planning processes are highly complex, and the conceptualisations of planning approaches can evolve over time. By adopting a temporal approach, and using discourse analysis as a means of analysis, it was revealed that the BoP Project's planning approach evolved as the project progressed. Initial understandings of possible solutions to the BoP Project were to create a high quality space for BoP activities, such as intermodal and warehousing facilities. However during the Situational Assessment Phase, the understandings of the planning response had evolved, and the envisaged solution was to construct an effective and efficient transport network, by creating a new movement lattice. This was promoted by the functional discourse-coalition. The design therefore shifted away from a conceptual approach which was embodied in a spatial frame, towards a functional solution that focused on the transport network.

Certain ways of framing spatial planning exercises can remain the dominant conceptualisation throughout these projects, whilst other frames become less prominent. By using Hajer's (2003a; 2005b) discourse analysis framework to analyse this spatial planning exercise, the dominant conceptualisation driving this project was based on generating globally-derived, neoliberal economic growth. This framing was attractive to the economic imperative of the eThekwini Municipality, and resulted in the initial formation of the hegemonic functional discourse-coalition.

However, the framing associated with using sustainability as the framework for the BoP Project lost momentum over time, due to certain aspects stipulated in the 'rules of the game', as well as the influence of powerful actors from the eThekwini Municipality. During the Inception Phase, it was stated by the consultant consortium that sustainability would be adopted as the framework of the BoP Project. However, the confidentiality agreement stipulated by the 'rules of the game', and the powerful directive from the City Manager at the time meant that practices of 'good urban governance' were not achieved. The confidentially agreement with the consultant consortium stipulated that the BoP Project should not be public knowledge during its formative stages, whilst the directive from the City Manager stated that the Situational Assessment should focus on what was present is the study area, and not what people wanted there. This limited the possibility for deliberative policy practices and extensive participation in the early stages of this project, which were recommended by the social team during the Best Practice Phase, and aligned to the framework of sustainability proposed for the BoP Project. The framework of sustainability was therefore set aside during the process.

Context is highly relevant to any discourse analysis. The physical context of a study area is also influential in spatial planning exercises, as the various knowledges, story lines and discourses associated with the understandings of the context can be introduced by actors into the policy arena. For example, in project there was a realisation by the planning team that manufacturing activities had declined in the SDB relative to other activities, whilst logistics and service industrial activities had increased. This 'on the ground' context reinforced the belief that market forces had invaded the study area, and that the planning system

should be aligned with these new activities. A further example of context shaping understandings was the social team's conception that the riskscape in the SDB had widened, which rationalised their subsequent call for social interventions to be implemented as part of the BoP Project.

The dramaturgical and deliberative dimensions of this spatial planning exercise were also identified through discourse analysis. The dramaturgical aspects of this project were evident at the various meetings of the BoP Project, through the scripting, staging and setting which occurred. The deliberative dimension of this spatial planning exercise was largely influenced by the 'rules of the game', which established a closed network of expert consultants and municipal officials as the contributors to the knowledge production process, as well as structuring the complex and nuanced negotiation processes of the BoP Project.

Therefore the identification of the discursive, dramaturgical and deliberative dimensions of the BoP Project was critical with regards to exploring the knowledge production process of this project. By examining the knowledge production process of this spatial planning exercise through the use of discourse analysis, the main drivers of knowledge production that shaped decision-making processes in the BoP Project were revealed. These drivers have the potential to change urban space in Durban, subject to the implementation of the BoP Project.

9.5 Learning from the Back of Port Project

Although large scale spatial planning exercises are laden with uncertainty, cities need to implement these strategic projects in order to reposition themselves in the global economy. The analysis of the knowledge production process of the BoP Project revealed that a number of factors are important to these spatial planning exercises.

