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Household Waste Management in a South African Township

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by

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ABSTRACT

South Africa emerged from apartheid in 1994 as a nation divided by race and class. The apartheid laws enforced separate development, which disadvantaged the black African population; especially the Xhosa people in rural Eastern Cape and the Zulu people in KwaZulu-Natal province. The democratically elected government inherited a country marked by social and economic inequalities, which had been enforced by the apartheid regime. A notable spatial variability in South Africa remains the difference in level of basic service provision between the former white suburbs and the black townships. The most visible evidence of poor service delivery in townships are informal household waste dumps. The main causes of the continuing waste problems in South African townships are high population growth and urbanisation rates, compounded by a lack of enforcement of environmental legislation. The transition to democracy demolished laws that restricted free movement between urban and rural areas resulting in large-scale urbanisation. This coincided with the integration into the national economy of black South Africans. The changes in their consumption patterns further accelerated the generation of waste. To remedy the household waste problem, a national policy framework was adopted focusing on achieving environmental and social justice while promoting economic development in deprived regions. The waste management policy aims to create sustainable and inclusive cities. Its implications and effectiveness have not been examined in township areas.

This thesis applies an approach of feminist political ecology to further the understanding of the complex socio-political relationships around household waste management in a multi-ethnic urban South African township. The aim of the research is to develop an in-

depth understanding of household waste management in a post-apartheid urban township in order to evaluate the management challenges and identify opportunities for waste minimization. Fieldwork was undertaken in Lamontville Township, an urban community on the periphery of eThekwini Municipality, KwaZulu-Natal province, South Africa. The research adopts a mixed methods approach. Qualitative information was gathered through focus group discussions, participatory activities, as well as interviews with waste management stakeholders and key informants. Quantitative data was gathered through a structured household survey that was administered to household members in Lamontville Township. Secondary data was collected from government websites and officials.

The research suggests that the waste problems in Lamontville reflect a number of underlying issues. According to the local municipality, waste collection is prioritised in areas where residents are contributing towards local taxes. However, not all parts of the township have the option of paying taxes, including peripheral areas that have not been formally incorporated. Disproportionately, Xhosa people, recent immigrants to KwaZulu-Natal, are located on the periphery of the township. Findings indicate discourses around dirt, gender and ethnicity are prevalent among both township populations and local government, compounding the challenges of integration. New and different forms of discrimination have developed whereby people are excluded from service provision based on gender, class and ethnicity. The policy framework designed to counteract the ills of apartheid is not coping with the fragmented social landscape and therefore has not achieved social inclusion. The application of the national waste

management policy further divides South African society, increasing the socio-economic

and spatial inequalities and tensions between different communities.

LIST OF ABBREVIATIONS

ANC – African National Congress

EPWP- Expanded Public Works Programme

IDP - Integrated Development Plan

EIA- Environmental Impact Assessment

KZN – KwaZulu-Natal

MK - Umkhonto We Sizwe

NEMA – National Environmental Management Act

NWMS – National Waste Management Strategy

RDP - Reconstruction and Development Programme

SA - Sustainability Assessment

SoER – State of the Environment Reporting

SEA - Strategic Environmental Assessment

TBP – Theory of Planned Behaviour

CHAPTER 1: INTRODUCTION

> I know people like you, who come here and ask questions, come this side
> and you will experience the challenges, and see it is not easy'.

(Makhanya, Male, Zulu, Municipal official, Interview, eThekwini Municipality)

The research topic of this thesis has been inspired by my own experience of the mismanagement of household waste in Lamontville Township. Household waste dumps are ever-present in the township. The quotation from Makhanya is directed at myself, a woman who is an outsider, asking questions about improper waste collection in Lamontville Township. His response provides a crucial insight into the complex and contradictory field of managing household waste in post-apartheid urban areas. It brings forth the multi-dimensional nature of household waste management, involving various actors with differing interests in household waste. 'It is not easy' because local municipalities are faced with many challenges when collecting waste in townships. The legacy of apartheid-era spatial planning in conjunction with socio-economic conditions creates an uneven distribution of waste service provision. Waste is an analytical entry point (lens) for exploring processes acting upon the community. How and where waste is handled and disposed of reveals the decisions taken by powerful actors in society (Moore, 2009), these decisions affect marginalised communities. Therefore, waste management cannot only be understood from a technical and service coverage perspective, there is a social, cultural and political dimension to waste management that both creates and reflects spaces of inequalities. This thesis adopts a feminist political ecology approach and draws from various other literatures to examine the challenges of household waste management in South Africa's urban townships.

1.1   Contextualizing the waste problem

Municipal waste management is one of the major challenges facing municipal authorities in the Global South. Rapid urbanisation and unplanned growth contribute to the generation of waste and its subsequent mismanagement (Sanneh et al., 2011). Population growth in urban areas is driven by different factors such as concentration of jobs and resources, amenities and social services which enhance rural –urban migration (Dangi et al., 2011).   Economic growth in the Global South has resulted in increased income altering the consumption patterns of most urban dwellers (Uiterkamp et al., 2011). Urbanisation is predicted to continue, as currently 55% of the world's population lives in urban areas, a percentage that is expected to increase to 68% by 2050[1] (UN, 2018). Consequently, the increase in urban population is overwhelming the capacity of city authorities in South Africa to provide adequate waste management services (Simatele et al., 2017). Furthermore, municipal solid waste is the most complex waste stream as opposed to more homogenous waste streams from agricultural and industrial sites (Troschinetz and Mihelcic, 2009).

The primary function of municipal solid waste management is to protect human health, promote environmental quality and provide support to economic productivity (Henry et al., 2006). However, solid waste in the Global South is a source of pollution as waste dumped in low lying ground, for example, presents a number of environmental challenges including water and land pollution (Chakrabarti et al., 2009). Furthermore, socio-economic conditions, such as poverty and overcrowding exacerbate the negative

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[1] The world's population is expected to reach 8 billion in 2050 with 5 billion people residing in urban areas, 90% of this increase is taking place in Asia and Africa (UN,2018).

impacts of waste disposal (Guerrero et al., 2013; Matete and Trois, 2008). The generally poor waste management situations in the cities of the Global South perpetuate environmental injustices against urban dwellers and fail to meet international policy agendas such as Sustainable Development Goals (SDGs), Agenda 21 and other moves to address the social exclusion of poor communities (Baabereyir at al., 2012; Sachs, 2012). Many urban residents live in unhealthy and life threatening conditions, characterised by complex interrelated risks related to a lack of basic services (Govender et al., 2011; Zurbrugg, 2002).

Waste management in South Africa needs to be considered from a historical perspective. The colonial period in South Africa and the apartheid legislation saw the introduction of the Group Areas Act of 1950 which led to land use re-zoning to establish particular neighbourhoods as 'Groups Areas', where only people of certain races were able to occupy the area (Christopher, 2001; Newton and Schuermans, 2013). Marginalised zones on the edge of the cities were predominately occupied by Black Africans who were not entitled to basic infrastructure and municipal services such as waste collection services (Stuckler et al., 2011). Townships, where the majority of black people resided were geographically, materially and psychologically distanced from the opportunities and advantages that are associated with life in cities (Bond, 2000). Apartheid ended in 1994 and the new democratic government inherited a country marked by inequalities which had been enforced by the apartheid regime (Alcock et al., 2009). Service delivery was an important element in how the new post-apartheid South African government aimed to change the conditions of people's lives (Stuckler et al., 2011).

The country of South Africa experienced rapid urban growth in the late 1980s and 1990s; a process that still continues (Friedrich and Trois, 2010; Rossi and Vanolo, 2011). Rural-urban migration resulted in an influx of Black South Africans into urban townships, increasing the amount of waste generation in townships (Debbané and Keil, 2004; Miraftab, 2004). Furthermore, the changes in governance saw an increase in consumption due to the changing income levels as more blacks participated in economic activities. Increased urbanisation has placed significant pressures on waste and other services in the urban areas. The government and municipal authorities have tried to put in place interventions regarding waste disposal but these have fallen far short of implementation (Matete and Trois, 2008). However, Townships are still excluded from development initiatives (Jürgens et al., 2013). The most visible scars of poor service delivery is the mismanagement of waste (Leonard, 2014). In the marginalised areas, overlaps between socio-economic status, education, geography, and language reinforces social polarization. Accordingly, social exclusion continues to persist today more than two decades after the end of apartheid (Burger et al., 2018).

1.2   Research Aims and Objectives

The problem under investigation in this study is the challenge of managing household waste in South African townships. Waste policies have been implemented post-apartheid for equitable access to waste services, however waste continues to pose a problem to public health and the urban environment resulting from poor waste management practices. The motivation for conducting this study emanates from the continued highly visible proliferation of waste in townships. A trend exacerbated by growth in urban township populations and changing consumption patterns.

The research aimed to develop an in-depth understanding of household waste management in a post-apartheid urban township in order to evaluate the management challenges and identify opportunities for waste minimization. The specific objectives that guided the study were:

(i) To investigate the constraints and opportunities for waste recycling in South African townships

(ii) To research how current waste policies and practices in urban areas facilitate the exclusion of vulnerable members of society

(iii) To understand the gender dynamics in household waste management.

In order to meet the aim and objectives of this research, the research adopted a mixed methods approach. Initially, qualitative data in the form of focus groups discussions, interviews, participatory activities, and observations was collected. This was followed by a household survey with community members that assisted with understanding the behaviour of citizens.

1.3   Knowledge gap and Contribution of the thesis

Household waste management has received considerable attention in South Africa with publications looking at the effects of poor waste management practices on the environment and public health, for example, work by Nahman et al. (2012) and Nemathaga et al. (2008). Research has also focussed on waste governance (including legislation) in an attempt to address environmental policies which were rooted in the

legacy of colonialism that placed greater exposure of marginal communities to environmental pollution (Adler et al., 2007; Godfrey, 2008; Nahman and Godfrey, 2010). The highly visible existence of the informal sector in the cities of South Africa has prompted research to focus on the particular struggles of waste pickers. The activities of waste pickers are extensively documented in urban areas and literature often points to their positive contribution in urban areas, while highlighting the social and political marginalisation they face (Langenhoven, and Dyssel, 2007; Schenck and Blaauw, 2011; Simatele et al., 2017). There is also a stream of literature focussing on waste management and sustainability driven by international agreements that have been adopted by the South African government (Ayeleru et al., 2018; Karani and Jewasikiewitz, 2007; Matete and Trois, 2008; O'Brien and Thondhlana, 2019).

More recently waste has been conceptualised using the environmental injustice framework. Work by Leonard (2012) and Patel (2009; 2014), positions the distribution of environmental pollution within the historical and political processes that continue to shape the South African landscape. The apartheid government segregated the layout of the urban areas by placing Black townships next to polluting industries as a means of accessing cheap labour (Sparks, 2006). Therefore, the current political ecology in South Africa is shaped by the racist policy of apartheid rule in the past and subsequent transition to democracy. Alternatively, Bond (2004) refers to 'class apartheid' when analysing service provision in post-apartheid South Africa, where service provision is available for citizens who can afford it, leading to marginalisation of many South Africans who cannot. However, the literature on waste management in most African countries lacks substantial theorization as to how political, economic and cultural processes

influence the management of waste. Furthermore, there are limited studies that investigate gendered access to waste management in the urban areas of the global south.

This study contributes to the understanding of waste management in post-apartheid South Africa in several ways. Firstly, this research seeks to place ethnicity and gender as central to the understanding of household waste management in a country with competing political identities. Literature on waste management points to many variables (such as a lack of space, quality of infrastructure, socio-demographic features such as age, education, gender and attitudes) that negatively affect the willingness to participate in waste recycling ; rarely (never) is ethnicity and subjective opinions in multi ethnic communities considered as a hindrance to waste recycling.

Secondly, a feminist political ecology approach is adopted to illuminate the way that improper waste management is not only about poor urban waste planning and financial constraints, but also about embodied emotions that have a direct effect on the lives of women. While, further investigations are required into the emotional geographies of conducting household chores in waste infested areas, engaging with emotions creates a locally grounded understanding of the impact of improper waste management to women as the group that is responsible for household waste management. Lastly, a feminist political ecology approach emphasises the scale of the body (the body interacts with socio-natural processes) for understanding inequalities and contradictions in society. This research contributes to understandings of how socio political changes

(privatisation of waste service) affects the body of a woman. Improper waste management creates a dirty body which results in the exclusion of women who form part of minority ethnic groups.

1.4   Introduction to eThekwini Municipality, KwaZulu-Natal

South Africa is divided into the nine provinces of Kwa-Zulu Natal, Mpumalanga, Gauteng, Free State, Limpopo, Eastern Cape, Northern Cape and North-West. Figure 1.1 shows the provinces of South Africa. The study area, eThekwini Municipality, is located on the east coast of South Africa, within the province of KwaZulu-Natal (see Figure 1.2). The largest city in this municipality is Durban[2], which has the largest port in the country and the subcontinent (eThekwini Municipality IDP, 2018). The municipality has a population of approximately 3.5 million people and inland, Durban is surrounded by other urban nodes, as well as other more sparsely populated areas. The number of households in the municipality are about 956,000 of which about 55% are formal houses (family flats and houses), 34% informal (shacks and backyard dwellings) and about 11% are rural (traditional clusters) (eThekwini Municipality IDP, 2012). Much of the recent development in housing involves the growth of informal housing that takes the form of backyard shacks located within established townships, particularly in older, well-located townships like Lamontville Township (Bank, 2007) rather than free-standing shacks in dispersed squatter settlements (Crankshaw et al., 2000; Lemanski, 2009). Housing the

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[2] Durban along with Johannesburg in Gauteng province and Cape Town in the Western Cape province, are the largest cities of South Africa (Morris, Barnes, & Dunne, 2001).

urban poor is essential in South Africa, although it has been a neglected area of government policy (Turok, 2010; Turok and Borel-Saladin, 2016).
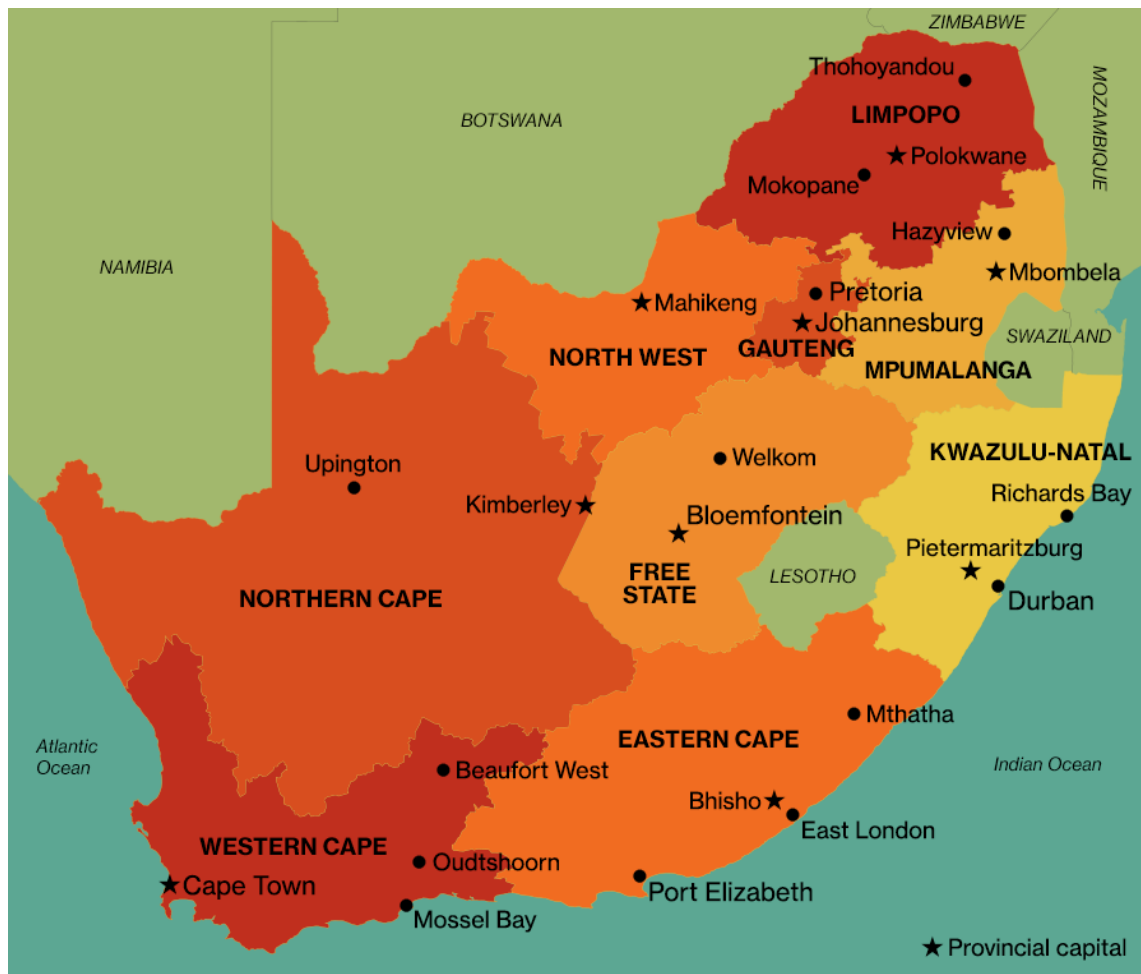
Figure 1.1: South Africa's Provinces
Source: Alexander (2018)
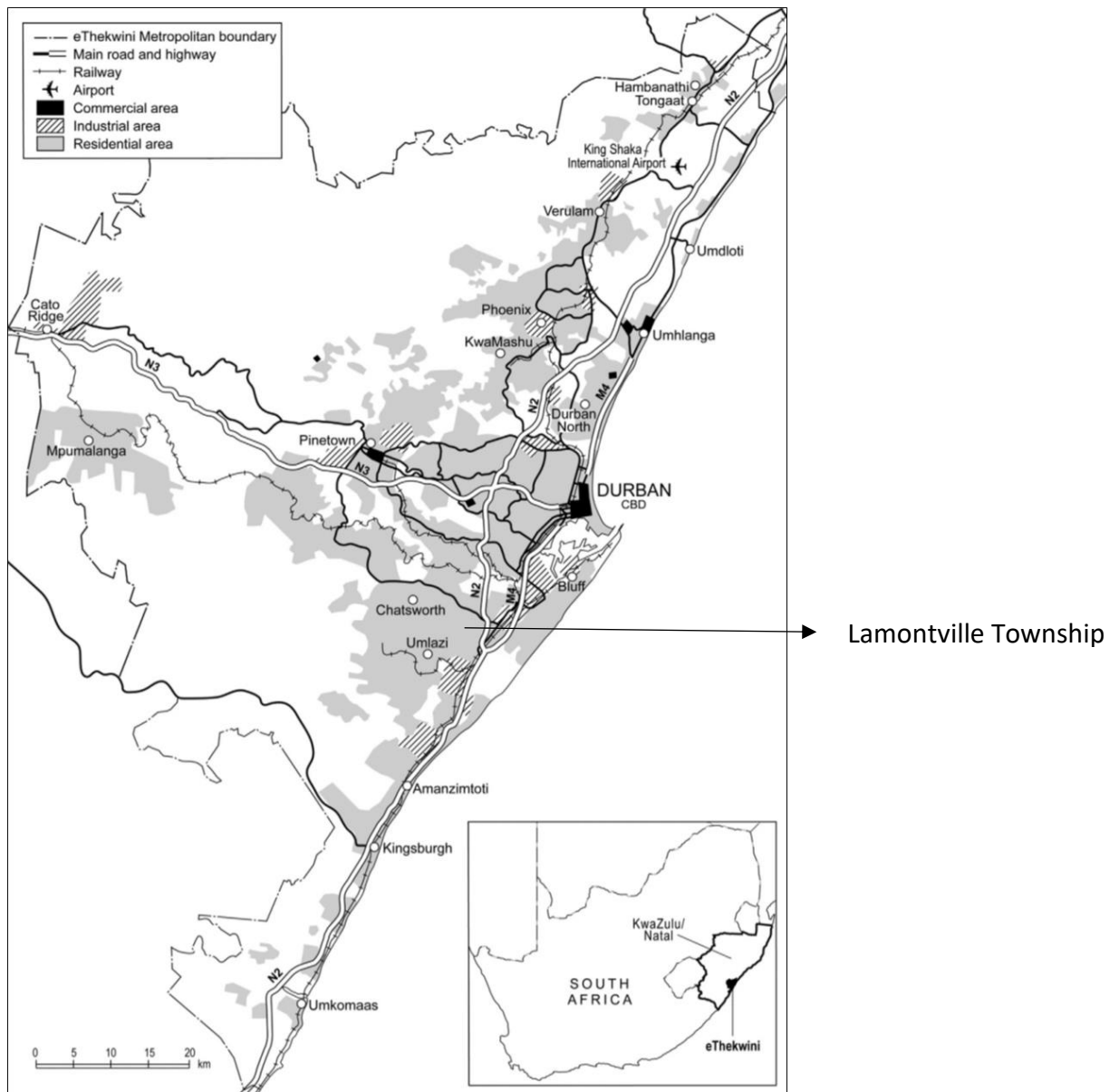
Figure 1.2: Map of eThekwini municipality
Source: Lombard and Crankshaw, (2017)

The population within the municipal area of eThekwini consists of individuals from different ethnic backgrounds. The majority of the population belong to the African community (74%) followed by the Indian community (17%), White community (7%), Coloured community (2%) and other nationals (0.4%) (eThekwini Municipality, 2018). EThekwini Municipality, like other cities and their hinterlands in the Global South, is subject to high rates of in-migration from rural areas and smaller towns in KwaZulu-

Natal province. After considering other sources of in-migration besides KwaZulu-Natal, the next largest source is the Eastern Cape which is the poorest province within South Africa. Migration into the municipal area has many implications including for the labour force, social services, infrastructure, and housing. Currently population increases are difficult to predict with accuracy, and a large number of new recently arrived urban dwellers already require housing and basic services such as water, electricity and waste collection (World Bank, 2016; eThekwini Municipality, 2018). To further compound the problems of service provision in previously disadvantaged areas, there are backlogs in the provision of infrastructure and services (i.e. housing, roads, electricity, waste removal, potable water and sanitation) (eThekwini Municipality, 2013). However, waste collection has been extended to cover, in one form or another, all households in the municipality (eThekwini Municipality, 2013). This research focuses on household waste (i.e. waste generated by households) which is a component of municipal solid waste management (Gumbo, 2014).

1.5   Lamontville Township - Introduction to the Study Site

Lamontville is a township in eThekwini municipality in KwaZulu-Natal, South Africa. The total population in 2011 was 32,421 with African Blacks constituting 99.6% of the population (Census, 2011). Appendix 2 shows Lamontville Township which is positioned next to the N2, a national route in South Africa that runs from Cape Town through to Durban. This site has interesting characteristics for the study which include but are not limited to (i) the continued poor waste disposal and uncollected refuse raises questions about the role of the municipality in the area and (ii) a range of the types of households in South African townships characterised by social and economic inequalities designed

and emanating from the apartheid regime. The further main considerations in selecting this township as the study site area:

1. Lamontville is the oldest township in KwaZulu-Natal, built in 1930. The township has expanded due to rural-urban migration resulting in increased household waste generation. The municipality appears incapable of meeting the waste collection demands of Lamontville Township, resulting in irregular waste collection periods and improper waste disposal practices from the community.

2. KwaZulu-Natal is one of the poorest provinces in South Africa with an unemployment rate of 34%; which is higher among women than men.

3. Lamontville is bordered by the largest industrial area in KwaZulu-Natal. The region is characterised by high levels of air pollution emanating from the smoke stacks in the Durban south basin. In addition, the largest waste dump in KwaZulu-Natal is situated close to Lamontville. The dump is a source of methane. Thereby the Lamontville community are exposed to different forms of environmental harm.

4. There is a potential for recycling networks within the township since Lamontville is in close proximity to Durban where formal recycling is currently conducted.

5. Lamontville is situated close to the researcher's home town, Empangeni and the researcher is fluent in Zulu which is the local spoken language within the Township.

1.6   Outline of the thesis

The thesis is organised into seven chapters. This chapter is the introductory chapter which presents the context of this study of household waste management in South Africa's townships and outlines the research problem, aims and rationale of the study. Chapter 2 presents the conceptual framework for the study. It includes a critical literature review of important concepts framing the research which are: the politics of service delivery, waste recycling practices, neo-liberalisation of nature, urban political ecology and feminist political ecology theory. From the onset, the literature review in chapter 2 shows how the research undertaken builds on existing understandings of waste management in the Global South. Chapter 3 describes and evaluates the research design and methodology. The chapter reflects on research philosophy and explains how it influenced the research design process. This research adopts a mixed method approach combining qualitative and quantitate data collection. Data for the research was collected through focus group discussions, participatory activities, interviews, observations, document analysis and household surveys. Each method is explained and justified in chapter 3. Positionality and ethical issues involved in the data collection are discussed, concluding with the limitations faced during data collection as a black Zulu South African woman.

Chapters 4, 5 and 6 comprise of the results and discussion from the fieldwork as pertains to the objectives of the study. These chapters analyse both the qualitative and quantitative empirical data collected in South Africa. Chapter 4   addresses the first objective on barriers to recycling from the perspective of the community and

stakeholders in the study area of Lamontville Township. It identifies waste collection methods within the township which are closely aligned to socio-economic levels. Approaches to waste storage, disposal and negative impacts of improper waste management are described. The bulk of the chapter details the barriers to waste recycling identified during fieldwork which are discussed based on the current waste collection methods. The barriers are grouped into physical, social, organisational and financial constraints. The chapter also assesses the existing waste reduction and reuse activities in the township.

Chapter 5 addresses the second research objective concerning urban waste policies and social exclusion of vulnerable members of society. The data analysis shows how certain segments of the community are prevented from accessing waste services. The chapter provides a detailed analysis of the political context of Lamontville Township in order to position the management of household waste. Thereafter, the dynamics of the informal sector are analysed, followed by the limits to effective public participation. In the chapter it is argued that the dominance of the ANC ruling political party influences the manner in which waste service provision is conducted. Chapter 6, which addresses the third objective of investigating gender dynamics in household waste management, argues that household waste management is highly gendered. It provides detailed analyses of the gendered allocation of waste management tasks within the household and community. Sections 6.5 -6.6 on the emotional geographies of waste management and the politics of dirt show how inadequate waste management affects women more than men. The final chapter 7 concludes the main outcomes of the research, and also

highlights policy recommendations and directions for further research arising from work

undertaken for this thesis.

CHAPTER 2: LITERATURE REVIEW

2.1   Introduction

Household waste management is complex hence literature on waste management is multidisciplinary. To begin to grapple with the dynamics of household waste management in the Global South, this chapter explores the relevant theoretical and empirical contributions derived from the fields of contemporary politics of service delivery, informal waste recycling, household waste management practices, neoliberalisation of nature, urban political ecology and feminist political ecology. Though each of these fields provide valuable insights that inform this thesis, each field also has gaps that are highlighted in this chapter. By reviewing the relevant contributions from each of these approaches, this literature review then highlights the feminist political ecology as the most appropriate framework to explore the challenges associated with household waste management in a South African Township.

2.2   Politics of Service Delivery in the Global South

Service delivery in the Global South is widely influenced by many factors. Existing literature on service delivery in the Global South centres on the fair and equitable distribution of services in the shadow of decolonization and changing political systems (Auriol and Blanc, 2009). More recent studies have focussed on corruption within service delivery under the dominant paradigm of decentralisation, and its negative impact on poor communities (Ghuman and Singh 2013; Mbazira, 2013; Oyelana and Kang'ethe, 2017). The dominant form of corruption in service delivery is clientelism. In

the literature, this is depicted as taking many different forms such as cronyism, neopatrimonialism, patron-client relationships, and gate keeping, which is predominantly used in South Africa (Beresford, 2015; Joubert and Grobler, 2004). In modern society, clientelism in all its forms, refers to a complex network of personal agreements between political patrons and their individual clients. Most patrons are not independent actors, but are linked within a larger grid of contacts (Brinkerhoff and Goldsmith, 2002; Heywood, 1997). The clientelistic relationship, according to Rubin (2011) and Stokes (2007), is one of domination which occurs between actors of unequal power status. The common conclusion within the development literature is that clientelist politics is most attractive in conditions of low government productivity, and high socio-economic inequalities in society (Brinkerhoff and Goldsmith, 2002; Kitschelt, 2000).

Political parties are at the centre of the distribution of public goods through the process of decentralisation (Heller, 2001 ; Wantchekon, 2003). Considering the history of South Africa, decentralisation requires effective public participation in decision making to facilitate the inclusion of previously marginalised communities. Several studies in South Africa have explored the relationship between decentralisation and political clientelisms (corruption) to describe the nature of service provision in low-income areas. Bénit-Gbaffou (2011), describes a case of political clientelism in a low-income area in Johannesburg, South Africa, where public goods are limited and the community is poor. Client-patron relations influences the distribution of food parcels to poor families. The parcels are allocated to deserving families, but only those that are politically affiliated to the ruling party. The author argues that political networks pursue narrow interests of

preserving their power, while the economic and politically weak are further marginalised. Similarly, Dawson (2014), examines how patronage politics operate at the local level in informal settlements in South Africa, and how they stimulate local protest. The author suggests that patronage politics create porous bureaucracy that results in spaces of hope for low income residents to interact with the state, but that consequently with unmet expectations, local protests may result (Alexander, 2010; Booysen, 2007; Rubin, 2011).

Protest action in South Africa post 1994 have become an integral part of society (Chikulo, 2016). The work of Bond and Mottiar, (2013) and Alexander (2010) has made a significant contribution to understanding the rise of protest action in post-apartheid South Africa. Recent protests in South Africa indicate a dissatisfaction with state sponsored public service provision such as water, waste, sanitation, and housing and health services, giving rise to what has recently been termed service delivery protest or 'poo' protests in Asia and South Africa (Nyawasha, 2016, McFarlane and Silver, 2017, Robins, 2014). Mkhize (2015) and Robins (2014) reported on a 'poo protest' in Cape Town, South Africa where residents from informal areas dumped human waste at the international airport in order to persuade local government to pay attention to their concerns for sanitation. Service delivery protest in South Africa often involve residents from low income settlements who protest through blockading of major highways, looting of shops, burning of tyres, confrontations with the police and burning of symbolically significant buildings (Jürgens et al., 2013; Mottiar, 2013). Service delivery protest activities in South Africa have for the most part emanated from informal settlements and townships, rather than from better resourced suburbs (Bond and

Mottiar, 2013; Alexander, 2010). Sinwell (2010) contends that protest in South Africa have been understood as the preferred method of participation following failed expectations of public consultations and the rising levels of corruption within local government.

Within the mixed interpretation on clientelism and its various forms, research is unequivocal of the negative impact on poor citizens, especially those who reside in close proximity as it allows clients to better monitor their loyalty to pre-agreed deals (Kitschelt, 2000). In an alternative argument, Anciano (2018), identifies a civil society group that acts as a client to the city of Cape Town, and is a patron to an informal community. The civil society group distributes public goods such as housing from the local government to the community, and is held accountable by various networks within the community. As much as clientelism is generally documented as an undemocratic practice, Anciano (2018) states that it increases avenues for the local community to hold the government accountable. Such assertions, however, ignore the power relationships within civil society groups, as well as social and cultural conditions that may prevent marginalised populations such as women who are often lowly in society, from participating in political spheres. While this existing research on the politics of service delivery in the Global South is valuable, it is important to examine the gender dynamics involved in service allocation (voting practices) more explicitly.

In the literature concerned with political voting in Africa, considerable focus is placed on the significance of ethnicity on partisan identification (see Bratton et al., 2012). There is a general consensus that in Africa, ethnic groups will naturally vote for a particular

political party that identifies with them (Cooper, 2014; Schulz-Herzenberg, 2014). Even though multiple factors influence partisan attachment, scholars constantly state that in ethnically diverse communities, people vote based on their ethnic identity (Ishiyama, 2012). There is a general acceptance amongst structural theorists that ethnic identity is constructed, and based on blood ties, language and dialect, ethnic customs, local communities and various other elements that are relevant to the dominant actors (Bedasso, 2017; Ferree and Horowitz, 2010). For example, Norris and Mattes, (2003) conducted a study in 12 African countries to determine if ethno-linguistic characteristics influence the support of governing political parties. While the authors acknowledge that various African countries have different political and economic systems, ethnic identities structure party identification and are the most dominant medium for organising collective action in communities where different political identities are competing for power. Furthermore, the strength of this ethnic association with a political party varies cross-nationally, with the strongest linkages in societies with many languages, like Namibia and South Africa. Tarimo (2010), points to the activation of ethnic identity in urban areas of Kenya, when disputes over the distribution of land resources arose. The dominant ethnic groups suppressed the minority groups and obtained the land, as the dominant ethnic group shared a similar ethnicity with the ruling political party.

Limited resources are usually cited as the condition that prompts ethnically aligned political parties in African societies to present themselves to the voting public as the champion of the interests of their particular ethnic group while excluding others (Battera, 2013; Chandra, 2007). Political parties who appeal to particular ethnic groups are able to garner their support. In Benin, Wantchekon (2003), in a field experiment

organised during the presidential elections in 2001 to determine if ethnic affiliation affected voters' behaviour, examined the impact of clientelism on voting behaviour. Their study found that successful politicians applied ethnic motivations and gendered promises to gain votes from the community. Promise of patronage jobs in government were more appealing to men, and electoral promises related to public health had a greater impact on women's voting behaviour. Studies from other parts of Africa have found consistent evidence of the connection between ethnicity and party support. Other factors, such as economic conditions and policy expectations, further affect electorates' decision making (Anyangwe, 2012; Arriola, 2003; Basedau and Stroh, 2012; Lindberg and Morrison, 2008).

Many authors argue that the process of societal modernisation will weaken social identities of ethnicity (ethnic identities and loyalties), as levels of education and awareness increase, people will be able to interrogate the policy making process more explicitly (Clark et al., 2001; Habib and Naidu, 2006; Norris and Mattes, 2003; Ukiwo, 2005). This argument assumes that people vote or use ethnicity without a rational calculation of how they will benefit from the government's monopolised access to social services (Bratton et al., 2012; Chandra, 2005). An alternative development is documented in KwaZulu-Natal province of South Africa, where an ethnically exclusive cultural organisation, the IFP moved into the public sphere as a political party that represented Zulu people (Anyangwe, 2012). According to Szeftel (1994), and Dlamini (1998), the Inkatha Freedom Party used Zulu identity and created a sense of solidarity based on the idea of an ancient nation with warriors who opposed colonial masters and capitalist penetration in the early twentieth century, well after other ethnic groups had

given in. De Haas and Zulu (1994) state that the Zulu ethnic identity is a measure of entitlement in the allocation of resources which consequently resulted in the politicisation of ethnic boundaries between Xhosa migrants and Zulu people. Ethnic divisions in urban Africa countries are fundamentally based on the divisions between those entitled to live in town and the more recent arrivals who lack resources (Moodley and Adam, 2000).

The existing literature on politics of service delivery shows that service delivery in the Global South is widely influenced by politicised ethnicity. This research has an interest in understanding how clientelism and ethnic identity influence the distribution of household waste management services in a South African township. The next section 2.3 engages with literature on the nature of household waste management in the Global South, focusing on the social and class divides that are (re) produced by a lack of waste service provision.

2.3   The nature of household waste problems in the Global South

Household waste management in the urban areas of the Global South has received considerable attention. It is generally characterised by inefficient collection methods, spatial disparities in waste collection and unsustainable final disposal of waste (Parrot et al., 2009; Zurbrügg et al., 2012). Urban areas are often characterised by accumulating waste heaps, illegal waste dumps and poor environmental sanitation (Aparcana, 2017; Okot-Okumu, 2012). Simatele et al. (2017) report the extensive lack of waste collection on the urban fringes of South Africa resulting in poor environmental conditions that pose

a public health risk to urban dwellers. Researchers assert that large portions of household waste generated by urban residents in cities of the Global South are never collected for disposal; its final destination is the streets, sidewalks and streams (Al-Khatib et al., 2007; Guerrero et al., 2013; Jonas et al., 2015). A combination of factors increases the likelihood of poor waste management in urban areas of the Global South. Examples of these factors include, rapid and unplanned urbanisation which is associated with changing income levels and a greater demand on goods and services, resulting in increased per capita waste generation (Asase et al., 2009; Cobbinah et al., 2017). The amount of waste generated is associated with socio-economic variables and in general wealthier households produce more waste than poorer households (Trang et al., 2017). Poor household waste management in the Global South is often suggested to be a consequence of local governments failures to respond appropriately to modernisation processes (Moore, 2009).

Municipal authorities in the Global South are very largely unable to provide routine and sufficient waste collection and disposal services within their jurisdiction (Fobil et al., 2010; Singh et al., 2011). While municipal authorities may attempt to achieve complete coverage of waste collection however, problems within local government frequently limit their capabilities. Institutional, technical and financial challenges are commonly stated as additional hurdles that present additional pressures on municipal waste management (Henry et al. 2006; Marino et al., 2018; Zhang et al., 2010). Institutions are at the centre of providing the framework for managing waste however institutions are often labelled as inefficient as their functions are duplicated resulting in an adverse effect on waste collection (Oosterveer and Van Vliet, 2010; Zurbrugg, 2002). Institutions

are often guided by legislation which is often fragmented and difficult to implemented due to social, political and financial reasons (Guerrero et al ., 2013). Moreover, poor waste management in the Global South has also been attributed to the general dearth of qualified personnel in the waste sector (Henry et al., 2006). Parrot et al. (2009) corroborates this observation, stating that municipal officials in the Global South often lack the technical expertise required for solid waste management planning and operation, at both national and local levels. Collecting, transporting and disposing of solid waste represents a large expenditure for the municipality (Leal et al., 2016). The scarcity of funds is consistently cited as a challenge to waste management in the Global South, largely attributed to local governments' inability to recover costs from citizens, and the limited funds allocated to waste management from the central government (Manga et al., 2008; Okot-Okumu and Nyenje, 2011). Part of the research presented in this thesis concentrates on the technical matters associated with waste collection, but also on progress towards issues of equitable access to waste services.

Low income urban dwellers are often cited as being unwilling to pay for waste collection (Okot-Okumu and Nyenje, 2011). In South Africa Oyekale, (2015) found that the waste collection fee required to be paid by households for municipal waste collection was a major hindrance to waste collection because urban dwellers were frequently unable to pay for waste collection services. In an alternative argument, Bond (2004) posits that post-apartheid urban policies creates a form of 'class apartheid', where people who cannot afford to pay for the services are systematically excluded from the collection network. These sentiments are echoed by Harrison and Huchzermeyer, (2003) who point to the South African government's 'neoliberal' policies recreating - through

unintended processes - a system equally oppressive as apartheid that enhances the social and class divide, further marginalising poor citizens. Similarly, Baabereyir et al. (2012) points to the allocation of machinery, labour and financial resources for waste collection in high-income areas as a reflection of the wider spatial inequalities in infrastructural development in the post-liberalisation period in Ghana. Hence, residents with financial resources further benefit from public resources. Spatial inequalities result in an increase in waste generation within urban areas, such creation of environmental injustices requires a re-evaluation of the waste collection systems within the Global South more broadly.

This marginalisation of poorer urban cities is not only seen in regard to waste collection, but in the wider infrastructure for collecting waste (Adam et al., 2015). Infrastructure refers to the physical networks in place for the disposal, collection and transportation of waste (such as roads and storage containers), and encompasses other aspects of the built environment such as the norms, information practices and social relations underpinning the politics of belonging (Easterling, 2014; Roelich et al., 2015). The historical background of South Africa dictated the infrastructure that was deemed sufficient for township areas (May and Govender, 1998; Jürgens et al., 2013) therefore affecting the quality of waste removal. In reference to South African townships, Von Schnitzler, (2008) notes that the lack of infrastructure in informal areas highlights the reluctance and disavowal of the local government in acknowledging the presence of disadvantaged communities in urban spaces. Infrastructure works in conjunction with other elements to marginalise people who 'do not belong' in urban areas (Harrison and Huchzermeyer, 2003), and reproduces spaces of inequality. Therefore, decisions on the

allocation of infrastructure are made in the political sphere. According to Corvellec (2001) and Filion and Keil, (2017) political discourses paint a greater picture of infrastructures by addressing their overall objective, in so doing, reflects the geometries of power in the place and time that the infrastructure is built.

The discussion above highlights that geographic distribution of infrastructure is both a driver for social disadvantage and advantage. The question of the various infrastructure options do not only affect the quality of service provision but also regulates bodies and behaviours to produce different life opportunities (Siemiatyck et al., 2018). Geographers working in the Global North have published numerous critiques of the unequal impacts of major infrastructure projects along gender, class, and racial lines (Cresswell, 2010; Urry, 2006, Young and Keil, 2010). Studies have shown how women, racial minorities, and marginalized communities have the limited access to critical infrastructure services (Lucas, 2006, 2012; Mahapa and Mashiri, 2001; Young and Keil, 2010). There is a gap in understanding how the built environment influences human actions of waste disposal in South African townships. Moreover, this research attempts to understand the social outcomes of the different types of infrastructures in a township, from the perspective of those communities on the receiving end of them.

Literature on the nature of waste problems reveals that local government has failed to respond to the modernisation process resulting in poor household waste management in the urban areas of the Global South. Furthermore, the infrastructure available for waste management further produces social and class division, marginalising the poor

communities. The following section explores the legal and policy framework for waste management in South Africa.

2.4   Legal and Policy Framework For Waste Management and Pollution Prevention

Various legal instruments are implicated in waste management. The Constitution of South Africa (Act 108 of 1996, section 152 (1)) (Republic of South Africa, 1996) is one of the world's most advanced pieces of legislation in terms of the protection of human rights, including citizens' right to a healthy environment (Constitution, 1996; Godfrey, 2008; Dugard, 2010). In terms of addressing equality amongst citizens, the Constitution (1996) mandates for equitable access to basic services including sanitation, electricity, health care and infrastructure (Tissington, 2010). Paramount to the vision of the democratic government was reversing the policies of apartheid that distributed wealth according to race. In the apartheid era, environmental policy making was technically driven and the broader public was excluded from policy deliberation (Freund, 2001). Public participation in environmental issues was limited to information distribution in white-only suburbs and occasional consultation with interest groups (Rossouw and Wiseman, 2004). Central to the discourse enshrined in the new Constitution was the concept of environmental justice which is intended to ensure that environmental harm is not positioned based on racial, class, social and other inequalities.

The constitution of South Africa (Act 108 of 1996) identifies the local government as the custodian of basic service delivery. Local government under the Local Government

Municipal Systems Act (No.32.2000) is responsible for provision of waste management services within the municipality, in accordance with national standards including the promotion of waste minimization and recycling (Godfrey, 2008; Muzenda et al., 2012). In post –apartheid South Africa power is shared amongst three spheres of government - the national, provincial and local government - reflecting a different paradigm from the apartheid government which placed greatest emphasis on the national government (Rossouw and Wiseman, 2004).