The 'rules of the game' were critical with regards to directing the knowledge production process, and shaping which knowledges were considered to be hegemonic and counter-hegemonic in the BoP policy arena. As part of the 'rules of the game', a clear vision needs to be developed by the client, which focuses on dealing with problematic issues; for example, how to deal with land use dysfunctions or the future of Clairwood within the BoP Project. The research revealed that this vision should be clearly established upfront, rather than setting the consultant consortium on a path of discovery, and subsequently instilling some form of a vision during the processes of these spatial planning exercises. Thereafter, consultants can use their expertise to refine ideas and strategies. By having strong project management, clarity and an execution plan, this would potentially create certainty in these processes, and would therefore reduce project delays and conflicts within the process. Furthermore, a 'space' that allows the introduction of new, alternative ideas needs to be incorporated into these strategic projects. This will allow consultants to manoeuvre within the knowledge production process, and act as knowledge brokers.

When considering these economically strategic spatial planning exercises, there is a need to elevate planning to a higher position in local government. This spatial planning exercise was initiated by the planning department of the eThekwini Municipality; however the strategic nature of this exercise and its envisaged solutions attracted the input of the engineering department, who would be largely responsible for the implementation of the new movement lattice. By elevating planning to a higher position, co-ordination across sectors and control of budgets can occur, with the aim of achieving integrated sustainable development. Furthermore, an elevated position of planning would help to gain the support of political or approving structures within the Municipality, who heavily influence the final outcomes of these processes, as well as their implementation. Insights from this research reveal that political will from these structures is critical to these large scale interventions, otherwise they tend to lose momentum, or only result in smaller changes.

Furthermore, it is suggested that the local government develop dedicated capabilities for these large scale planning exercises. An examination of the knowledge production process of the BoP Project revealed that the municipal officials present at each meeting varied, and this resulted in a more plural form of knowledge being introduced into the BoP policy arena. This however disrupted the continuity of the process. By creating a dedicated or core project team, there would be greater continuity in these processes, and a rational flow of knowledge would occur. In addition, during the implementation stage, a dedicated project team would ideally ensure the effective implementation of these spatial planning exercises.

An examination of the knowledge production process revealed that the institutional context is laden with high levels of uncertainty, which increased the complexity of the BoP Project. This therefore highlights the need for greater collaboration between different institutions, such as Transnet and the eThekwini Municipality. In addition, insights on the implementation of these neoliberal projects reiterate that there needs to be co-operation, understanding, alignment and financial agreements between the local and national governments, and other national institutions and agencies. Greater collaboration in the institutional landscape would create higher levels of certainty for these strategic interventions, which would in principle reduce their complexity.

A final lesson realised from an examination of the BoP Project is that the context of the study area should be weighted more heavily in these spatial planning exercises. Although these neoliberal interventions have a globally-derived economic focus, which advance spatial and functional knowledge; the incorporation of the ‘local’ into these large scale projects is an imperative, especially in the context of South Africa with its legacy of apartheid planning. This would require the incorporation of principles of effective urban governance and inclusive public participation, which would enhance transparency in these processes. There was a belief that a transparent public participation process would help to ascertain community buy-in, which would aid in the implementation of the BoP Project. However, the organisation of the BoP Project

meant that the concepts of this project would already be relatively fixed when public participation commenced, and therefore public participation processes would have little influence on the overarching ideas of this spatial planning exercise. Therefore, if 'local' concerns are not incorporated into these interventions, it can be anticipated that there will be significant local opposition and time delays associated with these critical neoliberal projects.

9.6 Relevance of the study

This study contributes to the understanding of urban planning processes within the city of Durban, with particular focus on a highly complex, large scale spatial planning exercise. This study also provides insight for policy-making, as it highlights the need to understand the knowledge production process, which presents the opportunity for policy-makers to reflectively endeavour to improve and promote more effective decision-making strategies and processes for these large scale interventions. Finally, this study emphasises the need for effective collaboration between various institutions in other port-cities in South Africa in order to align port development and spatial planning, with the overall goal of enhancing the competitiveness of the South African port system.

Furthermore, it highlights the need for a holistic approach to planning, where economic, social, environmental and governance elements are given the same amount of 'power', in order for sustainability to be a successful framework in these projects. This study also highlights the importance and power of discourses in the production of knowledge and decision-making, as these influence urban spaces and their development trajectories.

Future studies aligned with this research topic could use discourse analysis to focus on the public participation and implementation stages of the BoP Project. This would reveal further characteristics of the deliberative dimension of the BoP Project, and would incorporate a wider range of actors in the policy arena. It is also recommended that future studies use discourse analysis to examine other large scale projects in the city, in order to improve understanding of the way in which planning is undertaken, and decisions are made in Durban. Furthermore, future studies could use discourse analysis to analyse the knowledge production and decision-making processes in other port-cities in South Africa, so as to enhance understanding within South Africa's unique port governance context.

In the context of globally competitive landscapes, it is important to understand the ways in which knowledge is produced, and how decisions are made in urban planning projects. As cities actively endeavour to reposition themselves in the global economy by using large scale neoliberal interventions, it is imperative to reflect back on, and understand these processes which have the potential to significantly alter urban landscapes, economic activities and social livelihoods. An examination of the knowledge production

process through discourse analysis allows for an understanding of the ways in which knowledges and ideas shift throughout a project, and lead to the specific decisions which are made. This study has achieved this though an examination of the BoP Project, a spatial planning exercise in Durban, KwaZulu-Natal. In order for such planning projects to be successful, it is important that decision-making in urban planning is cognisant of the context within which it occurs, and that more holistic, open and participatory decisions are made which result in the best possible outcomes.

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APPENDICES

APPENDIX A

Interview schedule for the interviews conducted

Appendix A1 - Interview Questions for Consultants

1. What is the rationale of the Back of Port Project? What is the city trying to achieve through this project?
2. What five phrases or statements would you use to currently describe the South Durban Basin?
3. Assuming the current concept plan is implemented, would your description of the study area change? How would you describe it?
4. What was your initial understanding of what constituted a Back of Port zone? Has this changed throughout the project in any way?
5. Have any of your other ideas related to the Back of Port project evolved during the project?
6. For you, what have been the defining moments in the Project?
7. As the BoP Project is an interdisciplinary planning study, which discipline's ideas do you think have been the most dominant in the concept plan? And what ideas have dominated?
8. Do you think that it is acceptable that these ideas should be most influential in this project? Why / Why not?
9. Which ideas do you think have been the most contested?
10. What do you think is key with regards to successfully implementing the BoP Project LUMS?
11. What have been the greatest challenges you have had to address through your involvement in the project?
12. Are there any instances in the project where compromises have been made?
13. As a ... consultant, how influential was your role in the project?
14. Please reflect on your views of the municipality's role in the BoP Project.
15. Which municipality officials have been most influential in the BoP Project? And why?
16. How has the directive from the city manager to have a "state of the art port" impacted on the nature of the project?
17. How would you describe the relationship between the Municipality and Transnet? How has this relationship influenced this project?
18. What have been your main aims / interests / goals in the project?
19. Can you please comment on your overall experiences of this project

General Background for all interviewees

20. Department or Consultancy
21. Areas of expertise
22. Project role and responsibilities
23. Qualifications and experience
24. Past experience relevant to study / study area

Appendix A2 - Interview Questions for Municipal Officials

1. What is the rationale of the BoP Project? What is the city trying to achieve through this project?
2. What five phrases or statements would you use to currently describe the South Durban Basin?
3. Assuming the current concept plan is implemented, would your description of the study area change? How you would describe it?
4. What was your initial understanding of what constituted a Back of Port zone? Has this conception changed throughout the project in any way?
5. Have any of your other conceptions or ideas evolved during the project? If yes, what and how?
6. For you, what have been the defining moments in the Project?
7. As the BoP Project is an interdisciplinary planning study, which of the consultant discipline ideas do you think have been most dominant in the concept plan? What ideas have dominated?
8. Do you think that these ideas should be the most influential? Why / Why not?
9. Which ideas have been contested the most?
10. What do you think is key with regards to successfully implementing the BoP Project?
11. What have been the greatest challenges which have had to be addressed in the project?
12. Have these challenges been addressed? How?
13. What is the municipality's role in the BoP Project?
14. What have been your main aims / interests / goals in the project?
15. How influential was your role in the Back of Port Project?
16. Other than yourself, which municipal officials do you feel have mostly shaped the project? Why?
17. How would you describe the relationship between the Municipality and Transnet? And how has this relationship influenced this project?