Every municipality in South Africa is required under the Local Government Municipal System Act (No.32 of 2000) to develop an Integrated Development Plan (IDP) which assesses the community needs, devises strategies for development and monitors progress against predetermined targets. Ideally an integrated development plan should provide a forum for citizens to collaborate and exchange ideas about development of their local community. There are numerous invited spaces for public participation, but their effectiveness in addressing citizens' service delivery concerns has largely become a tokenistic exercise that reasserts partisan control of local resources rather than opening the space for different actors to debate how best to plan and distribute public monies that can bring about real change (Smith, 2011). Public participation speaks to the relationship between the communities and the government; and in the context of South Africa, its intension is to take into consideration the views and interest of those people in the community who are affected by the government, more seriously than in the past (Piper and Deacon, 2009). Participation of all citizens, including women and the

youth, in decision-making processes is seen by many researchers as a marker of a consolidated democracy (Beall et al., 2005; Harbers, 2007; Lotshwao, 2009). The IDP is the blueprint of service delivery which includes securing a safe and healthy environment for all municipalities in South Africa (Karani and Jewasikiewitz, 2007; Mubangizi, and Gray, 2011).

To facilitate public participation and inclusion of marginalised communities, the Municipal Systems Act of 2000 provides for the formation of ward committees that forge a closer relationship between the community and the municipality (Esau, 2008). Current legislation provides for the establishment of a ward meeting system to enhance participatory democracy in local government. In post-apartheid South Africa, ward committees include the local community, alongside ward councillors and the administrators within the legal definition of a municipality. The government has called for the establishment of ward committees in all urban municipalities including rural areas and sparsely populated areas (Napier, 2008; Esau, 2008). At the local level, ward meetings are a formal avenue for the concerns of citizens to be heard. Ward committee meetings are the first step of formalised public participation in South Africa (Qwabe and Mdaka, 2011).

In service delivery, formal public participation structures in the form of ward committees are necessary to ensure effective waste management and accountability of local leaderships. For example, ward committee members may make recommendations on the way in which household waste is handled by the municipality. Although ward committee meetings are only advisable institutions, deliberation is the essential

component of these engagements (Piper and Deacon, 2009). Agreements and decision from the ward meetings feed into the national development plan whereby resources are allocated according to community needs. Although South Africa is a democratic country, the level and access that community groups have to decision making processes has been criticized by Gervais-Lambony (2008) and Lane and Ersson (2007) who rightly state that meaningful participation is dominated by the privileged segments of society.

Waste management in South Africa is based on the following policy documents; 'White Paper on Integrated Pollution and Waste Management (IP and WM), the National Waste Management Strategy (NWMS) and the National Environmental Management Waste Act, (2008) (Godfrey and Oelofse, 2017). The National Environmental Management Act (NEMA) 107 of 1998 is a framework law providing the principles for sustainable development that apply to all activities of the state in South Africa. NEMA also provides for integrated environmental management (IEM) through which different environmental management tools such as environmental impact assessments (EIA), state of the environment report (SoER), sustainability assessment (SA) and strategic environmental assessment (SEA) have been developed (Morrison-Saunders et al., 2014 ; Retief et al., 2011). The integrated approach to environmental management was accepted in South Africa, however it has fallen short of its intended outcomes.

Overall responsibility for the implementation of South Africa's waste policy has been scattered amongst several governmental institutions sometimes with conflicting interest and objectives. This piecemeal implementation strategy has often proved

counterproductive. Tools such as the EIA's are selectively implemented, concentrating only on large construction projects (Hamann et al., 2000), omitting the assessment of other developments such as housing projects which may also affect the environment. Furthermore, the majority of these IEM tools have been directly adopted from international practice and applied to the South African context without considering local socio-political conditions which may have implications for their suitability and effectiveness (Cilliers and Retief, 2016).

South African waste legislation is influenced the principles of the waste management hierarchy, which dictates the comprehensive strategic approach for waste management (DEAT, 2000). The elements commonly associated with integrated waste management are waste avoidance and reduction, re-use, recycling, recovery and treatment and disposal in that order of priority (see Figure 2.1). Waste avoidance and reduction is the highest priority of the waste hierarchy. It mandates for products and materials to be designed in a manner that reduces their waste components; meaning that the amount of waste being generated will reduce (Muzenda et al., 2012). The least priority methods are waste treatment and disposal. Waste treatment refers to any process that is set to reduce the environmental impacts of waste by changing the chemical properties of waste. Waste disposal refers to the deposition of waste onto land, commonly known as landfilling (landfill is the least environment-friendly alternative).
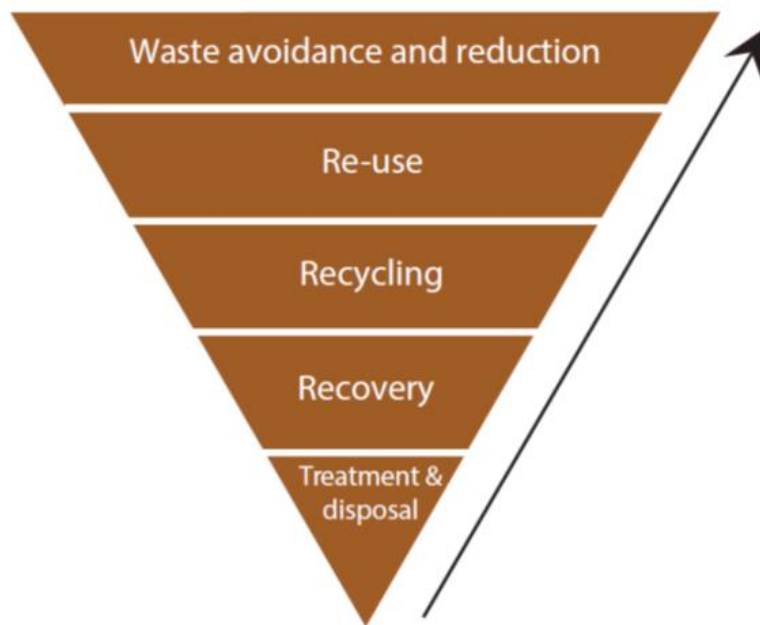
Figure 2.1 : Elements of the Waste Management Hierarchy
(Source: DEAT, 2000)

From the waste hierarchy other ambitious policy measures such as the Polokwane
Declaration on waste management (DEAT, 2001) and the Plastic bag policy were
initiated in South Africa with varying success (Taiwo et al., 2008). The Polokwane
Declaration on waste management set its target as the reduction of waste generation
by 50% by 2010 and the development of a plan for Zero Waste by 2011 (DEAT,2001).
Likewise, the plastic bag policy was introduced in 2003 due to extensive use of 'free'
thin-filmed plastic bags that created extensive littering problems. The legislation
increased both the thickness and the price of plastic bags available to consumers
(Hasson et al., 2007). In South Africa, terms such as 'waste minimisation', 'waste
reduction', 'zero waste' and 'sustainable waste management' are in use in policy
frameworks, however, some ambiguity still exists as to what these terms actually mean
and how they can be practically implemented (Silva et al., 2016). While policy promotes
waste reduction (moving up the waste hierarchy) and away from waste dumps, such

alternative methods to waste disposal are generally considered expensive for countries in the Global South (de Lange and Nahman, 2015).

Even though the waste policy promotes recycling, at the national level there is no legislation in place that compels the public in South Africa to reduce, reuse or recycle waste. Formal recycling on a large scale in South Africa is mostly conducted by the packaging industry (DEAT, 1999; Ogola et al., 2011). Recycling rates in South Africa are relatively well established, driven primarily by industry-led, voluntary initiatives with funds managed independently from the government via non-profit associations, which oversee recovery/recycling processes and facilities although the collection of recyclable materials occurs mainly through private organisations and agents for the different recycling companies (Muzenda et al., 2012). There is encouragement through the national waste strategy for all South Africans to apply the waste management hierarchy with recycling as key in citizens making decisions about their household waste.

This chapter has reviewed the legislation related to waste management in South Africa. Different legal instruments are applicable to waste management, the overarching act, the Constitution of South Africa mandates for the equitable access to basic services such as sanitation and waste management. The main objectives of the waste policy is to reverse the policies of apartheid while including marginalised communities in service provision. The following section explores literature on waste recycling in the Global North and South, highlighting the differences in modern approaches to waste management.

2.5   Household Waste Recycling

Waste recycling has many interpretations, however, in this study, waste recycling is used to refer to the recovery and utilisation of secondary material (Uiterkamp et al., 2011). Materials that can be recycled include but are not limited to; paper, glass, plastics, copper, electronic equipment, and steel (Wilson et al., 2006, Uiterkamp et al., 2011). In research relating to the Global South, there is a dualistic approach to understanding waste recycling. Many studies focus on informal economic activities that occur in the urban fringes (e.g. by waste pickers), while a limited focus is placed on formal waste recycling processes. Informal recycling is investigated as a sustainable waste management option within the constraints of municipal waste management challenges (Aparcana, 2017; Troschinetz et al., 2009; Simatele et al., 2017). The solutions put forward to address unsustainable waste management practices in the Global South are fairly uniform. They focus on strengthening institutions, involving the public in decision making, and formalising the informal sector (Henry et al., 2006; Guerrero et al., 2013). The following section briefly reviews the literature on informal and formal recycling in the Global North and South.

2.5.1   Waste Recycling Attitudes and Behaviour

Many studies have explored the complexities of recycling behaviors and intentions amongst household members. Researchers have formulated models and theories exploring factors that incite people to behave in an environmentally acceptable manner (Akil et al., 2015). Such work is mostly developed and applied in the Global North where

mature waste collection systems are in operation and there is strong trust between citizens and the government (Charuvichaipong and Sajor, 2006). An important behaviour model in waste recycling, the Theory of Planned Behaviour (TPB) has been applied by many researchers in the Global North to determine recycling behaviour at a household and community level. For example, Tonglet et al. (2004) used the model to understand recycling behaviour in a kerbside recycling scheme in the United Kingdom. The TPB suggests that behaviour is determined by behavioral intentions which are measured by an expressed willingness to partake in recycling waste (Akil et al., 2015). The findings of Akil and others indicate that pro-recycling attitudes were a major contributor to participation in recycling. The authors conclude that attitudes are influenced by having the opportunity to recycle waste, knowledge of recycling and the removal of physical barriers such as time, space and inconvenience. Similarly, Barr et al. (2003) developed a model based on the Theory of Planned Behaviour and tested it on households in Exeter, UK. Participation in kerbside recycling was encouraged by having access to a kerbside recycling network, by owning a large house, concerns about waste handling and the norm to recycle. They further state that for recycling to be engaged in by household members, recycling had to be an accepted behaviour and the benefits of recycling must be known. Stern (2000) used the Value-Belief-Norm theory to evaluate the relationship between environmental concerns and pro- environmental behaviour and determined that attitudinal factors, norms and beliefs were the predictive indicators for behavior. As significant as these studies may be they provide an analysis of behaviour in a neutral environment excluding situational and structural factors which could restrict recycling (Keramitsoglou and Tsagarakis, 2013).

In the Global South, such modelling (with predetermined inputs) has been limited in the literature since waste recycling has not been fully accepted as a sustainable waste management option, however, there has been attempts to understand demographic and socioeconomic variables that positively influence recycling behaviour in urban areas in the Global South. A substantial body of literature has investigated the relationship between socioeconomic variables and involvement in recycling. The most common variables used to indicate environmental behaviour are age, income, employment, gender, family size and education (Ekere et al., 2009; Ma and Hipel, 2016; Saphores et al., 2006). In South Africa, a study in Mariannhill, Durban, compared the recycling practices in formal and informal settlement areas. The results showed that the dwellers in informal settlements were recycling waste for economic incentives as opposed to the formal sector that recycled waste for environmental benefits. The author further emphasised the importance of knowledge as a determinant of recycling behaviour (Matete and Trois, 2008). Other formal waste recycling activities have been documented in many large South African cities such as Durban, Pretoria, Johannesburg and Cape Town (Schenck and Blaauw, 2011; Langenhoven and Dyssel, 2007) with varying results on the indicators of behaviour. Anderson et al. (2013) conducted a study on the influence of race and socio-economic status on the decision to recycling waste amongst urban dwellers in South Africa. Their study found that apartheid attitudes and behaviour continue to affect non-white South Africans since the relationship between the government institutions and the population is still characterised now with boycotting of government activities and withholding payments of public services.

Many studies often arrive at mixed conclusions on the likelihood of individual's engaging in waste reduction activities. Vencatasawmy et al. (2000) states that a wide range of demographic factors must be evaluated within the context of the host community. Consequently, work by Nixon and Saphores (2007) suggests an integrated approach by combining both socioeconomic (such as income, price, and demographics) and psychosocial (such as personal values, beliefs, and attitudes) characteristics in understanding waste recycling behaviour. However, a more consistent outcome globally is the greater likelihood of women (compared to men) to recycle waste. Gender has been investigated with researchers concluding that women are more likely to recycle waste due to social and cultural norms that underpin gendered division of labour in the household (Beall, 1997). This research seeks to understand the factors that influence gendered engagement in waste disposal and recycling in a South African Township. The literature on waste recycling attitudes and behaviour reveals that a wide range of variables (depending on local socio-economic conditions) can be evaluated to understand waste recycling behaviour. The following section reviews literature on informal waste recycling, an activity which is prevalent in the urban areas of the Global South.

2.5.2   Informal Waste Recycling
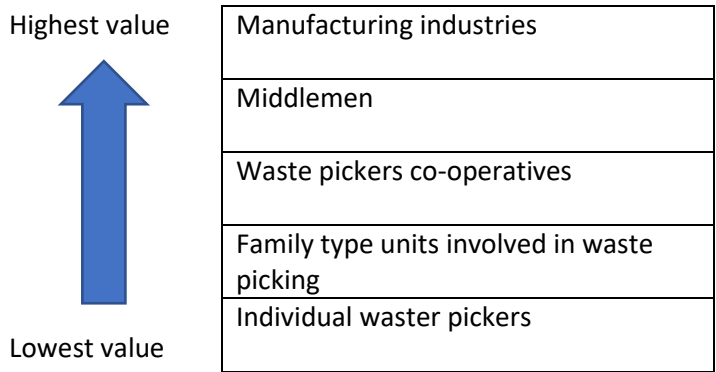
The informal waste sector is a visible and constant presence in most cities of the Global South. The activities of waste pickers have been widely documented, focusing on their contribution to environmental protection, their harsh working environments and their integration into formal municipal waste management systems, within specific socio-

cultural conditions in the Global South (Tremblay et al., 2010; Gutberlet, 2008; Parizeau, 2015). More recently work emanating from South America places emphasis on empowering waste pickers to achieve their own aspirations (Gutberlet, 2008; Tremblay and Gutberlet, 2010). This section reviews the activities of waste pickers in the informal waste economy to understand their working environment in urban areas where aspects of the political economy threaten their livelihoods.

Waste is an economic resource in the informal economy. Informal recycling provides a livelihood for poor urban waste pickers in many parts of the Global South (Gutberlet, 2008; Sembiring, 2010). The increasing levels of unemployment in growing cities pushes the urban poor to the informal waste economy for a source of income. Simatele et al. (2017) describe the urban poor as individuals who have been side-lined by the globalisation process. The informal (waste) sector is unregulated by the state, making it an easy employment sector to enter into (Gerxhani, 2004). Likewise, Medina, (2008) noted that waste picking is attractive to marginalised social groups such as those with no formal education, the elderly, the unemployed, children and ethnic minorities. Children are sometimes found in waste dumps either as workers for an income or with their parents who take them to work there (Navarrete-Hernandez and Navarrete-Hernandez, 2018; Madsen, 2005). Research into children's activities in the waste sector in South Africa, point to the poverty and the need of children to work to contribute to an income for their family (Rogerson, 2001, Benjamin, 2007).

Activities of waste pickers vary from groups organised in cooperatives providing door-to-door collection of recyclables to individuals scavenging in open dumps and communal bins (Wilson 2007; Wilson et al., 2012). The informal recycling economy consists of different actors within a waste hierarchy chain. Table 2.1 below illustrates the informal waste networks that take the form of a hierarchy. The way informal recycling activities are organised in the Global South has significant consequences for income generation and for the social status of waste pickers (Wilson et al., 2006). Several studies suggest that uncoordinated waste pickers are more vulnerable to exploitation from middlemen and intermediate waste dealers who are higher in the informal waste hierarchy (Asim et al., 2012; Hartmann, 2018). The income of individual waste pickers is likely to be lower than that of others within the waste hierarchy (Wilson et al., 2006).

Table 2.1: Hierarchy for informal waste activities

Highest value	Manufacturing industries
	Middlemen
	Waste pickers co-operatives
	Family type units involved in waste picking
Lowest value	Individual waster pickers

(Source: Wilson et al., 2006)

Certain waste materials have a better profit margin (Schenek et al., 2012). Differences have been observed in the income generated between men and women, reflecting the type of material retrieved by individual men and women (Mitchell, 2008). Generally, the well-paying waste materials such as scrap metal and aluminium are collected by men

while less valued items such as paper and glass are collected by women (Kofoworola, 2007; Rockson et al., 2013). Similar divisions in the access to valuable waste items is notable in organised recycling schemes. Foster et al. (2012) explored the gendered dynamics of non-profit organisations in Tanzania and Zambia, and found that women are prevented from collecting high quality waste material with a higher income value; furthermore positions of leadership were held by men. Similarly, Adama (2012) explored the power dynamics within existing informal waste recycling networks in Nigeria. Men were able to use their gendered social capital to claim materials such as scrap material which hold a higher value. Conversely, women were exploited due to their inability to defend their rights within the existing networks in the formal sector. This research aims to investigate the gendered nature of the informal waste economy in South Africa, which is to date an area that is less explored.

Making a living in the informal waste economy is associated with many social ills. Wilson (2006) describes the informal sector as a low wage, low technology and labour intensive industry for the poorest and most marginalised social groups who resort to waste picking as a survival strategy. In most countries waste pickers work under risk-prone conditions, making them vulnerable to ill health and social exclusion (Huysman, 1994; Sandhu, 2015). The Zabbaleen, a minority Christian group in Cairo, started informal recycling as a response to economic pressures, such as unemployment and poverty, in the 1940s. Despite the group's contribution to collecting nearly 50% of Cairo's daily tonnes of waste, they face discrimination and violence from other urban dwellers (Didero, 2012; Fahmi, 2005). Other studies report that waste pickers suffer from low levels of self-esteem due to harassment and physical violence from the police and the

public (Sandhu, 2015). Waste picking is often associated with socio-cultural ideas of purity and pollution that mark societies with a great divide between the wealthy and the poor (Bjerkli, 2015; Hartmann, 2012; Scheinberg and Anschtz, 2006). In Cambodia, waste pickers have been prosecuted and murdered where the drive for a 'modern city' has led to confrontations between the municipal authorities and informal recyclers (De Oliveira, 2012). Research suggest that local governments often attempt to eradicate waste pickers, as they do not fit into the collection system of a modernising westernised world (Gutberlet, 2008).

Recent research on waste pickers has progressed beyond efforts to understand their working environment, to a new emphasis on formalising the informal waste sector. The new direction is driven by the contributions made by waste pickers to sustainable development. Much work has gone into understanding the enabling factors that lead formalization initiatives to be successful and sustainable in the long term (Ezeah and Roberts 2012; Aparcana, 2016). Countries such as Brazil, Columbia, Jamaica and Peru have changed position to now recognise waste pickers as important stakeholders in municipal waste management (Dias, 2010; Marello and Helwege 2018). Studies suggest that when organised waste pickers are supported, there is a greater potential in the sector to create sustainable jobs, to reduce municipal spending and conserve natural resources (Gutberlet, 2008). Those in favour of integrating waste pickers into formal waste management systems argue that integration allows waste pickers to remove barriers that prevent them from fully embracing the economic opportunities in the waste sector. However the aspiration of waste pickers are not universal (Simatele et al., 2017). This research explores the activities of waste pickers in the informal sector to

understand their position in South Africa. The following section situates waste service provision within the dominate paradigm of neo-liberalisation.

2.6 Neoliberalised nature of service delivery

Local government authorities in the Global South are increasingly turning to the private sector for waste management activities (Rogerson, 2001). This development is a partial consequence of urbanisation, which brings an influx of people into urban areas. As a result, governments have to extend waste services for a growing population that often includes those who may be illegal or have qausi-legal status in urban areas (Bawa, 2011). Policies related with neo-liberalisation of resource management include transferring management responsibility to local communities, privatization and commodification of service provision (Littlefield et al., 2008). These affect populations which are dynamic, and often powerless to influence such policies (Lesufi, 2002). As such, the implication of neo-liberal policies on waste service provision are key concerns in current debates on household waste management (Bel et al., 2010; Leonard, 2014). Privatization is regularly referred to as the essential component of neoliberalism (Samson, 2010). The privatisation of waste services places a cost on service delivery, which makes it affordable only to those who can pay for a (better) service. This creates an incentive to allocate resources to the 'best' possible users and a disincentive to provide waste services to the poorest and precarious groups (Sandhu et al., 2017).

There are many models of privatisation (Mohan et al., 2016), however, the most desired strategy in the Global South is the transfer of state-run activities, to contracting privately owned businesses for waste collection services (Coad, 2005; Fahmi, 2005; Kassim and Ali, 2006). This form of private sector involvement, allows the state to retain control over policy decisions (Li and Akintoye, 2003). A large proportion of scholars in the Global North favour privatisation. They suggest that privatisation is more efficient, as it removes bureaucratic barriers, and reduces the costs of service delivery (Bartone, 2001; Bel and Warner, 2010; Coad, 2005). Privatisation is portrayed as a technical, straight forward issue, which includes the determination of a suitable mode of collection, and has the single target of efficient waste management (Dukhan et al., 2012; Simões et al., 2012). The majority of these conclusions, however, are drawn from more developed countries which have almost universal coverage of formal waste collection service provision. In comparison, in the Global South, and Africa in particular, research has been equally unequivocal in showing the spatial inequalities that result from private service provision (Cordelli, 2013). Operational challenges such as inadequate regulatory frameworks, and the government's limited power to control collection practices (Bolaane and Isaac, 2015; Dorvil, 2007; Oduro-Kwarteng and van Dijk, 2013), are cited as the major barriers to privatisation. There are also concerns with distributive equity and equal citizenship, as services are obtained based on affordability and are not available to all citizens (Ogu, 2000). The arguments for, and in opposition to privatisation of waste management services, regularly reflect the scholarly divide between socialist beliefs and neoliberal approaches (Zaki and Nurul Amin, 2009). Neoliberalisalism is not a single ideal but rather is a continually evolving and complex set of policies and practices (Peck and Tickell, 2002). This research attempts to understand the effect of

privatisation of waste provision on marginalised communities in the neo-liberal context of South Africa.

Private waste contractors enforce the neo-liberal state policies at the local level. In privatised waste management, contractors act as intermediaries between the state and communities by providing household waste collection, street sweeping and waste disposal (Sandhu et al., 2017). The activities of contractors in low income countries further produce inequalities, instead of providing an efficient service for all. For instance, Cobbinah et al. (2017) describes the activities of a contractor which stratifies a low-income community based on economic levels in Ghana. The contractor collects household waste in middle- and high-class areas where community members are paying for the service, while omitting poorer areas. Therefore, low income areas consequently have heaps of uncollected waste. The hiring of a contractor is viewed by many as a method for the government to abandon its responsibility towards the poor (Evans et al., 2005), who then receive inadequate services from a distance. Service provision to the poor is thus mediated through intermediaries who make particular claims on their behalf (Gaiha and Kulkarni, 2002; Khan, 2005). In this thesis, the role of waste contractors in service delivery in South African townships will be analysed, as townships are not homogenous areas.

The ability of a contractor to replace the state's social welfare function is questionable. In their analyses of policies addressing the privatisation of waste service provision in the global south, Oduro-Kwarteng and van Dijk (2013) identified a gap in the working

environment, pointing out that contractors operate in a vacuum where their performance is unmonitored. Bolaane and Isaac, (2015) further argue, using examples from Botswana, that within the void (vacuum) the power relations between the state and contractors are unequal. The contractor can make decisions without authorisation from the state, leading to opportunistic behaviour due to information asymmetries (Grimshaw et al., 2002; Amagoh, 2009). This is in line with Foucault's (1982) approach to power that it is always practiced in relationships between actors and consisting of a series of strategies and practices that actors use to ensure certain desired outcomes (power works on and through actors). The (power) dynamics between the contractor and the state creates space between themselves and the community. A number of studies have pointed to the growing gap that exists between people especially the urban poor and the institutions that affect their lives (Bakker et al., 2008; Von Braun and Grote, 2003). Studies on the role of contractors often omit the impact of privatising waste services from the perspective of the community; as contractors operate under structures of political-economic forces, as well as locally embedded cultural and social attitudes that may further marginalise certain segments of the community (Chaturvedi et al., 2015; Heynen, 2014). This research will address this gap by exploring the role of the waste contractor in a post-apartheid South African township.

There is a gendered component to privatisation of waste services. Literature on gender and development provides a lens to explore the manner in which privatization exploits the disparities in society. Samson (2010; 2007) gives an account of how privatisation takes advantage of the inequalities between men and women in South Africa. The author found that under privatisation waste management activities are divided based

on gender. Women were responsible for street sweeping which was viewed as an extension of their domestic work. Furthermore, women were more vulnerable to retrenchment as their work was considered easier than that of men. Men were allocated activities (such as operating collection lorries) associated with strength which also required higher levels of skill to use technology. Samson's findings are consistent with other studies that associate cultural and social beliefs with gendered patterns of formal employment (Scheinberg et al., 1999; Stinson, 2004). Waste provisions by the contractor reflects what Scheinberg et al. (1999) describes as the "waste boundary", which defines the limits of women's control in waste management. Entrenched socio-cultural ideologies associate the identity of a woman as supporting mothering (Arendell, 2000) which is further exploited by the local government via privatisation to allocate women work of low value. Women as mothers have unpaid caring roles in the home which are extended to lowly paid and lowly valued work such as cleaning up in the streets.

The practice of mothering and the privatisation of waste services has been explored in literature to a limited extent. Literature on motherhood and service provision in South Africa explores the burden placed on mothers in deteriorating urban areas as a result of neo-liberal processes (that often lead to increase service cut-off) (Harris et al., 2017; Meth, 2013; Tshishonga and Mafema, 2011). This literature focuses on the provision of water and sanitation (sewerage disposal), and highlights the deeply racial and gendered nature through which neo-liberalism is rooted in South Africa. The provision of water and sanitation has been the subject of debate in the Global South within the development circles. In Neumann's (2013) account of the gendered nature of development in Nicaragua, the author concludes that mothers shoulder the 'unequal

burden' of privatisation of state's basic services as they as predominately engaged in unpaid community care work. The intersection of gender, class and motherhood is cited as important for understanding the priorities of women and mothers as a consequence of the triple burden they exhibit of reproductive, productive and community work they perform as mothers and carers (Mosedale, 2014; Moser, 1989).

In areas where local government provides inadequate waste services, women within their gender ascribed role of mothers, work within their neighbourhood. Miraftab (2004) in South Africa explores the nature of privatisation in a township marked by economic inequalities. She suggests that privatisation limits access to waste services for low income areas, which reproduces apartheid's urban hierarchies. She states that privatisation increases the number of women volunteers who attempt to fill the void of uncollected waste in urban areas. It is women who do the work of mothering and their (constructed) mothering nature is exploited as volunteer waste collectors. Furthermore, McDurty (1998) also demonstrates in her account of, 'Trashy Women', how the government uses women and especially mothers as municipal housekeepers, relying on their moral obligation as 'good mothers' in their families to extend their caring duty to the wider community. Although, motherhood varies depending on the historical and material context (Arendell, 2000), literature that considers parenting in the Global South, has shown how women consider domestic work, such as waste removal, to be a form of care for their family, and consequently devote more time to unpaid care work than men (Kes and Swaminathan, 2006; Kroska, 2003; Meth, 2013). These assertions are a reflection of the broader gender divisions within society, based along gender and class.

There is a need to further explore how the privatisation of waste management services affects the gendered dynamics of multi-ethnic communities. Furthermore, mothers in different historical and cultural contexts experience motherhood differently (Hall, 1998; Mamabolo et al., 2009), therefore it is important to understand the experience of mothers in post-apartheid environments which are marked by unequal waste service provision. The following sections on the urban political ecology of waste situates waste management within the political, economic and ecological processes to better understand how inequalities are produces within urban areas.

2.7   An Urban Political Ecology of Waste Management

The urban political ecology framework seeks to understand the different ways in which political, economic, and ecological processes work together (through material entities) to produce inequalities and injustices within urban areas (Heynen, 2003; Milbourne, 2012; Njeru, 2006). According to Brenner (2000), the urban political ecology framework begins with the notion that our everyday living is embedded within and dependent upon other (natural) processes which may be beyond our immediate reach. Henri Lefebvre suggest that, 'every social space is the outcome of a process with many aspects and many contributing currents, perceived and directly experienced, practical and theoretical. In short every social space has a history, one invariable grounded in nature, in natural conditions that are at once primordial and unique in the sense that they are always and everywhere endowed with specific characteristics' (site, climate, etc.). (Lefebvre, 1991, pg110). Therefore, what is referred to as an urban area is a complex

and multi-dimensional process; a place where aspects of human experiences meet (Keil, 2003).

Urban political ecology draws on theoretical lineages primarily from Marxist urban geography and contemporary scholars contributing to this field often draw from the work of David Harvey and Henri Lefebvre for analysing urban processes that result in uneven spatial landscapes (Heynen, 2014; Swyngedouw and Heynen 2003). Heynen (2014) puts forward that urban political ecology is distinguished by two broad pathways, the Marxist urban political ecology and the second wave political ecology which are examined in this section. The Marxist urban political ecology examines and critiques the manner in which cities (just like nature) become enlisted in urbanisation processes under the current system of capitalism (Lawhon et al., 2014; Swyngedouw and Heynen 2003). It takes a historical and polititised view on nature that produces socio-natural landscapes such as cities (Harvey, 1996). The city is seen as a socionatural artefact produced through the metabolism of nature – through urbanisation and other processes brought together into making and remaking of the city. Marxist urban political ecology more explicitly identifies that the material conditions that make up urban areas are controlled to serve the interests of a few elite individuals to the detriment of marginalised populations (Kaika and Swyngedouw 1999). This perspective of the city provided for critical scholars a site for unpacking power relations that impact access to and control of urban resources and environmental services (Swyngedouw, 1997). A proportion of urban political ecology scholars have argued against such a framing of the Marxist urban political approach, as most cite that it is overly focussed on capital as a determent of ecological processes (Rusca et al., 2017).

A second wave of urban political ecology has emerged in nature- society research and is more appropriate in asking questions related to the socio-natural environment (Cornea and Zimmer, 2016; Holifiled, 2009; Lave, 2015). The so-called 'second wave' of UPE moves beyond the analysis of class and capital (consumption) towards matters of agency, across complex networks of actors who produce uneven geographical development (Heynen, 2014). Urban political ecologists who adopt this approach seek to situate urban political ecology through an engagement with the everyday that is firmly anchored in local contexts and identities (Latour, 2005; Lawhon et al., 2015). The perspective focuses on the dispersed practices of and the relationships between state and non-state actors that result in everyday forms of control (Bjerkli, 2015; Cornea et al., 2016; Ekers and Loftus, 2008). Political ecology encourages a consideration of how forms of governance and practices 'do work' within uneven matrices of class, race, age and physical ability at a range of scales from the local to the global (Guthman, 2014). This situated urban political ecology framework inspires the researcher of this thesis, as the local context of South Africa which is influenced by the political landscape and post-apartheid identities is of importance to this research. UPE has developed in the field of municipal waste management and offers a number of potential approaches to take this thesis forward.

Researchers applying the UPE framework use municipal waste as a pathway into exploring urban politics and the power relations that (re)produce uneven spatial development (Cornea et al., 2017). In the Global South, a large number of UPE studies on waste management emanate from South America and Asia, and cover different aspects of waste management within the categories of urban metabolism, social justice for waste pickers and environmental justice (with a particular emphasis on the spatial

distribution of pollution). Urban metabolism takes material flows as the unit of analysis to interpret patterns of natural resource transformation in cities (Davis et al., 2016; Guibrunet et al., 2017). Waste flows are placed within the broader production of the cities. Waste in cities is conceptualised as a product of an element that was once a natural resource that has become a threat to the public health of cities (Njeru, 2006). Therefore, the metabolic processes of waste involve a host of flows, both physical and social: an abrupt change in one element within the flow can generate a negative feedback that affects the overall metabolism (Demaria and Schinder, 2016; Lawhon, 2012; Parizeau, 2015). In the cities of the Global South, urban metabolism serves as a framework, to relate urban waste flows to the role of different actors in waste management uncovering context specific patterns of injustices (Currie et al., 2017; Guibrunet et al., 2017; Smit et al., 2017). In Africa, increasing urbanisation and the growing urban poor require a holistic understanding of the urban metabolism of cities (Kennedy et al., 2007). Urban metabolism is relevant in understanding the waste flows and the multi-layered systems of government however the focus of the research reported in this thesis is more on the influence of waste on the communities.

Within the UPE framework, research aiming at bringing forth the struggles of waste pickers, analyses the wider inequalities in power and control over waste materials in a changing urban environment (Swyngedouw and Heynen, 2003; Debanné and Keil, 2004). Working in the informal economy is associated with negative health impacts and numerous studies in the Global South confirm the socio-political marginality of waste pickers (Binion and Gutberlet, 2012; Medina, 2005; Oguntoyinbo, 2012). The presence of informal waste management activities is often attributed to failed strategies of

managing waste in growing urban areas. Insufficient waste collection results in uncollected waste being readily available for the urban dwelling waste pickers (Wilson, 2007; Nzeadibe, 2009). Cities in the Global South are introducing modern waste collection systems to promote sustainable waste management, however this type of modernisation limits the activities of the informal sector (Cornea et al., 2017; Parizeau, 2015).

Unpacking the politics of reforming municipal waste management system reveals the many injustices faced by waste pickers (Cornea et al., 2017). Research suggests that powerful actors attempt to eradicate waste pickers, as they do not fit into the collection system of a modernising western world (Berthier, 2003; Nwosu et al., 2016). The 'new' urban areas ignore the livelihoods of informal waste pickers, which is a harsh economic injustice which threatens to deny them of an economic resource (Gidwani, 2013; Gill, 2009; Shinoda, 2005; Yates and Gutberlet, 2011). Waste pickers are engaged in a socio-political contestation for the right to waste material (Sasaki et al., 2014; Viljoen et al., 2012). Urban political ecology brings forth the struggle of informal workers, who are situated on the periphery of cities (Chatterjee, 2004; Demaria and Schindler, 2016).

The environmental justice approach to waste management focusses on the distributional aspect of environmental pollution. The urban political ecology approach expands the scope of environmental injustice to explore the complex social and ecological relationships that create uneven urban spaces (Agyman et al. 2002; Debbane and Keil, 2004; McDonald 2002; Perkins et al., 2004). Environmental injustice occurs in

many different forms and refers, to the unequal distribution of environmental harm. Initial studies on environmental injustice stated that race and socio-economic status were the determinants for locating environmental harm (see Bullard, 1996; Hardoy et al., 2001; Harvey, 1996; Ryder, 2017; White, 2005). However, recent studies on waste dump allocation, have included other axes of differences such as gender and ethnicity, arguing that some marginalised groups tend to live amidst the worse environmental condition while the affluent members of society reside in clean and healthy places. This scholarship has emphasised the centrality of political and economic processes in understanding the local experiences of environmental injustice (Baabereyir et al., 2012; Leonard, 2012, Njeru, 2006). However, environmental justice literature (in all its approaches) generally lacked central analyses of gender as a variable that leads to disproportionate experiences of the environment (Eckerd et al., 2012). The interest of the research in this thesis is to explore the environmental injustice experiences of poorer communities' associated uneven distribution of municipal waste service provision.

The literature on urban political ecology represents a broad lens through which to untangle the political, social and economic processes within waste management that create highly uneven spaces in urban areas. It enables discussion of waste service provision to be re-positioned within the political space while understanding how local governments operate within the categories of class, race, gender and ethnicity. The following section reviews literature on feminist political ecology approach to make sense of the gendered dimension in the struggle for basic service provision.

2.8   Feminist political ecology

Feminist political ecology is an area of research within political ecology which addresses, gendered inequality and injustice by directing focus towards gendered processes underpinning the politics of resource access (Elmhirst, 2015). The field of feminist political ecology has been defined in many ways, as it is not static. Since the earlier work in the 1990's of feminist political ecologists (Rocheleau et al. 1996), there have been shifts in theoretical approaches to gender and the material ways in which gender is being shaped; challenging feminist political ecologists to engage with new debates in the Global South (Elmhirst et al., 2017; Mollett, 2017; Nightingale, 2006; Hawkins et al., 2011). 'New' feminist political ecologies call for a deeper engagement with other social differences that go beyond gender, race and class, to avoid simplistic understandings of gender divisions (Mollett, 2017; Radcliffe and Pequeño, 2010). This is in an effort to establish feminist political ecology as a 'feminist and justice oriented project' which is adaptive to local settings (Elmhirst, 2011).

Feminist political ecology traditionally focusses on three research themes: gendered environmental activism, gendered environmental rights and responsibilities, and gendered environmental knowledge (Rocheleau et al., 2013). These divisions were identified by Rocheleau and colleagues in their landmark volume 'Political Feminist Ecology' and emanate from their prior work and experiences within the field of environment, gender and development.   Since the publication of Feminist Political Ecology, there has been significant changes in the economic landscape that introduced amongst other elements market-driven approaches to resource management in the

Global South (Escobar, 2006). Moreover, rural areas in the Global South are experiencing heightened mobility towards the urban areas, in the hope of a sustainable livelihood (Mulcahy and Kollamparambil, 2016; Rogan et al., 2009). In South Africa, the politics of the transition to democracy has changed the patterns of resource use and access, with the incorporation of previously disadvantaged groups into the new democratic society (Leonard, 2012). Feminist scholars contend that these processes are impacted by gendered power relations that lead to unequal life opportunities and exclusions (Elmhirst and Resurreccion, 2012). There are significantly different ways in which the relationship between gender and the environment are conceptualised in attempts to understand and address environmental challenges.

The relationship between women and the environment has been an interest for feminist scholars who aim to understand the processes and conditions that bring women into submission. Gender and the environment have become a focal point in both research and development policy, as gender is viewed as a key element of difference that influences people's experiences and capabilities in natural resource management (Momsen, 2009). Initially, in gender and environment (development studies) women were essentialised, as having a different experience of the environment than men. The literature of ecofeminist feminism that emerged in the 1990s proposes that women are 'naturally' closer to nature due to their biology. Therefore, this link between women and environment gave women a unique understanding of ecosystems and environmental protection (Baker, 1993; Leach et al., 1995). This kind of essentialist approach received strong criticism from other feminist scholars such as Agarwal (1992)

and Warren (1987) who highlight the material basis that draws women closer to the environment which then gives then practical knowledge of nature.

Alternative conceptualisation of this relationship focuses on gender as a variable through which access to and distribution of natural resource is differentiated within societies, and rejects the notion that all women in the Global South are the same (Carney, 1994; Gururani, 2002; Rocheleau et al, 1996a). In this body of work, gender is closely linked to biological sex and is understood as culturally defined male and female roles. A noteworthy development in feminist studies is brought forward by post-structuralist and performative theories in feminist work challenging the dominant understanding of gender (Bell, 1999; Butler, 2004; Harris, 2009). In this literature, gender does not point to the inequalities between men and women, but gender is the process through which differences based on presumed biological sex are defined, performed and become significant in specific contexts (Butler, 2004; Lamb et al., 2017; Nightingale 2006). This research seeks to understand how gendered roles are constructed and shaped within household waste management in a South African township.

Feminist political ecologies extend their analysis of power with the consideration of scale. Although urban political ecology has contributed to the understanding of scale and the interaction of power and scale in human-environment interaction (Neumann, 2009), a noteworthy critique from Nightingale (2006) is that discourse in urban political ecology generally pays attention to gender as primarily significant only within the household and neighbourhood scales. The power of feminist conceptualisations of scale

is the inclusion of the less visible scale of the body, which is interconnected to the other broader scales (Hovorka, 2006; Katz, 2001; Truelove, 2011). Therefore, gender inquiries in human –environment interactions are at various scales of inquiry: the individual, the household, the community and the national scale (Ge et al., 2011). For example, focusing on the body, allows for an inquiry of the effects of socio-political change (in particular environments) at the scale of the body (Price and Shildrick, 2017; Thompson, 2016). The research presented in this thesis has an interest in the body (how poor waste management affects the body) and the effects of socio-political changes at the scale of the body.

Research using the feminist political ecology approach has applied the theory of intersectionality in understanding gendered access to resources (Moser, 2012). Intersectionality theory emerged out of the feminist movement in the USA. There was recognition from (Black) feminist scholars that women of colour were marginalised by mainstream feminism as they occupied an invisible space within the dominant discourse and studies of discrimination (Crenshaw, 1991). However, the concept of intersectionality precedes Crenshaw's idea as other scholars who were sensitive to gender matters had previously problematized the assumptions of commonality of interest amongst women of all groups (Anthias and Yuval-Davis, 1983; Hull et al., 1982). Intersectionality is a crucial principle in Black feminist theory, as the use of a single categorical axis overlooks the way that Black women experience multiple oppressions based on their identity (Collins, 2002; Jordan-Zachery, 2007). While intersectionality is heralded as one of the most important contributions in social science research (Davis, 2008; McCall, 2008), some confusion still exists as to how intersectionality should be

treated; as a concept, a theory or a methodological approach. Within the scope of this literature review, intersectionality is viewed as a theory and adopts a comprehensive definition from Davis (2008) that draws from Crenshaw's work that refers to intersectionality as the 'interaction between gender, race, and other categories of difference in individual lives, social practices, institutional arrangements, and cultural ideologies and the outcomes of these interactions in terms of power' (Davis, 2008 pg 68). Therefore, research such as reported in this thesis, that explores the experiences of multi-ethnic communities living within polluted environments adopts an intersectionality approach to understand how different axes of discrimination intersect to marginalise and harm certain segments of communities.

Limited research exists within waste management that applies a feminist political ecology approach. Work that might be regarded as feminist political ecology but is not named as such, investigates the influence of gender in accessing waste material in the informal waste economy (Dias et al, .2015; Nzeadibe et al., 2015). However, this existing research does not take an intersectional approach to gender, it ignores the differences within the group 'women' which are related to ethnicity, class, marital status, age and so on. It only highlights the experiences of sexism that limit women from accessing waste materials with a higher value. Scholarship that explicitly investigates access to municipal waste service provision, has thus far not embraced the feminist political ecology lens. Access to waste management service is often discussed in terms of physical and socio-economic barriers (as discussed in section 2.3). Commonly cited barriers in the Global South are poor infrastructure, unsuitable collection vehicles, a lack of funds, institutional deficiencies within local government, and the cost of the service

(Guerrero et al., 2013; Muzenda et al., 2012; Parrot et al., 2009; Tukahirwa et al., 2011). There is a dearth of literature using feminist political ecology to understand the distribution and challenges of municipal waste services in the Global South.