General Background for all interviewees

1. Department
2. Areas of expertise
3. Project role and responsibilities
4. Qualifications and experience
5. Past experience relevant to study / study area
6. Can you please comment on your overall experiences of this project.

APPENDIX B

Supporting evidence from Chapter Six

Appendix B1 – Evidence of the sustainability epistemic notion

Direct quotes linked to sustainability	Source
• "…sustainability approach provides a framework of what 'should be' which serves to guide the analysis and decision making regarding the future options for the Back of Port zone". • "These [ecological sustainability, social sustainability, economic sustainability and environmental governance] are integrated, or traded off, to achieve greater levels of sustainability".	Economic Consultant 1 (12/06/2008)
• "We want to achieve a win-win for everyone here and at times it's quite tense".	Economic Consultant 2 (18/03/2010)
• "The project approach should be to integrate the project on as many levels as possible. It should build on past studies and data and incorporate the most recent findings to support the integration of land use and transport development in a sustainable manner..	eThekwini Municipality (2008: 15)
• "Sustainability has been accepted nationally as a framing discourse in environment, planning and development in South Africa. The rhetoric and principles of sustainability permeate the Constitution, national legislation and policy and they shape the way in which government, business and civil society engage with each other. The eThekwini Municipality currently frames many of its policies and programmes within sustainable development (eThekwini Municipality, 2004). The sustainability approach provides a framework of what 'should be' which serves to guide the analysis and decision making regarding the future options for the Back of Port zone".	
• "The juxtaposition and impacts of incompatible land uses such as industry and residential uses needs to be assessed and resolved within the framework of sustainability".	GMA Consortium (2008a: 42)
• "We have to project for the next 50 years, and we have to think of the resources... You have to start thinking about all of that, and is it sustainable?". • "Environmentally, socially and economically, without having a plan. I think we are having compromises on all three sides… a plan for the area will enable things to operate at an optimum socially, economically and environmentally".	Planning Official 1 (09/07/2010)
• "How can we add sustainability aspects to the project? And balance?".	Social Consultant 1 (12/06/2008)
• "If you're looking at an integrated, holistic, sustainable solution. Sustainability is part of the city's IDP. You can't just have a planning exercise which plans for economic efficiency. You have to include the biophysical or environmental, and social to make it holistic".	Social Consultant 2 (24/02/2010)