A key question in this research is in what sense is there a gender dimension to waste management. Feminist political ecologists emphasis access to resource (especially natural resources) and argue that gender influences resource access and use of resources which in turn shapes women's encounters with the environment (Nightingale, 2006; Rocheleau et al., 1996; Thompson et al., 2017). Although waste service provision is not a resource, it is however a government service that is accessed within an environment that is changing. Access to waste services here, refers to the ability to access social services, as opposed to the right of obtaining a service. Therefore a lack of this service may result in a disproportionate gendered negative impact on the community. The following sections reviews literature on the usage and access to water resources to look for theoretical clues on how to better understand the relations between gendered subjects and household waste management in the Global South.

There is a plethora of research on water management issues (especially access to water resources in water scarce areas) in the Global South emanating, in part, from conferences held in the late 1980's such as the UN decade for Women (1975-1985) and the International Water Supply and Sanitation Decade (1981-1990) that raised awareness on the difficulties women experience in the Global South with providing water for their families (Cleaver and Hamada, 2010; O'Reilly et al., 2009; Regmi and

Fawcett, 1999). What was brought forward by researchers such as Momsen (2009) and Van Houweling (2016) was the limits of engineered solutions for water supply, which had little attention to women's interests and values. In this context, feminist political ecology viewpoint provides an alternative to development understanding that usually essentializes women and overlooks the social, political and cultural context of water supply programs (Cleaver, 1998; Harris, 2009; Van Houweling, 2016). In comparison, studies of waste management (unlike in scholarship on water) have not yet applied the lens of gendered analysis to waste management. This section of the literature review will explore scholarships on water access that applies the feminist political approach to highlight issues of identity in communities of the Global South.

Many women, particularly poor women in the Global South, directly rely on the environment in performing their daily domestic duties (Momsen, 2010). Insights from feminist political ecology and resource management scholarship on access and conflict are important in framing the water problem. In rural Bangladesh, Faisal and Kabir (2005) looked at how gendered identities and roles shape access to water resources. Their research shows how local cultural norms and individual attributes, such as social class, age and religion, interact with the materiality of the water sources. For example, poorer women were more likely to fetch water themselves than wealthy women, but water collection practices were also influenced by the location of water resources as well as the quality of the water. Various other feminist scholars have also contributed to the understanding of social interactions within water spaces, further arguing that communities using water supply systems imbue water spaces with meaning (Harris, 2009; Sultana, 2009).

In a detailed analysis, Van Houweling (2015, 2016) describes how a rural community in Mozambique interacted with a new water collection system. Although she acknowledges the pressure women face in water collection, she challenges the dominant ideas that associate water collection with oppression for women. She found that the new water system was not used by women as they valued the old customary water source. To the women, the customary water sources are important sites for livelihood, ritual, and social activities, and the introduction of a new water collection technology jeopardized activities that are valued by women, resulting in reduce use of the technology. These studies reinforce the idea that water spaces and practices are gendered and embedded in local meanings and power relations that determine how new water technologies will be perceived and used. Feminist political ecology provides the framework for analysing access to household waste services, and meaning that is associated with using waste spaces (i.e. waste disposal areas). This means that the complex experiences of people at the intersection of multiple aspects of their identity tend to be absent from the study of waste management.

Recent scholarship on resource access extends the work of feminist political ecology into new dynamic areas that explore the emotional nature of resource struggles. Increasingly geographers are becoming more sensitive to previously ignored conceptions of space, to accepting that place and space are felt (Anderson and Smith, 2001; Ey et al., 2017). Emotional geographies of resource access attempts to bring forth the realities of suffering which are intersubjective, into the understanding of accessibility, and the use of resources. For example, work by Sultana (2011), describes the embodied emotional

stress that is experienced by women from walking distances to collect clean water and negotiating access at water areas or in instances where gendered restrictions limit their mobility. Many women characterized negotiating this stress with negative emotions such as suffering, shame, and misery (Ennis-McMillan, 2001; Sultana 2011). Hawkins & Ojeda (2011) and Wright (2012), argue that paying attention to emotions is important for tracking processes of inclusion and exclusion, and it further illuminates the way in which emotions form part of everyday life. These studies of the emotional landscapes of water contribute to a better understanding of gendered oppressions faced when accessing water resources through the analysis of lived experience. It is of interest to understand the emotions associated with waste management and especially from a gendered perspective as women are mostly responsible for household waste management. This brief literature review highlights that emotions can reveal a host of alternative experiences, knowledge and insights relating to the waste sector. Having examined the literature on feminist political ecology, the next section reviews literature on the body and politics of belonging. Furthermore, the next section details how the appearance of the body may lead to exclusion of certain groups of people.

2.8.1 Gender, the Body and Politics of Belonging

Belonging is a contested concept and various scholars provide different explanations of its key components (Stokke, 2017; McQueen, 2014). Scholars influenced by feminist theories describe belonging as membership in a community which gives attention to an individual's social identity, while drawing attention to the emotional dimension of belonging in particular social spaces (Benson, 2014; Lähdesmäki et al., 2016; Yuval-Davis,

2006). Critical scholars are increasingly conceptualising belonging as a socially constructed process that changes over time (Antonsich, 2010; Croucher, 2018; Mackenzie, 2004) and acts at different scales[3] (Yuval-Davis et al., 2005). The concept of belonging has been employed across many disciplines with varying meanings – however current scholarly discussions are within the context of migration (integrating ethnic minorities) in the Global North where extensive literature is situated (Babar, 2014; Gilmartin, 2008; O'Halloran, 2018; Skrbiš et al., 2007). In the Global South and especially Africa, belonging is studied primarily in political sciences as a means of understanding voting patterns in multicultural countries.

The politics of belonging is based on the distinction of insiders and outsiders in a community (Jones and Krzyzanowski, 2008). Antonsich, (2010 pg 645) describes the politics of belonging as a 'discursive resource which constructs, claims, justifies, or resists forms of socio-spatial inclusion∕exclusion'. This description is similar to Crowley's (1999 pg 30) position on politics of belonging that it is the 'dirty work of boundary maintenance'. The boundaries that the politics of belonging is concerned with are the boundaries that separate a community (or imagined communities) into 'us' and 'them' based on identity characteristics (Yuval-Davis et al., 2005). The separation between us and them are better explained by Anderson (2006), who centred the understanding of identity politics on imagined community. Those people who are 'united' form an imagined community because the members of the community will never know or

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[3] The spatial notions on belonging are often multi-scalar, including a wide range of interdependent spatialities, such as homes, neighborhoods, regions, and countries (Huot et al., 2014)

interact with most of the other fellow members yet in the minds of the members' lives the image of their communion.

Therefore, belonging often becomes visible as a result of its absence and experiences of exclusion by others. Sibley (2002), for example, draws attention to the significance of space for understating social and spatial exclusion of minority groups in western cultures. This author states that space in not neutral; the state, capital and patriarchal social structures, impose order on society through the regulation of space to exclude those who do not belong. Cresswell (2014) has argued that social hierarchies and social relations are both expressed as well as experienced through space. Mischi (2009) furthers the debate on the construction of space by reflecting on the meaning of the English countryside where powerful groups through symbols in space excluded the 'others' who are thought to be illegitimate in the countryside. Although the above review is based on theorisation in the Global North, the research in this thesis aims to understand how symbols and practices in public space affect different members in a community from fully attaining waste management services.

The politics of belonging are inscribed in and expressed through bodies and space (Whaley, 2018). Of relevance to this study is how under-represented groups such as women are excluded from public spaces. Research on public participation has shown how women are excluded from public spaces and their level of involvement in decision making or political spaces is determined by constructed coding in spaces (Alubo, 2001; Lefebvre 1991; Reid, 2008). The nature of women's participation in the political

democratic processes illustrates how inclusion and exclusion is enacted in the public space; and how struggles for public participation[4] are effectively part of the broader issues of belonging and gender equality (Alubo, 2001). Public spaces have been historically construed as masculine spaces and private/domestic spaces as feminine. Feminist theorist argue that women are those most likely to lose out finding themselves and their interests marginalised or overlooked in participatory processes (Cornwall, 2003).

These studies implicate the body of women and what it means to be a woman. Young (1990) has argued that the appearance of the body plays an important role in the way that societies label certain groups of people as the Other - what she calls the 'aesthetic scaling of bodies'. The Other's are defined by their bodies, and their bodies are seen to be abnormal, ugly and impure (Young, 1990). Defining the bodies of subordinate and oppressed people is placed with the political realm by Bell (1999). She argues, in what she calls the performativity of belonging, that belonging is (re-)produced through our bodies (Bell, 1999). Bodies that do not fit into the broader social-cultural norms are excluded. Fenster (2005), for example, illustrates the performative nature of belonging when describing how certain clothing styles worn in public in an orthodox neighbourhood in Jerusalem lead to 'feelings' of exclusion for women who do not adhere to prescribed norms and traditions. In this context, the manner of dressing the body becomes the norms of inclusion and exclusion. Meaning is written on the body but the inscribed meaning is either rejected or internalised by the individual when

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[4] The concept of participation in the Global South has been widely used in development discourse. The concepts often relates to participation in the public arena or in development projects (Smith, 2011).

negotiating their own appearance. Hence, women's understanding of their bodies is negotiated in reference to cultural and social standards about appropriate standards of appearance (Frith, 2003; O'Neill and Hubbard, 2010; Pfaff-Czarnecka, 2011). This research aims to understand how the body of a woman is constructed and read within waste infested areas.

2.9   Conclusion

The task of understanding and explaining the dynamics of household waste management within the urban areas of the Global South is complex. This chapter has reviewed the scholarly contribution of literature on contemporary politics of service delivery, informal waste recycling, household waste management practices, neoliberalisation of nature, urban political ecology and feminist political ecology to understand household waste management in a South African township. Reviewing the relevant contributions from each of these approaches facilitates new insight. The following sections detail the gaps within this literature.

The literature reviewed in this chapter reveals that the urban areas of the Global South are characterised by accumulating waste heaps, illegal dumping and poor environmental sanitation which pose a health risk to urban dwellers (Aparcana, 2016). Furthermore, waste recycling has not been fully accepted as a sustainable waste management option. The literature on municipal waste management in the Global South is well known for citing rapid and unplanned urbanisation which are associated with increased per capita

waste generation as the reasons for improper waste management (Asase et al., 2009; Parrot et al., 2009). Local government failures to respond to modernisation exacerbate waste collection and disposal challenges in the urban areas. There is, as yet, little research on the role of the built environment on waste collection and disposal practices (in shaping environmental attitudes and behaviour). As Filion and Keil, (2017) find, that decisions on the allocation and quality of the built environment are made in the political sphere and reflect the dominant powers in that particular environment. Moreover, the historical background of South Africa dictated the infrastructure that was deemed sufficient for township areas therefore affecting the quality of waste removal (May, 1998; Jürgens et al., 2013). There is a gap in understanding how the built environment (i.e. infrastructure) influences human actions of waste disposal in South African townships. Furthermore much more still needs to be said about gender and the built environment in household waste management. As stated by Siemiatyck et al. (2018) infrastructure provision is both a social disadvantage and advantage for some, creating spaces of exclusion for certain segments of the community.

This chapter has also reviewed literature in relation to the neoliberalism of service delivery. In the Global South research has shown that the privatisation of waste services produces spatial inequalities as services are obtained based on affordability and not available to all citizens (Ogu, 2000). The privatisation of waste services through a waste contractor, provides a lens for understanding how social exclusion is enacted within the wider political and societal context. Insights from urban political ecology are fundamental in understanding how the flows and management of household waste are influenced by the local social, political and economic processes that work together to

produce uneven urban spaces (Heynen, 2003; Cornea et al., 2017). The literature of urban political ecology goes beyond the analysis of class and capital towards the analysis of actors within the urban areas who facilitate the creation of uneven development. In understanding how household waste is created and shaped within a South African township, the urban political ecology allows for the engagement of the everyday that is firmly grounded in the local context and identities. Situating waste management services within contested and political spaces, reveals the complex decision making processes that determine how household waste services are delivered. Household waste becomes an important tool for tracking the process of inclusion and exclusion in areas of limited resources with competing identities.

This chapter revealed that tools from feminist political ecology are able to provide new ways of understanding gender roles and inequalities in accessing and using resources (Nightingale, 2006). While gender is the focal analytical category in most feminist work, this research pursues a feminist approach that is intersectional to understand how gender oppression is intertwined within other axes of class, geographic location, marital status, age and ethnicity that lead to disproportionate environmental harm. Feminist political ecology makes provision for gendered inquiries into household waste management to be at a variety of scales (Katz, 2001; Truelove, 2011), therefore this research stresses the interconnection of the range of scales in evaluating gender matters in household waste management. There is limited work that applies the feminist political ecology to household waste management and the literature has shown that there is clear scope for investigating the gendered patterns, meaning and implication of household waste management in contemporary South African townships. Applying the

feminist political ecology approach in this research, can bring to light a host of alternative experiences, knowledge and insights relating to the household waste management sector.

This study therefore combines all the theories mentioned above to make sense of household waste management in a multi-ethnic South African township. Having examined the relevant literature, the following chapter will discuss the methodological consideration involved with collecting primary and secondary data for this research thesis.

CHAPTER 3: METHODOLOGY AND METHODS

3.1   Introduction

In order to address the objectives outlined in Chapter 1, the research reported in this thesis used a combination of qualitative and quantitative data collection methods. This chapter describes the approach and techniques applied during fieldwork and details the overall methodology of the research. This chapter begins with a brief discussion of the ontological and epistemology position underpinning the study before detailing the methodological approach adopted.

3.2   Ontological paradigm and epistemological underpinning of the study

Methodological approaches in social sciences are closely aligned to the ontological and epistemological assumptions and direction that the researcher holds or chooses to undertake (Plowright, 2011). The three significant ontological paradigms that have influenced social sciences have been (i) positivism, (ii) interpretation/constructivism (Clark and Creswell, 2008) and more recently, (iii) the pragmatic approach, an important ideology for mixed methods (Bryman, 2016). The positivist paradigm's ontological perspective holds that the world's existence is independent of our understanding and perception; it regards the world as having one truth that can be known with reliability and validity (Bergman, 2008; Mertens, 2003). Accordingly, social phenomena should be treated as objects in a similar way that physical scientists handle physical phenomena (Johnson and Onwuegbuzie, 2004). The epistemological assumption that follows from positivism is that the researcher remains objective to avoid tainting the interpretation

of the data. The aim is to produce numerical data that measures and describes social phenomenon by attribution of numbers (Clack and Creswell, 2008). Quantitative research in the form of surveys somewhat rests on the assumptions of positivism. This study uses quantitative methods, but rejects the notion of total objectivity and a single truth that is uncoverable by quantitative methods (Plowright, 2011). The very idea of controlling variables, especially turning women's narratives into objects, is viewed as a masculine approach (Bryman, 2016). In this research, quantitative methods are applied in conjunction with qualitative methods to better present the reality of conditions on the ground.

Qualitative research commonly rests upon constructivists assumptions (Atkinson and Delamont, 2010). Constructivists believe that multiple constructed realities exist and the knower and known are intertwined as the knower is the source of the subjective reality (Lincoln et al., 2011). Constructivist data collection methods include observations, interviews and focus group discussions; data explanations are generated inductively as opposed to verifying theories. Data is obtained from interpreting the knower's lived experience and seeking to describe or reveal social occurrences (Bryman, 2016). This approach is favoured when working with marginalised people such as those in the South African township which this research focusses on. The two paradigms (positivism and constructivism) are based on two different and competing ways of comprehending the world and combining them has been criticised by many researchers who state that these approaches are incompatible. Although challenges have been identified in combining the two contrasting paradigms, in attempting to explain the world through research (Bergman, 2008), understanding the strengths and weaknesses of quantitative and

qualitative research puts a researcher in a position to combine research strategies (Johnson and Turner, 2003). Mixed methods research uses methods and a philosophy that combine together the strengths provided by qualitative and quantitative research into a workable solution for a single study (Teddlie and Tashakkori, 2009).

The philosophical orientation most associated with mixed methods is pragmatism, although some mixed methodologies take a more philosophical orientation towards a transformative perspective (Teddlie and Tashakkori, 2009). The process of pragmatic inquiry includes the use of induction, deduction and abduction which refers to relying on the best set of explanations for understanding research results (Creswell and Clark, 2017). Mixed methods research offers a practical alternative that allows the use of multiple approaches in answering research questions, rather than restricting researchers to a particular theoretical style (Onwuegbuzie and Leech 2004). The research reported in this thesis is sensitive to the transformative paradigm which is characterised by placing as central the importance of the lives and experiences of marginalized groups such as women, ethnic/racial minorities and those that are poor (Creswell and Clark, 2017).

3.3   Methodological Approach

The purpose of this study is to further understanding of waste management practices in Lamontville Township. The complex nature of household waste management and the historical context of South Africa mandates for varied data collection techniques that are suitable for different groups of people. Hence this study adopted a pragmatic

approach, combining both qualitative and quantitative approaches to best answer the research questions and to explore waste management in a marginalised area from different perspectives. The underlying assumptions for this study are similar to those of the transformative paradigm that hold that there are diverse viewpoints with regards to social realities but these perspectives need to be situated within the local political, cultural, historical and economic systems to understand the basis for the differences that lead to marginalisation and inequalities (Teddlie and Tashakkori, 2009). In particular, the research seeks to further understand how and why gender leads to differences in knowing the world. Although the study adopts a transformative paradigm, research participants were not involved in determining the research methods.

Qualitative research in the form of field observations, interviews, focus group discussions, participatory activities and document analysis was conducted first. Initial data analyses was conducted to determine emerging themes and subsequently the second phase of the data collection involved the collection of quantitative data, in the form of a household survey. Qualitative methods help collect information which cannot easily be measured quantitatively such as people's perceptions and attitudes towards household waste management. In the study reported in this thesis, each participant is seen to possess a unique perspective on reality, which is their own individual conception of what is truthful (Morgan, 2013). The quantitative household survey covers variables which are applicable to waste management such as waste disposal behaviour, waste recycling activities and subjective opinions on waste management (sections 3.6.4 describes the elements in the household survey questionnaire). The contrasting components of the data set (qualitative and quantitative) complement each other to

best answer the research questions and it speaks to the silences revealed by the different approaches. The use of mixed methods allows for triangulation between different data sources, not only to validate particular 'truths' (Creswell and Miller, 2000) where researchers search for similarity amongst multiple data sources of information, but rather to be able to consider, why certain truths appear in certain modes of inquiry, while other realities may be visible through other methods (Nightingale, 2003).

3.4   Research population and sample

The community of Lamontville Township are all involved in some aspect of household waste management, hence the entire population is considered as the study population for the research. Key stakeholders in waste management who are outside of Lamontville but within eThekwini Municipality are also included and these stakeholders are waste service providers, waste pickers, and public institutions. Table 3.1 below provides a summary of the sample size for each data collection method.

Table 3.1 Data Collection Methods and Sample Sizes

Research method	Description of sample	Total
Focus group discussions (Adults)	6 Female groups (47) 3 Male groups (18) 1 mixed gender − Elderly group (10)	75
Focus group discussions (Children)	1 Primary School (10) 1 High School (8) 1 Lamontville central (8)	26
Participatory Activity (Children)	1 Primary School	7
Semi structured Interviews (municipal officials)	9 Durban Solid Waste[5] 2 Housing Department	11
Semi structured interviews (community volunteers)	Extended Public Works Programme Volunteers	2
Semi structured interviews (Waste contractor)	Private Waste collection Company in Lamontville	4
Semi structured interviews (formal recycling businesses)	Waste recycling company in eThekwini municipality and Umlazi Township[6]	2
Unstructured interviews with Waste pickers	7 in Lamontville 2 in Cato Manor[7] 1 in Mlazi Township	10
Household questionaire	Door to door questionaire	210
		347

3.5   Collecting the research data

3.5.1   Ethical Considerations

A number of ethical issues were addressed in the course of the research including informed consent, access, confidentiality and anonymity. Ethical approval for the research was given by the University of Hull. Ethical considerations for the study was

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[5] Durban Solid Waste (DSW) is the cleansing and solid waste unit of eThekwini Municipality.

[6] Umlazi Township is the fourth largest township in South Africa after Katlehong, Soweto and Tembisa. The population of Umlazi Township is estimated at 4 million (Stats SA, 2011).

[7] Cato Manor is a township in eThekwini municipality. It is located 500m from University of KwaZulu-Natal (Howard campus) where I was a resident researcher. It is also in close proximity to the municipal waste offices where I conducted most of the stakeholder interviews.

addressed through inter alia use of consent forms. The purpose of the research was explained to each participant and they were made aware that participation was optional and they could chose to withdraw at any time during the study. All participants signed consent forms and were encouraged to ask questions about their participation in the study. Appendix 1 contains a signed consent form for focus group discussions and interviews with adults. The researcher had to inform the local councillor of the research before commencing with the research (see appendix 3 for the approval letter). The following sub-sections detail the stakeholders and the research methods applied in the study.

3.5.2   Durban Solid Waste Department and Housing Department

Semi-structured interviews were conducted with municipal workers from the public institutions and service providers of Durban Solid Waste. Interviews are a meaningful way of collecting data as it allows the interviewee to reflect on their position while describing their thoughts, beliefs and immediate concerns (Roulston and Choi, 2017). During interviews, municipal workers expressed their immediate concerns with household waste in townships and low income areas. The interview schedule was semi-structured, usually beginning with general questions before moving to more specific questions on governance and policy (Rubin and Rubin, 2011). The interview questions posed were open leaving space for the researcher to probe further by asking follow up questions (Frankfort-Nachmias and Nachmias, 2007), as this was particularly relevant during the interviews. The interviews lasted between 45 – 60 minutes. The questions were related to waste recycling and waste service provision. Prior to conducting the

interviews, approval and consent were obtained through the signing of a consent letter. The researcher assured the officials that the interviews were for the purpose of research and assured them confidentiality and anonymity as some officials were initially sceptical of their interviews being voice recorded.

A total of nine municipal officials from Durban Solid Waste Department and 2 from eThekwini Housing Department were interviewed. With regard to the Solid Waste Department, the plan was to interview senior officials who are engaged in policy formulation and decision making. The researcher also had interest in junior officials implementing the waste policies on the ground and directly interacting with the community. The interviews with municipal staff were conducted at the municipal offices. The Housing Department was included in the study once it was determined, during field work, that housing type is closely associated with the quality of waste service provision. Overall, the interviews with municipal officials were successful. In instances where the response from the interviewee was unclear, the researcher would ask for clarity and some officials drew diagrams to reiterate their point. The male officials were very eager to explain themselves as they were of the opinion that the researcher was unable to comprehend aspects of waste management as she is a woman. At all times, the researcher was cognisant of her subordinate position in relation to the senior municipal officials. Most of the interviews were voice recorded, however, some officials requested the recorder to be turned off, so they could express sensitive information which was based on issues of race and political decisions made within service delivery. Although the voice recorder was switched off, the officials allowed the researcher to write the information down. To protect anonymity, the actual names of the officials have been

changed in this thesis. To check the reliability of the responses, the same question was asked at different times during the interview and the responses were compared. Some of the responses were compared with documentary sources such as newspaper articles and available official records. For example, the municipal position on service delivery for marginalised communities was also verified with published items in local newspapers.

3.5.3 Waste Pickers and Waste Recycling Companies

Waste picking is a livelihood strategy for members of the urban poor in eThekwini municipality. In Lamontville, seven waste pickers were identified and approached for interviews. Waste pickers working within Lamontville Township apply different strategies for transporting their materials to the market. Three additional waste pickers working outside of Lamontville were included in the study, as a means of understanding the broader networks that operate in the informal waste economy. Unstructured interviews were conducted with the waste pickers as it was anticipated that they would be interviewed as they were working. Systematic sampling techniques could not be applied for identifying waste pickers to be interviewed. During focus group discussions, participants assisted the researcher with the names of waste pickers in their immediate surrounding. Once waste pickers were identified (while working), the researcher introduced herself and requested consent from the waste picker, prior to the interview. The interviews were loosely formatted, driven by the waste picker, mirroring a conversation between two people. During the interviews, the researcher probed to elicit responses that addressed the research questions. The research interest was on the waste pickers' work experiences as expressed in their own words. Members of the

community and waste pickers pointed the researcher towards waste recycling companies operating in Lamontville.

There are numerous waste recycling companies operating in the wider eThekwini municipality. However, only a limited number of waste recycling companies travel into Lamontville to collect waste materials as distance is a hindrance. During field work, two recycling companies were identified collecting waste items from waste pickers in Lamontville. Unstructured interviews were conducted with workers of the waste recycling companies while waste items were being collected and weighed. This allowed the researcher to view the interaction between waste pickers and the private company who act as the middlemen. The researcher had an interest in obtaining the perspectives of both waste pickers and recycling company workers on their working environments and challenges with collecting waste items in townships.

3.5.4   Private Waste Collection Company

On behalf of the eThekwini municipality, a single waste contractor is responsible for collecting and disposing of household waste in Lamontville. Four semi-structured interviews were conducted with the site manager, female street sweepers and the men who work with the collection vehicle. The contract manager ensures the waste collection schedule is adhered to while the other staff members have the important role of collecting waste and interacting with the community. The interviews were conducted while they were doing their work. Interactions with these workers enriched the research as new themes (e.g. access to time and gendered environmental pollution) that were

previously not considered emerged from the prolonged interaction between the researcher and the staff members. When the researcher was directing questions to women workers, men would respond for them, therefore efforts were made to talk to the women separately to ensure that their voices were heard uninterrupted. Interviews with the private contractor were aimed at retrieving information on how the local socio-economic and political condition influence service delivery. This was achieved by posing questions that addressed the collection schedule, the workers' subjective views on waste management, the impacts of 'immigrants' on waste collection, the role of waste pickers and the division of work. The researcher accompanied the truck workers while they were collecting waste on two occasions. The exercise enabled the researcher to gain accurate first-hand insights into the unequal distributive nature of service delivery. The researcher was also able to observe the waste disposal practices within the Lamontville community and hot-spot areas for illegal dumping. Informal conversations with truck workers revealed the attitudes that are associated with collecting waste for poor sub-communities. In addition, the researcher accompanied the waste contractor on several occasions to the Mariannhill landfill site, 28 km from Lamontville Township, to dispose the collected waste (see appendix 19 for map showing Mariannhill landfill site).

3.5.5   Document Analysis

Important information about municipal waste management was collected from local newspapers and reports as a source of information as they often describe waste management practices in Lamontville Township. Many government policy documents

were also used to review waste management legislation and policy to identify gaps in addressing waste reduction measures. In South Africa local government prepares at least the following documents which are applicable to waste management: Integrated Development Plan, Integrated Waste Management Plans (IWMPs), Environmental Management Plans (EMPs), Environmental Implementation Plans (EIPs) and Service Delivery Improvement plans (Godfrey, 2008). For the eThekwini municipality the Integrated Development Plan and the Integrated Waste Management Plans are available online on the eThekwini Municipality website. The remainder of the documents were requested at the local government offices during the interviews with the key municipal stakeholders. The secondary data in the form of policy documents supplemented the primary data collected from focus group discussions, the household survey and field observations.

3.6   Collecting data with the Lamontville Community

The population and the targeted research participants in Lamontville were children between the ages of   6 – 17 years, adult community members, including the elderly. As detailed in section 3.4 several data collection methods were adopted in the community of Lamontville. The following sections detail the methods applied in Lamontville with the various research participants.

3.6.1   Focus Group Discussions with Adults

Focus group discussions (FGDs) were very useful for the exploratory phase of this research. Focus group discussions assisted the researcher with positioning herself within

the unknown field. Large amounts of rich data were generated from the participating community members in their own voices. The outcomes of the focus group discussions informed the design of the household survey questionnaire. All the discussions were voice recorded with the permission of the participants and the duration for each FGD was approximately, 1 to 2 hours, depending on the location and group dynamics. Nine out of the ten FGDs were held outside, in open neutral spaces within the township. The Lamontville Community Hall had initially been identified as the place for the discussions, however, a feeding scheme was occupying the hall. The draw backs of conducting FGDs outside was the wind and occasional background noise that compromised the quality of the recording. Moreover, being visible in an obvious position attracted unwanted attention towards the discussions. Each FGD had a maximum of twelve participants and a minimum of five participants. These numbers allowed for every participant to contribute to the discussions. The discussions were held in both Zulu and Xhosa depending on the preference of the group. The researcher is conversant in both languages.

A FGD guide was developed prior to fieldwork and it was piloted on a group of adult men in Lamontville (see appendix 4 for the focus group discussion question guide). Men were readily available and easier to gather than women who were busy engaged in domestic activities. The FGD questions were designed to create discussion about the participants' daily waste management practices. To stimulate and expand the discussions, the questions addressed the knowledge of waste recycling, current waste collection, prevailing social conditions, social networks in waste management, household waste responsibilities and the inclusion/exclusion of citizens in decision making processes.

After the pilot discussions, the guide was adjusted to remove questions that involved visual imagery on waste recycling as it emerged that the community had sufficient knowledge of waste recycling. The researcher had to re-orientate the manner of questioning as unexpected themes such as political affiliation and corruption emerged from the pilot discussion; these themes were incorporated in subsequent discussions. At the end of each session, a summary of the key points were read back to the participants to ensure that the information was accurate and that everyone was in agreement.

A snowball sampling technique was applied to identify the adult participants for the FGDs. The snowball sampling technique is based on using networks in the community and shared knowledge about individuals (Auerbach and Silverstein, 2003). The target population was the adults in Lamontville community who were not in formal employment. This method is beneficial for research which seeks hidden or undocumented populations, where a list of those people is non-existent (Browne, 2005). In recruiting participants for the discussions, several starting points were used. This was done to broaden the range of participants by tapping into several different social networks. The participants varied according to age, religion, socio-economic status, education levels, marital status, ethnicity and political affiliation; but all were residents within Lamontville Township.

The researcher placed emphasis on the group composition as it had the potential to hinder interaction amongst participants (Hennink, 2013). Much of the existing guidance on FGDs encourages intra-group homogeneity (such as men or women-only group) to

allow participants to freely speak (Morgan, 2013). Similarly, the researcher decided to separate men and women in gender specific FGDs, an attempt to create a safe place for women to communicate their views freely. Moreover, the participants were from the same local geographic areas within Lamontville (sub community) which was sufficient commonality to maintain productive conversations and to circumvent unnecessary conflicts (Fern and Fern, 2001). According to Puchta and Potter, (2004) the relationship that participants have with each other within FGDs is paramount in generating rich interactions and differing perspectives.

During the FGDs, the researcher allowed interaction between participants as a means of collectively constructing knowledge (Morgan, 2013). The researcher asked questions and played a less active role in directing the discussion. Furthermore, the researcher observed how knowledge was constructed during the discussion; participants came with their own beliefs on waste management and described how they acted out their beliefs on a daily basis. It was of interest how certain topics were contested between ethnic groups in the same sub-community, further showing how different people have socially constructed their world perspective. While the FGDs proved successful, the researcher encountered a few challenges – in response, attempts were made to resolve or manage them where possible. The researcher was of the opinion that if the groups consisted of women only, ethnic differences would not matter. In most instances, the multi-ethnic groups for the FGDs were successful, everyone in the groups participated in discussion except one FGD where a Xhosa woman remained silent in a group with Zulu women. There was asymmetry in the group relating to power dynamics, because in that particular area of the Township, the Zulu are more dominant than the Xhosa. Efforts

were made to include the Xhosa woman without making her more uncomfortable. In another, FGD, an uninvited ANC ward committee member joined in, as a way of surveillance-monitoring the discussions in an area of the Lamontville Township she is responsible for. The researcher was very troubled by the presence of the ANC ward committee member, as the safety of the participants and researcher was potentially (to be) at risk. There was also a fear that the participants would shy away from divulging certain kinds of information. However, the focus group participants were more than eager to discuss sensitive information (such as unmet promises by the councillor) which were at times directed towards the ANC ward committee member. The participants felt their concerns with waste management and other issues may reach the councillor since the ward committee member was present. The FGDs with adults were stopped after 10 FGDs had been conducted and the groups were no longer producing new information.

3.6.2   Focus Group Discussions and Participatory Activities with Children

The children in Lamontville Township were viewed as individuals competent enough to contribute to the waste management issues that affect them. Children's geographers and other social scientists concerned with the study of childhood consider that children are social actors who have a right to participate in activities within their community (e.g. Skelton, 2008). Thus, three focus group discussions in Lamontville were conducted with children. One in a primary school, another in a high school, and the third was with children outside of the school environment. In addition one participatory activity (drawing) was conducted in a primary school. The drawing activity was introduced when focus group discussions with younger children in a primary school were less productive.

The school environment was selected as it was safer for the students and the researcher. That particular primary school was selected as it is involved in formal waste recycling efforts of the municipality initiated by Durban Solid Waste; furthermore the school is in close proximity to the most deprived area of Lamontville-Transit Mathini. There is only one high school in Lamontville where one FGD with older children was conducted.

Much effort was directed at conducting research with the children in an ethical manner. Access to children was negotiated with gatekeepers – head teachers and teachers. The researcher was aware that children fear school teachers as corporal punishment is still practiced. The parents and their children signed a consent form prior to the FGDs and participatory activity. Obtaining consent from children required more effort than consent for adult participation in the research. Since the first two focus group discussions and the participatory activity with children were in a primary school, the researcher had to pass many gatekeepers to receive consent to work with the children. The initial step was approaching the head teacher and explaining the aims and objectives of the research study. Thereafter, the head teacher spoke to the teachers who agreed to release the children from lessons for a specified time. The school staff first approved the research after which consent from the children and parents was sought. The teachers asked in each class who would be interested in the research. The researcher was aware that the children in the primary school understood (comprehended) waste recycling as it was being conducted at school. An introductory letter, written in Zulu, with the school stamp explaining the research objectives and requesting for the children to partake in the research was sent to the parents (See appendix 5 for the letter from the school). The research with children only commenced

after the consent forms from the parents were signed. The third focus group discussion involving Lamontville children was difficult to organise since the researcher had to find the parents for consent before commencing with the discussion. The process of obtaining consent was time consuming. This FGD consisted of males, all of whom were in high school, with some over the age of 18. However this third group yielded good information as these young men travelled out of Lamontville and were aware of waste collection methods in surrounding areas.

In the primary school, children between the ages of 7- 12 years were involved in the research activities which took place in the staff room. Appendix 6 contains the interview guide for the FGD. The researcher was aware of the power she had in the research process relative to the children. Christensen (2004) describes how power is inherent to research when viewing research as a practice that is part of social life. Social norms and expectations of control that the children have are reflected in the study (Tinson, 2009). In the first FGD with the children, the researcher monitored the children's behaviour and noticed some were afraid to speak while others avoided eye contact with the researcher and kept their heads down. The boys in the group were more forthcoming with information than the girls. The researcher was mindful during the focus groups discussion that a child's age in conjunction with their life experience, could further lead them to be less empowered and unlikely to speak up (Greig et al., 2012). Information was gathered from this FGD, but further participatory activities were considered as the voices of the quiet students were also important to gather. The focus group discussion with the older adolescents (13-16 years) in the high school was more interactive and yielded useful data. The last focus group with adolescents (14- 18 years) was held in an

open space in the township. It was unsafe to conduct the FGD with them in a public space as crowds would gather and the wind would compromise the quality of the recording. The school environment was safer than conducting the discussion in full view of the community.

One participatory activity was held at the primary school. The children were asked to draw three pictures: firstly, of a dirty area close to home, secondly of a dirty place that is far from home and a third picture of a clean area. The idea was for the children to draw and describe their drawing to the researcher as it occurred. However, the 'draw and talk' approach was not effective as the children mocked each other as they were narrating their drawing to the researcher. The researcher decided to have a one to one dialogue with each child individually about their three drawings while out of ear shot of the other children. In this way the participatory activity was very successful in gaining information about waste management from the children's perspective. Visual methods such as drawing are child centred for they enable children to participate in research through an activity that they enjoy, and in which they are competent (Mitchell, 2006). The children enjoyed using colourful crayons. Visual methods are a way through which children are able to best articulate their experiences without the restriction of language and literacy (White et al., 2010).

3.6.3   Field Observations

Field observations were conducted as an additional form of data collection. Field observations are a systematic process where the researcher obtains a first-hand account

of the phenomena without relying on someone else's interpretation through interviews or focus group discussions (Merriam and Tisdell, 2015). Observations were gathered by walking through the streets of Lamontville, and observing waste disposal methods, illegal waste dumping, waste collection intervals, waste recycling activities and the content of disposed waste. Observations assisted the researcher in constructing a detailed description of the waste-related behaviour, activities and culture of the residents of Lamontville. Photographs related to household waste management were taken, in instances were photographs involved people, their permission was requested. The field observations undertaken to collect data were largely unobtrusive. Observations were recorded in as much detail as possible, and they include descriptions and direct quotations which form part of the database for analysis.

Throughout the seven month (September 2016 to March 2017) field work period, the researcher used a note book to record the observations. The researcher also wrote down reflections of meetings, interviews and informal interactions and other events which were deemed necessary. A separate journal was kept for documenting the researcher's reflective stance during field work including the researcher's positionality during field work and instances that made the researcher uncomfortable. The observations were also made beyond Lamontville Towns. The researcher was taken by municipal staff to Durban (CBD) and to transit camps in Cato Manor to view waste management practices. The information from the field observations supports the data gathered from focus group discussions, household surveys and interviews.

3.6.4   Household Survey Questionnaire

Questionnaires are one of the most widely used structured techniques for collecting primary data. In social sciences, questionnaires are often used to collect standardised information on the same variables for in a selected sample. Questionnaires are easy to administer and simple to analyse when dealing with data involving large numbers of people (Olsen, 2011). Although the use of questionnaires has disadvantages such as the possibility of unreliable responses and a low response rate, they still remain an effective tool for collecting data on people's social characteristics, behaviour and awareness of certain issues (Bee and Murdoch-Eaton, 2016). A questionnaire for the household survey of waste management was developed by the researcher and applied in the study area of Lamontville Township.

The household survey was designed to provide a broader understanding of waste management practices in the township. To address the research objectives, the survey collected information on the following: household waste management practices, waste management and vulnerability, waste reduction activities, waste recycling attitudes and communication with community members. To complement the data that had already been collected, themes emerging from the qualitative data collection were incorporated into the household survey. The questionnaire was semi-structured allowing for closed and open questions. Closed questions required household members to select options from predefined choices while open questions gave respondents an opportunity to provide their own responses based on their interpretation of the question (Treiman, 2014). Open questions were particularly useful in this study as participants could give a

richer and fuller perspective on the topic of interest. Moreover open questions capture information that may have been missed in closed questions (Merriam and Tisdell, 2015). During data collection, open questions encouraged dialogue between the researcher and the participants where new information emerged. For example, women were able to express other matters concerning how waste management affected their movement in the community (and how waste affects interpersonal relationships amongst women of different ethnic groups).

Several stages were involved to ensure the questionnaire was reliable and suitable for the study. The questionnaire was tested in a different township outside of eThekwini municipality to pilot the questions, and to see if any questions produced meaningless information. All participants were asked the same question, although the order of questions differed. For example, some participants were wary of providing their demographic details before answering the questions that were focussed on waste management. It was also important to explore how different groups of people would respond to the questions.   The outcome of the pre-test showed that the questionnaire was sufficient for the study. It was easy to understand for household members and it yielded the appropriate information to address the research questions.

The questionnaire survey was conducted in Lamontville Township from January to March 2017. A number of factors prevented the use of a random sampling procedure. Lamontville, is a settlement experiencing unplanned expansion and making random sampling impossible as a list (number) of the whole population was non-existent (see

appendix 7 for the map of the housing distribution). The researcher was unable to ensure equal access to all members of the community (Auerbach and Silverstein, 2003). Furthermore, a section of Lamontville was omitted on safety grounds due to the fear of violence. Nevertheless attempts were made to get a spatially representative sample of most of the population. Lamontville was divided into seven sections based on housing type and socio-economic levels to identify the households to be interviewed. The rationale for the division was to compare responses based on socio-economic levels which are associated with different waste collection methods. In each of the seven sections, every third household was chosen for the administration of the questionnaire. Appendix 8 contains a rough map of the seven different sub-sections. A single household questionnaire was completed by one household member. The household members selected the individual who would complete the questionnaire. The researcher exercised caution in seeking a balance between men and women completing the household survey as in Global South, the household as the unit of analysis often excludes the voice of women.

The questionnaire was administered by visiting the households on a door-to-door basis. The questions were asked in Zulu or Xhosa (English was used for just one participant) and the responses were recorded in English. The questionnaire is included in appendix 9 and took between 30-45 minutes to complete. The researcher would approach the household, introduce the study and request for consent to administer the questionnaire. The researcher administered the questionnaire in 6 of the 7 sections of Lamontville. A male research assistant was recruited to assist with the administration of the questionnaire in the Wema hostel as it was unsafe for a woman to enter the male

dominated hostel area. Another female research assistant accompanied the researcher in the other sections of Lamontville. If there was someone present in the house, they were always willing to participate in the study. The ease with which people participated resulted partly from the fact that the research did not require the participant's identity number, which many adults are reluctant to share. The researcher worked through the questionnaire with participants, and although it was time consuming, it produced high quality data. All the questions were answered, including other concerns that were also addressed on the spot. The researcher preferred to administer the questionnaires personally, as it allowed for additional narratives to be captured that contributed to the wider socio-political landscape of Lamontville. Intra-household dynamics were also observed during the household survey. Some of the qualitative data captured during the household survey is used in the discussion chapters. The questionnaire data was collected during weekdays and weekends to cover all demographic groups. Some days, the fieldwork area was avoided due to violence amongst 'mini kombis' (form of public transport). The field work was successful despite financial constraints and brought to an end once most households were covered. The data was reviewed, and 6 questionnaires were discarded due to errors and incomplete sections (see appendix 10 for the summary of the socio-demographic information from the household survey). A total of 210 questionnaires were obtained and prepared for analysis

3.7   Data analysis

The analysis of the household survey was performed with the aid of the Statistical Package for Social Sciences (SPSS). Data from household survey was coded and captured in SPSS for ease of analysis. Statistical analysis was used for interrogating quantitative data in order to draw meaningful conclusions from the study (Balvanes and Caputi, 2001). Simple descriptive statistics were generated to compare and contrast responses, which then transformed the data into percentages, tables and graphs. However, the study mostly uses percentages to describe the data and responses to questions. Statistical techniques were used to test significance and relationships between variables (cross -tabulation). The open responses were analysed, coded and captured in SPSS to show the most common responses. This analysis was undertaken in order to generate a descriptive picture of the data gathered on the demographics, waste management practices, attitudes and opinions of residents.

The interviews and focus group discussions were recorded and transcribed verbatim. Corden and Sainsbury (2006) describe how at the writing up stage, verbatim quotations enhance the quality of the work and provides evidence for the researchers' analysis and interpretation. All the transcription was done by the researcher and it includes laughter, disturbances and significant pauses during interviews. Laughter often signalled discomfort amongst women participants. Transcription brought the researcher closer to her work as preliminary themes and ideas emerged while similarities and differences amongst participant's accounts could also be identified. In order to make sense of the data, NVivo which is a qualitative data analysis software was used to organise the data.

It was anticipated that transcribing the material collected during field work would generate large amounts of text. NVivo was selected for the analysis due to its capability to manage large qualitative databases and its ability to analyse free flowing text (Bazeley and Jackson, 2013). Computer-assisted qualitative data analysis software (CAQDAS) has been criticized in the past for creating a distance between the researcher and the data. CAQDAS is said to de-contextualise the data while other software requires more specialised knowledge to use which may be time consuming (Bryman, 2016). However, NVivo is simple to operate and enables the user to see nodes (themes) in their context (Silver and Lewins, 2014). For example, nodes can be traced back to the person who said it while indicating their (the person's) location and demographic details. The researcher imported all the textual data into NVivo and coding was done on the screen.

Developing the right codes was a process of mainly inductive techniques rather than deductive techniques. With the inductive analysis of data; a statement or paragraph was read and a code (node) was assigned to it – examples include nodes such as 'political affiliation', 'geographic location' or 'refuse bags'. Deductive analysis was applied to a small section of the work where waste recycling theories could be tested against the participants' responses. In both processes, the codes remain faithful to the transcribed data. The hierarchical structure in NVivo provides a way of organising and grouping nodes (Silver and Lewins, 2014), therefore the data could be organised into categories and subcategories, for example the category ethnicity contained the nodes 'dirty', 'foreigner', and 'self-blame'. The process of coding moved from more specific raw data in which narratives from participants were more pronounced to more theoretical concepts that informed the discussion chapters (chapters 4-6). The whole data set was

coded and this process produced work that is richly descriptive. Thereafter the most significant challenge was in deciding on which data to use in the writing of this thesis.

3.8 Reflexivity and positionality

Undertaking a study on waste management that involves interacting with people through focus group discussions, interviews and survey demands consideration of the researcher's own position in the research. Bourke (2014) discusses how the researcher, especially so in qualitative research, is viewed as a data collection instrument, and their beliefs, political opinions and socio-economic status are important factors that may affect the research process. Reflexivity is an awareness of the influence the researcher has on the research participants while simultaneously being aware of how the research process is affecting themselves (Gilgun, 2008; 2010). Reflexivity is seen as a method of acknowledging subjectivity and therefore reducing it to a certain extent even though research can never be totally free of bias (Probst, 2015). The practice of reflexivity stresses the importance of positionality and power relations at various stages within the research (Sultana, 2007). The researcher's position, according to Berger (2015), speaks to the personal, physical and social characteristics of the researcher. These characteristics include age, gender, marital and economic status, race and education, political affiliation, immigrant status, personal experience and emotional responses to respondents (Moser, 2008; Berger, 2015). These elements can determine access into the study field area and also influence the information provided to the researcher. In the remainder of this section I reflect on my own positionality and how it influenced the research.

I am a Black South African woman, of the same ethnic origin as the majority of the research population in Lamontville. Due to my family name (surname) and birth place, I am Zulu. I am not a member of a political party. I grew up in a different township in KwaZulu-Natal but with similar socio-economic dynamics to Lamontville[8]. The only identity I concealed during fieldwork was my political position. I was fearful of telling research participants that I am not affiliated to any political party, for safety reasons. According to Sultana (2007), openness in the research process is not always simple to maintain especially when the researcher is inserted into multiple scales of power relations. There were some participants who assumed I was an ANC member since I am Zulu, Black and can enter Lamontville without hindrance. My grandmother lived in Lamontville and regularly my family would visit her. That is when as a child I witnessed heaps of waste at the rear of her house on the edge of the road. Every year the waste remained untouched and it bothered me (see Figure 3.1 for waste bags outside my grandmother's house). The visits to my grandmother were short, as my parents made sure we left Lamontville before the streetlights came on. Lamontville was dangerous to me. On our way out of Lamontville, I saw many people, busy, chatting, laughing and walking around at night; even women walking outside in the night which I had been taught was culturally unacceptable. I was always troubled by this.

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[8] I witnessed the violence during the transition from apartheid to democracy. I remember how fearful I was of IFP protests. I was 7 years old and lived in Ngwelezane Township in KwaZulu-Natal. We lived in an area that was perceived as an ANC loyal section. I remember how angry and loud IFP men with spears would move house to house forcefully taking young men to join them in the fight against the ANC. I remember how my mother would hide my brother inside our home, praying he wouldn't be captured.

Figure 3.1 Front and rear of my grandmother's house in Lamontville Township
(Source: Author's own)

The same fear of Lamontville as a dangerous place which I knew of during childhood, became a reality during fieldwork for this thesis. At the entrance of Lamontville, men are stationed carrying rifles monitoring mini kombi violence. Some days, the work would cease for security reasons, due to mini kombi violence. During fieldwork in Lamontville, I also met aggressive men who thought they could touch or push me, but my research assistant came to my aid. At Transit Mathini, the community accused me of being impartial in distributing t-shirts, an activity I was unaware of. I always introduced myself as a mature student, who was only collecting data for academic purposes, to allay optimism that the research will bring development projects such as improved housing and sanitation. Lastly, I was traumatised by witnessing how men treat women in their

homes and outside where it was visible. Some participants confessed about being raped and young girls walked with their heads down, in shame from abuse. Living away from Lamontville and having family and friends around me, helped me with lowering the stress and anxiety involved in collecting data. Throughout the data collection exercise, I was mindful of my position in relation to the research participants as it was important in establishing a relation with the respondents.

I positioned myself as both an insider and an outsider based on the context of the research. It is accepted that a researcher has multiple overlapping identities which influence their perceptions of others and how they think they may be accepted or perceived by others (Kezar and Lester, 2010). Historical and political processes placed me close to the participants, while my education and material differences made me an outsider. However, the boundary between being an outsider or an insider was hazy. Most participants were willing to express sensitive information, as they perceived me as an outsider who cannot report what was discussed to the ruling political elite. Berger (2015) highlighted some advantages of being an outsider stating that when participants perceive the researcher as an outsider, they are highly likely to perceive them as neutral with some degree of objectivity. The researcher is likely to receive impartial information that they would not receive if they belonged to the host community. My gender identity was important, and it affected the information that participants were willing to share. Although both men and women were eager to speak to me, it was the women who were more comfortable to share additional information about their experiences. I called the women, Sisters during fieldwork, as we related to the shared oppression faced from men. The women were willing to communicate with me and they perceived me as being

sensitive to their situation. Where the women and other participants provided information that could potentially have adverse effects to themselves or the other participants when disclosed, such information was used in such a way, that a direct association with the participants is not made.

3.9   Limits of the study

The collection of data was affected by several factors, that affected the amount of information gathered for this research. Initially the study had intended to collect data through participatory activities with adults in Lamontville Township. The proposed activities included transit walking, where the researcher would walk with participants in the township, to allow the participants to discuss waste in the landscape from their own position (Chambers, 1994). This activity was cancelled, as it would have attracted unwanted attention, impacting the safety of the researcher and participants. The security situation hindered the collection of data on a regular basis. A municipal election in eThekwini took place on 3 August 2017 and the outcome (results) were disputed in several regions, including Lamontville Township. The political situation resulted in conflict amongst disgruntled community members in Lamontville. The security situation on the ground made movement within the township difficult as random people would run past screaming and gun fire was audible. A sub-section of Lamontville called Gijima was left out of the study due to the active violence. However, the transit area within Gijima was included as it is located on the periphery of the township.

3.10   Conclusion

This chapter explains how data was collected and analysed to address the research questions. The use of a mixed methods approach allowed for the best tools to be used for the study. Direct observation, focus group discussions, participatory activities, interviews and a household survey were the data collection methods used in this study. In collecting the data, ethical guidelines were strictly followed throughout the research process. Data was analysed using themes emerging from qualitative date and statistics used for analysis of the questionnaire survey of households. Chapter 4, which is the next chapter, presents the results and discussion for the first research question addressing the constraints and opportunities of recycling waste in a South African township.

CHAPTER 4: WASTE RECYCLING IN A SOUTH AFRICAN TOWNSHIP

4.1   Introduction

This chapter addresses the first objective explores the constraints and opportunities for recycling household waste in the South African township of Lamontville where the research was carried out. The results and discussion presented in this chapter is informed by data collected in the Lamontville community and the broader municipality through focus group discussions, interviews, observations and a household survey. The discussion commences with an explanation of the current waste management practices as the background for understanding waste recycling. Thereafter, the barriers to and opportunities for waste management generally and specifically waste recycling which are grouped into four categories will be discussed as described by residents of the Lamontville community. The discussion throughout this chapter highlights the role of politics and ethnicity in implementing waste recycling in resource-deprived urban areas in post-apartheid South Africa. The theoretical framework is applied in order to understand how current household waste practices and waste recycling initiatives are distributed within the municipality in a way that marginalises previously disadvantaged areas.

4.2   Waste collection methods in Lamontville Township

EThekwini municipality is responsible for household waste management in its jurisdiction. In Lamontville and other townships surrounding Durban, eThekwini

municipality has privatised household waste management services. A private company is contracted to ensure household waste collection and to provide other related services such as street sweeping and providing plastic refuse bags to households in the community. The type of contracting model adopted within eThekwini municipality is common in urban areas of Africa where household waste collection is undertaken by a private entity while the local government maintains the power of policy decisions (Li and Akintoye, 2003). This system of collection is similar to other adjacent and nearby townships such as Umlazi, Folweni and KwaMashu which are also in eThekwini Municipality (see appendix 11).

Currently several different waste collection methods are used in Lamontville Township by the private contractor. Household waste in LTA (an upmarket area of Lamontville (refer to appendix 8), is collected on a house-to-house basis while in Lamontville central, Barcelona and Transit areas waste is collected from the nearest street boundary and also from communal waste collection areas. Street sweepers are employed by the private contractor to collect waste litter from paved roads which is placed along the road for collection. Figure 4.1 below shows waste bags awaiting collection on the side of the street and a street sweeper at work. The contractor provides households in Lamontville with four refuse bags per month with a minimum of one collection of refuse bags in a week (4 x per month). Individual households within the community may also request special waste collections in preparation for weddings, funerals and traditional ceremonies. These various arrangements demonstrate how modern waste collection systems are adaptable to local cultural activities.

The waste collection intervals differ depending on the locality of the household within the township. Contract waste workers use manual methods to lift and carry the filled waste bags to the collection vehicle. All collected waste is transported by road and disposed at Mariannhill Landfill Site, a landfill site for non-hazardous waste that is operated and owned by eThekwini municipality (Matete and Trois, 2008). With respect to shortcomings of the current waste collection system for Lamontville Township and the broader municipality as provided by the private contractor, is plagued by inconsistent waste collection periods and discriminatory waste collection practices which are discussed further in this chapter. In addition, the majority of household waste collected in the municipality is disposed in a landfill without any further reprocessing.

Figure 4.1 Street sweepers working along Msizi Dube (main road of Lamontville)
(Source: Author's Own)

Informal waste activities were also observed in Lamontville during the field work period (further discussed in section 5.5). Waste collection for recycling provides a livelihood for marginalised individuals in the township. Waste pickers collect glass, cans, steel, cardboard and plastics for recycling in exchange for money. Waste materials are

retrieved through house-to-house[9] collections and waste picking at illegal dumping spots. Most waste pickers target social functions and weekend activities such as weddings and funerals that produce large amounts of recyclable materials such as bottles and cans. In other urban areas in Africa, waste picking or scavenging occurs mainly at landfill sites (Nzeadibe, 2009). In South Africa, access is prohibited for waste pickers at legal landfill sites. Waste material is collected from waste pickers in Lamontville by the middlemen, as waste pickers do not have transportation to potential market areas. The waste item are taken mainly to Isipingo (see appendix 12) (and other industrial areas) where materials are reprocessed. Local government still perceives informal waste pickers as a negative aspect of the waste management system (Simatele et al., 2017); and other community members socially exclude and marginalize waste pickers. In the following section, the different practices of waste collection are discussed for the subsections of Lamontville.

4.3   Marginalised Communities and Waste collection hierarchies

A formal household waste collection service is normally provided in all sections of Lamontville Township. However, the township is a heterogeneous community with various segments of the community having different and unequal access to services whereby the majority of the community are deprived of efficient waste collection services. It was observed during field work that household waste collection follows specific patterns that are associated with social class and housing form. The five main

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[9] Waste pickers rarely open black refuse bags for valuable waste items. A few community members assist waste pickers by pre-sorting their material from household waste. Waste workers from the private contractor assist waste pickers by not collecting waste items that can be recycled for money.

housing types in Lamontville are a) shacks, b) transit housing, c) family flats (constructed

post 1994 as part of RDP[10]), d) formal houses and e) family flats (constructed pre-1994)

as illustrated below:

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a) Shacks (Informal Houses)   b) Transit housing

c) Family flats /RDP houses   d) Formal houses (bond)

e) Family flats constructed pre-1994

Figure 4.2 Different housing types within Lamontville Township
(Source: Author's own)

The manner of waste service provision is changing with the current housing formalization and upgrading process in townships. The government's housing policy as part of the post-apartheid reconstruction and development plan (RDP) relocates people from informal shacks (a), to transit housing (b), while their family flats (c) are constructed. The final location for residents in government provided social housing is a

family flat[11] (formal RDP housing) (c).   Families residing in (d) formal housing own their homes. Family flats (e) were constructed during apartheid and they have the same status as formal homes (i.e. the occupants are home owners). Waste collection works in conjunction with infrastructure development to delineate those community members who cannot afford to pay for a waste collection service or who are not required to pay for the service. Residents who live in formal housing (d) receive an efficient service as they pay their taxes[12]. The service for the other areas of housing types a, b, c fluctuates depending on the social and political landscape.

The observed inequalities and inconsistencies in waste collection practices within Lamontville Township were evaluated in the household survey by inquiring about the household members' satisfaction level of the service provided by the municipality through the contractor. Thirty-eight percent of the 210 households surveyed in the community are dissatisfied with the waste collection service (Figure 4.3). Out of the 7 sections (see appendix 8), only Madlala Village and Lamontville Central are the two sections of Lamontville that are dissatisfied with the waste collection service.

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[11] The change to RDP housing also means an upgrade from communal sharing of toilets and water taps to sanitation facilities inside the house.

[12] Residents of shacks, transit housing and RDP houses do not pay rates. Resident in family flats (constructed pre-1994) occasionally pay rates and taxes.
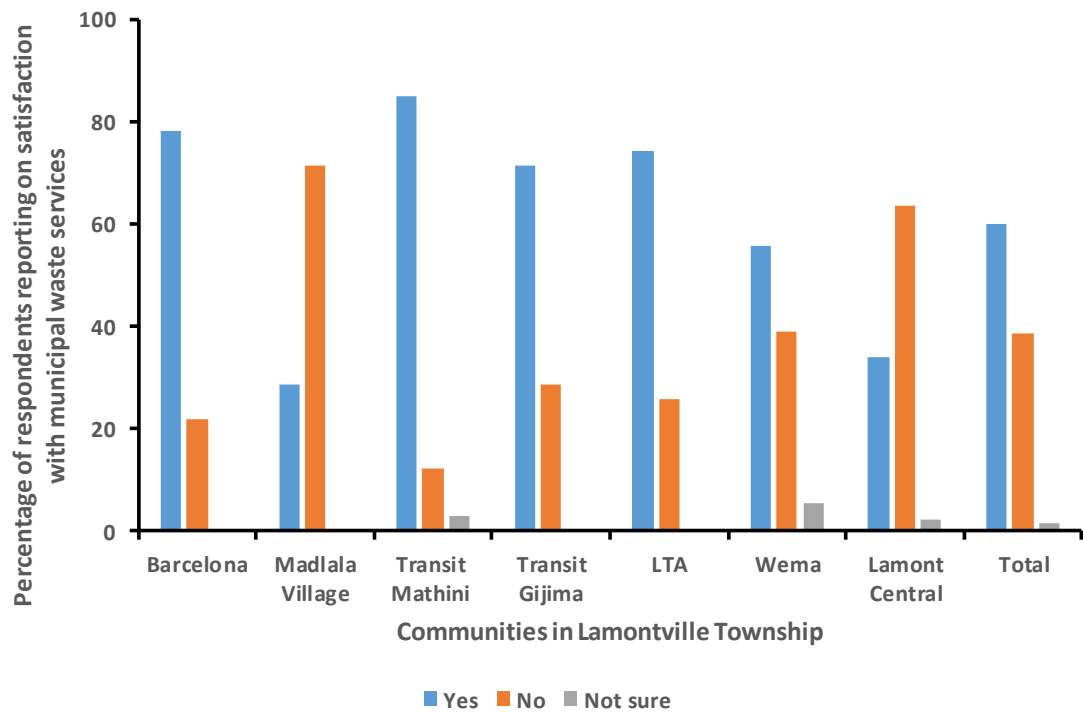
Figure 4.3: Respondents reporting on satisfaction levels with municipal waste services

The community members cite, 'limited collection' (weekly collection not enough), 'no collection' and 'collection time' (late collection) as reasons for their dissatisfaction. Madlala village[13] is an informal settlement that developed through illegal land invasion on the periphery of the township. There is a single waste collection point for the whole of Madlala Village and people living close to the main road have the option to use that collection point while the remainder of the settlement, burns and/or buries their household waste. Domestic burning of waste at household level in the Global South is common in areas with poor access to proper waste disposal facilities and services (Boadi and Kuitunen, 2005; Guerrero et al., 2013). The collection schedule is frequently disrupted by vehicle breakdowns and the political decisions made by the ruling political party that dictate collection for 'unrecognised' places.

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[13] Madlala village is also without water and electricity supply.

Madlala village does not receive refuse bags from the waste service contractor because the informal settlement of shacks is not 'recognised' by the local ANC leadership. Likewise, other informal houses outside of Madlala village but within Lamontville also do not receive refuse bags unless the local ANC councillor has recognised them. Recognition is given to each household through the allocation of a number, this number legitimises the household and its members as citizens of Lamontville. Thereafter, the household is entitled to waste services through the provision of refuse bags. The process of receiving a number is dependent on the local councillor; the majority of the residents of Madlala village are uninformed about the process of and criteria for attaining 'recognition'. The process of receiving recognition attests to the manner in which governments in expanding urban areas of the Global South deal with informal qausi-legal settlements that are in need of services that have been commodified (Bawa, 2011; Littlefield et al., 2008). In smaller informal settlements within Lamontville, recognition came immediately before the municipal elections of 2016 and was accompanied by other promises linked to basic services (such as housing, water supply and electricity) that the informal settlements would receive for voting for the ANC. The process of recognition is influenced by ANC party politics, and it ignores the need for waste collection services. Residents of Madlala village who possess political capital, (claim to) use their informal channels to communicate with the ANC councillor and thereafter inform the community that recognition is eminent. Hence, Madlala villagers are living in hope of recognition and in fear of eviction from the land they occupy illegally and where they have built their shacks.

Lamontville Central consists of informal houses, family flats (apartheid-style and RDP) and formal housing. All the people surveyed who live in informal houses within Lamontville Central, were dissatisfied with the waste service. The satisfaction level of the people living in family flats and formal housing is influenced by their proximity to informal houses and waste collection points. People living in formal houses and family flats accused people residing in informal houses of indiscriminate waste dumping. This is to be expected, as those people living on informal housing are not provided with refuse bags and have little choice but to dispose of their waste in open areas. There were also complaints associated with the proximity of waste collection points. Figure 4.4 shows an area within Lamontville central with a mixture of family flats and informal houses in close proximity.

Figure 4.4: Lamontville Central - informal housing (shacks) and family flats in close proximity leading to high levels of dissatisfaction with waste service provision.
(Source: Author's own)

The sections that were most satisfied with the waste collection service were LTA, Wema hostel, Transit Mathini, Transit Gijima and Barcelona[14] (refer to Figure 4.3). The main reasons given for their satisfaction is 'collection time,' meaning the waste collector adheres to the scheduled day and collection time. LTA is a high income area and the residents of LTA[15] demand an efficient waste collection service since they pay rates and taxes. Wema is a hostel outside of Lamontville, but sharing the same geopolitical ward (ward 75) with a portion of Lamontville that is ruled by the ANC. A different contractor[16] to the one operating within Lamontville collects waste in Wema and according to the household survey conducted in Wema, the residents there are satisfied with that contractor. The satisfaction levels for Transit Mathini, Transit Gijima and Barcelona as measured in the household survey yielded unexpected outcomes since observational findings and discussions of the focus groups indicated the inverse. Transit Mathini and Transit Gijima are under-served as confirmed by the contractor, community members and focus group discussions. In both these areas of transit housing, waste collection is sporadic and community members dispose a large portion of waste generated in the adjacent natural environment.

In an in-depth analysis of the focus group discussions and conversations with community members, it was clear that housing provision was a greater need for Lamontville inhabitants than the desire for waste disposal facilities. In South Africa and much of the

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[14] Barcelona is in a secluded hidden location within Lamontville Central.

[15] LTA is part of Lamontville but within a different geopolitical ward, (ward 69) which is governed by the Democratic Alliance. There is a perception within the community that the Democratic Alliance provides a more reliable service than the African National Congress.

[16] The waste collection method is different for hostel dwellers. Contractor workers remove waste weekly from bins located at the end of each hostel floor.

Global South, housing provision is the most pressing development issue in the face of rapid urbanisation (Ross et al., 2010).People in transit areas are waiting for 'free' houses from local government. As a result, people in transit areas live in insanitary conditions, with the hope of being allocated a family flat by government. In Barcelona, which is a government funded housing area (RDP family flats), household waste is collected on a weekly basis. Distance is an important factor that determines if the community disposes waste in a safe manner. Members of the Barcelona community, who are further away from the formal collection points, dispose of their waste informally in the nearby wetland. The actions of Barcelona residents pollute the environment and threaten the health of the community. Residents are moved into formal RDP homes (family flats) without adequate waste collection creating environmental injustices for poor people, who are in need of housing. Currently 78% of the people surveyed in Barcelona are satisfied with waste collection (see Figure 4.3) but this reflects that some of them have accepted unsustainable waste practices.

The exposure to insanitary conditions resulting from inadequate waste management is not evenly distributed socially or geographically throughout the township. During fieldwork the following people were identified as especially vulnerable to the consequences of poor waste management: women, children, the elderly, tenants, new immigrants and waste pickers. Vulnerability defines the potential of harm due to exposure to household waste. In every focus group discussion, the children were identified by men and women as most vulnerable to harm due to contamination resulting from hand to mouth contact and ingestion of waste (as also seen by Ma and Hipel, 2016). Due to their immaturity, children are always more vulnerable than other

community members (Sun et al., 2013; Shibata et al., 2015). In focus group discussions, there were complaints of children suffering from skin irritations and respiratory illnesses as a result of interacting with waste (refer to section 6.4 for health issues amongst children). In the household survey, 49 % of the households indicated that children were most vulnerable to harm. Children attracted the most responses followed by the elderly (16%) and women (15%). Women and children are especially exposed to harmful substances due to their position in the household as responsible for disposing of household waste - in 78% of the surveyed households, women were reported as being responsible for disposing of household waste, followed by children at 24%.

This section outlined the waste collection practices in Lamontville Township, revealing how social class and housing form in a politically charges area, are used by the private contractor to determine the level of service provision for the community. The barriers and opportunities to waste recycling are discussed below based on the context of vulnerability within Lamontville Township as set out in this section.

4.4   Barriers and Limits to Waste Recycling

The research conducted for this thesis has identified four barriers to waste recycling in Lamontville Township. These are physical, socio-political, organisational and financial barriers. These barriers to recycling waste are not mutually exclusive. The communities' responses to questions posed about waste recycling were strongly based on their current experiences of waste management. Hence this discussion draws on their understandings of waste recycling within the context of the current waste collection

practices within Lamontville. The argument set out in this section 4.4 maintains that the process of waste recycling is interwoven with the historical, socio-cultural, and political conditions operating locally that act to restrict development initiatives in marginalised areas.

4.4.1 Physical barriers to waste recycling

In the context of Lamontville, where formal waste recycling activities are limited, the physical barriers to waste recycling that were identified are infrastructure, housing type and geographic position of household as discussed in this following subsections 4.4.1.1 (infrastructure), 4.4.1.2 (geographic position) and 4.4.1.3 (housing type). The infrastructure considered is the road network, waste disposal facilities and the operational efficiency of waste collection vehicles. In studies of waste reduction and recycling undertaken globally, the presence of infrastructure has been identified as crucial in encouraging community members to separate waste prior to collection (Struk, 2017; Nnorom et al., 2009).

4.4.1.1 Infrastructure for waste management

The road network was observed during fieldwork in Lamontville as a possible barrier to waste recycling. The roads in Lamontville Central are narrow, as a result of apartheid spatial planning that dictated the type of limited infrastructure that was considered suitable for townships (Von Schnitzler, 2008) (see Figure 4.5 below for images of the road network in Lamontville Central). Furthermore, the width of the roads also reduces

towards the periphery of the township. Subsequently waste collection vehicles refrain from collecting refuse in areas where free vehicle movement is hindered, as the road size limits the vehicles' rotational capacity (turning point). Simatele et al. (2017) also identified the road network in the urban outskirts of Johannesburg as a limiting factor in waste recycling. In other parts of Africa, formal waste collection in low income areas is widely affected by narrow roads, steep gradients and untarred roads that motorised collection vehicles are not equipped to handle (Henry, 2006). In Lamontville, poorly developed infrastructure in the form of narrow roads exclude people living on the periphery of the township from formal waste services provision. The population in Lamontville is growing, as indicated by new settlement development, and the existing road network does not adequately address the increasing numbers of people residing in the township. Therefore, community members living in transit areas and informal settlements are at a greater disadvantage in obtaining a waste collection service due to the limited road network in these areas of poorest housing. This finding is aligned with Harrison and Huchzermeyer, (2003) who suggest that inadequate infrastructure in post-apartheid South Africa, works to systematically exclude some people from service delivery.

Figure 4.5: Narrow roads in Lamontville Central which hamper waste collection by vehicle
(Source: Author's own)

The exclusion from waste services is not just a factor of infrastructure and geography but is also based on socio-economic class and ethnicity, as predominately poor people and Xhosa immigrants from Eastern Cape Province live in the informal and transit areas of Lamontville. The development of RDP housing (family flats) for poor people further reveals the discriminatory practices applied by the local government in service delivery. Barcelona is a government funded housing (RDP) area within Lamontville Township built in 2008 and yet the road network is limited, preventing formal waste collection for a large number of residents. It is evident that infrastructure development (such as the road network) reproduces apartheid spatial planning, in that narrow roads are still constructed for people who have 'temporary status' in the urban areas. In areas of township where waste collection vehicles cannot reach, community members who have the option to access formal waste disposal, are required to walk a long distance to dispose of their household waste by carrying it to the side of a larger road accessible by waste collection vehicles. The concerns of the road condition were only mentioned in one focus group discussion and in the household survey, road conditions were not mentioned as a hindrance to waste management. This could be an indication that the community is unaware of the challenges posed by the road network to effective waste collection or they have accepted the poor quality of waste service provision in their township and have greater interest in and concern for other more essential services.

The road network conditions in Lamontville are worsened by the integrity of the tarred roads. From observations made during fieldwork, for example, after extreme rain events, some roads are damaged requiring immediate maintenance. Figure 4.6 shows a

damaged road in Lamontville Central which remained unmaintained throughout the fieldwork period of 7 months. Moreover, the roads are also damaged by malfunctions of the sewerage system located within the roads. Burst sewerage pipes, as illustrated in Figure 4.7 remained unattended to for several weeks. Hazardous human waste is continuously released from damaged sewers and Figure 4.8 shows a child playing in polluted water from a burst sewerage pipe. The worsening conditions of the road network in Lamontville is aligned with the assertions of Hazra et al. (2009) and Kubanza et al. (2016) who describe how the infrastructure for municipal waste management in the Global South is inadequate and deteriorating in areas experiencing rapid urbanization. Any introduction of waste recycling in Lamontville Township would be hampered by the poorly maintained and inadequate road network which is inherited from the apartheid period and newer urban areas without any roads would be excluded from waste development initiatives.

Figure 4.6: A road damaged after an extreme rainfall event in Lamontville Central
(Source: Author's own)

Figure 4.7: Road damaged by burst sewerage pipe in Lamontville Central
(Source: Author's own)

Figure 4.8: Child playing in waste water from burst sewerage pipe in Transit Gijima
(Source: Author's own)

Collection vehicles also avoid collecting refuse bags in areas with damaged roads to prevent vehicle breakdown. The breakdown of waste collection vehicles is a common occurrence in Lamontville. For example, children in a focus group discussion in Lamontville High School associated the late collection of household waste to municipal vehicle breakdown. Furthermore, men in a Lamontville Central focus group discussion provided an additional explanation for vehicle breakdown:

> The truck breaks down all the time, they are not improving their services.
> The vehicle breaks down because it is over utilised, they do not have extra
> vehicles. One truck is collecting for the entire area of Lamontville
>
> (Mandla, 48 years, Zulu, Male, Lamont central, ANC member, FGD)

Mandla attributes the waste collection vehicle breakdown to over-usage and shortage of equipment. The truck collects for the whole of Lamontville which is ever-expanding and conducts a minimum of two trips daily to Mariannhill landfill site to dispose waste. In an interview, the contract site manager agreed with the men of Lamontville and further stated that the same collection vehicle for waste collection is used to transport building material in a low cost housing project[17] outside of Lamontville. Moreover, in Lamontville, building waste puts pressure on the collection vehicle as it is ill-suited for carrying discarded sand and brick waste from construction activities in the community and hence susceptible to breakdown from in appropriate use. Although construction and demolition waste is classified as general waste as per the waste classification regulation, there seems to be ambiguity and confusion about how it should be collected. The lack of clarity leads to disputes between the contractor and local government for the disbursement of funds to fix the broken down vehicle that was collecting building waste. This results in unnecessary delays in the provision of services, leading to uncollected waste.

The community of Lamontville complains about the poor service delivery in several ways. The community members complain about inconsistent collection intervals mostly to street sweepers as they are accessible to the community. The local councillors are rarely

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[17] The holder of the waste contract in Lamontville was also awarded a housing construction contract in a different location within eThekwini Municipality.

available and when they are 'consulting[18]', community members queue for extended periods of time to wait to speak to them. In instances, where community complaints about late collection resulting from vehicle breakdown reach Durban Solid Waste, a municipal official dismisses their complaints in the following manner:

> The truck eventually comes to collect waste. It can come during Generations[19], then people complain about the noise. What is better, waste collection or watching Generations?
>
> (Makhanya, Municipal official, Male, Interview)

From the above statement, the municipality expects the community to accept vehicle breakdowns. According to Makhanya, the vehicle may arrive late to collect waste during popular TV viewing time, late in the evening, disrupting the communities' relaxation time. The municipal official does not acknowledge vehicle breakdown as a critical problem in Lamontville. There is lack of accountability from this municipal official and he shows apathy towards the communities concerns. This is a reflection on how local government provides services to poor areas whose voices are considered unimportant. Furthermore, there is total disregard of the impact of collecting waste late in the day. Leaving the bags of waste by the road side all day awaiting collection, means that the waste bags are exposed to dogs that rip them apart scattering substances that may be harmful to the community. Further trade-offs occur, for example when a waste collection backlog is created due to vehicle breakdown, informal and transit areas within Lamontville are only serviced after the backlog has been cleared. It was noticeable

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[18] 'Consulting' refers to the time allocated for the community to interact with the local councillor. The time is limited and is on a random basis. These dynamics of meeting the councillor defeats the purpose of decentralisation of power to lower levels of government which is meant to 'bring the government to the people'.

[19] Generations is a popular local television programme that airs at 8pm during weekdays.

during field work that waste in Transit Mathini was only collected once waste bags in Lamontville Central were cleared. There is also a hierarchy in priority given to waste collection which is based on the geographic position within the community as explored in section 4.4.1.2.

4.4.1.2 Geographic position and waste collection

Evidence of a relationship between geographic position and collection intervals was observed during fieldwork. In Lamontville household waste collection is determined by the geographic position of the household. Households close to the main roads[20] are serviced more frequently than households in the inner part of Lamontville. During focus group discussions about waste management, the participants were aware of the importance of geographic location with respect to the road network. In collecting household waste, the prioritisation of collecting along main roads was favourable to certain segments of the population while disadvantaging others. The awareness of collection practices was described by the community members during focus groups as follows:

> You can also dig a hole on your land and burn it, luckily waste is removed three times a week for us. There is no need for us to have dirty areas, and worse we are on the main road. We must respect the main road than those small roads.
>
> (Padi, 27 years, Female, Zulu, Lamontville Central, FGD)

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[20] There are other benefits for households on the main road. Houses on the main road have easy access to public transportation and street lights are always working. During apartheid, street lights on the main road worked as tools for surveillance of the community and also to direct vehicles entering and exiting the township at night.

The community members are aware that residents along the main roads receive a better service. The quotation by Padi, highlights the pride that is associated with living in a visible area along a main road. Padi further separates herself from the remainder of the community that is 'dirty'. There is a recognition of the dirty areas found along the smaller roads which are associated with informal houses that are perceived as 'dirty' due to their inability to dispose of waste adequately. In other focus group discussions, participants explicitly stated that informal housing dwellers are dirty as they are 'foreigners'. By 'foreigner' in focus group discussions, the participants were referring to people coming from the Eastern Cape Province, who are Xhosa. As a result, dwellers of informal housing exhibit different characteristics to other residents of Lamontville. Geographic position works in conjunction (or intersects) with ethnicity and class to exclude Xhosa people who have recently moved into KwaZulu-Natal Province.

Participants in this focus group and others in the household survey who live in Lamontville Central have space in their yards hence they opt for waste disposal practices such as burning waste instead of living in a 'dirty area'. To further demonstrate their pride, a participant during the discussions in Lamontville Central overinflated the number of refuse bags received per week for residence on the main road. There was a clear message that people living along the main roads are highly esteemed in the view of their neighbours and the wider community. Moreover, Musa said the following:

> We are in the RDP houses. Waste disposal is still fine. We take our waste bags to the top since the road is still in construction. They remove the waste. I'm in agreement with my sister, that being on a busy road is beneficial.
>
> (Musa, 65 years, Male, Zulu, Elderly, Lamontville Central, Focus group discussion)

Musa in the quotation above, indicates the need for housing and infrastructure. Housing provision is more important than the supply of other essential services such as electricity, water and household waste collection. Musa is in an advantageous position as he is closer to the main road and his household waste is collected timeously. As observed in Barcelona as well, community members are relocated into new RDP houses without adequate waste infrastructure. This arrangement increases the distance that households have to travel to waste collection points, resulting in dumping waste in unofficial sites. Within the current waste practices, waste disposal is inconvenient. Any additional changes to waste management such as the introduction of formal waste recycling, should consider how convenient the system is for the community, as convenience is essential for effective community participation (Lange et al., 2014; Wang, 2016). Currently, it is common for illegal waste dumps to be positioned in areas of limited collection, along smaller, inner roads near clustered houses.

The implications of household position for access to formal waste collection service as juxtaposed with the constraints were similarly expressed by women residing in the Barcelona section of Lamontville. The emphasis placed on main roads excludes other community members. The sense of exclusion was expressed by people living in Barcelona:

> Municipal workers come on Monday to throw refuse bags at us, that's all they do. The sweeping of streets is only done on the main roads in Lamontville. They choose to sweep up there and not here. They do not come down to us.
>
> (Noma, 29 years, Xhosa, Female, Barcelona, FGD)

Street sweeping is an extension of formal waste collection services offered in Lamontville. The exclusion of Barcelona from street sweeping coverage is based on the geographic positioning of this area of the township away from the main roads and their lower position within the hierarchical levels of the community. The participants acknowledge that they are 'down here' due to their physical geographical position in the valley[21]. However, Noma is also reflecting on the community's social level, suggesting that aesthetic appeal is a feature of the main road. Their exclusion from the street sweeping service is in combination with other forms of marginalisation from development initiatives in the township. Street sweeping is a minor activity but its operation creates spaces of inequality amongst Lamontville residents. The provision of street sweeping to residents of Lamontville is based on the distinction of insiders and outsiders in a community (Jones and Krzyzanowski, 2008), where those who do not belong in Lamontville, are not afforded the complete service.

Municipal demarcations (wards) were also mentioned as a determining factor in receiving an effective waste collection service. In the focus group discussions with the elders, Musa stated two reasons as to why ward 74 was serviced twice a week. Firstly, ward 74 is the largest ward in size that comprises only of Lamontville, secondly, it is the only ward amongst ANC wards that has an active ward councillor, who is seen to be controlling service delivery in the township[22]. However, in accompanying the collection

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[21] Barcelona is constructed in a valley. It is not visible from the main road.
[22] The ward councillor for ward 74 is a gatekeeper in many respects e.g. by giving me access to do research for the whole of Lamontville.

vehicle, I observed that waste collection was based on street names[23] and not on ward numbers.

4.4.1.3 Housing type as a barrier to waste recycling

Housing type is a factor that needs to be considered in Lamontville as a barrier to recycling (Moghadam et al., 2009). Housing type was initially mentioned by participants in focus group discussions when questioned about their perceived barriers to waste recycling in the township. Their willingness to participate in future recycling schemes was influenced by a lack of space inside their homes. According to Lamontville residents, their houses have limited space to store their current household waste. Housing type is commonly stated by non- recyclers as a reason for not recycling waste (Zen et al., 2014). Space for storing recyclable materials was discussed extensively in focus group discussions with residents of Barcelona, Transit housing and people living in family flats[24] constructed during the apartheid era. A participant in Barcelona explained the challenges of limited space in their homes in the following manner:

> Sister, you are telling us to recycle waste, our houses do not have ventilation.
> If we are recycling waste how will we deal with the smell?
>
> (Noma, 29 years, Xhosa, Female, Barcelona, FGD)

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[23] All of the paved streets in Lamontville have a name, the majority of which are named after heroes of the anti-apartheid struggle.
[24] Family flats constructed during the apartheid era are found in Lamontville Central. The design of those flats is different to the design of family flats in the Barcelona section (RDP) of Lamontville.

According to Noma, the houses in Barcelona are poorly ventilated and storing waste inside the home for extended periods poses health risks. Noma is concerned with the smell that will emanate from the waste stored indoors as waste generated by households in low income areas largely consists of organic matter (Oelofse et al., 2013). As a result, household waste (especially the organic component) is disposed of in the marshy areas along rivers, polluting the environment. These sentiments were also expressed by residents in Transit Gijima, where insufficient collection activities and a lack of space inside their homes results in environmental pollution. However, women in Barcelona were overly worried about the impact of stored waste on themselves. If the waste is stored inside the home, it attracts flying insects and in Barcelona, flying insects are associated with witchcraft. The women believe that other community members will associate them with witchcraft activities if flying insects are identified in their home as a result of storing recyclable materials. The act of witchcraft is gendered as women are responsible for the domestic sphere. This is an indication of how waste is intertwined with local cultural beliefs that influence how waste is (or could be) managed.

From the above comments, it is clear that people residing in small houses were less likely to view waste recycling as a viable option for reducing waste. A different concern emerged from the family units within Lamontville Central. In the household survey, people living in the first floor of the family flats constructed prior to 1994 also cited their housing form as a barrier to recycling. Currently, waste collection ignores housing type, and the pressure placed on women, who are mothers and may be of ill health. It is highly unlikely that people occupying first floor units of apartheid style flat would agree to participate in waste recycling. During the household survey a woman living on the first

floor complained about the negative effect household waste has on her health as her immune system was already compromised (see case study 4.1.)

Case Study 4.1: Nomthandazo Dladla

Nomthandazo is a 45 year old woman. She is an ANC volunteer and lives in family flats that were constructed during apartheid era. She occupies an upstairs flat and lives with her two adult sons, an adult daughter and three grandchildren. The old apartheid style flats only have one exit door and are poorly ventilated. The flat does not have space to keep the filled waste bags which are only collected by the municipal services on a weekly basis. Disposing waste requires carrying waste bags from the first floor to the waste disposal site which is some distance away. Nomthandazo faces multiple obstacles as a result of living in apartheid era housing. Waste management is of particular concern to Nomthandazo as she is a mother who is HIV positive. Nomthandazo is concerned about the odour from the waste and the potential of being cut by broken glass bottles, as she is prone to other infectious diseases and opportunistic infections. Furthermore, Nomthandazo is responsible for ensuring that household waste is disposed of daily and that the household is in a good hygienic condition. The waste also poses a danger to her grandchildren who play with it. She objected to storing recyclable waste inside her home (should waste recycling commence) due to her health. She believes waste recycling would be an additional burden to her.

4.4.2   Social and political barriers to recycling waste

This section presents the perceived challenges with waste recycling in a politically charged urban area occupied by people of multiple ethnicities. Waste recycling presents different challenges based on the communities' position and what they are striving for.