Appendix B2 – Evidence of the urban entrepreneurialism epistemic notion

Description of Inception Context	Source
• "...at the end of the day, come up with an optimal plan for what is an absolutely critical piece of national infrastructure". • "I was the only consortium representative at the meeting where the Municipal Manager made it quite clear that his vision was to remove any residential community that was in the way [of the Back of Port development]. That was right at the beginning of the project, and I remember thinking, my goodness this is not what I thought the project would be about... Subsequently I think that viewpoint was significantly challenged and modified. And I think it was accepted by the City Manager, the fact that that it is not an option". • "So the sub-continent has to have a super port as defined by Notteboom at some point. And the region needs to be planning and building towards this ideal. Otherwise the region is going to suffer economically very severely in the future. We believe that that as a result of our research, that Durban is the optimal location. There are very good reasons for this which is spelt out in our reports. Having accepted that it has to be Durban, and that Durban is the right choice, you then have to set about planning, achieving this objective within the constraints you are working with. Which are social, environmental, economic, spatial, topographically. There are challenges every way you turn. …But I think having decided that Durban is the optimal location, you have to make it work and that means trade-offs with other objectives".	Economic Consultant 1 (07/03/2010)
• "So our job is take into account how to make businesses and the economy more efficient in the area. So we have looked particularly at industry in the area, logistics, manufacturing… And how to optimise their output and create jobs so that has been our main goal the whole time. Try to maximise those efficiencies for businesses. And we have had to take into account, because Transnet makes up such a big part of the study area, well they border. We have had to take that into account to try and create efficiencies throughout the South African economy so our main goal is to find solutions to these things".	Economic Consultant 2 (18/03/2010)
• "The stakes are too high. The future economic growth of the region and national growth is essentially in our hands. We need to make it as right as we can".	Engineering Official 1 (20/04/2010)
• "The eThekwini Municipality has also focused its attention on the port in terms of the key role it plays in the national and global competitiveness of the city. The city therefore wishes to develop local area plans for a zone known as the Back of Port that will be used to position the Port of Durban as a 'state of the art', globally competitive port".	GMA Consortium (2008a: 30)
• "A core issue is the potential loss of competitiveness of Durban as a city in terms of port related development and associated global trends relating to Port / City development."	GMA Consortium (2009: 3)
• "The city's intentions are… to look at urban renewal and issues which you can't just leave. The fact that the Back of Port contains the bulk of the cities businesses and industries, and Durban is the country's second most important industrial park. And the fact that Durban has the Port, being the largest in Africa, it has national significance, not just city significance".	Planning Consultant 1 (21/04/2010)
• "...we are not going to get another chance to get this right… The city and various parties must make a decision… If we are going to grow the economy, if we are going to put our money somewhere, we can't ignore this area. We need to have something more decisive". • "I think the main aim is to finalise the project. To have a back of port zone, not because we just think it is nice to have. It is there in a really fragmented way, with all sorts of compromises, and we are minimising maximisation. We need to think bigger. We need to think long term. Our biggest economy is the port-city. So we need to start thinking and playing like a port city. So the idea is to think strategic, work strategically, and deliver a strategic plan, and commit to that strategic plan, and get all parties to commit to that".	Planning Official 1 (09/06/2010)
• "Firstly, what we required from the back of port project, from the city side and from the city's perspective… We need to actually understand fully, what was required from the land side usage point of view. That would effectively stimulate and allow the port to grow, in a more effective and efficient manner".	Planning Official 2 (24/06/2010)
• "They are trying to plan a Back of Port area. This is because of the current crisis with congestion, and congestion particularly around the port. Currently there is no logistics area... So there is a crisis. Port is handling more and more cargo. So the crisis is getting worse and worse, and impacting on the city. The City wants to plan an area and a method for handling these incoming cargoes and transport related to that".	Social Consultant 2 (24/02/2010)

• "And because the BOP Project is essentially an economic project. It's a project to make the city more efficient in dealing with the import and export of containers. Because the issue is one of efficiency, and you are planning for an efficient zone in this way… The decision to make the city more economically efficient and more productive. So this is a pro-growth project. The City said that the goal was to produce a world class port. The exact goal of the city is an economic goal".	

Appendix B3 – Reflections on the congestion crisis

Direct quotes linked to the congestion crisis	Source
• "We are seeing that there are issues around transport that can't be resolved by upgrading networks. You have to build dedicated routes, which has an impact on BoP land because there are corridors which need to be identified, and logistics nodes need to be factored in".	Engineering Official 1 (20/04/2010)
• "The Basin has a lot of inefficiencies in all areas… environmental inefficiencies, economic, traffic and just general planning problems".	Economic Consultant 2 (18/03/2010)
• "There is no [planned] logistics area… [which intensified the] crisis with congestion".	Social Consultant 2 (24/02/2010)
• "We need to look at how to improve linkages between existing activities... We require good connectivity and access between the Umhlatuzana arterial and the DIA site". • "[i]f new infrastructure is put in, it will take congestion off other roads and therefore open them up".	Planning Consultant 1 (18/02/2009)
• The land use system is characterised by "ad hoc development…and all kinds of conflicts… [which created] pressures in the area".	Economic Consultant 3 (07/03/2010)
• "Over the last decade or so Durban Port has found its capacity to handle several of its traditional cargo types coming increasingly under pressure. These pressures have been brought about by several factors; both domestic in respect of the lifting of international sanctions, the lowering of import tariffs, a steadily increasing domestic economic growth rate, a significant increase in the establishment of small businesses and substantial growth in consumer spending power, and internationally, it has been a combination of changing market circumstances and changing cargo logistics technology. As a result of this, competition between shipping as well as logistics companies has intensified and factors such as transport and logistics costs, speed and reliability of delivery, communications, ease of documentation and customs formalities, etc. have become all important".	eThekwini Municipality (2008a: 2)
• "From the 2005 road data and the information supplied by logistics experts and operators, we can assume that the number of containers being sorted in the eThekwini Municipality has increased. This is creating massive congestion around the port and in areas where logistics activity is concentrated".	IUDS and GMA (2012: 17)
• "They are trying to plan a Back of Port area. This is because of the current crisis with congestion, and congestion particularly around the port. Currently there is no logistics area... So there is a crisis. Port is handling more and more cargo. So the crisis is getting worse and worse, and impacting on the city. The City wants to plan an area and a method for handling these incoming cargoes and transport related to that."	Social Consultant 2 (24/02/2010)