4.4.2.1 Source separation of waste material

Waste recycling in Lamontville requires people to interact with each other. At the community level, the interaction is at drop off stations in instances where kerbside recycling is not operational. In focus group discussions, participants discussed how they would prefer a recycling scheme to operate. The preferred option by the majority of participants, was dropping waste items unseparated, in a waste collection scheme which is within walking distance in their neighbourhood. Research participants in focus group discussions perceived source separation as a barrier to recycling. The rejection of source separation was also evident in the results of the household survey. Four options were given to household members concerning the designing of a recycling scheme in the household survey. The first option, kerbside waste recycling involves the collection of waste materials, already separated, from the community member's homes. The second option is a drop off waste recycling scheme where community members drop their recyclable waste unseparated in a location at a distance and the third option involves transporting waste to the recycling station. Ninety-eight percentage of the surveyed community members preferred the second option of sending the waste to another location and allowing someone else to separate it (see Figure 4.9)
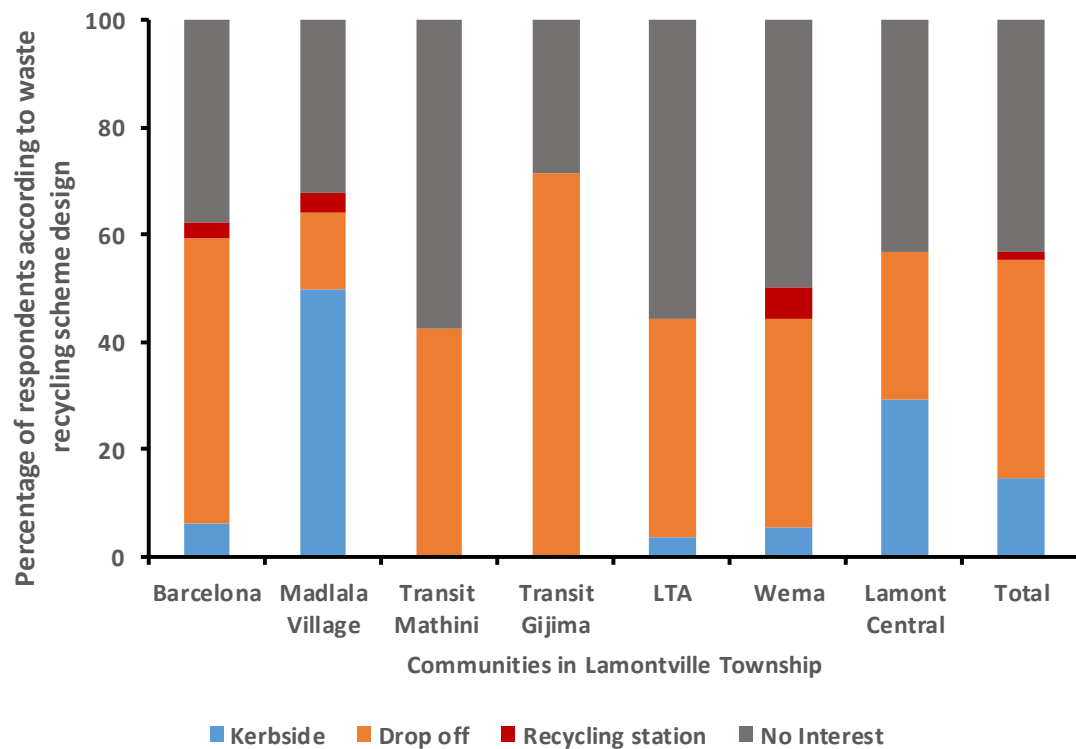
Figure 4.9 : Percentage of respondents in Lamontville according to recycling scheme design

The participants in Lamontville rejected a waste recycling scheme that involved separating waste inside their homes, mainly as a result of limited space and due to their subjective views of household waste management in Lamontville, which are informed by cultural and political processes operating within the township. Source separation as an optimal approach to household waste recycling has been promoted by many scholars on the basis of evidence that separating waste material at source is more efficient (cheaper for authorities) than recovery of material from a mixed waste stream. This separation method produces cleaner waste items with a higher value in the market for recyclable materials (Moh et al., 2017; Owusu et al., 2013; Stoeva et al., 2017). The following section focusses on Transit Mathini for an understanding of the role on ethnicity in waste recycling.

4.4.2.2 Ethnic conflicts and waste recycling

> A Zulu will not separate waste.
>
> (Dipuo, 27 years, Female, Xhosa, Transit Mathini, FGD)

The above statement indicates a distinction of people based on ethnicity by a resident of Transit Mathini. According to Dipuo, waste separation will be unsuccessful as people who are Zulu will refuse to participate in it. Literature on waste recycling in the Global South points to many variables (such as a lack of space, quality of infrastructure, socio-demographic features such as age, education, gender and attitudes) that negatively affect willingness of individuals to participate in waste recycling ; rarely (never) is ethnicity in multi-ethnic communities considered as a hindrance to waste recycling. The perceived limitation to waste recycling at a community level as a result of ethnicity was evident in Transit Mathini, where there are more Xhosa than Zulu people living in a small impoverished area. A participant in Transit Mathini describes how ethnic tensions would be enacted should waste recycling commence:

> If we start separating waste, you would not be able to tell a Zulu to do it, because they will say this is not the land of the Xhosa. Xhosas are from far away…When you approach, people will insult you saying there comes this Xhosa person.
>
> (Sine, 30 years, Female, Xhosa, Transit Mathini, FGD)

The above statements by Sine indicates tension between the Zulu and Xhosa ethnic groups that must be addressed in waste management. Waste recycling requires community participation and interaction with other people who may be from a different

group. In this regard, Sine asserts that a Xhosa like herself, will not have the authority to instruct a Zulu person to separate waste correctly. Instead of viewing this assertion as an incident of lawlessness on the part of the Zulu, there is indication that she believes Zulu people have the power to disregard any requirement of waste management authorities that they should separate waste. Sine and the other Xhosa women in Transit Mathini know their inferior position within Lamontville Township and KwaZulu-Natal province[25] as they are a minority and are considered foreigners. According to Adam (1995) the Zulus in KwaZulu-Natal province exert power over other ethnic groups. In this instance, the Zulu can behave in a disorderly manner, mixing waste while knowing that a Xhosa person will fail to speak out. Currently, at ward meetings agreements are made on how waste should be disposed of and according to the Xhosa in Transit Mathini, the Zulu continue to dispose waste in water drains and in other improper places without being reprimanded[26].   The Xhosa people are immigrants in KwaZulu-Natal, as opposed to Zulu who claim the right to be in Lamontville, through birth right. Being born in KwaZulu-Natal gives them an identity that links their ethnicity to the land (Szeftel, 1994). These localised quarrels speak to the long standing contestation between the two groups on who has the right to be in urban areas (Moodley and Adam, 2000).

In the current hostile living environment in Transit Mathini, Sine and other women in Transit Mathini believe that should formal recycling scheme commence, their journey to the recycling area would result in humiliation. Currently, when disposing of household

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[25] KwaZulu-Natal is a dominate homeland of the Zulus.
[26] There are high crime levels in Transit Mathini. When Zulu criminals are caught by Zulu vigilantes the parents or relatives are informed, but when a Xhosa criminal is caught they are killed. Vigilantism has exposed the limits of the new state's capacity to secure justice for all (Buur and Jensen, 2004.)

waste, Xhosa women experience verbal humiliation when walking to the waste collection areas. Sine contends that the Zulu will insult her as she appears with recyclable materials for disposal because she is a Xhosa person. The element of potential humiliation was also expressed in household surveys where Xhosa women were confined to their homes as a result of fear of the dominant 'other' group. Such experiences of humiliation are often highlighted in research into water access in rural areas, where accessing water supply in resource-scarce areas, often brings about humiliation and shame to women as they are responsible for household chores (Sultana 2011; Thompson, 2016). The humiliation associated with waste management is gendered, as men are generally not involved in domestic activities. From the perspective of intersectionality, the humiliation in waste management intersects with class, ethnicity, gender and poverty (lack of assets). The tensions are heightened in Transit Mathini, however, because throughout the township, the Xhosa people as incomers are 'othered'[27]. In understanding how people will use a recycling station, it is not based on a seemingly rational decision but on a range of societal factors; decisions are made in a negotiated daily reality that involves multiple claims and identities (cf Sultana, 2011 in respect to water collection).

In Transit Mathini the conflicts between Zulu and Xhosa are enacted on a daily basis. Even though the women complained about the insults from the Zulu women, Xhosa men made mention of the tensions in Transit Mathini. Xhosa men also mentioned how Zulus

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[27] Negative attitudes towards Xhosa people were prevalent in the community. In the children's focus group at Lamontville High School, it was expressed that 'Xhosa people give birth at a fast rate', expressing a belief that Xhosas are irresponsible. During interviews with municipal officials, there was a prevailing belief that 'Xhosa people are too lazy to dispose of their household waste properly'.

use refuse bags filled with waste to ignite conflicts. For example, the waste-filled refuse bags are deliberately placed outside the door of a person from a different ethnic group. Such action was a rare occurrence in the experience of men who took part in this research because much of their time is spent away from Transit Mathini. The tensions between the Zulu and the Xhosa within Lamontville were further evident in the responses to the household survey. In responding to the household survey, Zulus constantly repeated that 'Xhosa people love dirt', making the claim as some perceived genealogical fact that supports why Xhosa people are different[28]. This presumption may be based on the insanitary conditions of Transit Mathini, which is a section of Lamontville occupied predominately by Xhosa people. In the household survey, the question, 'Different ethnic groups (Zulu/Xhosa) dispose household waste differently' was posed to examine the attitudes between Zulu and Xhosa people. In Transit Mathini, sixty-seven percent of the Zulu people agreed with the statement while 86% of the Xhosa people disagreed with the statement. In Transit Mathini, there is an active battle of cleanliness (accusing each other of being dirty) between the Zulu and Xhosa that is fuelled by the political context of Lamontville. This section (4.4.2.2) has examined the potential socio-political barriers to recycling in Lamontville in relation to source separation and ethnicity. The next section (4.4.2.3) interrogated how politics in waste management hinder the establishment and functioning of formal recycling of waste in the township.

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[28] In other parts of Lamontville, the Xhosa people are depicted as a people who are incapable of managing their household waste.

4.4.2.3 Political interference in waste management

Participation in recycling schemes is also influenced by attitudes pertaining to the prevailing socio-political landscape. The degree of willingness to participate in waste recycling is associated with the nature in which development is currently introduced into the township of Lamontville. Participants in focus group discussions were sceptical of the working dynamics of any potential recycling scheme, while others questioned how a waste recycling tender would be awarded. A research participant made the following comment based on her perception of challenges to waste recycling:

> Trying to separate waste will not work here. We only have one black bag, we mix all our waste there. If we were given different bags we might (maybe) separate our waste, but if we are not given then how can we start it…anyway, the tender for waste recycling will be given to an ANC member.
>
> (Tiny, 28 years, Zulu, Barcelona, Female, FGD)

There are a number of conclusions that can be drawn from Tiny's comment. Tiny lives in the Barcelona section of Lamontville and her comment is based on her experience of and attitudes towards service delivery in Lamontville Township. In this focus group, all the participants agreed that waste recycling would not work in Barcelona because the government is only providing them with black refuse bags for combining all waste types. The participants have knowledge of waste recycling schemes operating in nearby suburban areas[29] where different coloured bags for various waste types are provided to households. Tiny views the government as the responsible entity for implementing waste recycling showing a dependency on the local ANC government for any changes in

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[29] They compared waste removal practices in adjacent suburbs of Montclair and Woodlands to Lamontville Township. They concluded that those previously white-only suburbs still receive a better service to them. Across South Africa today a white household is still far more likely to have tap water and flushing toilet and use electricity for cooking than African household (McDonald, 2002).

development of the community. Although Tiny cites the non-provision of plastic bags as a reason for rejecting waste recycling, there is the suggestion that even if refuse bags were available, there is no guarantee that waste recycling will occur.

The women in this focus group expressed reluctance to involve themselves with initiatives introduced by the current political leadership. From their previous experiences the women assume that a waste recycling scheme will be operated by a person affiliated to the dominant political party[30], and they would be manipulated into contributing to another individual's wealth. The women in this focus group and others in other focus groups argued that socio-economic development in the township is always influenced and controlled by the local ANC councillor. In local politics in South Africa, the councillor is powerful (Beresford, 2015) and is able to direct state benefits to clients, in this stance the women's assumption is that waste recycling would be tendered out and operated by a person favoured in the councillor's political network. Political analysts such as Piper and Deacon, (2009) in South Africa have documented that councillors pursue the interests of their political parties over the needs of the community they are elected to serve. Recycling schemes can be developed by using the positive attitudes and socio-demographic variables that promote recycling, however successful recycling schemes depend on how, where, by whom and for whom are they developed for (Keramitsoglou and Tsagarakis (2013). The current arrangement of politically-influenced tendering for waste services would lead to an unsuccessful

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[30] For example, during the fieldwork period, bond houses were being renovated. Toilets were constructed away from the house during apartheid, now the toilets are being constructed and attached to the house. The women's views stem mainly from the selection of ANC affiliated subcontractors for these building projects in Lamontville, - an employment strategy which excluded them although they are also unemployed.

partnership between the local government and the community, as the community has limited trust in the process of government.

These patronage relationships were also highlighted in a male focus group discussion conducted during fieldwork. The men in Lamontville Central shared their personal experiences and encounters of corrupt activities in the local government:

> The waste collection tender is not for everyone. They (councillor) looks into the work you have put in during the struggle against apartheid. It's mostly political people who tender for these contracts… The waste tenders are the easy ones.
>
> (Sizo, 43 years, Lamont central, Male, ANC Member, FGD)

Sizo believes that waste related tenders are only awarded to politically active individuals. Sizo is part of a community based organisation which aggressively seeks waste-related work from the local government. In their view, the criterion for selecting beneficiaries for projects excludes them even though they hold ANC membership cards. The men feel they are not considered because of their youthful age as they were not old enough to have participated in the armed struggle against the apartheid government. In spite of such challenges the men adopted an alternative strategy to ensure they get work. The young men demanded to cut grass in Lamontville. After being denied by the local councillor, they decided to use their bodies to halt waste collection. The men from Lamontville went to the neighbouring waste depot in Montclair and stopped a waste collection vehicle by laying across the road. The men knew that they would attract the

attention of the waste management authorities as people in Montclair[31] (previously white suburbs) due to their higher socio-economic class were more likely to complain. This shows that waste collection services today are linked to social class (based on race) that was created during apartheid. The men were given grass cutting work and at the time of the focus group discussion, they were positioning themselves as the refuse bags providers for informal housing areas in Lamontville.

Similar struggles were voiced out by an independent[32] ANC affiliated man who has identified the waste sector, amongst other activities, as his potential livelihood strategy. He asserted the following:

> The person who had the waste contract was an MK[33] soldier. They were unable to tell them to have all their equipment ready before giving him the tender.

(Bafanothi, 36 years, Zulu, Lamontville central, Male, ANC member, household survey)

Bafanothi points out that the previous waste contract manager in Lamontville was a former MK member involved in the armed struggle against apartheid. The current contract manager confirmed this assertion as it is widely known and grudgingly accepted by some in the community that contract work is always given to ANC affiliates. According to Bafanothi, people who receive tenders due to political patronage connections cannot be held accountable or questioned about the quality of the service they provide to the community. It is easy for Bafanothi to identify the shortcomings of the waste contractor

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[31] The men knew that if they blocked a waste collection vehicle from entering Lamontville, they would not attract much attention.

[32] Independents are people who are ANC members who have stopped supporting the local ANC councillor.

[33] Mkhonto weSizwe was the armed unit of the ANC during the apartheid struggle

as he is of the opinion that he would perform the job better. Evans et al. (2005) states that the quality of service delivery reduces in a patronage state. The struggle for control of government tenders for waste management services produces unjust social and environmental conditions. Thus, current political balances of power at national and local level based on historical allegiances during the apartheid era, strongly influence the delivery of waste management services in townships like Lamontville and would be anticipated to similarly enmesh any formal waste recycling schemes that could be introduced. The following section discusses the awareness and knowledge of waste recycling within the township of Lamontville.

4.4.2.4   Public awareness and knowledge of recycling

In this section, lack of public awareness and knowledge of recycling as a further socio-political barrier to waste recycling is explored. Knowledge particular to recycling is defined here for the purposes of this thesis as familiarity, awareness or understanding of waste recycling. This awareness may be acquired through experience and/or education (Babaei et al., 2015). Public awareness of waste recycling is often influenced by other elements such as public attitudes towards recycling, education provided to community members and decision making processes that include the public (Babaei et al., 2015; Kirkman et al., 2016; Saphores et al., 2006). Research on public awareness is often conducted in the Global North where formal waste recycling schemes are widely in operation (see Martin et al., 2006; Tonglet et al., 2004). That research work is directed at increasing participation, or identifying factors that hinder participation in waste recycling. In Lamontville, where formal waste recycling is limited currently to schools,

public awareness of recycling is influenced mainly by informal activities of recycling encountered within Lamontville, and the broader municipality; and experiences of recycling at work.

Awareness of recycling activities and participation in recycling schemes was discussed in focus group discussions and surveyed in the household questionnaire. As an initial question for discussing waste recycling in focus group discussions, participants were asked for their understanding of 'waste recycling'. The following is a highlight of some of the responses:

Reusing things that have been used.

(Dennis, 36 years, Zulu, Male, Transit Mathini, Male, FGD)

It is separating your waste, you can separate it into plastics, cardboards and glass for someone else to collect. I used to work at Jacobs (business) and there were different containers for different waste type. The containers had different colours.

(Phili, 26 years, Zulu, Female, Transit Gijima, FGD)

These responses present different aspects of waste recycling activities. In reference to the first comment made by Dennis, the household survey revealed that 81 % of the community reuse items from their household waste (see Figure 4.10). There were significant differences of the proportion of respondents in Lamontville reporting on reusing household waste (Chi square test, P<0.05).
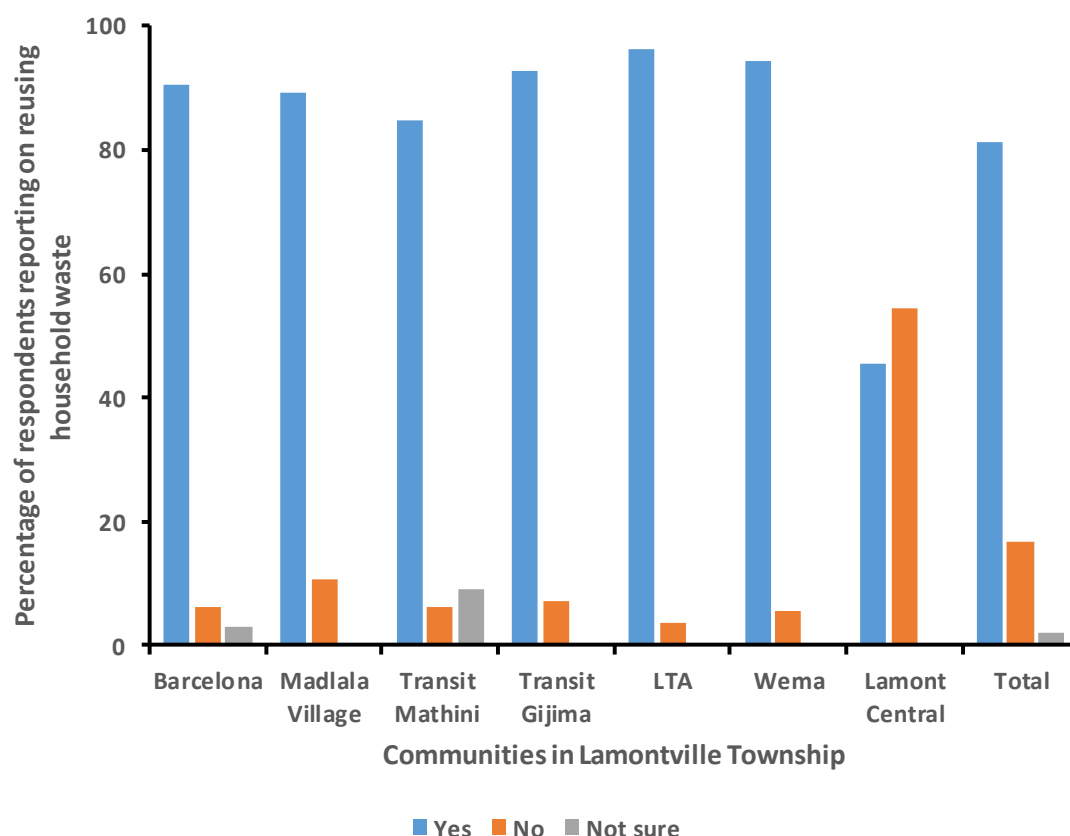
Figure 4.10 : Percentage of respondents reporting on reusing household waste

The most common waste materials that are reused are 2-litre plastic bottles, yogurt, margarine and mayonnaise containers. From my observations, the use of 2- litre plastic bottles by households was an indicator of the economic status of the household and sub-community. In Madlala village, an informal settlement within Lamontville, the 2-litre bottle was most commonly used to store paraffin as a fuel used for cooking. In Lamontville Central with better off households, the 2-litre bottle was used for drinking water and was kept in a fridge. Even though Dennis does not describe waste recycling (see Uiterkamp et al., 2011 for definition), it does show that at the community level some form of waste reduction is occurring. During the research, other individuals described the activities of informal waste pickers as waste recycling. Informal waste

picking is occurring in particular areas of Lamontville; it is mostly dependant on social networks (as described in section 4.2 and analysed in section 5.5).

The second statement from Transit Gijima was from a participant who had prior experience of waste separation from working in a business in Jacobs, an industrial area in eThekwini municipality. Her explanation of waste separation is the initial step in waste recycling. Nonetheless the process of recycling was not fully explained in her understanding of waste recycling. The source of her knowledge is an indicator of the role that stakeholders have in transmitting waste management information. During the household survey, other community members also attributed their knowledge of waste recycling activities to their places of employment. An owner of a waste recycling company interviewed, used to collect waste in Lamontville. He has since stopped due to fears of crime in the area. Waste recycling companies are also unwilling to travel long distances for small quantities of recyclable materials. The challenges of distance and other factors that hinder recycling from the perspective of waste pickers is further discussed in chapter 5 (section 5.5).

In a focus group discussion with children at Ntuthukweni Primary School, waste recycling was described as '*the collection of tins, plastic and cardboards'* (Boy, 9, Zulu, Lamontville Central, FGD). Formal waste recycling is undertaken in the primary schools of Lamontville and hence the children have knowledge of which waste materials are suitable for recycling. Children are required to collect waste material from home and bring them to school on a daily basis. The school is rewarded by Durban Solid Waste

based on the amount of materials collected by the school. Waste recycling is not actively carried out in Lamontville High School as, according to the education officer in Lamontville, 'high school children cannot be controlled'. It is easier to request primary school children to collect waste and the burden of recycling is placed on younger children. It was common for women in the community to describe waste recycling as cleaning. Sdudla in Barcelona said: *'waste recycling is the cleaning of the area we live in'* (Sdudla, 34 years, Zulu, Female, Barcelona, FGD). This description of waste recycling was common with women in focus group discussions and the household survey.

Research conducted in Lamontville Township for the purposes of this thesis reveals that for the township residents the benefits of waste recycling are perceived as being associated with economic incentives as opposed to environmental protection. This was further confirmed by responses to questions in the household survey whereby 87% of the respondents said they would recycle waste if an economic incentive was provided. In the household survey, a Likert scale with 'know much', 'know little' and 'know nothing' was applied to determine knowledge of waste recycling. Forty-two percent of the respondents 'know much' about recycling; meaning that they could explain the whole process of recycling waste (Figure 4.11). Fifty-five percent of those individuals who 'know much' about waste recycling, also knew of recycling companies. They gave examples of recycling companies in Isipingo and Jacobs, others mentioned a recycling company collecting waste in Lamontville. A small number of people were familiar with an individual called Jota Jota who used to collect glass in Lamontvile. He has since moved to Isipingo to be more competitive as the amount paid for a kilogram of glass is higher.
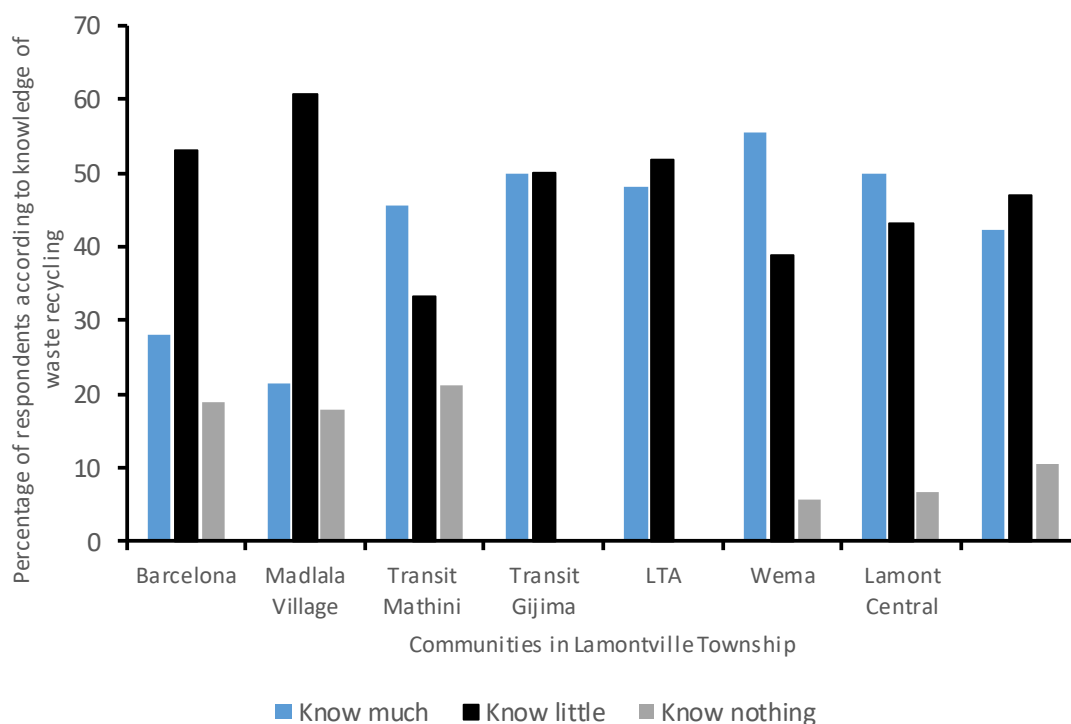
Figure 4.11: Percentage of respondents in Lamontville according to their knowledge of waste recycling

Nearly half, (47%) of the respondents know 'little' about recycling, meaning they had some knowledge of waste separation but could not explain the full process of recycling waste. Only 11% of the respondents had no knowledge of waste recycling. Overall the research found, there is evidence of some level of knowledge of waste recycling among the residents of Lamontville that can be explored further with regard to the possibilities for implementing waste recycling in the community.

Knowledge of recycling was found to vary across different sections of the Lamontville Township community. Within the peripheral areas such as Transit Mathini, Transit Gijima and Madlala Village, it was only in Transit Mathini where active visible waste

collection for recycling was occurring. In Madlala Village, there is an open area with a notice indicating a contact number of a person who collects steel and tins. Although this is a recycling drop off site, no person was ever present to collect waste steal and tins during the field work period and the cell phone number on the notice board was non-operational. However, this area still served as an awareness locale for the community. In Transit Gijima, 50% of the community knew about waste recycling, and a waste picker collects glass bottles to repackage traditional alcohol. The household survey question concerning knowledge of waste recycling yielded unexpected results in Transit Mathini - only 33 % of the surveyed community members have little knowledge of waste recycling, despite waste separation activities taking place within Transit Mathini. There was a woman encountered during field work who collects glass bottles for financial gain, however, her activities are unknown by the broader community even though her glass bags are clearly visible outside her house (Figure 4.12).

Figure 4.12: Pedestrian thoroughfare next to glass collection bags in Transit Mathini
(Source: Author's own)

Drawing on the socio-economic context of Lamontville, two factors may explain the limited awareness about waste recycling amongst Transit Mathini residents. Firstly, the ethnic divisions within the area prevent free movement. The glass collection bags are situated in the section of the community where Zulu people reside. Xhosa people remain in their space of comfort amongst other Xhosas to avoid confrontation with the Zulu. Secondly, it may be suggested that since the people in Transit Mathini are mainly immigrants from rural Eastern Cape (see Hamann and Tuinder, 2012), they may have had limited exposure to waste recycling in the past. This is an indication that should a formal waste recycling scheme be established any waste recycling information from local government on waste recycling must cater for new immigrants, into townships like Lamontville.

A large portion of households (56%), from the survey reported having no access to formal waste management information. A total of 44% of the community who were

surveyed reported receiving waste management information from television and newspapers, council meetings and work places. The only source of information provided by the local municipality is directed at people living along the main roads. The information is about collection times and it is attached to the weekly plastic bag. In comparison, in the more affluent suburban areas outside of Lamontville, accurate information of sustainable waste management options is available through pamphlets, which are regularly distributed by the municipality. This section showed that how knowledge of waste separation and recycling varied across the township depending on an individual's geographic location and socio-economic status. Immigrants, who have recently arrived in the township have lower levels of awareness. Organisational barriers to waste recycling will be considered in the following section 4.4.3.

4.4.3   Organisational barriers to waste recycling in Lamontville

As previously mentioned (section 4.2), in South African Townships the local government is responsible for collecting household waste within their designated municipalities. In regard to waste management, decentralisation policy devolves the roles and responsibilities of national government to local authorities. Local authorities and their departments are key stakeholders in waste management as they fulfil the legislative requirements and facilitate the interaction of stakeholders within the municipality to ensure effective waste management (Sharholy et al. 2008). Various stakeholders in waste management were identified in eThekwini Municipality. **Error! Reference source not found.** identifies the various stakeholders in waste management in Lamontville Township and their interests (political interest and financial pressures from their

perspective) in waste management. Privatising waste service provision through the contracting model has led to an increased number of actors in waste management (as shown elsewhere in the Global South e.g. Guibrunet et al., 2017). The discussion on organisational deficiencies is approached from the view of local government as the key stakeholder in delivering sustainable waste management solutions.

Table 4.1: Stakeholders' perceptions of their roles in waste management in Lamontville Township

Stakeholder	Roles in Waste management
Local government	Setting environmental regulation and standards, educating the community, providing waste collection services, implementing decisions reflecting political inclination.
Local Councillor	Ensuring community complaints are resolved, conducting meetings with the community, monitoring employment within the waste contractor and expanded public works programme.
Waste collection contractor	Waste collection, vehicle for distributing government resources to ANC members, the face of local government.
Community/households	Disposing of waste safely, participating in decision making as the main waste generators, complying with waste collection service arrangements.
Schools	Recycling waste, educating children on waste management, allocating waste collection responsibility to younger children.
Waste pickers	Retrieving waste items in the community
Recycling companies (middlemen)	Collecting waste from waste pickers and transporting it to industry.
Volunteers	Identifying illegal dumping sites, voicing local community complaints, ensuring the visibility of the ANC political party.
Community based organisations	Aggressively demanding employment within the waste sector by using political capital, responding to environmental conditions by initiating waste operations.
Media (newspaper)	Providing environmental awareness and reporting

The above **Error! Reference source not found.** indicates that the various stakeholders involved in waste management in Lamontville have different and conflicting interests. Furthermore, it is apparent based on the interviews that stakeholders (actors) work within their own silos impeding any collaboration that may lead towards improving waste management in townships. As waste flows through the township, its meaning is interpreted from each actor's subjective position. Waste is simultaneously an object to be removed, a source of income, and a tool to oppress others. The most influential

stakeholders are the local government, which closely works with the waste contractors and the local councillors to direct those involved in decisions of waste collection. There is limited involvement of the private sector and the community in waste management issues. The following section discusses how local government distances itself from service provision through the use of a waste contractor.

4.4.3.1   Privatization Instead of 'Us'

While the responsibility for waste management remains with the eThekwini municipality, private waste companies are entrusted with the collection of waste in residential and commercial areas, and transporting that waste to Marianhill landfill site. In the urban areas of eThekwini municipality, the waste contractor has a multipurpose role within formal waste service provision. The primary function of the waste contractor is to provide a waste service to previously underserved areas such as townships and informal residential areas. Also, its secondary function is to promote local socio-economic development by extending employment to the local communities in which it operates (Beresford, 2015). During interviews with stakeholders, there was a tendency of the municipal officials to only state the positive attributes of hiring a contractor to undertake waste collection in townships. They profusely emphasised that the service provided to all households in eThekwini municipality is of an equal standard (meaning that all households had a minimum weekly collection). The local municipality's defence of privatisation correlates with the views of other supporters of privatisation (in the Global North) who present the logic of market driven examples for encouraging privatisation (Bel and Warner, 2010; Simões et al., 2012) while ignoring the evidence

that societies are not equal (Zaki and Nurul Amin, 2009). The data gathered from this study shows that waste service provision through the contractors divides society and reproduces spatial inequalities

The private waste contractor in eThekwini municipality operates only in previously disadvantaged areas such as townships, while Durban Solid Waste (local government service) collects household waste in formerly white suburbs and in high income areas. Such two-tier collection practices in post-apartheid South Africa reflect a stratification based on socio-economic level as opposed to racial differences which were applied in the past by the apartheid government (Von Schnitzler, 2008). A municipal official, Mvelase, explained the disparities in service provision between townships and suburbs while simultaneously in a subtle manner distancing local government from service delivery in disadvantaged areas:

> There are things that can be better understood by people living in townships. People in townships can tell you that they do not have space to store waste inside their homes. Contractors are another avenue (for managing household waste), we cannot put our guys (municipal workers) there.
>
> (Mvelase, Municipal official, Male, Interview)

Mvelase is of the opinion that contractors provide a better service for waste collection in township areas. He suggests that contractors, through employing local people are in a better position than the municipality to understand the township communities. These communities act differently to more affluent suburbs which are managed by the local municipality. From his statement, it can be deduced that the local government is using the contractor to segregate people based on what Bond (2003; 2004) refers to as class

apartheid, which has replaced racial apartheid (although there is still an overlap). Quality waste collection is provided to those people who can afford it which is contrary to the provisions of the national constitution. Furthermore, Mvelase is aware of the environmental problems and prevailing social conditions in marginalised areas (see Joseph, 2006). In like manner, other municipal officials describe townships as a hub for urban environmental pollution and criminal activities (section 5.3 and 5.4 explore the crime levels in Lamontville Township and how it influences waste management).

Moreover, Mvelase's explanation, 'we cannot send our people there' explains the fear that has gripped local government in the face of poor service delivery. There is a prevailing belief that if they entered the townships, waste workers from the municipality would be attacked by the community due to unmet service delivery demands. Through privatisation, local government attempts to create a 'safe distance' between themselves and the poorest people in their jurisdiction through the work of the contractor. The contractor acts as a buffer between the community and the local government (Oduro-Kwarteng and van Dijk, 2013). Therefore the burden of waste management and handling service delivery complaints is absorbed by the contractor. The manner in which the municipality deals with a poor community is similar to the position of Evans et al. (2005) who state that in poorer areas of the Global South, a mediator is used to interact with the community. The disparities in waste collection services were also observed within the community of Lamontville. The contractor subdivided the township into socio-economic sub-communities, and consequently promoted discrimination against the poorer areas.

In Lamontville, the contractor collects waste according to the different socio-economic levels of the different areas within the township. Housing types and geographic position within the township are used as proxies of socio-economic class. In Lamontville Central, there is priority given to collecting waste efficiently while in areas such as transition housing and informal housing areas, waste collection is inconsistent. The quality of service provided in transit housing areas is also poor and even after waste collection has taken place; waste collection areas are still scattered with waste items (See Figure 4.13). Cobbinah et al. (2017) state that the quality of service delivery is reduced in poorer areas when waste services are privatised. Although the local government is aware of such uneven, inadequate and discriminatory waste collection practices within Lamontville, the contractor is not held accountable for incomplete waste collection (poor service delivery). This results in environmental injustices created by privatisation and further reinforces stereotypes of poor people as being 'dirty'.

Figure 4.13: Waste collection area after contractor has collected waste in the Transit Mathini area of Lamontville
(Source: Author's own)

The divisive collection practices of waste contractors are politicized in larger townships such as Chatsworth and Umlazi Townships that border Lamontville (see appendix 12). In Chatsworth, a predominately Indian Township, Durban Solid Waste has subdivided Chatsworth into different socio-economic classes based also on housing type. Low income areas are serviced by a contractor while high income areas are serviced by the local municipality. This reinforces the wide gap between low income and high income earners; localised geographic socio-economic/ethnic divisions reflect quality of service provision that is lower for poorer residents. Likewise, in nearby Umlazi Township, the largest township in KwaZulu-Natal, several waste companies remove household waste according to each section's economic level (refer to case study 4.2 in section 4.4.3.3). These waste collection strategies affirm that contractors operate in a non-homogenous space where different communities have unequal provision of and access to services. People with minimal capital and social challenges are serviced through a political patronage system that favours certain groups over others (e.g. MK veterans).

The waste contractor in Lamontville faces challenges of lack of thoroughfares through clustered housing, difficult topographical conditions, and of equal importance, people's negative attitudes towards waste management. In these conditions where providing an efficient waste collection service necessitates overcoming many hurdles, the municipality insists on the contractor being innovative, by devising strategies of collecting waste in areas previously structured by apartheid's discriminatory planning as devoid of formal service provision. According to Mthembu, a municipal official interviewed for this research, every business is required to be innovative when providing a waste collection service. However, the expectation of 'innovation' was not

communicated to the Lamontville contractor prior to undertaking the job and similarly in the general tender notice for waste collection, the requirement of innovation is never stipulated. The private waste collection company, an independent entity, is required to create strategies to facilitate sustainable waste management in isolation without the involvement of stakeholders such as local government, the community and the private sector. This leads to a gradual breakdown of the distinction in responsibility between the private and public sectors (Amagoh, 2009; Grimshaw et al., 2002). In the current situation, the contractor has full responsibility for waste collection in low income areas like Lamontville. The contractor operates in a 'hazy space' loosely defined by the local government mandate and the demands from the councillor. Hence, in undefined spaces the contractor makes informal decisions based on the local political interface.

In reality, the contractor in Lamontville operates under the instructions of the local ANC councillor from ward 74. During fieldwork it became evident that the local councillor holds a powerful position in local government and plays an important gatekeeping role for the ANC (see Beresford, 2015; Joubert and Grobler, 2004). The contractor's employees are sourced from the local community as a means of providing employment as part of economic development. Such labour practices are prone to political manipulation where employment becomes a clientelist good for the community (Wantchekon, 2003). Labour for the waste contractor is obtained via the local councillor as this type of employment is not publicly advertised. According to the contractor manager, the ward 74 councillor provides a database of ANC volunteers[34]' names who are eligible to work in the waste collection service. ANC 'volunteers' are given material

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[34] 'Volunteers' are unemployed residents who are ANC card carrying members.

goods in the form of jobs in return for electoral support. The criteria for the distribution of waste related employment, to the patrons is simple, the councillor gives employment and the workers support her (e.g. by voting for her re-election). By the same token, the contractor hires ANC 'volunteers' in exchange for securing the contract until end of the term which is four years and also in expectation of being favoured for the renewal of the contract. The nature of the relationship between the local councillor and the waste contractor, is that of a clientelistic relationship, i.e. one of domination which occurs between actors of unequal power status (Rubin, 2011 and Stokes, 2007). Furthermore, the waste contractor acts as a client to the councillor and as a patron to the ordinary members of the community who seek employment and waste collection services.

The widespread political abuse of tenders was complemented by similar patronage networks in the recruitment process for 'volunteers'. 'Volunteers' are ANC card carrying members who are not in formal employment. A 'volunteer' during an interview, provided a justification for employing people that are in the councillor's database. She said *'names are retrieved from the councillor, in case there is a complaint, the person can be reported to the councillor'* (Shezi, female, 28 years, interview). In the volunteer's view, retrieving names from the list is formulated (constructed) as a means of monitoring, as opposed to extending public goods to ANC members. However, there is a lack of evidence showing that volunteers from the opposition parties (or politically inactive people) will not work adequately. The waste sector is one avenue for hiring 'volunteers'; other 'volunteers' are utilised by the Expanded Public Works Programme[35]

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[35] The Expanded Public Works Programme is a social protection tool aimed at providing poverty and income relief through temporary work for the unemployed. It is a nationwide programme covering all spheres of government

(EPWP). Various government departments and initiatives, such as health and safer cities, have 'volunteers' working in Lamontville[36]. All 'volunteers' regardless of their allocated government department, are required to assist during elections with electoral campaigning for the ANC and registration of community members. The work conducted by 'volunteers' during the election period is not remunerated. The ANC at national level through the EPWP and at local level through the councillor, distributes resources and opportunities (patronage) to their extended networks of dependent clients.

This section of 'privatisation instead of us' demonstrates how waste service provision through the contractors divides society and reproduces spatial inequalities. The stratification caused by the private waste contractor is based on socio-economic level resulting in environmental injustices for community member who cannot afford service provision. Furthermore, the waste contractor has a multipurpose role within the township, employment in the private waste contractor is extended to unemployed ANC card carrying members as a means of security the dominance of the ANC. The next section further probes the relationship between the community and local government.

4.4.3.2 Distance Poor People from Us

This section explores the relationship between the Lamontville community and local government. The community members are rarely consulted by the local municipality on waste management issues. The only formal contact the community has with local

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[36] Volunteer activities in Lamontville include planting trees, cleaning schools, visiting old-age homes and distributing HIV/AIDS information.

government with regard to waste management is through Education Officers from Durban Solid Waste, who are responsible for educating the community on waste management. In focus group discussions and the household survey, community members disclosed that education officers are not visible in the community, although the education officers suggested that weekly visits are conducted in Lamontville. Musa, an elderly man who has resided in Lamontville for 55 years, laments the nature of their relationship with the local government officials, he states:

> We do not know those people; they are only visible during disaster times, that is the only time they do their work, after the disaster, they are never seen.
>
> (Musa, 65 years, Male, Elderly, Lamontville Central, Focus group discussion)

Musa is referring to disasters resulting from flooding and excessive illegal dumping that affect the communities' health. Musa highlights the reactive nature of local government to disasters, showing that now in the post-apartheid era (unlike previously) regular monitoring of township conditions[37] is rarely conducted. His comments allude to the lack of trust between residents and the local government (lack of accountability); the use of the words 'those people' shows the distance between local government and the people living in townships. A number of studies of service provision in the Global South point to the expanding rift that exists between people (especially the poor) and the institutions that shape their lives (Bakker et al., 2008).

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[37]In highlighting the failures of the current government, Musa spoke of a health officer that operated during apartheid that kept the township clean.

The local government is not visible within the township, albeit formal public participation structures in the form of stakeholder and ward committee meetings are in operation in Lamontville Township. Ward Committee meetings involve the community and the ward committee members (the structure of ward committee meetings is extensively discussed in section 5.6.1); while stakeholder meetings consists of all stakeholders in the community but excludes 'ordinary' community members. I attended the monthly stakeholder meeting held in January 2017 at the local municipal office in Lamontville Township. It consisted mostly of female ANC 'volunteers' from the expanded public work programme and two representatives from the eThekwini Health Department. Volunteers from other political parties and others who are politically inactive are not invited to this meeting. The term stakeholders is loosely defined allowing for public spaces to be demarcated and constructed to be for people affiliated to the dominant political party (ANC). At the meeting 'urgent' issues such as food parcels, cancer and HIV awareness, providing shelter to rehabilitated drug users and demolition of pre-1994 housing were discussed. It was observed that having individuals who are ANC members in the meeting, leads to the distribution of goods (handouts) to ANC supporters in the community (in terms of food parcels).

The councillor, who is the appointed chair of the stakeholder meeting, was absent from this meeting and the previous one (26 January 2017). Moreover, the acting chair who is also an ANC female 'volunteer', stated that the local municipal office in Lamontville Township has limited financial resources as printed minutes from the previous meeting were not available. She recited from memory the discussion and agreements made from the previous meeting. This is an indication that the structure of public participation

through decentralisation of powers is not inclusive and effective. Household waste related matters were not discussed at the meeting and representatives from Durban Solid Waste were absent from the meeting, even though the monthly stakeholder meetings are a key forum for communicating waste related developments and challenges with other stakeholders. This demonstrates that waste management is low down on the agenda of local government.

An additional method of contact between local government and the township community is through clean-up campaigns. As described by Tuma a municipal official, the aim of clean-up campaigns is to involve the community in removing waste and to reinforce collection and disposal times. A clean-up campaign is commonly requested by a community member who has identified a dirty area or an illegal waste dump. Thereafter, a day is set and communicated to the community members (via ANC 'volunteers') for cleaning with the assistance of the waste contractor. Occasions such as clean-up campaigns provide the education department of the municipality the opportunity to disseminate information on proper waste disposal. After the cleaning event, the person who requested the clean-up becomes responsible for maintaining that area under the provincial government's programme called 'adopt-a-spot' (see Lalbahadur, 2018).

Under the 'adopt-a-spot' programme, the maintenance of that area is at the expense of the community member who requested the clean-up. The responsibility for waste management is further channelled to a poor individual who hopes that by maintaining

previously dirty areas, he or she may get employment within the waste sector. However, not surprisingly, these areas frequently revert back to being illegal dumping spots, as the person who has adopted the spot lacks the resources to maintain the area and the underlying causes for the illegal dumping are unresolved (i.e. people's behaviours are not changed). Increasingly, eThekwini Municipality in townships seeks to mobilise the local human resources to maintain a clean environment. These initiative are exclusively in low income areas and former white suburbs are not involved in clean-up campaigns. Appendix 13 contains a newspaper article reporting a clean-up campaign in KwaMashu Township, a township within eThekwini Municipality. As can be seen from the photograph in appendix 13, the clean-up campaign mostly involved direct participation of women and children. These initiatives by local government are a means by which people in marginalised communities ultimately are made responsible for the cleanliness of their environment and for ensuring proper waste disposal in their areas.

The relationship between municipal waste staff and the township community is largely mediated by negative attitudes. There is a strong (patronising) belief amongst the municipality staff that people in township areas are incapable of disposing of waste correctly and unable to comprehend waste recycling. The interviews undertaken with local government employees highlighted the intersection between race, class and ethnicity in the justification of poor formal waste collection services in townships, further perpetuating and enforcing the structural injustices created during apartheid. Waste problems in poor areas were explained by municipal waste service staff in the following way:

> Black people litter more than Whites, Mbali I can take you on a drive, we can drive from the suburbs towards central Durban (business district), and you would see the difference in waste disposal practices for yourself.
>
> (Mvelase, Municipal official, Male, Interview)

Mvelase, who works for the municipality as an operations manager, offered to drive me from the suburbs towards Durban's central business district so I could observe waste disposal practices. He contends that as one moves from the previously white only areas (beyond the townships) towards poorer areas in the city centre, the amount of waste litter increases. More explicitly, he means that Black people living in townships and central business areas, litter more than more affluent people (largely not Black) living in better maintained suburban areas. His analysis is simplistic and binary, applying racial differences as a determinant of pro-environmental behaviour while 'othering' people residing in undesirable places. A study by Anderson et al. (2013) into waste related behaviour in South Africa supports Mvelase's claim, blaming historic attitudes towards government as the reason for Black people's disregard for litter. More comprehensive studies on environmental injustices locate race within broader structural factors which cause waste problems in poorer areas (Heynen, 2003; Leonard, 2011). I was able to visit the central business district and observed that it is infested with waste litter. However, the conditions are worsened by the political conflicts between local governments and EPWP 'volunteers'[38]. Figure 4.14 below depicts the dirty streets of Durban after political protests.

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[38] The Expanded Public Works Programme offers temporary work opportunities for two years for unskilled and unemployed people. Thereafter, 'volunteers' (who are paid) are released to give others an opportunity to be 'volunteers' and gain work experience. Conflicts arise at the end of the programme, when some 'volunteer's demand to remain in the programme due to continuing unemployment.

Figure 4.14: Waste litter on the streets in Durban Central due to political disputes
Source: Ndaliso, C. (2018)

Institutions such as local government label people who are oppressed. The local government is in a powerful position to direct resources to more affluent neighbourhoods while (re)producing negative narratives about poor people as dirty and irresponsible. Under these circumstances, waste recycling initiatives like waste collection is directed to areas with people who are capable of 'handling waste'. Another municipal official, Lindo explained the reasons for implementing waste recycling in suburban areas:

> Why is there litter everywhere (in townships) because we provide a service once a week? It has to do with environmental literacy. If we can develop them (township communities) in terms of awareness until they get to that level. These areas are different.
>
> (Lindo, Municipal official, Male, Interview)

'Volunteers' protest against the local government demanding permanent employment in the waste sector by deliberately overturning waste bins and making Durban city centre dirty.

Lindo suggested that townships still need to be 'developed' and taught about environmental protection. He uses language similar to apartheid narratives that portrayed the native as being ignorant and therefore a second-class citizen; and in the context of waste management, as a people who are incompatible with a modernising society. These areas are described as different, as people who live there are Black and are said to care little about the environment. The narrative discourse of Lindo and other municipal officials views black people as not being well-informed about the importance of proper waste disposal and suggests for their exclusion as a means of addressing the waste problem. Although the staff of the municipality are of the opinion that waste recycling is not suitable for townships, when questioned if waste recycling was just for suburb areas only, 76% of surveyed households in Lamontville stated that waste recycling can also occur in Lamontville.

Waste officials associate their belief that waste recycling activities would not be effective in townships with their local mix of ethnic groups and violence that occurred during the transition period at the end of the apartheid era. Mangaliso, a senior waste education officer, explained how Lamontville has been overlooked with regards to formal waste recycling schemes in the following way: *Lamontville is a mix and match community…it was a violent area, unlike Umlazi, that has people who are not at the bottom* (Mangaliso, municipal official, male, Interview). Mangaliso still refers to the violence that preoccupied townships during the transition to democracy. According to Mangaliso, waste recycling will not work in Lamontville because it is a poor community with a variety of different ethnic groups. He argues that recycling only works effectively in homogenous townships such as Umlazi, a township neighbouring Lamontville, further

implying that KwaZulu-Natal is only for Zulu people. This position was also stated by another municipal official who asked prior to commencing with the interview to omit the informal areas of Lamontville from our discussions, because in their opinion people living in transit housing areas are 'dirty'.

This section revealed that local government institutions use race, class and ethnicity as a justification for providing a poor service to Black people in townships and low-income areas. Inadequate personnel for waste management is examined next as an organisational barrier to waste recycling in townships.

4.4.3.3   Inadequate personnel for waste management

The data gathered for this study shows that barriers to recycling and household waste problems in Lamontville are also related to the organisational limitations of staff shortages and lack of staff capacity. In South Africa, the policy framework for managing household waste is drafted at national level and operationalised at local level requiring local government officials to be trained and equipped with suitable waste management knowledge and expertise. Several studies in the Global South confirm that there is a dearth of professional knowledge amongst waste management personnel resulting in many failed waste management initiatives (Henry et al., 2006). In South Africa, the competency of staff members is critical in an attempt to move practices up the waste hierarchy and towards a modern waste management system such as waste recycling.

Municipal officials tend to be ill prepared to perform their duties, especially in areas of limited resources and opportunities such as townships like Lamontville. For example, municipal officials know of the illegal dumping areas in Lamontville, however there is limited investigation into the underlying root causes of illegal waste dumping (as stated earlier illegal dumping areas are handed to poor people to keep clean through the 'adopt-a-spot' initiative). Their limitations arise as a result (amongst others) of inadequate technical/professional training needed to execute their duties. Some waste officials for example have an inappropriate teaching qualification, owing to the apartheid government's arrangement of labour that only allowed Black people to be qualified as teachers, police officers, social workers and nurses. It can be argued that the post-apartheid government has extended employment to unqualified Black personnel as a means of turning their positions into pools (channels) of patronage and favours.

The lack of skills among municipal waste management personnel is also reflected in the formulation of ambitious by-laws which lack surveillance and control mechanisms. For example, section (7) eThekwini Municipality Waste Removal bylaws, states that the municipality will supply bulk containers to premises if the current methods of waste disposal methods are not suitable for proper waste collection. These developments (bulk containers) have not been considered for the townships in eThekwini municipality. Furthermore, the bylaws state that community members should ensure that plastic refuse bags are at the nearest street boundary before 07:00am on waste collection day. The bylaws are made without considering the dynamics on the ground, making them difficult to enforce. During field work, the municipal waste staff were waiting for training in the bylaws, indicating non-involvement and a lack of understanding from the local

municipality. There is a disconnect between the information provided by the municipal authorities and the current community dynamics. The major component of sustainable waste management that is taught to the community by the municipal education officers is waste minimization. The Lamontville community is advised by education officers to reduce their household waste by buying their food products in bulk. However, this advice is not feasible for people living in poverty with precarious and irregular income to spend on essential basic needs like food. Until these key issues are adequately addressed, it will be difficult to implement proper waste management practices.

The post-apartheid era has ushered in aspirations to transition towards sustainable development and integration of South Africa into the global economy, introducing terms such as the 'green economy' and 'sustainable development' to South Africa. These terms are loosely utilised by the local municipal officials, especially education officers to promote waste recycling in Lamontville and other township areas. During interviews, it was apparent that municipal officials had limited understanding of these concepts. Moreover, the term 'sustainable development' has become fashionable in waste management (and much more widely) where its actual meaning and measurement scale are unknown. For example, Tuma, an education officer, shares information with the community during clean-up campaigns to encourage waste recycling. She says, *we tell people about iSustainability…and say the green economy to encourage them to recycle waste* (Tuma, female, Durban Solid Waste, Interview). Tuma uses the letter I before an English word in a Zulu context, turning that word into an object. Thus, sustainability becomes an object that the local government strive towards while the community is unable to contribute towards it. Furthermore, Tuma promotes the green economy in a

township where formal waste recycling for economic benefit is challenging without the assistance of government and other stakeholders. In another interview, Mangaliso, a senior waste education official in eThekwini Municipality, explained waste recycling as 'smashing it all together'. He was referring to combining all waste types and making 'something new'. Similarly, Henry et al. (2006) found that local waste management officials in the Global South suffer from a lack of technical skills (professional knowledge) and organisational capacity which are crucial in implementing alternative options in waste management. The lack of technical knowledge contributes to the failure of the waste education system. In a way, the lack of suitably qualified government officials contributes to the inability of the municipalities to implement new projects aimed at modernising waste management systems in eThekwini Municipality.

The staff at Durban Solid Waste are overloaded with work. The staff are responsible for managing household waste and related political conflicts between the community ('volunteers' and MK veterans) and the local political leadership. Political disputes within the waste service frequently stretch the capacity of the staff as they are responsible for the waste management activities within the municipality. The low staffing levels became apparent during the political protests in Umlazi Township that took place in February 2017. Disputes due to political agreement in the waste sector often involve former MK members and ANC volunteers. All the staff were diverted to deal with the political tensions[39], ignoring other responsibilities of maintaining waste management in other geographical areas of the municipality such as Lamontville. The waste related protests

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[39] During fieldwork, all the meetings I requested with a municipal official responsible for waste management were cancelled or postponed due to workload pressures.

in Umlazi Township reduced the number of staff member with other functionalities in the municipality. It was crucial for staff members to respond to daily emergencies and meetings that result from political agreements between the local political leadership and community members that failed to materialise. In the case of Umlazi Township, the waste municipal staff mediated between the local political leadership and MK representatives. Case study 4.2 details the dispute between MK members and the local political leadership.

Case Study 4.2: Political Waste Protests in Umlazi Township

Strike action over waste collection is common in South Africa's townships. In eThekwini Municipality, former MK members are members of the Umkhonto weSizwe Military Veterans' Association who are unemployed and demand jobs from the local government as they contributed in liberating South Africa from apartheid. MK veterans use political history and their past contribution to the struggle to carve out new livelihood opportunities in the waste sector. The waste sector is one of the avenues where Umkhonto weSizwe violently demand for waste tenders to be given to them. During the second phase of fieldwork (January – March 2017), waste collection in Umlazi Township was halted as a result of unmet promises between Mkhonto veterans and the local political leadership (see Mkhize, 2017)

I was made aware of the tensions as during this period, I struggled to schedule interviews with the local municipality. The MK veterans claimed that the previous councillor promised them waste tenders. Therefore, MK veterans threatened to harm the current private waste collectors resulting in a completed stoppage of waste collection in Umlazi Township. As a result the community had little alternative but to leave their waste at the gate of Umlazi transfer station, which remained closed. Figure 4.15 shows the accumulation of waste outside the transfer station in Umlazi Township. The municipal waste staff were drawn into negotiation with the local political leadership (councillors) and the MK veterans. To curb the situation in Umlazi Township, MK veteran were allocated low income areas for collections while higher income areas are serviced by more established private waste contractors.

Figure 4.15: Umlazi waste transfer stations closed due to political conflicts

(Source: Author's own)

Disagreements over the tenure periods for 'volunteers' in the government's expanded public works programme are common in townships. The EPWP 'volunteers' demand formal employment from the councillor after the two years fixed tenure of being a 'volunteer'. 'Volunteering' is done with the hope of transitioning into permanent employment. In an interview with Bheki an ANC 'volunteer' under the Safer Cities programme, he stated the following:

> I cannot be a volunteer forever, the money is just enough to buy bread…if you complain to the councilor's office, you are referred to the Metro Bill which has fake jobs.
>
> (Bheki, Zulu, 31, Male, Wema Hostel, ANC volunteer)

Volunteers like Bheki, grow weary of being ANC 'volunteers'. He complains about the low level of the stipend and a lack of job opportunities. The maximum tenure period for volunteers in the EPWP is 2 years. However, for some volunteers who have strong ANC

connections, their tenure may be extended if they are not in formal employment. Bheki was told that volunteering would be part of work experience that will assist him in applying for formal employment. The Metro Bill is the local newspaper and the careers section has adverts for employment opportunities which Bheki feels are fabricated to keep him and others like him looking for jobs and in hope. The dissatisfied 'volunteers' in Lamontville do not respond with blocking roads with waste, but they stop attending clean up campaigns and reporting illegal dumping. The following section 4.4.3.4 further discusses the roles and responsibilities of municipal waste staff.

4.4.3.4 Roles and responsibilities

A further organisational barrier to waste recycling is in the unclear and undefined roles and responsibilities within the various departments of local government in eThekwini Municipality. At township level in Lamontville, undefined roles and responsibility amongst government institutions manifest themselves through inefficient waste removal practices. There is a lack of clarity of responsibilities between the Parks, Leisure and Cemeteries Department (Parks Department) and Durban Solid Waste Department, in regards to collecting garden waste and cleaning parks in Lamontville. The service of removing garden waste (such as tree cuttings) is provided in townships on a random basis, while in suburbs removing garden waste is the responsibility of each household. The Parks Department[40] is obligated in townships to remove felled, trimmed and fallen

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[40] The Parks Department is within the Parks, Leisure and Cemeteries Department which is responsible for the development and maintenance of parks and open spaces including grass cutting, trimming trees and removing fallen trees.

trees and grass cutting while Durban Solid Waste collects household waste. The schedule for collecting garden waste and grass cutting is unclear to the community.

During the fieldwork period, the Parks Department had completely ceased to collect garden waste in Lamontville. There were various areas in the township where garden waste and household waste are disposed of in the same area. The contract manager argues that the accumulation of garden waste (including from removed and pruned trees) creates an illegal dumping area. The community assumes that they can dispose of household waste in areas where organic waste from maintenance of trees is left for collection. Therefore, Durban Solid Waste collects organic tree waste and grass cuttings even though it is not their mandate to do so. Figure 4.16 (below) shows a waste truck collecting trees and household waste that have been disposed of by being left in the same area. However the collection vehicles are unsuitable for the combined collection of both domestic waste and organic waste including large volumes of woody material, tree stumps and heavy tree trunks. The truck is required to make several trips to the Mariannhill landfill site, delaying collection and placing pressure on the vehicle.

Figure 4.16: Waste truck collecting garden waste and black refuse bags
(Source: Author's own)

In areas such as parks, waste problems due to unclear roles and responsibilities are more pronounced. Parks in Lamontville are the responsibility of the Parks Department with respect to maintenance, but the litter in the parks is the responsibility of Durban Solid Waste. Since the Parks Department is not responsible for litter, household waste dumped in parks and fly tipping remains unremoved by either department. The challenges with waste litter in parks is felt more acutely by children who play in the park. Children in FGDs and participatory activities in the primary school complained about the waste litter in the parks, with some of them further reporting on being cut by glass fragments while playing in the park. This section indicates that undefined roles and responsibilities negatively impacts waste management in the township. It is envisaged that future waste recycling initiatives would encounter challenges as several departments are involved in household waste management. The following section 4.4.3.5 discusses boundary disputes within the township that results in uncollected waste.

4.4.3.5 Boundary disputes

Boundary disputes are the final organisational barrier to efficient waste management identified during fieldwork in Lamontville. The physical boundaries of Lamontville excludes Wema hostel resulting in an accumulation of waste in 'in-between' spaces (see appendix 8). There is a long-standing dispute over the inclusion of Wema hostel into Lamontville Township. A foot bridge over a major highway (the N2, which connects Durban to Cape Town) connects Lamontville Township 'mainland' to the area around the Wema Hostels. Wema Hostel and Lamontville share the same municipal ward, but Wema is not physically part of Lamontville. It is a stand-alone entity.

During the apartheid era, the people living in the Wema hostel[41] were male immigrants with temporary status in urban areas, as most were from the Eastern Cape. Currently, Wema hostel is open for anyone to live in at a cost of approximately R70 per month (£4). Waste accumulates in the open spaces between Wema hostel and the adjacent Lamontville Township on the other side of the highway. There is a constant flow of people across the foot bridge between the two areas as the Wema area provides essential services to Lamontville residents. These services include traditional medicines, services of traditional healers and long distance public transport to the Eastern Cape (see appendix 14 for image of baboon skin used for witchcraft). These services are not found in the other service and retail area used by Lamontville residents, which is the

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[41] Hostels in South Africa are mainly single-sex dormitories found in cities as a legacy of apartheid and migrant labour system. Hostels still provide a place for rural-urban migrants to stay in the city. The multi-storey dormitories can house thousands of mainly unemployed men on a single site.

recently built modern shopping mall of Megacity in Umlazi Township[42] adjacent to Lamontville.

There is deliberate dumping of waste in the open spaces between Lamontville and Wema hostel, along the foot path that connects the two places. Two different waste contractors serve Lamontville and Wema, the spaces in between are not the responsibility of either. The people most greatly affected by uncollected waste and litter are street vendors outside of Wema (close to path to catch passing trade) and people residing near the Wema area. The waste is unattended to by the local government as Wema is still referred to as 'outside of Lamontville' by the municipal authorities, who call it an informal area. The nature of these conflicts affects waste collection and the quality of life of people living close to those areas. The above analysis of organisational barriers has shown that attitudes, behaviours and structures of local government contribute to inadequate waste collection in the township. The local government through employing a waste contractor creates a distance between themselves and the community, further abandoning their responsibility to low income communities. Furthermore, unsuitable waste personnel, undefined roles and responsibility and boundary disputes between Lamontville and 'informal areas' compound the waste collection challenges in the township. Therefore, an introduction of waste recycling within the current waste management arrangement would be unsuccessful. The following section discusses financial resources for waste management as a limitation to efficient waste service provision.

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[42] Megacity attracts customers from Umlazi and Lamontville.

4.4.4 Financial resources restricting development

The data gathered for this study indicates that limited funds is a further important barrier which impedes waste management in Lamontville. According to municipal officials, waste management is afforded low priority in the annual budget for service delivery; the major priorities being housing, water and energy supply. Financing of waste services in the municipality is obtained from three main sources. These are (i) local rates and taxes, (ii) charges for services provided by the municipality and (iii) loans and government subsidies (Koelble and LiPuma, 2010). These are firm sources for funding municipal services; however, in townships, there is a strong reliance on government funding. It is a challenge to enforce direct charges such as rates and taxes on low income residents. The major costs (representing a large expenditure for the municipality) of waste management currently in Lamontville are associated with collecting, transporting and disposing of household waste, moreover, there is growing population in the township, whose actual dynamics are unknown. This places an additional strain of service delivery onto the municipality making planning to meet current and future needs very difficult. In the Global South more widely, the challenge of waste management is similarly compounded by the growing population, rapid urbanisation and rise in community living standards (changing waste composition) (Sharholy et al., 2007). These are some challenges that pose a heavy burden on the municipal budget across the Global South.

In Lamontville, while some segments of the community pay rates and taxes, other residents are exempt from paying service fees. Broadly in the Global South, there is a

widespread disparity between residents who pay for waste collection and those who do not pay. This wide disparity is due to the fact that a significant percentage of the urban population living in slums do not pay for waste collection and subsequently have poor waste collection services (Manga et al., 2008; Okot-Okumu and Nyenje, 2011). In Lamontville, people living in government funded houses and those in transit housing are exempted from paying taxes, as they are perceived to be in need. It was anticipated that waste service provision would be poor in these areas. The municipality have implemented communal waste points that residents should take their waste to instead of more convenient waste collection methods, such as roadside collection for households, like in LTA. People residing in LTA receive a good service as they are rate payers. During the children's focus groups, those living in LTA were referred to as 'mini whites', as they live in the 'suburbs' of Lamontville.

In Lamontville mainland, the waste service fee is low; less than £10 per month per household, and some community members were of the view that the municipality should collect household waste without charging any fees. Many people in Lamontville Central reference the cause of Msizi Dube, as one of the reasons for not paying rates and taxes. Msizi Dube was an anti-apartheid struggle icon who led a campaign called Asinamali (we have no money) against rent increases in Lamontville. He led people to boycott paying government rent in 1982 (Daymond, 2013). His legacy still remains in Lamontville (although a new political system is in place), thus resistance to tax payments lingers, which directly affects the quality of the current waste service and the possibility of implementation of alternative waste management systems.

4.5   Conclusion

This chapter addressed the first research objective of this thesis that investigated the constraints and opportunities for recycling waste in a South African township. The findings from fieldwork presented in the preceding sections show that apartheid spatial planning in the form of infrastructure and ethnic divisions still impacts the management of household waste. This scenario is further complicated by the political characteristics of Lamontville Township (see section 4.4.2.3), which dictate the quality and access to waste removal services. The people most vulnerable to harm, as a direct result of improper waste disposal and collection, reside in transition housing, informal houses and low-income areas of Lamontville such as Barcelona.

Waste recycling was discussed within the context of the current waste management practices in Lamontville since the majority of the community had not participated in formal recycling schemes.   Physical dimensions of infrastructure, housing type, geographic position (see section 4.4.1), as well as attitudes to source separation and public awareness of recycling activities were identified as affecting the willingness of the community to partake in future waste recycling schemes. The notion of source separation, which is promoted as the ideal approach to waste recycling at household level for maximising the quantity and quality of waste material, was perceived to be beset by many challenges for marginalised individuals (as discussed in section 4.4.2.1). Source separation as a route to waste recycling was rejected by the community due to a lack of trust in their local political leaders and ethnic divisions amongst community members particularly in Transit Mathini.

Negatives ethnic attitudes about the Xhosa incomers were revealed as prevalent in Lamontville amongst the 'native' Zulu. However, the ethnic tensions are especially played out in Transit Mathini where the Xhosa people are concentrated in greater numbers. The Xhosa-Zulu conflicts were mobilised during the transition to democracy however, these ethnic tensions still exist in the midst of scarce resources, including limited resources for household waste collection by the municipality as discussed in section 4.4.4. Furthermore, ethnicity and socio-economic levels are shown to determine access to knowledge of waste management. In order to have a sustainable waste recycling scheme in Lamontville, the following must be considered; pre-existing historical conditions that define the urban landscape, socio-economic levels as a factor in prioritising household waste, access to information, political decisions that exclude people based on ethnicity (identity). The following Chapter 5 explores how urban waste policies create social exclusion in South African townships.

CHAPTER 5: URBAN WASTE POLICIES AND SOCIAL EXCLUSION

5.1   Introduction

In South Africa, the local municipal authority is tasked with managing household waste within its jurisdiction. The national, provincial and local waste policy framework discussed earlier in this thesis in section 2.4 guides the activities of disposing, collecting and transporting household waste. The South Africa constitution further stipulates that waste service provision is a human right and emphasises the need for all South Africans to have equitable access to the service (Godfrey, 2008). Subsequent waste-related policies draw on the post-apartheid development agenda of inclusive growth, focusing on achieving environmental and social justice while ensuring economic development in deprived regions. In townships and other disadvantaged areas of South Africa, policies are aimed at including previously marginalized communities into the waste collection network.

Addressing the second objective of the thesis (see section 1.2), this chapter discusses how waste policies and practices facilitate the (social) inclusion/exclusion of vulnerable and/or marginalised communities in urban areas with respect to formal waste collection practices. Social exclusion is the process by which groups of people with a common identity find their access to resources, rights, goods and services (across the economic, political, social and cultural realms) denied as citizens (Levitas et al., 2007; Lucas, 2012). The kind of social exclusion focussed on in this research is characterised by a lack of access to basic public services and the inability of some communities, or some members

within communities, to participate in specific activities (e.g. public participation) in society. The main body of this chapter presents the findings and analysis from interviews, observations, document analysis, the household survey and focus group discussions that investigate how social exclusion is enacted in a post-apartheid township. The chapter begins with a review of household waste management practices together with the national party politics that mediate service delivery. Thereafter, the chapter explores various ways that waste legislation is implemented in a township marked by violence, corruption, and competing political identities.

5.2   Household Waste Management and national electoral politics

In Lamontville Township, household waste collection is intertwined with the local party politics. As described in the previous chapter, formal household waste collection services are more efficient in areas where members of the community are paying rates and taxes. During fieldwork, it became evident that the national ruling party (ANC) determines the collection intervals for the peripheral areas of the township. Moreover, waste spaces are contested by various actors with differing interests. Therefore, this section argues that service delivery is influenced by party political interests that dictate how and when household waste services are provided in the township via the municipality, tendering system, ward councillors and use of 'volunteers' among other mechanisms.

Maintaining political power is the national ruling party's primary concern. This research shows that service delivery, including waste provision, is promised for those community

members who vote for the ruling party. The promises of service delivery are made before national and provincial elections, and election placards are a constant reminder of the dominance of the ANC. The community of Lamontville is aware of the pressure exerted on them by the ruling party to vote and the promise of service delivery that comes with it. An elderly person who was born in Lamontville and lived through apartheid, explained how the ANC government pulls them to voting stations, in the following statement:

> When voting is approaching, they (councillor and ANC party volunteers) run around. They ask us to vote for them. They point out things they will fix (blocked storm water pipes) but after voting (laughter) they disappear. We never see them again.
>
> (Ndondo, 69 years, Zulu, Male, Elderly, Formal house, Focus group discussion)

Ndondo in the above quotation suggests that the ANC is aware of the environmental challenges faced by the community such as blocked storm water drains and presents itself as the solution to unhealthy living conditions. The government makes electoral promises related to issues of health and the township environment that are appealing to the community. Currently storm water management is of concern to the entire community. The run off from storms is not diverted away from their homes due to a lack of a formal drainage system. Flooding is common in eThekwini municipality and in Durban (see Kahla, 2019; Mngadi, 2019; Singh, 2017). An elderly woman in the same focus group discussion lamented that '*indlu yami iyashona*' (Makazana, 72 years, Zulu, Female, Elderly, Formal house, Focus group discussion) which translates as 'my house is getting buried'. Storm water erodes sand particles, affecting the stability of houses that

were built during the apartheid era. The poor infrastructure dating from the apartheid decades still impacts the quality of life for many Lamontville residents. Furthermore, community members in Lamontville Central living downslope from informal housing areas, complain about storm water runoff which collects waste items as it flows into the vicinity of their homes. Poor storm water management together with people' perceptions of informal areas form part of the broader discourse in the township that depicts Xhosa people (who predominately live in the informal areas) as dirty. The social constructions of ethnicity and dirt are further discussed in sections 5.4, 6.6 and 6.7.

The comment from Ndondo on the promises of service delivery concurs with Tino, a woman living in Transit Gijima, who referred to a common election campaign slogan in Lamontville: 'Vote and you will see' (Tino, 33 years, Zulu, Female, Transit Gijima, focus group discussion). Both Tino and Ndondo refer to the lack of attention given to service delivery after the voting process, when the ANC government has achieved the majority win it was seeking. Despite years of unmet promises of service delivery and complaints from the community, the ANC still enjoys support from the majority of the citizens in Lamontville Township and across the KwaZulu-Natal province. What emerged from the fieldwork and data collection undertaken for this thesis, is that people in Lamontville remain loyal to the political party that brought them 'democracy'. Therefore, service delivery today, including waste management services, is still influenced by the racial politics of apartheid.

The ANC has a visible presence throughout the township of Lamontville. Political placards, t-shirts and local newspapers work to promote (support) the ANC. During fieldwork placards were observed throughout the township, with the slogan 'Vote ANC' and the face of the then South African Zulu president, Jacob Zuma. These placards and posters serve as a reminder of the dominance of the ANC in Lamontville and across the broader municipality. Figure 5.1 reflects the nature of promises made by the government in the context of poor service delivery. The eThekwini municipality which is controlled by the ANC handed out T-shirts printed with the slogan 'My future is in my hands' to encourage the community to vote in the 2016 municipal elections.

Figure 5.1: A woman in Lamontville Township wearing a municipal election T-shirt with slogan 'my future is in my hands'
(Source: Author's own)

The ANC-led municipality encourages community members to vote in the municipal elections by promising them (hope for) a better future including aspirations for better waste services. The ruling party uses state resources to gain an advantage over the other political parties. This form of corruption favours those who are already in control of the government.

The distribution and wearing of T-shirts serves several purposes in KwaZulu-Natal province and particularly in townships. Firstly, there are specific T-shirts that are worn by Zulu men to identify with other Zulu men in the urban areas (Figure 5.2). These T-shirts are worn by men in the community as a social representation associated with the Zulu ethnic identity (Jaspal and Cinnirella, 2012). Men wearing these T-shirts belong to KwaZulu-Natal and hence claim the right to demand certain government goods (e.g. tenders) in this region. The T-shirts are printed with the person's surname and clan names which signal their Zulu ethnic identity.

Figure 5.2: T-shirts worn in Lamontville Township to reflect the Zulu ethnic identity

(Source: Author's own)

Secondly, T-shirts are used by political parties to communicate political messages to the community, and consequently they become the mouthpiece for the national political party. The strength and capabilities of T-shirts as a political communication tool was discussed in focus group discussions. The following comment from Sandisiwe clarifies how T-shirts are used by the local ANC councillor:

> I last saw her (the local elected councillor) in 2015, she (councillor) remains up there. She did not come down. She sent volunteers with T-shirts to come down here.
>
> (Sandisiwe, 48 years, Female, Zulu, Transit Gijima, Focus group discussion)

Transit Gijima is located in the valley, hidden from the rest of Lamontville. According to Sandisiwe, the councillor did not come to Transit Gijima in person but sent her 'volunteers' to distribute T-shirts during the campaigning season in 2015. The T-shirts reached Transit Gijima although it is the part of Lamontville that is perceived as undesirable by the community and councillor. Transit Gijima is geographically excluded; nonetheless their votes are still essential for the ruling party. T-shirts with political messages are distributed predominately in the marginalized areas of Lamontville[43]. Poorer areas of the township such as Transit Mathini, Transit Gijima and informal areas receive the T-shirts instead of having the privilege of direct contact with the local councillor. The T-shirt is entangled within the politics of belonging in Lamontville Township, in that T-shirts are provided to outsiders as a means of 'pulling' them into the imagined community of Lamontville which is controlled by the ANC.

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[43] This is not to say that people in Lamontville Central do not receive T-shirts however that part of the township receives better services.

There is a sense of entitlement that is felt by some members of Lamontville. These citizens can command certain goods from the government, in part, as a result of conditions created by the government. As described earlier, voting for the ANC is accompanied by promises to the citizens which are unmeasurable and unrealistic in a country where resources are scarce. Another example of such promises is the campaign slogan for the 2014 National Elections, which was 'Vote ANC, A Better Life For All' (see Figure 5.3). The ANC creates a sense of entitlement in community members who voted for the ANC when the party has won the elections. The democratically elected government promotes a culture that promises to give citizens 'a better life' through voting for them. Thereafter, the people 'wait' for the government to improve their lives and to provide them with basic services which the community is not obliged to pay for. For example, the community expects the local government to maintain a clean environment without their participation.

Figure 5.3: ANC campaigning slogan; Vote ANC for a better life for all
(Wilkinson, 2014).

The local government, especially via the ward councillor and tendering of services, has control over service delivery in the community, which at times makes people powerless to change the direction of their lives. In a dirty area in Lamontville Central, the feelings of being powerless was expressed by Mam Fikile in a focus group discussion:

We have a new councillor…if maybe someone can tell her (councillor) about recycling, she might help us. The old councillor did not care about waste recycling.

(Mam Fikile, 65 years, Female, Family Flat, Focus Group Discussion).

This comment indicates that residents like Mam Fikile, believe the local ward councillor, who is an ANC member, is responsible for implementing waste recycling. Throughout the township, development initiatives such as delivery of services through tenders and public works programmes (and hence often people's livelihoods) are associated or aligned to the local municipal council. Her expression 'she might help us' shows how people in Lamontville like Mam Fikile are waiting to be governed and lack the drive to initiate waste separation schemes themselves. The citizens of Lamontville are not only 'in waiting' for waste services, but also for other services such as adequate housing and sanitation, which are discussed later in this chapter.

There is a clear distinction between waste collection in previously white areas of South African cities and that in townships. The geographical difference in waste separation projects is clearly marked by historic race and class categories. The geographical distinction is in both waste collection methods and the implementation of waste recycling initiatives. The municipality initiates waste separation in previously 'white' suburbs, investing in educating those communities and providing 'free' recycling bags. Figure 5.4 (below) shows coloured waste bags for different household waste types in Glenmore, a middle-class formerly White suburb in Durban. The black refuse bag is for general waste, the yellow bag is for recyclables and the blue bag is for garden waste. This recycling scheme based on source separation at household level and roadside

collection has been successful in the more affluent areas of South Africa, suggesting that education and information on recycling, amongst other socioeconomic variables increases participation in waste recycling schemes as similarly demonstrated by other research in the Global South (Ekere et al., 2009; Ma and Hipel, 2016).

Figure 5.4: Waste separation in Glenmore suburb (Durban) eThekwini Municipality
(Source: Author's own)

In Lamontville, formal waste recycling is undertaken by the municipality and limited to primary schools. The responsibilities of collecting recyclable waste material (e.g. paper and glass) is transferred onto primary school children. The local municipality relies on government primary schools in the township to collect waste materials. Children bring in recyclable waste items to school reducing the burden of collecting waste for the municipality. Tuma, an education official for eThekwini municipality, reported in an interview that waste litter is reduced along the pathway between Transit Mathini and Ntuthukweni primary school. The primary school children follow the recycling programme with no resistance. Other children, during participatory activities, expressed the guilt they felt for leaving recyclable materials along the path as they walk to school.

This compliance is in contradiction to resistance by young people in secondary schools who have been able to voice their views and refused to take part in the recycling programme.

A failed glass collection project is evident throughout the township of Lamontville. Several households with bags filled with broken glass were identified and interviewed in relation to the glass collection project (see Figure 5.5). An organisation requested permission from individual households to keep empty bags for storing glass for a private glass collection project. The household and surrounding community were urged to dispose their glass in these bags. However, the glass bags remained uncollected. It was apparent that the aims and expected outputs of this glass recycling project were not explained to the community. Also, there was limited follow-up support after the project was implemented. The waste bags are a source of distress for the community as the local municipality refuses to collect them and commercial recycling companies require 6 full bags before driving into Lamontville to collect the glass waste bags.

Figure 5.5: Failed waste glass recycling initiative in Lamontville Township.
(Source: Author's own)

Community members who have travelled out of Lamontville, observe the differences in waste collection methods in areas they term as 'esiLungwini[44]'. These areas of eThekwini Municipality are Montclaire, Clairwood, Woodlands, Yellow Wood Park and Bluff (see appendix 15 for map), characterised as previously White areas that are in close proximity to Lamontville. Waste recycling is viewed as part of 'White culture' by some community members. Community members are aware that they are treated differently by local government and feel they are excluded from partaking in waste recycling; which is observed as an exclusive activity for previously 'White' areas. The disparity in provision of waste recycling services makes the community believe that they have not been completely included into the 'new' South Africa. However, the research found that politicians find waste management services an important instrument to retain patronage, hence deliberately limiting formal waste recycling in townships.

During interviews with municipal officials, a political justification was given to explain unequal waste service provision between townships and suburban areas. Mvelase, a municipal official said the following:

> We call the community, we do away with the contractors and educate the community. We give them 5 types of plastics (bags). We have a recycling company that will collect the waste, the government will save money. Tell the community this, people will be laid off, the councillor will storm in here, then the politician will attack me saying why are people sleeping hungry because of me? It is so complex, we travel all over, see initiatives but cannot implement them here.
>
> (Mvelase, Municipal waste management official, Male, Interview)

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[44] Taken from the Zulu word uMlungu, which means a white person.

Mvelase explains that waste contractors and community members will lose their jobs should a household waste recycling scheme be introduced in townships in the same way as in the former-White middle class suburbs. There is an assumption that such a recycling system will require less people than those currently employed in the waste sector. In eThekwini municipality, the waste sector employs approximately 5600 people[45]. The Expanded Public Works Programme (EPWP), volunteers and contractors operate in marginalised communities like townships and are controlled by the local councillor who ensures that workers are ANC card carrying members. Although Mvelase understands that the government would reduce financial spending with a modern waste collection system[46], as less waste would be collected, there is pressure to maintain the status quo as it ensures political capital for the government. Therefore, the research undertaken for this thesis reveals that decisions for implementing waste recycling strategies reflect political inclination rather than economic prudence or values of environmental sustainability.

Political interference was also found to weaken local institutions. It was evident during field work that Durban Solid Waste, limits projects that are not supported by current political leaders. Case study 5.1 (below) further details the influence of the political economy on a formal waste recycling scheme in Umlazi Township which has similar

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[45] Tuma, an education officer counted the number of people employed by the waste contractor, she said *within Solid Waste we have approximately 2000 permanent employees, through EPWP we have 800 people, plus another 600. Then through major contractors we have 900 people, then the 450 small companies, they employ 3 people each. You are looking at 5600 people.*

[46] EThekwini municipal is involved in wasteful expenditure, municipal waste officials attend international conferences in the Global North to learn about new developments and efficient technologies in waste management. However, this knowledge remains unused and innovations are not implemented due to the political situation in South Africa.

socio-economic conditions to Lamontville Township. According to Azzi, the Head of Strategy at the Durban Solid Waste Department, the recycling project in Umlazi Township will also be implemented in Lamontville, but insisted that the working procedures will be different (i.e. the collection schedule and waste types may differ in other townships).

Case study 5.1 : The politics of waste recycling in Umlazi Township

A pilot waste recycling project in Umlazi Township was initiated in 2015 and is operated by a non-profit organisation (NGO), SAWEB, comprised of five ex-MK veterans. Currently household waste is collected by SAWEB from three sections of Umlazi Township, and it is envisioned that collection will eventually cover the whole of Umlazi Township. SAWEB provides households with a single clear plastic refuse bag for non-organic waste recyclables. The recyclables and normal household waste are collected on the same day. The NGO collects the recyclables and the local contractor collects the household waste in black refuse bags. SAWEB collects waste in Umlazi Township and uses land at the edge of Umlazi to re-sort the waste before transporting it to the market. Currently, the pilot project faces economic and technical problems due to a lack of support from the local political leadership and the municipal Solid Waste Department.

Initially the recycling project was funded by a unit within the municipality through the ANC political structures in eThekwini Municipality. Durban Solid Waste, although a key stakeholder in waste management was not involved in this arrangement. At the time of the interview with SAWEB, the project was facing financial difficulties as the funding from the unit had ceased. The individual within the ANC structures who had initially supported this project had since lost their influence. In order to continue with the project (and make a livelihood for the five ex-MK veterans), SAWEB registered a private company, Amaxoxo, that deals with waste recyclables. SAWEB gives Amaxoxo waste recyclables at zero cost, then Amaxoxo sells the waste material to make a profit for SAWEB who are a non-profit organisation. This indicates the dominance of corruption within local government that is perpetuated by agreements between individuals.

The manner in which waste service provision is delivered affects the dynamics of waste recycling. SAWEB expressed the difficulties of collecting waste in one section of Umlazi Township that consists predominately of informal housing. In this informal section of the township, household members use clear waste bags which are meant for recyclables for disposing all types of household waste, as the municipality does not provide refuse bags for waste disposal in informal settlements. The clear waste bags give the community an opportunity to dispose in a responsible manner even though the waste content is incorrect. SAWEB then has the additional work of separating the waste; at this point recyclable material would have been contaminated. This shows that the political decision of not recognising informal areas within townships affects waste recycling initiatives.

5.3   Violent waste spaces

For many people living in South Africa today, everyday life is fraught with danger and violence. The urban areas of South Africa are characterised by murder, aggravated robbery, sexual offences, assaults and drug related offences (Holtmann and Domingo-Swarts, 2008). An average of 52 people were murdered per day from 1 April 2016 to 31 March 2017. In the same period, the Eastern Cape province had the highest murder rate at 56 per 100,000 people followed by KwaZulu-Natal at 37 people per 100, 000 people (SAPS, 2017). The highest crime levels are recorded in townships near the six metropolitan areas of South Africa[47]. Scholarship on South African violence since the colonisation period reveals a long history of urban disorder and conflict particularly in the urban periphery (Kynoch, 2016; Vigneswaran, 2014). Furthermore, during apartheid when the African National Congress (ANC) was still in exile, it called on its supporters throughout the country to make the townships ungovernable. Wilson (2001) argues that

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[47] The six metropolitan areas are Port Elizabeth, Johannesburg, Cape Town, eThekwini (Durban), Pretoria and Germiston.

the state of 'ungovernability' still exist in townships post-apartheid. Since apartheid, townships have been heterogeneous spaces with politically motivated violence, socio-economic deprivation and corrupt policing (Kynoch, 2016); violence has become a normative way for resolving disputes (Breetzke, 2012).