Appendix B4 – Evidence showing that it would be easier for newer industrial estates to be rezoned to logistics and port-related uses

Industrial Format	Description	Transition to logistics
Early format	• Buildings occurred in and adjacent to Town Centres • Buildings occupied entire sites – 100% coverage • Loading and off-loading occurred from the street • Little or no parking on site	• Difficult
Industrial estates	• Commenced in the 1960s, with larger buildings on larger sites • Buildings had 50 - 60% site coverage • Loading and off-loading occurred on site	• Moderate
Contemporary logistics building	• Linked to 'Just in time' assembly and distribution facilitates • Buildings possess large docking facilities, and require large circulation areas • Lower coverage • Requires computer and related office functions	• Easier

Source: Adapted from IUDS and GMA (2012)

APPENDIX C

Supporting evidence from Chapter Seven

Appendix C1 – Evidence supporting the live, work and play in SDB story line

Quotations linked to the live, work and play in SDB story line	Source
• "Another one was the social guidance that showed clearly and very convincingly how important certain neighbourhoods were... Highlighting how contested the area was, and how important it was for communities... The fact that people stay where they are in the area... It was a strongly influencing factor".	Economic Consultant 3 (18/03/2010)
• "...tension exists between globally competitive growth and creating liveable cities. Port cities worldwide compete with other ports and are under pressure to attract trade… to expand and become 'world class ports' and 'main ports'."	GMA Consortium (2008b: 96).
• "Thus the poor and socially excluded residents living around the Port need special consideration even if they are socially linked into social networks and appear to have a level of social capital as a resource".	GMA Consortium (2008b: 102)
• "Residential amenity and quality of the place [in the SDB] is good compared to other areas in South Africa". • "People have often taken that for granted even under those harsh conditions. It was very strong in the earlier work we did, so there is a very strong sense of community". • "People may think I'm an idiot saying this, but it could be a fantastic place to live, work and play... Provided it is done well, and planned. I'm not trying to belittle any of the air quality issues or real problems with health in the SDB. Those are actually really important issues, but somehow it has 'clouded' the other aspects of the area".	Planning Consultant 1 (21/04/2010)
• "[People residing in the SDB want the area to] …retain a strong residential component." • "History reflects and reinforces the importance of recognising the conflicting land uses in the area – all need to be there, all want to be there".	Social Consultant 1 (29/10/2008)
• "People want recognition that South Durban has a residential system." • "There are strong [social] connections in the South Durban Basin".	Social Consultant 1 (01/04/2009)
• "...changes to the residential area of Clairwood in relation to its location to the SDB will impact on the vulnerability of people living here".	Sutherland *et al* (2009: 53)
• "Certain parts of the South Durban Basin, especially looking at Clairwood, have been seen as having a huge amount of historic value".	Transport Consultant 1 (19/04/2010)

Appendix D
Supporting evidence from Chapter Eight

Appendix D1 – Thirteen trends epitomising 'state of the art' port planning and management

Trends observed by the economic team in 'state of the art' ports
1. Mapping of inland container movements.
2. Incorporate a greater use of information technology in port operations.
3. Increased rail share in transportation.
4. Road offered as an alternative for rail transport.
5. The port and adjacent rail precinct needs to be linked.
6. Consolidation of containers.
7. Creation of logistics business parks.
8. Locate inter-modal facilities in areas that generate container traffic.
9. Re-zone land adjacent to the inland container depot to import/export buffer stacks for importers, de-stuffing facilities and export stuffing facilities.
10. Municipal, provincial government, port or maritime clusters need to oversee the inland container depot's inter-modal system.
11. Residential and sensitive uses in close proximity to the port need to have building safety features.
12. Double handling of containers needs to be avoided.
13. Creation of a maritime cluster.