In Lamontville, the fear of violence was evident in the household survey conducted for this thesis. Overall, in the township, for the respondents to the survey who were asked to rank what they considered the most important challenge in Lamontville, drug dealing was a major concern (22.9%) followed by housing (22.4 %), and alcoholism at 19.5% (Figure 5.6). There were significant differences of the proportion of respondents ranking the most important challenge by different subsections of Lamontville Township (Chi square test, P<0.01).
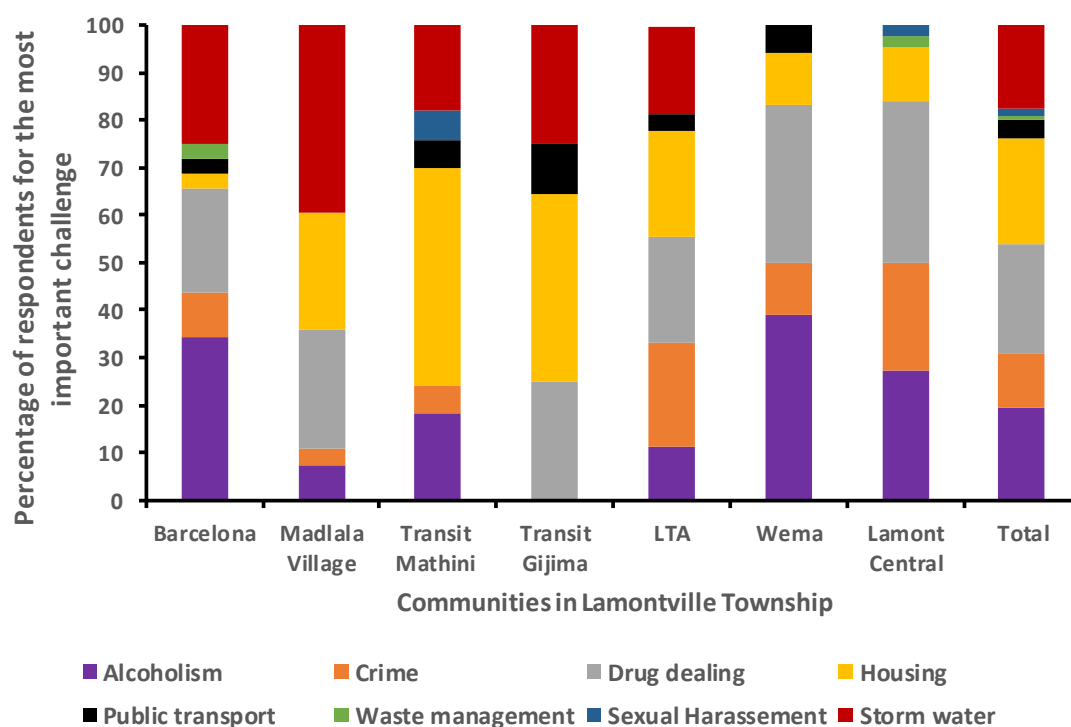
Figure 5.6: Percentage of respondents according to the most important challenges in Lamontville Township.

Furthermore, there was evidence that the violence in Lamontville affects waste disposal (household waste management) for mostly women and children. The level of violence affects the manner in which women and children manage household waste. Women and children live in spaces of fear, leading them to take precautions which are often spatial such as avoiding certain parts of the township. They have concerns about criminal activities and experience anxiety due to constant sounds of gunfire. For example a young girl, Bointy, lives with her mother in a family flat in Lamontville Central, who collects plastic bottles and stores them outside their home (see Figure 5.7). I questioned Bointy on how she assists her mother with collecting bottles. In her response, she highlights her fears of violence in Lamontville:

> There is always fights, even at school; there were fights on who will be the principal. Teachers that did not want the principal told us to go back home...There were shootings at Ebony (local supermarket), we do not go there anymore. We sit at night listening to guns... They said the councillor Ntongo is an alcoholic, she hit a child while driving in her car.
>
> (Bointy, 13, Girl, Zulu, Family flat, Lamontville Central, Informal conversation)

Bointy mentions a known crime hot spot, Ebony, that she and her family avoid. Ebony is a supermarket area where she and her mother collect plastic bottles. It is also an important waste collection area for other waste pickers in the township. Fear becomes a controlling mechanism for women waste pickers, restricting them to areas of safety. Similarly, a violent crime that directly affected waste disposal was disclosed at the end of a focus group discussion at Lamonville Central. The person who sexually assaulted a woman that participated in the focus group discussion lived near a waste disposal area. This prevented her from disposing waste in a lawful manner because after the assault she avoided going to the waste disposal area for fear of encountering her assailant.

Violent spaces prevent women and children from disposing waste in a safe manner. Similarly at the Marianhill landfill a security guard stands at the entrance with a firearm, this depicts the nature of crime in South Africa (see appendix 16). These examples are just a couple of the myriad of ways that waste management activities are affected by the violence that permeates everyday life in the townships. The following section continues the discussion on lawlessness which further contributes to poor household waste management.

Figure 5.7: Plastic collecting sack containing 2 litre bottles in Lamontville Central
(Source: Author's Own)

5.4   Informality, Lawlessness and Waste Management

Littering and illegal waste dumping are common in Lamontville Township. Informal trading by street vendors also contributes to the littering. The vendors sell items that have been repackaged into smaller packs, and the containers empty packs are thrown on the ground. It was also common to see motorists littering in the streets. Indiscriminate dumping of waste is a major challenge in South African urban areas. In

Lamontville, littering and dumping of waste often leads to blockage of drainage systems and pollution of water sources. Despite different regulatory frameworks such as Section 26 and 27 of the National Environmental Management: Waste Act No. 59 of 2008 and the municipal bylaws that explicitly forbid unauthorised disposal and littering at the community level, waste continues to be a problem in townships. During field work, evidence pointed to both the behavioural norms of littering and the unwillingness and inability of municipal officials to enforce the existing laws on household waste management in the townships.

Throughout Lamontville Township, illegal waste dumps, uncollected filled refuse and plastic bags are visible. Illegal dumping spots are known by the community and are referred to as 'iZiko', meaning a 'burning hot flame'. Although waste litter is evident throughout the township, the greatest amount of waste is concentrated in informal housing areas such as transit housing and informal dwellings. The research shows that community members and the local government are of the opinion that certain segments of the community discard waste indiscriminately; as an intended action. For example, in a children's focus group discussion Zinhle articulated the nature of environmental pollution at her immediate surroundings thus:

> My grandmother complained about rats that were bothering her [as a result of a waste dump], a 'no dumping sign' was placed there….and people were told about a fine for disposing waste there illegally. People broke the board and blamed those living in informal housing [for disposing waste], when it is not them who are responsible for the filth.
>
> (Zinhle, 15, Zulu, Girl, Lamontville High School, FGD)

Zinhle's description of attitudes of blaming others for waste dumping highlights the power of belonging versus the risk of being an informal citizen in Lamontville Township. Zinhle's grandmother resides in a formal house and as a 'Mnsinsi', i.e. a Zulu person who was born in Lamontville Township, has the right to complain about waste-related incidents around her living space. Public participation structures are arranged in such a manner that those who are 'foreigners[48]' are 'not heard'. Only the voices of 'legitimate[49]' Lamontville citizens are 'heard'. According to Zinhle, her grandmother complained at the local councillor's office about rats from a waste dump and the local government responded by erecting a board stating 'no dumping '. This can be regarded as a passive response to a multi-dimensional problem. The failure of the local municipal authorities to enforce existing by-laws on waste disposal results in a general lack of respect for the law (section 4.4.3 on organisational barriers to waste recycling elaborates on the inadequacies of local government in addressing waste issues in townships)

Throughout Lamontville signboards are erected by the municipal authorities in areas where illegal dumping is prevalent. Community members showed their disregard of the signage by vandalising it (see Figure 5.8). Vandalising all kinds of sign boards is a common occurrence in Lamontville. The dumping continued and residents of informal housing were labelled as the culprits when according to Zinhle people living in the formal houses were the ones responsible for polluting. The blame is shifted to poorer residents since informal houses are in close proximity to the dumping spot. Informal dwellers are not

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[48] People who are from the Eastern Cape and living in informal and transition housing.
[49] People who were born in Lamontville and are Zulu speakers.

only less privileged, but are labelled 'foreigners[50]', who may be Xhosa. Instead of viewing

lawlessness as a criminal activity, it is viewed as an activity associated with the 'Other',

outsiders of differing ethnicity.

Figure 5.8: A vandalised 'no dumping' sign at Lamontville central (Gambushe street)
(Source: Author's own)

In other instances, community members litter intentionally as a way of creating jobs for

unemployed individuals. The residents hope that through intentional littering, more

street sweepers would be employed from Lamontville reducing the number of

unemployed people. This indicates that the community is aware that littering or illegal

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[50] Informal dwellers are considered to be foreigners to KwaZulu-Natal province, and predominately come from rural Eastern Cape.

dumping brings about no punishment. In the absence of active and effective law enforcement, to a limited extent, community members monitor each other's waste disposal practices. Makoti, for example, described how she and others monitor waste disposal patterns in their immediate surroundings:

> They placed boards saying do not dump here with a contact number to report illegal dumping. I used to monitor this. If I saw someone dumping waste, I would take it back to their house, until I realized I would start fighting with people. Another man joined me. I decided to stop because I was making enemies.
>
> (Makoti, 69, Female, Zulu, Formal housing, Elderly, Focus group discussion)

Makoti and another person from the community attempted to take ownership of the area they live in. With this arrangement, a community member who dumps waste bags at an inappropriate place is only informally controlled by other residents. Due to fear of violence, Makoti decided to stop monitoring illegal waste dumping in this way as other community member were threatening to harm her. In other parts of Lamontville, where waste is indiscriminately dumped, community members open and search waste bags for clues that will direct them to the person who dumped the bag of waste. Thereafter the waste-filled bag is returned to the owner. This behaviour where citizens police each other shows that the local government is inefficient at enforcing bylaws governing waste disposal in townships.

Other women resort to violence to solve their waste disputes with other women. A particular incident was recounted which took place at Lamontville Central resulting in a

physical altercation when a community member was reprimanded for improper disposal of their refuse bags. The individual involved said:

> She knows when the collection vehicle comes past, but she places her waste bags on the wrong day. I confronted her. She initially refused to take back her waste then I promised to harm her. She leaves her place and moves this side to dispose of decaying waste that smells. We also have children.
>
> (Tobile, 32, Female, Zulu, Lamontville Central, formal housing, Household survey)

Tobile suggests that other community members do not observe waste collection days. As a result, the particular woman being described avoids disposing of waste in her area close to where she lives and moves towards Tobile's house. Tobile views this action as a direct attack on her children's health, which in turn negatively affects her mothering abilities. There is an indication that improper disposal affects women more than men as they are responsible for household waste and mothering their children. The lack of law enforcement and people's disregard of rules in Lamontville not only causes conflict, but gives rise to consequences which are gendered (waste conflicts involving women are further discussed in chapter 6).

Information gathered from the contract workers and the community reveals that hiring community members who are ANC members as waste workers affects the collection of waste. The contract manager reported an instance where a worker could not be fired even though her work performance was dismal due to their personal connection to the local ward 75 councillor. Furthermore, in the household survey, a community member in LTA section of Lamontville reported a physical altercation involving herself and a contract worker allocated to sweep their street. She complained about the performance

of the sweeper several times at the councillor's office until she decided to take matters into her own hands. This shows that political patronage in job allocation affects service delivery.

The single most important waste minimisation initiative mentioned by all the municipal officials during interviews was the plastic bag policy which was initiated in 2003. The policy aims to reduce the use of plastic bags in South Africa and eventually eliminate them. Plastic bags are problematic because of their light weight and tendency to blow away in the wind (Dikgang et al., 2012). In Lamontville, animals (especially dogs) and children tend to eat plastic bags accidentally. However, the plastic bag policy has not reduced the amount of litter in Lamontville Township and other townships. Plastics are the most visible waste type. The local municipality is aware that the plastics levy is not reducing the amount of waste in the township. A senior education officer from the municipality reiterates the process of reducing plastic waste:

> Take your own plastics for shopping, instead of buying plastics all the time. When buying apples, oranges, use one plastic for weighing. What we are noticing now is that even though government has introduced this thing of tax for plastics, it is too small.

(Manele, Senior education officer, municipal waste official, Interview)

The education officer directs the implementation of this waste policy to large retail shops like Spar, for people who are buying their goods in bulk. The policy is only effective in wealthier suburban areas as they can afford to buy thicker more durable and reusable plastic bags which are more expensive. The policy is not extended to township shops, which are providing cheaper thin plastic bags to customers without a fee. Plastics bags in Lamontville are used to dispose household waste for community members who do

not receive black refuse bags from the municipality. The local contractor in Lamontville, collects household waste disposed in Spar plastic bags, this action is viewed by the community as an endorsement for the use of plastic bags. The municipality prohibits the use of plastic bags while local socio-economic conditions in marginalized areas force people to dispose of their household waste in plastic bags. Furthermore, in central Durban, plastic bags are used to make mats, handbags and brushes which people sell as a means of livelihood.

The challenge in Lamontville with regards to plastic bags was visible and further illustrated by children who took part in participatory activities at a primary school as part of the research for this thesis (see Figure 5.9). Beko narrates her drawing in the following way:

> The swimming pool is not kept clean. There are Spar plastic bags floating in the swimming pool. My friends and I have to remove the plastic before we can swim.
>
> (Beko, Girl, 11, Xhosa, Madlala Village, Participatory Activity, Primary School)

Figure 5.9: Drawing of plastic bags and other waste material in Lamontville Swimming Pool
(Source: Author's own)

The drawing from Beko points to the areas in Lamontville that are dirty to her. She encounters the problem of waste litter when she is cooking and playing in the park. There is a public swimming pool in Lamontville and litter floats in it. She clearly identifies a Spar plastic bag in the swimming pool. The problem of plastic is felt more acutely by children who play in a dirty environment.

There is a clear distinction in the manner that municipal bylaws are enforced within eThekwini Municipality. According to Mthembu, eThekwini municipal has five enforcements officers who are working in the suburbs to enforce the eThekwini bylaws. The bylaws are descriptive in how waste should be handled and disposed, also giving recommendations on how the community should recycle waste. Mthembu stated that staff deficiency resulting from limited budget, results in differential applications of the law (see section 4.4.3.3 on inadequate personnel for waste management). There was no

suggestion that enforcement officers would operate in townships. This shows that current environmental policy in South Africa is rooted in a legacy of apartheid. Social marginalisation and a greater exposure to environmental pollution is still located within deprived communities. The following section examines the position of the informal waste sector in a modernising economy.

5.5   The Informal waste Sector and Modernisation

As part of the fieldwork conducted for this thesis in Lamontville and the broader municipality, informal waste collectors were identified. Seven informal waste pickers were interviewed in Lamontville, all of whom work independently in their own personal capacity. Table 5.1 shows the characteristics of waste pickers in Lamontville. Three additional waste pickers were interviewed within eThekwini Municipality: two in Cato Manor Township[51] and one in Umlazi Township. As identified in Chapter 2 (section 2.5.2) the presence of informal sector waste management activities is often attributed to failed formal strategies of managing waste and high poverty levels faced by urban dwellers in the Global South (Nzeadibe, 2009; Wilson, 2007). This section analyses the data collected from waste pickers and discusses how local government policy marginalises waste pickers in South Africa.

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[51] Waste pickers in Cato Manor, have created a settlement close to their working area, a highway that is visible to waste trucks. The settlement consist of 12 shacks with a total of 18 resident adults. The waste pickers allowed me to observe their working dynamics.

Sex	Age	Housing Type	Ethnicity	Material Collected	Education
F	65	Family Flats (RDP)	Xhosa	Glass, Tins and cans, Cardboard	Primary School
F	52	Family Flats (RDP)	Xhosa	Glass, Tins and cans	Primary School
F	69	Formal	Zulu	Glass	Primary School
F	76	Formal	Zulu	Glass	Primary School
M	43	Family Flat	Zulu	Glass, Tins and cans	High School
M	45	Informal	Xhosa	Glass, Tins and cans, Cardboard, PET bottles	Primary School
M	72	Formal	Zulu	Glass, Tins and cans	Primary School

Table 5.1: Characteristics of waste pickers interviewed in Lamontville Township

This research reveals that in Lamontville waste pickers are divided into two categories by the community, 'clean' waste pickers who collect waste recyclables for a livelihood and 'dirty' pickers who collect mainly steel to sell to purchase drugs. This section will focus on 'clean' waste pickers who were interviewed in this research. The major waste items collected by the waste pickers are glass, cans and bottles. Waste pickers in Lamontville Township form part of the most marginalised sector of society in the townships as most of them are not educated beyond primary school and are not in formal employment. A man who is living with a disability and is a waste picker was also identified. He collects PET bottles and sells them to a middle man who uses them for containing traditional medicine (Figure 5.10). The activities of this man were narrated by other members of the community as he has some difficulties with speech and it was difficult to interview him directly. Children were absent from informal waste collection

in Lamontville. However, during fieldwork in Isipingo, an industrial area close to Lamontville, a child[52] was observed carrying scrap metal next to a reclamation plant (see appendix 17 for an image of a child carrying scrap metal). The characteristics of these waste pickers is similar to those elsewhere in the Global South, showing that waste picking is an adaptive response to scarcity of income earning opportunities by disadvantaged populations[53] (Fahmi, 2005; Marello and Helwege, 2018; Oteng-Ababio et al., 2013).

Figure 5.10: A waste picker collecting plastic bottles in Lamontville Township
(Source: Author's own)

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[52] In an interview with the manager of the reclamation plant he stated that children are sent to bring metal parts of stolen cars in exchange for money at the reclamation plant. He implied that adult criminals use children in this way to avoid arrest.
[53] The community of waste pickers in Cato Manor are Xhosa who came from the Eastern Cape and could enter the informal sector with ease.

Waste materials are collected from waste dumps, house-to-house collecting and street picking. Waste pickers self-regulate their working environment and to prevent conflicts, individual waste pickers have demarcated their working area in Lamontville. The waste pickers are of mixed gender, and women waste pickers work in pairs for safety reasons while the men collect waste individually. The waste pickers I encountered did not include young people, between the ages 18-35 years. They are not involved in waste picking due to the perceptions associating waste with shame. Waste pickers operate day and night to target specific areas of opportunity. An abundance of recyclable waste items are found within the township in areas that are overlooked by the formal waste contractor. For example, one of the waste pickers focusses on the pathway between Wema hostel and Lamontville where there is no formal collection of waste due to a boundary dispute (see section 4.4.3.5). The presence of waste pickers in Lamontville is an indicator that current formal methods of collecting waste are inadequate. In other urban areas of the Global South privatising of waste services leads to a reduction of waste material available for pickers (Didero, 2012) however, in Lamontville, waste pickers and the waste contractors work side by side.

Making a living in the informal waste economy is associated with threats to the well-being of waste pickers. The interviews with waste pickers revealed the bodily impact of their work. For example, Elizabeth (65 years, Female, Xhosa, Barcelona, Grandmother), a waste picker in Barcelona, complained about the strain of intense physical labour in her work as a waster picker. In order to prepare waste cans for collection by middlemen, her work requires using her bare hands to crush the steel cans with a rock (see Figure 5.11). Consequently, Elizabeth constantly has a painful arm and according to her, the

local clinic is unable to assist her. Likewise, Ka (43, Zulu, Lamontville central, Care giver),
a male waste picker is required to crush glass before collection. His major challenge is
the tiny glass splinters that enter his eyes. To clean his eyes, he has to open them under
running water. Waste pickers work without protective clothing or eye protection for
extended periods of time. Research on the informal waste economy has documented
the working conditions of informal waste pickers, which is often characterised by
exploitation, poverty and risks to the worker's health (Ezeah and Roberts, 2012; Wilson
et al., 2006). The particular metabolism of recyclable waste that has emerged in
Lamontville Township entails waste pickers regularly exposing themselves to health
hazards, while earning very little money.

Figure 5.11: A waste picker using a rock to crush tins in Barcelona, Lamontville Township
(Source: Author's own)

Waste pickers are also further exploited by other actors within the informal economy.
Recyclable materials (such as glass, cans, cardboard) are collected by a middleman from
Lamontville to transfer to the market which is often in Isipingo. The middlemen are the
connection between the formal waste recycling industry and the informal waste pickers.

The middleman is used to transport the collected material because Lamontville is far from the industries and waste pickers do not have their own transportation. The price per kilogram is determined by the middlemen as the recycling industry is unregulated. The waste pickers complained about the exploitative nature of their relationship with the middlemen[54]. In Lamontville, Ngema complained about the treatment from a middleman in the following manner:

> Sibiya (the middleman) took our crushed glass and told us he does not have a scale. He said he would weigh the glass in another location and this came with an additional charge. A few weeks later, he gave three of us R800 to share for a full bin with crushed glass
>
> (Ngema, 76 years, Female, Zulu, Formal housing, Lamontville Central)

Ngema worked with two other elderly people in glass collection. She has since quit crushing glass as she felt the middleman, Sibiya, was exploiting them[55]. Ngema is caring for her grandchildren and the income from collecting glass assisted her. She now depends solely on her government pension for survival. In another incident a waste picker from Barcelona complained that the process of weighing collected recyclable cans 'was too fast' (Elizabeth, 65 years, Xhosa, Barcelona). The middleman weighs the cans too quickly and she does not see the numbers on the scale. She also suspected that the middleman was factoring in the cost of travelling to Lamontville to collect her cans. Many recycling companies in South Africa are private enterprises, so the relationship between middlemen and informal waste pickers is exploitative rather than fair (Sentime, 2014). Figure 5.12 shows two middlemen weighing cardboard collected by a waste

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[54] Waste pickers in Cato Manor are also exploited by the middlemen. I interviewed a middleman and he told how he adjusted the scale because the waste pickers wet the cardboard and paper to add extra weight to it.

[55] The amount of R800 is equivalent to approximately £47 which is a little for three people.

picker who has occupied an area on the margins of Lamontville. During fieldwork, I was able to witness the weighing process, whereby the waste picker is in the vicinity but they are not informed of the payment rate per kilogram[56]. The waste picker accepts any amount of cash as their work is not formally recognised. The waste picker is at the bottom of the waste hierarchy and has limited power to command what is due to them.

Figure 5.12: Middlemen weighing cardboard on the outskirts of Lamontville.
(Source: Author's own)

Waste pickers felt their activities were socially unacceptable and were frowned upon by local community. Mfundisi from the Barcelona area of Lamontville stated that community members have thrown coins at her as she is perceived to be poor as a waste picker. Similarly, Ngiphiwe, a male waste picker recounted the number of times the community has questioned him about his mental well-being, suspecting that he may be 'crazy' for walking around the township collecting waste. Being a waste worker is associated with low social status and is not seen as an honourable occupation. Waste pickers are associated with the waste they collect. Futhermore, local government tends

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[56] The weighing process is also unfair on other respects because for example 8.9 kg is rounded down to 8 kg.

to prohibit and prosecute informal waste pickers, rather than recognising or promoting their activities and contribution.

Law enforcement is directed towards waste pickers in previously white areas and Durban city centre. Waste pickers in these areas expose the waste collection problems and the poverty that is experienced by some. Figure 5.13 below is an abstract from a newspaper detailing how the police remove waste pickers in the suburb of Montclair in an attempt to keep the city clean. Waste pickers are also prohibited from working in visibly dirty areas within the city of Durban. Figure 5.14 shows a security guard removing a waste picker from Durban central, who was searching for waste in a bin. According to discourses of modernity, informal activities do not belong in the modern areas of the municipality. The disregard for the needs of informal waste workers is linked to broader narratives around informality and the eradication of dirty elements within a modernising economy (Chatterjee, 2004; Truelove and Mawdsley, 2011). As research suggests, the prosecution of informal waste pickers has been viewed by many scholars as a way of removing elements in the city that are not compatible with notions of a modernised city (Aparcana, 2016; Moore, 2009).

Figure 5.13: eThekwini Municipality Metro Police confiscating wet cardboard and scrap metal in Montclair, Durban.

(Nkabane, 2016)

Figure 5.14: Security officer reprimanding a waste picker in Durban Central.

(Source: Author's own)

The economic, political, and social contexts of South African urban areas make it difficult

for waste pickers to leave their working environment. The waste picker Elizabeth and

her work partner live in Barcelona, a government funded housing scheme (RDP); where

they are charged for electricity and water. They moved from informal housing areas where previously they could access water and electricity illegally and without payment. The women are hence forced to remain working as waste pickers in the informal sector in order to maintain an income to pay for the associated utility costs of their 'free' new houses. Furthermore, they have limited work opportunities in the formal sector as they are uneducated and elderly. The gender relations within the waste recycling economy reflect wider relations in the society and economy. In this instance, employment practices in South Africa produce and entrench marginalisation. It is clear that national level policy decisions about housing have impacted the lives of poor women who are pushed towards the informal economy for lack of alternative livelihood possibilities. Different agendas in the urban areas determine the flow of resources resulting in inequalities that affect the poor in society (Kaika et al., 2006).

Other waste pickers in Lamontville also have financial obligations that keep them working in the informal sector. Ngema and Ka are taking care of their family members. Ngema is a grandparent and is also taking care of her HIV positive son. Her whole family including her grandchildren, rely on her pension grant supplemented by what she earns by waste picking. Likewise Ka is 47 years old and still living with his mother whom he is taking care of. However, since Ka is a man in Lamontville, he has options of alternative sources of income. The male waste pickers also have the option of working in the factories outside of Lamontville and also doing odd jobs in the community (ama-piece jobs). Ka said he has a card and company number for a firm in Illovo town, Durban. He can go to Illovo at any day and if there is casual work available, it will be given to him.

Likewise, Sokuthula, another male waste picker relies on ukufesa [57] for alternative income. This means Sokuthula walks around factories searching for employment. In the household survey, some men reported that they were in seasonal employment (see appendix 10). None of the women in the household survey reported on involvement in seasonal employment. Women who seek employment in the industries are considered to have loose morals.

The contribution of waste pickers to waste reduction in Lamontville is significant. A worthwhile contribution made by a waste picker was observed during fieldwork in Lamontville Central whereby a waste picker turned an illegal dumping area into a waste collection spot where community members can discard their recyclable waste (see Figure 5.15 below). Other waste pickers were proud of being able to create a livelihood through collecting and selling waste material. They now have the socioeconomic benefits of being able to afford food and housing. There is personal fulfilment that comes with collecting waste which is often ignored in academic literature. This thesis contributes to the understanding of personal fulfilment in waste picking. Mfundisi, a waste picker at Barcelona stated that waste picking is 'in her blood, she will never stop doing it'. She further explained that she even carries her waste collection sack with her when she attends funerals and weddings in case she spots discarded cans she can collect. Some waste pickers have feelings of pride in their work that justifies their devotion to waste picking. In all the challenges that informal waste pickers encounter, none of them

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[57] In isiZulu ukufesa means to 'queue for work'. The word, ukufesa is said to be derived from the English noun 'face'. It evoked the frustrations of job seekers who press their faces against the gates of companies in attempt to find employment (Hunter, 2010).

requested recognition from the government as suggested and found elsewhere by other researchers (Dias, 2010; Marello and Helwege 2018). Waste pickers in Lamontville Township expressed attitudes of disaffection towards the government. Their requests were connected to desires for provision of transportation and protective clothing.

This section on informal waste sector and modernisation argues that waste pickers have a valid role and should be supported as a way to promote recycling. However, the current precarious and dangerous lives of waste pickers epitomise how current waste policies and practices create and maintain social exclusion. The following section 5.6 details the gendered nature of public participation in household waste management.

Figure 5.15: Waste collector who turned a waste dumping area into his working space
(Source: Author's own)

5.6   Public Participation in Household Waste Management

Fung and Wright (2003) argue that policies generated through deliberation are more legitimate than those derived from a top-down manner and encounter less resistance during implementation. There are several forums for community members to participate in development initiatives (including in relation to waste management) in Lamontville Township. Participation occurs in invited spaces such as ward committee meetings and in uninvited spaces such as protest actions and informal networks with political elites. In South Africa, ward committees comprise the ward councillor and committee members elected by the community, whose term in office is set by the municipality (Makhanya, 2016). The ward committee is mandated to represent the interests of the community at the municipal level and to disseminate information about government's development plans that concern the community (Msibi and Penzhorn, 2010). Ward committee members[58] are required to understand the needs of the community and report community concerns to the councillor in that ward on a monthly basis. These meetings are set at the local community level to allow for all citizens to participate in policy formulation (Smith, 2011).

The intended purpose for ward committees of allowing citizens to contribute to their economic, social and environmental wellbeing is generally not achieved in Lamontville. Since ward committee members are exclusively ANC members, it was observed during field work, that public participation structures favour community members who are

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[58] Ward committee members live in their designated ward. This arrangement has been disrupted in Lamontville by the housing allocation scheme. For example, a ward committee member can receive an RDP house in a different ward or outside of Lamontville, but they still continue to be a ward committee member in their designated ward in Lamontville.

affiliated to the ruling political party. The following section explores the political nature of ward meetings and how they reproduce spaces of exclusion of 'Others'.

5.6.1   Ward Committee Meetings

Ward committee meetings are conducted in different formats throughout Lamontville. There are three wards in Lamontville Township (corresponding to 3 councillors) each tasked with arranging ward meetings (see appendix 18). From the interviews with municipal officials and conversations with ward committee members, several challenges were identified that hinder effective representation of the community at a provincial level. Ward committee members are required to attend the National Development Planning meetings that occur quarterly with city officials in eThekwini (Durban) central, which is approximately 20 km from Lamontville. At these meetings, the ward committee members are expected to engage with the provincial government to present the needs of what are complex communities. During field work, I encountered five ward committee members, none of whom had attended the quarterly National Development Planning meetings in the past 12 months[59]. The Lamontville ward committee members were still waiting for the meeting dates, while others did not completely comprehend the dynamics of the meeting[60].

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[59] It could not be confirmed if the meetings were occurring on a quarterly basis as intended.
[60] During conduct of the household survey, a ward committee member from ward 74 offered me an impromptu technical explanation of waste recycling. He hoped that his 'hustle' would persuade me to recommend him to the municipality as the champion of future waste recycling tenders in Lamontville. The explanation he provided of waste recycling was incorrect, showing that some ward members have limited information on waste matters. His assertions further brought into question the ability of ward members to comprehend the legal, financial and technical language of the matters on the agenda in national development meetings.

It was also apparent, although not mentioned by the committee members, that the logistics and cost of travelling to the meetings were a challenge. Therefore, as some ward members were unemployed, they were unable to attend the meetings. Thus, their influence only extends to the community level, resulting in dialogue only with the local political leadership, in the form of the ward councillor. This is an indication that ward committee members in Lamontville, who represent the urban poor, face huge challenges with participating in these meetings. This form of participation is not genuine as the communities' needs are not elevated to the provincial level where resources are distributed, further silencing the voices of communities on the periphery.

The research reveals that amongst Lamontville Township residents attendance at ward committee meetings is influenced by the individual's perception of the benefit to themselves. Overall 54.8 % of the surveyed community members reported attending ward committee meetings, 41.4 % sometimes attend meetings and 3.8% never attend the monthly meetings (see Figure 5.16). However, there were significant differences between the locations for respondents reporting on their attendance of ward committee meetings (Figure 5.16, X^2 test, P<0.05).
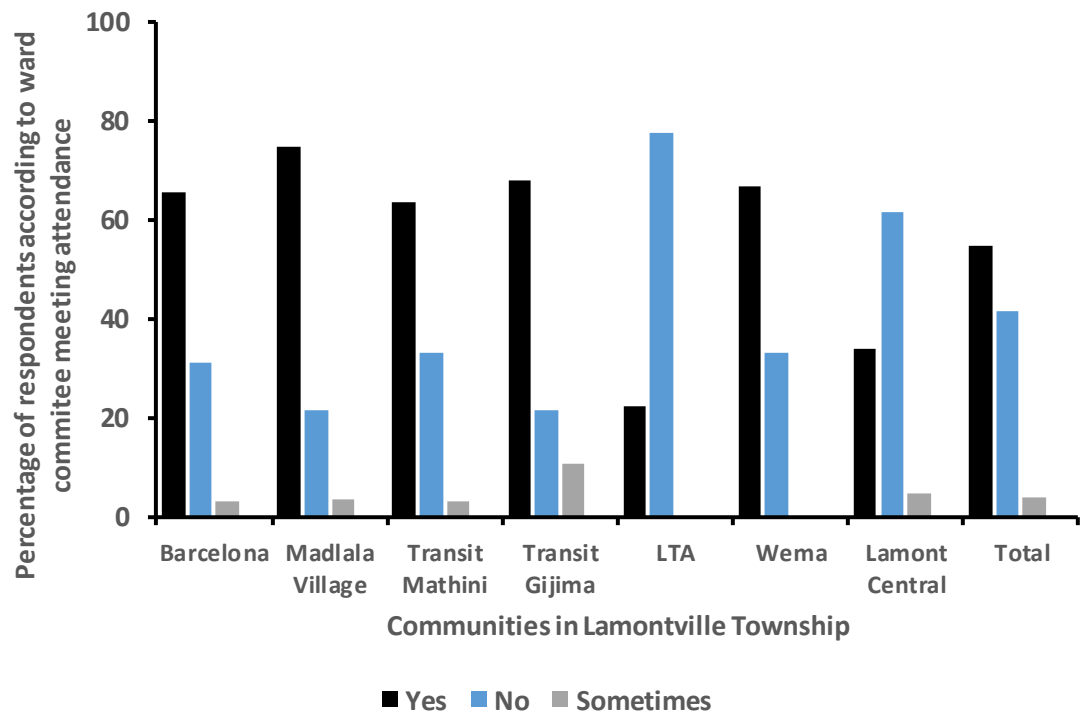
Figure 5.16: Percentage of respondents in Lamontville Township according to ward committee meeting attendance.

The majority of respondents who attend meetings gave the following responses to why they attend ward meetings; 'to receive information about development issues'. The community members are aware of the benefits associated with attending meetings and making yourself visible in spaces of public participation. In attending the meeting, community members believe they will be favoured in receiving an RDP house [61]. According to the community, RDP housing has become a clientelist good that is delivered to loyal ANC supporters. These claims were valid (justifiable), as I observed in Transit Mathini and Transit Gijima that ward committee members had two houses instead of one (see Figure 5.17 below). This is an indication that ward committee members whom, according to Brinkerhoff and Goldsmith (2002) and Heywood (1997), are linked to a larger grid of contacts, therefore have some influence in how houses are distributed in

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[61] Ward committee members have influence in selecting community members to receive RDP housing. Women in Barcelona spoke of exchanging sexual favours for an RDP house.

the township. The ward meeting space is more for visibly demonstrating political loyalty than a space for community members to voice their concerns relating to household waste management[62].

Figure 5.17: A ward committee member cut an opening on the wall to have access to his second adjacent house.
(Source: Author's own)

With respect to securing service delivery, it is preferable for sub communities to attend ward committee meetings in large numbers. This demonstrates that the entire community is in support of the current local leadership, thereby positioning itself well to receive other government goods such as electricity and water provision. These claims are validated in Barcelona, where the extension of services such as electricity are determined by the local councillor. Currently in Barcelona, the councillor is said to have stopped the electricity department from disconnecting illegal connections of electricity[63]. There are several illegal connections which, not only reduce revenue to the state but pose a danger to the community, especially children and other vulnerable persons (see Figure 5.18 below).

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[62] Some community members especially women, expressed that, when raising a concern in the meeting that was deemed as unnecessary, such as illegal waste dumping, they were reminded of their frequency at attending ward meetings – only regular attendees (mostly men) had their concerns listens to.

[63] In Barcelona, izinyoka (snakes), is the term used for the illegal connection of electricity, which costs R50 (equivalent to £3).

The dominant paradigm of decentralisation of local government encourages corruption (Ghuman and Singh 2013). The councillor's actions highlight her personal motivation of maintaining a good relationship with community members in Barcelona. Her acceptance of the illegal connections is a form of corruption. It gives her a level of personal power, whereby the community builds their faith in her and her political capital is strengthened. The manner of public participation (in respect to service provision) in Lamontville indicates that clientelism is a complex network of personal agreements between political patrons and their individual clients (Anciano, 2018; Bénit-Gbaffou, 2011). The following section, discusses how gender (gendered dynamics of public participation space) further plays a role in public spaces.

Figure 5.18: A child in Madlala village whose hand was electrocuted by touching illegal connection (Source: Author's own)

Community meetings are perceived as 'spaces of benefits' where government goods are distributed. The prevalence of violence in ward committee meetings discourages women from attending these meetings and thereby reduce their participation in local politics in Lamontville. In the household survey, 8% of the women respondents stated they do not attend ward committee meetings, due to the violent nature of the meetings. This is a significant number who are brave enough to be honest about their non-participation, because being vocal about non-participation in ward committee meetings could result in physical harm. In the focus group discussions and household survey women identified and described the meeting spaces as frightening areas. Men fight and scream at each other during the meetings. During field work the women referred to violence that erupted over disputed municipal election results (see ENCA, 2016 for the details on the disputed election in Lamontville and other areas in the municipality). Ward committee meetings became violent spaces prior to the election and after the election when the results were contested. The resulting exclusion of women due to the violence works to silence female members, and thus local governance ignores matters that are essential to women.

The violent nature of meetings was also described by men, but in a different tone. Violence is seen as a livelihood strategy, necessary to be successful in the contestation of local political interests. Indeed some research suggests that the use of violence is common in Lamontville and other townships because of South Africa's particular history of violent protest over decades to bring about social changes (Wilson, 2001). This may explain the male townships' residents' use of violence in demanding services and a

livelihood from the local government. Case study 5.2 below details the nature of violence that erupted after the election period in 2016.

Case story 5.2 : Election violence in Lamontville Township

A municipal election took place in eThekwini Municipality on 3 August 2016. The outcome (results) was disputed in several places in the municipality including Lamontville Township. Out of the three wards of Lamontville, the results from ward 75 were rejected by community members. This political situation resulted in conflict amongst disgruntled (politically active) community members in Lamontville, leading to violent protest action after the election. Disgruntled opposing factions within ward 75 demanded for the current councillor to be recalled. This demonstrates that democratically elected leaders are often recalled based on failed political intentions. Figure 5.19 below shows protest slogans on a wall demanding the right to recall the councillor. The office for the ward 75 councillor was closed prior to the election due to fighting during the ward meetings, and remained closed during the whole field work period. The community from ward 75 was left without formal representation at local government level, and their concerns and needs were unmet.

Figure 5.19: Political Slogan: 'We demand the right to recall councillors' (between Umlazi and Lamontville Township).
(Source: Authors own)

The violent protest was important to community members who are politically active and wanted to ensure that their preferred candidate was elected as the ward 75 councillor. Once in post their expectation was that the selected candidate would remain loyal to them as the clients, and thus direct state funded tenders (and resources) to them. The common term used by politically active members that I interviewed from ward 75 was; *'besifuna umuntu wethu'*, meaning we wanted our person. This favoured person would be embedded within their network of patronage and further strengthen their corrupt activities. The protest actions took place in August 2016 in Lamontville were captured in the media, and senior ANC officials from national government had to intervene to diffuse the fighting. The violent nature of political engagements in South Africa has been documented by many researchers (for example, Kynoch, 2016; Bolt and Rajak, 2016). The decentralisation of democratic local government structures such as the ward committee meetings fails to be representative of all groups in the community. Consequently, ward committee

meetings become battlegrounds of competing factions amongst politically active men in the community, who use violence while seeking individual assistance from local government. Therefore, women play a smaller role in political decisions and are likely to find their interests overlooked in democratic participatory spaces at grassroots level.

5.6.2 Waste, Social Movements and Geography of Political Capital

The different sections of Lamontville have varying access to political structures in the community. Ward committee meetings are the formal means for public participation in local government, but other additional spaces of participation e.g. affiliation to social movements are created by each subsection (depending on their characteristic) which affect their political capital. This section argues that community members who are in transit accommodation have minimal political capital affecting the quality of service delivery in their area.

Madlala village, is an informal settlement that has carved out spaces for public participation outside of the formal political spaces. The residents of Madlala village, had limited knowledge of ward committee meetings and there was no consensus on the meeting intervals. However, 75% of the residents of Madlala village who participated in the household survey reported attending the meetings (see Figure 5.16), I am of the opinion that their responses were untruthful. This is owing to their informal status,

which creates an ambiguous relationship between themselves and the local government. For the residents of Madlala village, insecurity and a lack of trust characterises their relationship with the state[64]. The residents of Madlala Village are 'waiting' to be evicted. Hlanga, a respondent in the household survey said; '*We don't know when they will come to remove us*' (Hlanga, 31, Male, Formal Employment, Madlala village). Madlala residents are not legally entitled to the land they have occupied and hence have inadequate access to basic services such as electricity, water and sanitation. Waste collection services are provided on an irregular basis, dependant on the political landscape. The Madlala residents may say they attend ward committee meetings in order to appear loyal to the local political leaders in the hope that they will be provided better services including waste collection.

Madlala village is affiliated to a prominent social movement called Abahlali baseMjondolo[65] , an organisation of poor shack dwellers in eThekwini. The movement's key demand is for 'Land and housing in the city' (Pithouse, 2008). It has successfully politicised and fought to end the forced removals of informal shack dwellers, and for access to basic services including waste services in eThekwini (Kienast, 2006). Abahlali BaseMjondolo mobilise around a rights-based claim that is enshrined in the constitution. For example, in terms of housing in South Africa, the Constitution states that 'everyone

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[64]During fieldwork, I encountered municipal workers from the security department at Barcelona, they were planning the dynamics of forcefully removing Madlala village residents (located close to Barcelona). A member of the security team stated that Madlala village is built under electrical power lines, on land which they have illegally occupied.

[65]The movement's fundamental belief is that impoverished people living in informal settlements have been forgotten in the 'new' South Africa post-apartheid. The movement asserted itself as a specific group of people with a set of interests that must be considered by the leading political party (Pithouse, 2006). The informal housing areas, such as Madlala village have become an object of study in urban studies, not only their creation but the individual efforts made by these communities to formalise their existence within urban spaces.

has a right to have access to adequate housing' and that the 'state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right' (Republic of South Africa, 1996).

In Lamontville Township, the movement supported Madlala village residents by opposing an unlawful eviction order in June 2014 (see Abahlali beseMjondolo, 2014). A resident of Madlala village in an informal conversation said 'the councillor fears us because we are not affiliated to any political party and we can not be bribed'. Madlala village has existed for over 10 years, their affiliation to the social movement is one of the reasons the settlement continues to grow. However, the living arrangements are complicated due to the tenant system. The community has accused the councillors and other community members of building shacks in Madlala village to rent to tenants as a source of personal income. Additionally, it is also common for boys who are considered to be too old to live at home and are unable to find formal employment to find refuge and reside in Madlala village. The demands of Madlala villagers are connected to the broader struggle of informality in post-apartheid South Africa (Dawson, 2014). Informal residents like those in Madlala village are in a better position in terms of asserting their political and social rights than people within the transit areas who depend on the political promises of the local government. For example, with respect to waste, the ownership of space is important in regards to managing waste litter by the community. Residents of Madlala village own the space where one's shack is located. Therefore, they can command and control the cleanliness in their vicinity. In comparison, in transit areas, there is no ownership of land and they feel no responsibility towards clearing waste litter.

There are two transition camps of temporary housing in Lamontville Township and the strategies employed by each differs in terms of reaching local political structures. The two camps differ significantly in terms of the employment status and ethnicity of the residents; building material, their location within the three electoral wards and their participation in structures of local government. A slightly higher percentage of people attend ward committee meetings in Transit Gijima (68%) than in Transit Mathini (63%) (see Figure 5.16). In addition, a larger number of people in Transit Gijima are in formal employment outside of Lamontville[66]. In Transit Mathini, those in employment were in the informal economy (frequently either as domestic workers or handy men). The people in Transit Gijima consist mostly of people who were born in Lamontville and lived in backyard shacks[67]. However, most residents from Transit Mathini originate from the Eastern Cape. The major determinant to accessing public participation structures (political structures) is the geopolitical location within Lamontville and the right to be in Lamontville. While Transit Gijima is situated in a hidden location within Lamontville, it is better positioned than Transit Mathini in terms of reaching the appropriate political structures.