Source: GMA Consortium (2008b)

Appendix D2 – Eighteen principles recommended by the social team during the Best Practice Phase

Principles recommended by the social team
1. Be critical of adopting purely pro-growth discourses and policies.
2. Alternatives to pro-growth landscapes are attainable.
3. Diverse and complex histories and geographies need to be included in the production of the new port-city interface.
4. Place identity must be determined by the 'view from the bottom' and the 'view from above'.
5. Create a vibrant space by combining business, residential and quality of life concerns into planning processes.
6. Maintain amenity, culture and heritage.
7. Maintain and enhance the existing social value of surrounding residential areas.
8. Maintain neighbourhood characteristics which promote social cohesion and support social networks.
9. Mitigate the typical social impacts of port development.
10.Creation of 'healthy communities' where risk is diminished.
11. Ensure that vulnerable communities are not doubly impacted.
12. Apply principles of procedural, inter-generational and distributional equity as planning criteria.
13. Adoption of a contextual and historical approach to understand the social fabric and community constructions of place and risk.
14. Use concepts of environmental quality to determine residential satisfaction. This is linked to identifying environmental 'goods' and 'bads'.
15. Design a deliberative engagement process with civil society to obtain meaningful and procedurally equitable outcomes and build trust.
16. Development of social criteria to be included in planning design.
17. Combination of economic, social and ecological goals by establishing sustainability objectives.
18. Create neighbourhood or social plans to address social, economic and environmental concerns.

Source: Adapted from GMA Consortium (2008b)

Appendix D3 – The design shifting from a spatial frame to a functional approach

Direct quote revealing the functional shift of the BoP Project	Source
• "The key moment for me was when I understood, because it's really all about logistics, it's very difficult to define a back of port zone spatially. It's really about connections. It's much more than a contiguous space. It's about linkages and efficient movements of freight in and out of the Port".	Economic Consultant 1 (07/03/2010)
• "But from doing readings and studies I understood that a Back of Port zone is there to support the port. It's the linking in of the entire economy and how it relates to the port. That's how my understanding started to shape itself and how we can maximise that… So we have to think bigger and think more strategically around how to get the port linking with the rest of the country efficiently and within our city".	Economic Consultant 2 (18/03/2010)
• "My initial understanding was very crude. I originally thought it was some kind of container terminal. And it's gone through a number of revisions, which has been very informed by our own research. Understanding that it's an area that facilitates logistics and throughput of various cargoes. In Durban's case it would be containers, however in other ports may not have containers, but other cargoes".	Economic Consultant 3 (07/03/2010)
• "Our focus from day one has been tied to a particular study area given to us. Although we have the bigger picture in mind, therefore our proposals around movement related mainly to that study area. But more recently, the city is saying - coming from the transport sector, hang on guys, there is a need to consider a dedicated freight route which links the western corridor, linking Cato Ridge to the Port".	Planning Consultant 1 (21/04/2010).
• "My initial understanding was that it was going to be a logistics area located next to the Port, it would handle trucks and resolve transport issues. Whether it is rail or trucks coming in and out of the harbour. It would be an area where this would be resolved, and would have storage space". • "Originally [the BoP zone] was more an area. As project has gone on, it became more complex… As the process continued, it became obvious that the transport networks, the connections between the port and other places were important. So not just the little area adjacent to the port".	Social Consultant 2 (24/02/2010)

Appendix D4 – Zoning Framework proposed in the Back of Port Project

Zones
Noxious industry
Light industry (No high or medium impact manufacturing)
Logistics A (allows open storage)
Interface/Transition A (buffers between residential and industrial zones; allows for houses to be converted into offices)
Interface/Transition C (buffers between residential and industrial zones, which is within an industrial area)
General industry (No high impact manufacturing)
Business/ office park (medium density office clusters)
Logistics B (No open storage)
Interface/Transition B (buffers between residential and industrial zones, allows higher density and the redevelopment of low rise offices)
General business

Source: Adapted from IUDS and GMA (2012)

Appendix D5 – Evidence of discarded and altered knowledge

The following section highlights two main knowledges, one of which was discarded and one which was altered in the final concept plan. It is important to note that other knowledges were discarded and altered, but the following examples were the most evident from the analysis of interviews and personal observations of the researcher at the various meetings.

Transhipment possibilities at the Port of Durban

One of the ideas which was discarded during the negotiation of knowledge was that of making the area adjacent to the planned dig-out port suitable for the transhipment of cargoes[143] (Economic Consultant 2, 18/03/2010). During the Concept Plan Phase, it was presented by the economic team that transhipment activities should be happening in close proximity to the planned dig-out port, as Durban was missing out on the value-adding potential of these activities (Economic Consultant 2, 17/06/2009). Linked to these ideas was the creation of a Duty Free Zone, which would be fenced off from the general public (Planning Consultant 2, 05/05/2009; Transport Consultant, 05/05/2009; Economic Consultant 2, 17/06/2009). It was acknowledged that transhipment facilities at the planned dig-out port would ensure that both ports in Durban would be important hub ports in the South African port system (Economic Consultant 1, 17/06/2009). It was additionally rationalised that value-adding activities associated with transhipment processes could potentially stimulate local manufacturing activities, and these could be included in the BoP Project (Economic Consultant 1, 17/06/2009). Transhipment was therefore an attractive proposition to the eThekwini Municipality (Planning Official 1, 17/06/2009).

However, during the Concept Plan phase, the economic team concluded that the creation of a transhipment hub and Duty Free Zone would be inefficient from a financial and practical perspective, after discussions with Transnet and the private sector (Economic Consultant 2, 18/03/2010). It was therefore understood that the local government wanted a wide variety of activities at the Port and planned dig-out port, however these ports needed to rationalise and specialise in a few activities in order to promote an efficient BoP zone (Transport Consultant, 05/05/2009).

The waterway as a negotiated urban design feature

The concept of a central waterway represented a created urban design feature introduced by the planning team into the BoP Project, which endeavoured to upgrade the image and status of the study area, as well as sought to create a postmodern feel and style (Social Consultant 2, 24/02/2010). This

[143] Transhipment refers to when very large vessels enter a port, and unload their long haul cargoes at transhipment facilities, and then on to smaller ships, which are subsequently transported to smaller, nearby ports (Economic Consultant 1, 05/05/2009).

concept was inherently linked with the securing of open spaces in the study area, particularly along the Amanzimyama Canal, which would be an urban design feature within the proposed belt of logistics activities within the study area. It was envisaged that this central waterway would have different functions, and would create a point of focus in the BoP zone, which had significant regeneration potential (Planning Consultant 1, 06/10/2009). Therefore this concept represented the *planning for the public realm* component of the ***functional use*** story line. The central waterway was therefore conceptualised as a non-negotiable asset and part of the mitigation strategy[144] of the BoP Project (Economic Consultant 1, 05/05/2009; 06/10/2009). It was argued that "…big ideas are not new ideas to the city", and this urban design feature would highlight that equal consideration was given to social and environmental concerns, and road and transport infrastructures in the study area (Planning Consultant 1, 17/06/2009).

The specifics of the waterway were regularly debated in the consultant consortium meetings, as well as meetings with the Steering Committee (18/02/2009; 01/04/2009; 17/06/2009; 06/10/2009). The waterway would involve the reengineering of the Amanzimyama Canal, which would allow small vessels and barges to travel through a lock system from the Port of Durban to the planned dig-out port (Social Consultant 2, 24/02/2010). However the practicalities of the barge and lock system were questioned, particularly from a cost and feasibility perspective, and it was believed that this system would compromise the water quality of the Port of Durban (Engineering Official 2, 06/10/2009; Social Consultant 2, 24/02/2010; Economic Consultant 1, 07/03/2010; Planning Official 1, 09/06/2010). It was therefore rationalised that the central waterway "…would be something that's nice to have, but it's not necessary for the plan to work" (Planning Official 1, 09/06/2010). As a result the barge and lock system was rejected by representatives of the eThekwini Municipality; however it was negotiated that the Amanzimyama Canal would be secured as a central public space corridor traversing the logistics belt in the study area.

[144] The mitigation strategy covered environmental and social aspects in the study area.