Transit Gijima is geographically located in Ward 74, bordering Ward 69 which is served by a councillor belonging to the Democratic Alliance[68] (DA) (see appendix 8). The community of Transit Gijima is aware of the political resource it possesses, which they

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[66] Thus, it was difficult to organise focus group discussions in Transit Gijima as many of the residents are in formal employment. Surprisingly, it was in Transit Gijima where I encountered an individual with a Masters degree. Furthermore, the community of Transit Gijima are more assertive than those in Transit Mathini.

[67] People who lived in backyard shacks received an allocated number before moving into Transit Gijima.

[68] The image of the DA is associated with the historical setting of South Africa, during apartheid the National Party (partly formed the DA) provided an efficient service to suburban areas which were occupied by 'white people'.

use to get their demands heard. During focus group discussions, the women voiced their concerns on the neglect they experience from the ANC councillor responsible for ward 74[69]. The communities' major concerns are housing provision, sanitation, and safety issues for women and children as there is no street lighting. Minor concerns involved the smell emanating from the waste dumps due to inadequate waste collection intervals, and household waste that has blocked public toilets[70]. Since the community is positioned near ward 69 (DA controlled), service delivery complaints are reported at ward 69 office located within Lamontville. Ntoko explained the reasons for reporting complaints at a different (adjacent) ward:

> I reported an incident of a blocked toilet at ward 69 and they helped us.
> They helped us so they can show that the ANC is underperforming
>
> (Ntoko, 38 years, Transit Gijima, Female, Focus Group Discussion)

In Transit Gijima, a small portion of household waste is disposed of in black refuse bags left inside toilet facilities (See Figure 5.20). It is also common that waste items are also disposed of directly in toilets, which become blocked and damaged. After several complaints to the ANC-led ward 74 which went unanswered, Ntoko opted to approach ward 69, a DA-led ward to report the incident. Even though Ntoko, lives outside of ward 69, the DA officials in ward 69 assisted her, as a way of gaining political capital from an unsatisfied member in an ANC-led ward. Addressing their service delivery concerns to a different ward is common practice for residents of Transit Gijima. Manelisi also reported her concerns over a burst sewerage pipe in ward 69 (Manelisi, 34, Female, Zulu, Transit

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[69] The women kept emphasising *'silahliwe thina'*, a strong Zulu phase meaning we have been abandoned.

[70] In areas of transit housing, toilets and washing facilities are provided communally, shared by several households.

Gijima). This further strengthened the political and social position of the DA, while simultaneously jeopardizing the ANC's efforts in acquiring electoral support.

Ward 69 is eager to assist any person from an ANC led area to capitalise on their mismanagement of wards. This opening allows participation spaces for community members who are excluded from the political patronage networks. For example; those who do not have a relationship with the ANC councillor of ward 74 opt for ward 69 who are still perceived as being genuine in delivering services in an equitable manner. Waste management and the provision of other services are used as a political tool for both the community and the opposition party. Therefore, the 'flows' of household waste are influenced by the local political setting. These disputes between the DA and ANC at ward level within Lamontville Township are similarly played out on a national scale. Municipalities that are controlled by the DA often struggle to obtain assistance from central government (Sartorius and Sartorius, 2016). In Lamontville, the ANC is in direct competition with the DA which is the official opposition party in the province of KwaZulu-Natal[71]. Waste management forms parts of the struggles for political power; how actors make their decisions within a given context is structured by economic and political forces operating at various scales (Bjerkli, 2015; Swyngedouw and Heynen, 2003).

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[71]In the household survey, a ward committee member alerted me to development taking place at the ANC brand level. The ANC is in talks of rezoning areas to exclude Chatsworth, a historically Indian Township from ward 69 that votes for the DA. In so doing, all of Lamontville, would be under the ANC.

Figure 5.20: Waste bags inside the communal toilet facility at Transit Gijima

Source: (Author's own)

In comparison, Transit Mathini is allocated on the periphery of Lamontville and fully dependant on the processes of Ward 75. Sixty-three percentage of the residents of Transit Mathini who participated in the household survey reported that they attend ward meetings, and 61% of them were confident that the meetings occurred once a month. In focus group discussions in Transit Mathini, men and women expressed dissatisfaction with the manner in which the ward meetings are conducted. However, they still attend these meetings, with the hope of receiving positive feedback about being relocated into formal housing. Waste related issues are no longer discussed in the meetings for the following reason:

> We are told where to dispose waste, but people continue to dispose anyhow. No one follows what is discussed in those meetings.
>
> (Nwabi, 35, Female, Xhosa, Transit Mathini, FGD)

Nwabi suggests ward meetings are ineffective in addressing indiscriminate waste dumping. The agreements made at the meetings are not binding. Both men and women in focus group discussions were dissatisfied with the nature of ward committee

meetings, however, they still faithfully attend the meetings. Transit Mathini residents are considered outsiders whose origins lie outside of Lamontville. Their survival in Lamontville is dependent on their allegiance to the ANC, which is their vehicle to 'hopefully' gaining formal housing. At the meeting an attendance register is signed, which is a subtle tool to monitor, not only attendance but also loyalty to the ruling party. In Transit Mathini service delivery is complicated as it is entangled with the local structures of political parties, increasing the likelihood of violent protest when promises are unmet by the ruling party. Section 5.6.3 further probes the nature of waste protest in waste infested areas.

5.6.3   Protesting in waste infested areas

Protests in South Africa have been a common occurrence since the apartheid era. Protest action during apartheid was directed towards the oppressive government and nearing the end of apartheid in the 1990's, violent politically motivated protests emerged between the ANC and the IsiZulu-based Inkatha Freedom Party (IFP) in South Africa (Breetzke, 2012). The struggle for power between the ANC and IFP was intensive in KwaZulu-Natal townships, where the most number of people died (Klopp and Zuern, 2007). Duncan (2003, p.11) refers to the 'low intensity war' within Black townships during the transition period; daily, media reported on bomb blasts and murders of political figures. A total of 1,400 people died in South African townships from 1990 to 1994 (Knox and Monaghan, 2001). Today, in a 'democratic society', violent protests have decreased in townships and other deprived areas of the 'new' South Africa.

Social protests are now directed at unsatisfactory living conditions and unmet promises made by the ANC ruling party. In the past 5 years several documented incidents in the media of protest actions in eThekwini Municipality show people demonstrating against a lack of service delivery. Protests are more common in resource-deprived areas such as Lamontville. However, minimal attention has been given to the struggle against poor living conditions including lack of waste management services in transition housing. During field work, the community spoke of two protests that occurred which have shaped the socio-political landscape of Lamontville. The first protest involved disputed results of the 2016 Municipal elections and is extensively discussed in section 5.6.1. The second protest consisted only of residents of Transit Mathini and describes the social, economic and political realities of ethnic minorities who are struggling to obtain ANC's election promises of free services (i.e. housing, electricity, healthcare and waste management). This section focusses on the nature of protest action within Transit Mathini, the most deprived sub-community in Lamontville.

The research reveals that people living in Transit accommodation receive less services than those who are already living in substandard RDP houses. Transit Mathini comprises small, closely-packed zinc structures and lack social infrastructure and amenities[72](refer to Figure 4.2 in section 4.3). The local municipality employs the same method of collecting waste as in other areas in Lamontville, which are structured differently in terms of housing type, and waste collection areas (as elaborated in section 4.3). In Transit Mathini, waste is disposed of in waste collection areas with low walls that are

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[72] Privacy in each unit is impossible as there are no walls inside the zinc containers. The residents of transit housing also struggle to get a decent night's sleep.

inadequate to contain the waste and the waste collection vehicle has limited space to turn around. Furthermore, the physical conditions of the area were not considered when planning for waste collection services[73]. Waste water accumulates in between the clustered houses due to the poor drainage systems and wayside areas of uncut grass (bushes) become waste disposal sites. The provision of refuse bags by the waste collection contractor is inconsistent and residents resort to using plastic bags from supermarkets to put their rubbish in which are not always collected by the private company. During fieldwork visits to Transit Mathini, many children were observed to have skin irritations due to the insanitary conditions and poor waste management practices. The community in Transit Mathini suffers from minimal service provision, while living in a deteriorating urban area with inherently negative characteristics.

The local government has done little to mitigate the waste management challenges in Transit Mathini. Ward committee members placed a notice at the communal washing area, warning of punishment for improper waste disposal. However, the signage is ineffective, as the dominant planning rationale of the area exacerbates the difficulties of disposing of waste. The community have conditioned themselves to disregard the waste. Xolo said, *we don't care about the waste, we are waiting for our houses* (Xolo, 34, Female, Xhosa, Transit Mathini). Waste management is a low priority for the community (see figure Figure 5.6) and their greatest concerns is moving into formal RDP housing.

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[73] An Environmental Impact Assessment which is required for all developments under the National Environmental Management Act was not conducted at Transit Mathini. People were relocated to low lying wet areas without any study to determine the suitability of the area. According to Makhanya, a municipal official, Transit Mathini was constructed before the waste department was informed. Transit Mathini only received waste collection services from the municipality after people from Lamontville (mainland) complained to the local councillor about the unhygienic conditions that emanated from uncollected household waste in the area of transit accommodation.

The current residents of Transit Mathini were relocated to this transit area from shacks (mjondolo), without the kind of proper engagement that would have involved clear explanation of timelines for when their permanent formal housing would be made available. Moreover, there was an expectation from the residents of Transit Mathini that the site they were resettling in, would have improved services compared to the informal settlements they were leaving. Waste collection is a challenge for places such as Transit Mathini where political powers make decisions on relocating people without adequately considering the physical geographical environment and the need for provision of services.

In Transit Mathini, conversations with residents on household waste management were often associated with housing and the local ANC councillor's promises of improved living conditions. Therefore, I conducted an interview with an official at the municipal Lamontville housing department and enquired about the processes involved (time frame) with moving people from transition housing to formal housing. The housing official disassociated herself and expressed that ' *We (housing department) are not involved with anything that has to do with Transit Mathini. Those people belong to the councillor'* (Slondi, Female, Housing official, Lamontville Township).

Thus according to the local housing official, individuals in transit homes 'belong' to the councillor. The notion of 'belonging' to the councillor was further explained by the community in the household survey. Mayile from the Eastern Cape said '*Ngafika ngoMucha eMathinini'*, (Mayile, 38, Female, Xhosa, Transit Mathini) when translated, it

means, I was placed at transit accommodation by Mucha, who was the previous Ward 75 councillor. The councillors have been accused by the broader community in Lamontville of bringing people into Transit Mathini, and promising them houses in return for their votes in the elections. While the councillor is then in power, he or she is responsible for 'their' people. According to the residents, the councillors 'collects' people from informal areas, predominantly in Kwa-Zulu Natal and Eastern Cape Provinces. Several residents from Transit Mathini detailed the political arrangements made prior to their relocation. In a focus group discussion with women in Transit Mathini, Zime, a Xhosa woman who has spent more than 10 years in Transit Mathini, said the following:

> This is the third councillor and we are still here. The first one came and
> took his people. The second one did not even look at us. He said he did not
> want Xhosa's
>
> (Zime, 36, Xhosa, Female, Transit Mathini, Focus group discussion).

Zime and the other women in the focus group link their arrival to Transit Mathini with a councillor who was in power at that particular time. The 'first one came and took his people' means the councillor brought people into Transit Mathini and then moved these people to RDP houses[74]. It is evident that service delivery for immigrants is negotiated through relationships with those in power who use ethnicity as a measure of entitlement. Therefore, residents of Transit Mathini, who do not 'belong' in Lamontville, remain loyal to the ruling party in the interest of achieving improved housing and a better life. In this context, the implication of voters' loyalty is that minority ethnic groups vote with the dominant Zulu group that is controlling the economy to better position themselves to

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[74] Similar narratives were obtained from people living in RDP housing; those residents explained their entry into and exit out of Transit Mathini through the local political structures.

receive basic services such as housing and household waste services. Although the housing upgrade is part of government policy, the politics of the ANC has infiltrated government institutions affecting the implementation of the housing policy and creating an environment that is conducive for patron- client relationships to flourish.

The impermanent state of this settlement of transit Mathini within Lamontville Township deprives the residents of basic services. The community is dissatisfied with the poor conditions of shared toilet facilities, inadequate household waste collection and the risks to safety of their children. The residents of Transit Mathini decided in 2016 to protest in demand for housing that was promised to them when they were relocated to Transit Mathini. The community is adamant that the temporary zinc structures have become permanent housing. Furthermore, the community in Transit Mathini and Lamontville, directly accuse the local councillors of corruption, alleging that access to government – provided housing requires bribery and inducement. The community's claims are validated by other reports that have emerged in the media on corrupt activities involving politicians and housing allocations in townships across South Africa (Sack, 2013; Rondganger, 2016). Residents of Transit Mathini, also compared their living situations (social, economic and political realities) to that of Lamontville Central[75]. The comparison made by Transit Mathini residents indicates an aspiration of being included in the 'community of Lamontville' since they are economically and politically disadvantaged. These grievances were a powerful motivation for collective action

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[75] Activities such as grass cutting, were viewed as a privileged for Lamontville Central by residents of Transit Mathini. The community of Transit Mathini expressed how they had limited political representation.

against the government, as prior engagement with the local councillor through their elected representatives was fruitless.

The protest at Transit Mathini took place on May 2016. The protest involved mostly men while women generally avoided the demonstration due to fears of violence. David, a resident of Transit Mathini who participated in the protest, explained the dynamics of the protest action in the following way:

> We took waste from the stream and blocked the highway (N2) with it... We convened at 3 am, we wanted the councillor to tell us when we are moving out of this place. Those who were at work, were here in spirit

(David, 28 years, Male, Xhosa, household survey, self-employed, Transit Mathini)

According to David, the protesters gathered in the early hours of the morning, when there was less vehicle traffic. To draw the attention of local authorities, filled waste bags were used as a political tool to gain adequate housing. Protesters collected waste bags from the stream in Transit Mathini (see Figure 5.21) and also from the uncollected waste in the waste collection areas. The national N2 highway [76] which passes next to Lamontville was blocked with waste bags restricting the flow of traffic. The residents attempted to bring their struggles for adequate housing into the public arena. These protestors applied similar tactics to those used during the fight against apartheid; protesters from Transit Mathini marched and did the 'toyi-toyi'[77], but instead of burning and destroying buildings as a means to be heard, the community used the uncollected waste items. Placing waste bags on the streets exposed their plight as they felt they lived in a marginalised hidden area of Lamontville. The actions of the community show that

[76] N2 is a national high way that runs from Cape Town through Port Elizabeth to Durban.
[77] Toyi-toyi is a Southern African dance involving a high step that was made famous during apartheid protests. Today the toyi-toyi continues to be a popular symbolic act of resistance during service delivery protest (Trotter, 2009)

waste has different meanings to various actors in the community, while simultaneously

being intertwined within the political struggle of marginalised people. Furthermore, the

abundance of waste indicates the failures and weakness of local government in

incorporating all citizens into the new South Africa.

Figure 5.21: Waste bags disposed in the nearby stream in Transit Mathini
Source: Author's own

The protest action captured some media attention as motorists using the N2 expressed

outrage at the dirt and refuse on the road (see IOL, 2016). The local councillor was forced

to engage with the protest leaders to diffuse the situation. The protest action came to a

halt with the arrival of the ward 75 councillor who 'pulled' the leaders of the protest to

her office. Protest leaders were shown the 'housing list' that contained names of people

who were in waiting for government funded housing. At that point, the government

retained its legitimacy as it showed that the number of people due to be allocated

housing were more than the houses available. Thereafter, the leaders returned to the

community and informed them about the housing list and urged the community to

continue 'waiting'. Within the contemporary political and economic conditions in

Lamontville, waiting entails living in spaces of poor quality of life resulting from

inefficient waste management. Moreover, elected municipal ward councillors are not

held accountable for the promises they make. This section on protesting in waste

infested areas gives evidence of how service delivery for immigrants is negotiated

through relationships with those in power who use ethnicity as a measure of entitlement. Impoverished areas such as Transit Mathini are involved in the politics of waiting which entail living in waste infected areas while waiting for housing provision.

5.7   Conclusion

This analysis and discussion in this chapter explored the relationship between urban waste policy and social exclusion in Lamontville Township. The household survey, policy documents, focus group discussions, observations and stakeholder interviews were used to explore the nature of policy implementation in a South African municipality deeply marked by inequalities in the post-apartheid era. The discussion and findings in this chapter reveal that policy enacted in the new South Africa has failed to eradicate the deeply entrenched socio-economic and ethnic inequalities. The management of household waste (particularly as discussed in section 5.2) demonstrates how managing household waste forms part of a broader political struggle for political actors who aim to strengthen their dominance in the community. The findings of the empirical research undertaken for this thesis indicate that the politics of the ANC has permeated institutions affecting service delivery and excluding the less powerful in society. The dominance of the ruling party negatively affects service delivery in marginalised areas like Lamontville Township. Furthermore, the political economy of handling waste in Lamontville results in exclusion of women from public space and othering of people who do not originate from Lamontville Township.

Addressing the second objective of this thesis: to research how current waste policies and practices in urban areas facilitate the exclusion of vulnerable members of society; the findings in the preceding sections resonate with urban political ecologies that view environmental pollution as a product of political processes at different scales. Residents of transit accommodation, who are in waiting for government funded housing, live in waste infested areas. Waste collection is a challenge in areas of transit housing as political powers make decisions on how and when waste services are provided (in an attempt to strengthen their power). The informal nature and impermanent state with highly transient populations of these settlements does not only deprive these communities of waste services, but also affects their political status in the township. The narrative brought forward in this chapter brings to light that household waste management is part of a complex set of political, ethnic and gender hierarchies that mediate the implementation of waste policies. In the following chapter, the gendered dynamics of household waste management are explored in greater depth.

CHAPTER 6: HOUSEHOLD WASTE PRACTICES AND GENDER DYNAMICS

6.1   Introduction

The aim of this chapter, which focusses on household waste management and gender dynamics, is to understand how local social, political and cultural processes influence the gendered divisions in household waste management. To address the third objective of the thesis (section 1.2), this chapter presents the findings generated from focus group discussions, household surveys and interviews in Lamontville Township. It also brings together data collected through observations, literature survey and interviews with waste management practitioners. A feminist political ecology approach, particularly the concept of intersectionality is applied to explore the different roles men and women have within household waste management in Lamontville Township. Furthermore this chapter details how poor waste management affects the appearance of a woman's body leading to exclusions which are constructed based on the intersection of dirt, geographic position and ethnicity.

The chapter opens by assessing the responsibilities and roles that women and men have in managing household waste, showing the gendered nature of domestic waste related tasks and activities. Motherhood is highlighted as an important role that brings women closer to waste. The chapter further explores how environmental pollution is unevenly distributed arguing that women in urban areas bear the brunt of the impact of inadequate waste collection services. An analysis is presented in the chapter of emotions that result from living in waste infested areas, and how politicised ethnicity

results in waste conflicts amongst women. This is followed by a review of how public participation spaces use gender, ethnicity, political affiliation and marital status to exclude women from public participation.

6.2   'I am a woman and I am responsible for waste'

Gender is an important factor in determining household responsibilities. From the comment 'I am a woman and I am responsible for waste' (Limile, 23, Female, Xhosa, Lamontville central, FGD) handling household waste in Lamontville Township remains the responsibility of women. Her beliefs about waste are common amongst other women in Lamontville. In general women are tasked with disposing of waste whatever the specific waste collection method in their sub-community. Likewise, in the household survey, 78% of the interviewed household members state that women are responsible for household waste[78]. The comments of women who participated in the focus group discussions reflect how they have taken ownership of the responsibility of handling household waste:

> We do not have any problem with waste because we are women. It is our duty to dispose it.
>
> (Ayanda, 26 years, Female, Zulu, Lamontville Central, FGD)

> We are here the whole day, when people wake up and go to work, you are left behind. You are forced to dispose the waste.
>
> (Zinyo, 35 years, Female, Xhosa, Transit Mathini, FGD)

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[78] The remaining 22% consisted of household that consisted mainly of men. The other household had a women who was unable to be responsible due to employment and old age.

Ayanda asserts that she and other women are primarily responsible for household waste because of their gender. Handling waste is associated with other domestic activities such as cooking and cleaning which are also predominately done by women; and are viewed as forms of care for their family members. She does not perceive this action as a burden on women. It is a responsibility that is automatically assumed because culturally certain duties are allocated to a woman. Gendered societal norms tend to assign reproductive labour, such as caring for family members, household waste management, and housework to women; while men are considered as primary workers outside the domestic sphere as the main breadwinners of their households (Kroska, 2003; Kes and Swaminathan, 2006). On the other hand, Zinyo points to the socio-economic conditions in South Africa which dictate her position in the household and community. The burden of managing waste falls on her because (being unemployed) she spends most of her time at home, therefore interacting with household waste on a daily basis which she finds unpleasant and annoying. According to her, if she were employed and spending her time working away from the home, she would not be forced to deal with waste as that responsibility would be transferred to another person. Her statement about being left in the home all day and forced to deal with waste reflects her frustration over unemployment more than over poor waste management. She resents her current impoverished economic position in the community and her responsibility for waste handling is based firstly on her status as unemployed; her gender identity is secondary.

Her attitude illuminates the economic situation in South Africa that dictates how waste is handled and perceived by different community members. Figure 6.1 shows women's responsibility for waste alongside other domestic duties such as laundry (hanging on the clothes line). She is keeping the vicinity around her home clean by retying refuse sacks to stop waste spilling into the pedestrian pathway.

Figure 6.1 Woman retying refuse bags after dogs had ripped it apart - Transit Mathini

(Source: Author's own)

In other households, the duty of disposing waste is negotiated (albeit not always successfully) between women without involving men:

> In the morning you find that you are late for school. I have a child that I must also prepare for crèche. Sometimes, I forget to take the refuse bags to the streets and at times my sister oversleeps. By the time she wakes up, the waste vehicle has passed.

(Phili, 26 years, Female, Zulu, Barcelona, FGD)

According to Phili, she and her sister are both responsible for household chores, including waste management. Phili has two brothers who are excluded from the arrangements for disposing of their household domestic waste. Waste bags are collected weekly by the local contractor and in instances where they do not put out the waste bags in time and miss the collection vehicle, their waste is disposed of in the nearby stream. It is convenient to dispose the waste in the stream as it is close to the location of the household. This account indicates that women have multiple roles within the household (including child care) and the absence of a woman results in improper waste disposal, men are not involved in waste issues. Buckingham and Kulcur, (2009) suggest that men tend to care less about domestic waste issues as such issues are not seen as masculine concerns. The lack of empathy that men show towards improper domestic waste handling and their absence in household waste management was noted in all of the women-only focus group discussions held. Nomaliswa further clarifies her views on the role that men have in waste management:

> Men do not touch waste, it is just like that. We, as women dispose the waste.
>
> (Nomaliswa, 40 years, Female, Zulu, Transit Gigima, FGD)

Nomaliswa states that in her view men in the township community of Lamontville do not touch their household waste, but that she and other women understand their position as disposers of waste at household level. She believes that women are closer to waste and dirt than men. Likewise, Beall (1997) also concludes from research in South Asia that women are the gender that is traditionally equated to waste. In the household survey, an unemployed man in Transit Mathini said his wife who is a domestic worker in Montclair disposes of their domestic waste, even though he spends most of his time at home. Although women are now more economically active than during apartheid, men's attitudes are still influenced by both cultural practices and the colonial migrant labour system which positions them as economically active and 'away from the home'. However, men as waste pickers and working as contractors engage with waste as a resource that offers livelihood opportunities and employment.

The attitudes of men and the political context of Lamontville work together to oppress women within waste service provision. In the household survey, Ningithi, who resides in an informal house, states that she is forced to take waste with her on the way to work and dispose of it along her journey as the other family members refuse to handle it in her absence as they are all men[79]. The burden of waste for women like Ningithi is compounded by the local political setting that dictates the non-provision of refuse bags

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[79] She was only able to speak about the non-participation of her male relatives because at the time of the interview they were not in the house.

to informal settlements. Ningithi does not receive refuse bags as she is a tenant in a backyard shack that has not received recognition from the local government (refer to section 4.3 for explanation of recognition process). This shows how political decisions place additional pressure on women who are already in a submissive position within the household with respect to gender relations.

It became evident during fieldwork that in several instances women were being physically abused by their male partners. As it was outside the scope of this research, the nature of the abuse was not investigated, however the women stated that the abuse they experience extends to the domestic sphere. Sdudla who resides with her male partner in Barcelona stated the following:

> Grandmothers are always tired. They cannot place the waste on the streets. Please exclude men from the list of vulnerable people, unemployed men are abusive.
>
> (Sdudla, 34 years, Female, Zulu, Barcelona, FGD)

Younger women in focus group discussions share Sdudla's sentiments on the manner in which men treat them. The discussion (at this point) involved recounting vulnerable people that this study was focusing on and unemployed men were included in that list, however Sdudla pleaded with me to remove men from that group. In the context of waste management, Sdudla describes how unemployed men are abusive towards them and not managing waste is another form of this abuse. It was evident that intra-household dynamics and power relations within heterosexual couples impact the distribution of household chores including household waste management. The

dependency many women have on the economic contributions of their male counterparts, often places them in the role of having to deal with waste of their households alone and accept non-participation of their male partners in waste disposal in their homes and streets. Similar attitudes were expressed by Tiny (Female, 24, Zulu, FGD) who also resides with her male partner in Barcelona: *'Men are abusive and rude. They are lazy. They fail to take the waste bags out'.* Tiny's comment shows that aggression is used by men to control the behaviour of women. These quotations show that women are under multiple oppressions within the household.

The men in this research echoed the discourse that waste belongs to women. The greatest challenge with household waste management for Khalad was that he was disposing of it; he said:

> Every morning at 06:45am, I must be awake to take the waste out. I am the one responsible for disposing waste. The challenge is, I am the son at home and I do not have a wife.
>
> (Khalad, 31 years, Male, Zulu, Coloured, FGD)

Although in his thirties, Khalad is still living at home in Lamontville Township. He must wake up early to put out their household waste because the waste collection truck might arrive before 7am. The lack of employment opportunities has delayed his goal of adulthood. He is stuck in the prolonged transition phase from youth to adulthood and he cannot afford lobola [80] for a bride who would then be responsible for waste management in his household. Other men in the same focus group discussion reported

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[80] Lobola is the Southern African form of bride price and involves the distribution of wealth to the family of a bride, usually in the form of cash and/or livestock (Ansell, 2001).

that their female partners (wives and girlfriends) dispose of the domestic waste in their households. This subservient position of women is consistent with other studies on household waste responsibilities in the Global South (Beall, 1997; Lakhani, 2007; Nzeadibe and Adamu, 2015), which identify women as being responsible for waste because of their lower socio-economic status than men and their associated roles and responsibilities of household waste management (for example cooking, cleaning, washing that all produce waste). This position of women creates conditions that lead women to actively contribute to environmental pollution in areas of poor service delivery. The following section 6.3 explores the interaction of women with their immediate environment in the residential setting of Lamontville Township.

6.3   Women pollute the environment

Poor service delivery in a resource-deprived area like Lamontville and other South African townships makes waste disposal a challenge for women who are responsible for the majority of household chores including waste disposal. The focus is on women as they are predominately responsible for household waste management and experience the environment differently from men. During fieldwork women were often accused of being the polluters by the community and municipal officials. Women find alternative methods to dispose of waste, polluting the environment they live in. Sdudla explains the conditions which lead her to pollute in the following way:

> In this community we do not have a place for storing waste bags. We throw our waste here [points at the stream overgrown with bushes], everything we have; papers, plastic and food waste, all of it is thrown in that place. It causes mosquitoes and rats.
>
> (Sdudla, 34 years, Female, Zulu, Barcelona, FGD)

In Barcelona, Sdudla blames the lack of suitable waste storage areas as the reason for disposing of her rubbish in an inappropriate manner. Hence, her actions result in environmental pollution. The residents of Barcelona are not required to pay for the waste services provided by the municipal authority and service delivery is generally poor. The minimal collection by the private contractor is insufficient while an alternative avenue for paying for waste services is unavailable. In this regard, women actively contribute to environmental degradation. In Transit Gijima, Lindiwe explains her waste disposal patterns in the following way:

> We live in a hidden area and waste is not collected frequently. There are heaps of uncollected waste. Waste heaps are a mixture of different plastic types, you find black refuse bags and Checkers[81] plastics. I do not bother myself [with disposing in the designated site]; I dispose my waste over there.
>
> (Lindiwe, 34 years, Female, Xhosa, Transit Gijima, FGD)

Lindiwe explains how she disposes of her waste in the bushes adjacent to the transit camp[82]. The municipal collection vehicle collects waste on a random basis in this marginalized part of the settlement. The irregular waste collection service causes Lindiwe and other women to dispose of their household waste in an unsustainable

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[81] Checkers is a supermarket chain store in South Africa.
[82] The camp is positioned downslope on the edge of Lamontville, where it is not visible. This position marginalizes them in terms of service delivery.

manner, instead of walking to the designated area for waste disposal. As a consequence of poor waste disposal, the women in Transit Gijima, have to deal with rats, warthogs and flying insects; also the fermenting organic food matter produces a bad odour. The community who live in Transit Gijima feel powerless and are unable to hold the local government and ward councilor accountable for poor service delivery. They describe a physical divide between themselves and those in power. Several women complain about the steep gradient of the land within Transit Gijima. One woman reported falling; the fact that the transit camp is positioned on a steep hillside not only limits mobility, but also makes waste disposal a challenge. Women in transit homes and RDP flats are directly polluting the nearby environmentally sensitive environments such as streams and wetlands. In contrast, those residing in Lamontville Central, mostly pollute through contributing to illegal waste dumps which are not located in their immediate living space. In a focus group discussion at Lamontville High School, a girl noted how she disposed of food waste in a drain which ultimately blocked the drainage system for the whole family unit. The drainage system remained blocked until the person who pays rates complained to the local authority.

During my research in Lamontville, the women blamed themselves for practices of poor waste disposal, (predominately) in three sub-communities where service delivery was at the lowest. In Transit Mathini, Transit Gijima and Barcelona, women were of the opinion that their actions contributed to environmental pollution; they internalised and accepted their role as polluters. Thandi explained how they, as women contribute to polluting the environment:

It cannot be explained - we are responsible for these living conditions. We take food waste and our bodily fluids and throw them there, others dispose of their faeces in the sink. We are filthy.

(Thandi, 22 years, Female, Xhosa, Transit Mathini, FGD)

Thandi in Transit Mathini is blaming herself and other women for polluting their living environment with poor waste disposal practices. Thandi finds it difficult to explain the dirt and feels her actions are the major cause of insanitary conditions. As the person who is primarily responsible for dealing with the household's waste, the only available method of disposal means polluting the environment. The formally allocated waste collection areas have low walls (Figure 6.2 shows a waste collection area with low walls) and all waste types are disposed of together in one place. In deprived areas such as Transit Mathini, women do not recognise that their living environment prevents them from managing waste in a safe manner. In Transit Gijima, Hlali explains how men point the waste problem towards women:

Men say that women are responsible for the insanitary conditions at the washing basin, they say women are filthy.

(Hlali, 19 years, Xhosa, Female, Transit Mathini, FGD)

In Hlali's comments the insanitary conditions at the communal washing area are attributed to the waste that is disposed of by women. At the publicly shared washing basin, nappies, sanitary towels and bodily fluids are visible, making it easy to correlate the filth with women. The challenge with disposing of used disposable nappies arises when the discarded waste remains uncollected and nappies are exposed for dogs to 'rip apart'. The presence of discarded used sanitary towels is viewed as self-loathing, by both

women and men. What was common amongst men in focus group discussions was the disgust associated with observing used disposable nappies and sanitary towels in uncollected waste. The men identified waste items that are directly produced by women and babies to further perpetuate the impression that women are polluters. A man during the household survey in Transit Mathini said *'the women are careless, they throw those things (sanitary towels) anyhow. We (men) do not need to see those things'* (Elkin, 35 years, male, Ndebele, Transit Mathini, household survey). The feelings expressed by Elkin were also common amongst women who suggest that no other person needs to know when a woman has her menstrual period. It brought great shame to the women to spot their waste (sanitary towels) amongst scattered litter on the ground. Research conducted in the Global South highlights that menstruation is a taboo which is tied to socio-cultural and religious traditions (Agyekum, 2002; Bobel, 2010). Feelings of sadness were more prevalent amongst female adolescence, a girl in the focus group discussion said the following:

> It is not nice to see sanitary towels in the streets, you do not know if it is yours or not.
>
> (Nomvelo, 15 years, girl, Zulu, Lamontville High School, FGD)

Nomvelo confirms the embarrassment that is associated with observing used sanitary towels in uncollected waste. Children like Nomvelo are at the bottom of the hierarchy in the community and easily assume the responsibility for handling waste. When the issue of sanitary towels was brought up during the mixed focus group discussion, there was shaming and teasing from the boys. The implication of improving the well-being of people in South Africa (through the housing upgrading system) is absorbed by women.

The following section discusses the burden of managing household waste for women who are mothers.

Figure 6.2: Waste collection area- Transit Mathini
(Source: Author's own)

6.4   Motherhood in waste infested areas

Mothers displayed more concern for the state of the environment in comparison to men[83]. Mothers constantly worry about their children who play in waste infested areas. This concern was verbalised in all the women-only focus group discussions. To the women in Lamontville Township, the practice of motherhood involves keeping their children away from polluted and waste infested areas. It is a daily task that impedes their ability to have total control of their children's health. The women expressed how

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[83] Most of the women involved in this study have children. The community disrespects women who do not have children. According to Chilisa and Ntseane, (2010) motherhood is perceived as a desirable goal to accomplish in most African countries.

they care for their children and try to protect them from the health hazards that waste presents in the following ways:

> This area has stagnant water with waste and people urinate everywhere. The waste collection area is filthy with lots of flies. I always tell my child to stay away from that area, but it does not work, his friends play there as well.
>
> (Sine, 30, Female, Xhosa, Transit Mathini, FGD)

The polluted and dirty condition of the township environment is a direct source of stress and distress for the women. According to Sine, all her attempts to keep her son away from the waste fail. Transit Mathini is polluted with waste material littering the ground. Children do not have alternative playing areas within Transit Mathini. In Lamontville, there are limited spaces for children to play in; open spaces, playgrounds and soccer fields are under threat from housing developers. Figure 6.3 shows a playground that is being lost due to the construction of new houses. During fieldwork, one person made mention of the fact that limited recreational facilities for children, resulted in them playing in the waste (Male, 50, Lamontville Central, household survey). This indicates that the need for housing a growing urban population is prioritised by local government over the wellbeing of children. The burden of continuous cleaning due to other people's poor waste disposal practices was common in transit housing where people live in close proximity to each other. For example, in Transit Gijima, a mother details her cleaning duties:

> Another thing is having to pick waste that I did not throw. I am continuously cleaning because my children play with the waste.
>
> (Mam Dudu, 46, Zulu, Female, Transit Gijima, FGD)

Figure 6.3: The demolishing of a recreational area for the construction of RDP houses in Lamontville Central[84].
(Source: Author's own)

Mam Dudu explains how she must clean other people's dirty waste to allow her child to play in a safe environment outside. She would prefer not to, and would rather leave it for the municipality to remove. Additionally, Mam Dudu lives in clustered accommodation next to a pathway where littering is more common, hence she devotes much of her time to collecting the waste. For her and other mothers, caring for their children was a natural state of being a mother (see Hall, 1998 and Mamabolo et al., 2009). Figure 6.4 shows an image of children playing 'izindlu[85]', with waste items that

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[84] Reconstruction and Development Programme (RDP) housing are fully funded housing units/flats given freely to low-income families in South Africa. It is an attempt by the national government to cut down on informal settlements while alleviating poverty through home ownership (Shapurjee and Charlton, 2013).

[85] Izindlu means houses in English. It is a township game that involves acting out gendered roles that children observe in their homes. Young girls perform the roles of their mothers which involves cleaning and cooking. In Figure 6.4, the children are washing yogurt containers which resembles washing dishes. The presence of waste outside the house, allows the children to re-enact the activities in their homes. A patriarchal division of labour is introduced and reinforced in subsequent generations through this modelling behaviour.

are readily available. The concern for their children's health was further explained by Zandile who is a single parent:

Figure 6.4: Girls playing 'house' with yogurt containers at Transit Gijima.
(Source: Author's own)

> The children are sick all the time with scabies, it affects us parents because you must take the child to the hospital, that takes time out of your day.
>
> (Zandile, 38, Female, Zulu, Transit Gijima, FGD)

Zandile comments about the time taken out of her day as she often needs to take her child with scabies to the clinic. Scabies is common amongst children in Transit Mathini and Transit Gijima due to their exposure to waste and dirty living conditions. Zandile has three children and although she has a Masters degree, and is actively seeking work, she is struggling to find employment. She has limited alternatives outside of being a mother in a waste infested area. Motherhood intersects with the economic conditions to marginalise or prevent her from searching for employment that would improve her

position. Ayana also explains her experience at the clinic due to her child's poor health

as a consequence of living in a polluted place:

> I took my child with scabies to the hospital (clinic), I sat there the whole
> day. Just to get calamine, which I got the last time.
>
> (Ayana, 38 years, Female, Xhosa, Transit Mathini, FGD)

According to Ayana, the nurses just provide calamine lotion for the scabies without

examining the child's skin. Children with scabies are imagined to be living in spaces that

are labelled as dirty [86] and inappropriate for human habitation. There is shame

associated with having a child with scabies and Ayana feels she is failing at being a good

mother as her child is always sick. Other women also mentioned the burden of trying to

protect their children from exposure to waste:

> My child leaves me sleeping and comes back wet. The gum boots will be
> wet, when I take them off, he stinks. I give my son a bath, he goes out to
> play and comes back with boots full of water. I have to bath him again.
>
> (Maye, 30 years, Female, Xhosa, Transit Mathini, FGD)

> My child was eating a used condom from uncollected waste. He told me it
> was a balloon. I was very angry, I have to check where they are playing.
>
> (Zama, 26 years, Female, Zulu, Barcelona, FGD)

Maye has to continuously bath her child who is 3 years old because he stinks from

playing outside in a wet and dirty area. Transit Mathini is next to a wetland,

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[86]I remember when I was growing up how children with scabies were associated with dirt and poverty.
Teachers at school would bath them in front of all of us, as a form of public humiliation.

compounding their waste problems. Maye's child is already playing while wearing gum boots despite the heat in warm weather, but the gum boots are not enough to keep waste water away from him. Likewise, Zama, in the second quotation, speaks of the need to constantly monitor her child's playing environment. She found her child chewing a used condom from uncollected waste that anyone has access to. There is prevalence of casual sex in the Barcelona area of Lamontville. After hearing Zama's comment during the discussions, the women warned each other to be careful with the disposal of their used condoms. Mothers deal with different types of waste depending on their location within the township. Therefore, a single category of analysis such as gender (mothers) is insufficient in reflecting the daily struggles of mothers in the township. The concern for their children's health, drives them to clean their surroundings.

In taking care of their children, the women do the work of waste disposal that is the responsibility of local government. Hlali put it in the following way:

> The area next to my house was so dirty, I wanted to volunteer. My children play next to the waste.
>
> (Hlali, 19 years, Female, Xhosa, Transit Mathini, FGD)

Volunteering as expressed by Hali, means picking up litter and cleaning the public environment around her home. Women like Hlali voluntarily take on unpaid work for the sake of keeping their children safe. Her concern is more about her children than the environment. Volunteering is an action that is encouraged by local government in townships and low income areas in South Africa. It relieves the government of its obligation by letting the community take ownership of their surroundings. Hlali

understands the problem with waste, and is offering to personally contribute to solving it. This shows how neoliberal policies at a national level result in uncollected waste in poorer areas, placing more pressure on women who are mothers. Community members can volunteer as individuals or collectively under local government initiatives, which gives recognition in the form of a volunteering certificate. Appendix 19 contains the certificate awarded for volunteering. Volunteering is constructed as a duty of a good citizen in low income areas where class, race, and gender intersect to marginalise mothers. In clean up campaigns[87] that are conducted by the Durban Solid Waste department in Lamontville, more women than men participate. The municipality uses women as municipal caretakers in low income areas like Lamontville, relying on their roles as mothers. Chant (2013) states that unpaid labour which includes routine domestic chores is taken up by mothers, as a major role while men's labour is largely concentrated in income-generating work. In Lamontville, women who are mothers are positioned as caregivers in this community and the burden of inadequate waste management is felt by them the most. Constructions of motherhood in Lamontville Township are extended to alleviate waste challenges. There is an emotional element to interacting with waste for women which is explored further in the following section 6.5.

6.5   Emotions in household waste management

The environment has a direct impact on women's domestic activities in Lamontville. The majority of women's domestic work involves interacting with the environment and uncollected waste, producing tangible emotions in women who have household chores

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[87]Clean-up campaigns were often referred to as waste recycling by the community.

to conduct. Negative emotions such as 'I'm lazy', 'it saddens me' and 'I am worthless' were commonly narrated by women in focus group discussions, the household survey and informal conversations, about their living environment in Lamontville as part of this research. These verbal assertions were often accompanied by physical expressions and gestures that involved sighing, looking down and placing hands on the forehead. This section attempts to bring to the fore matters of gendered subjective emotions in waste management that have hitherto been ignored in the literature.

In communities where household waste is inadequately collected, activities such as washing clothes becomes a strenuous and difficult activity, producing feelings of inadequacy amongst the women. These feelings in Lamontville were more commonly expressed by women living in transition housing and government funded housing where waste collection is irregular. Since women are responsible for disposing of household waste, as in many other places in the Global South, it is the women who directly feel the distress of uncollected waste during their day-to-day living. The women explained their feelings on conducting household chores in waste infested areas in this regard:

> I have to think for long before deciding to wash my clothes. The area is dirty, it stinks, I usually get a headache from the smell. The area we live in is dirty.
>
> (Ntokozo, 37 years, Female, Xhosa, Barcelona, Household survey)

Ntokozo expressed the difficulties she faces with washing her laundry. In Barcelona, there is no running water in individual dwellings so water is collected from a communal tap. Due to the weight of wet laundry, washing is done near the water source. The communal tap is located next to a drain that contains waste (See Figure 6.5). A bad

odour emanates from the drain making clothes washing unpleasant. As a means of reducing the time spent in the washing area, women leave the tap running, unattended to while it is filling up large buckets. Ntokozo also reported developing headaches from inhaling unpleasant smells from the decaying waste material, indicating the additional health problems faced by women in poor urban environments. Residents of Barcelona, together with those of transit housing, share feelings of despair about having to conduct household chores such as laundry and collecting water in waste infested areas. Dirty waste places are 'felt' by women revealing the hidden by-product of improper waste management in 'developing' urban areas. In Transit Mathini, a woman recounts her emotions and experience with using the communal sink for washing clothes and dishes:

> The sink gets blocked sometimes. People dispose of faeces and urine inside the sink... When using the sink, I keep my eyes fixed on the sink. The surrounding is filthy. It is not pleasant to look at the waste, I don't feel good while washing dishes.
>
> (Zandi, 35 years, Female, Xhosa, Transit Mathini, FGD)

The comment by Zandi, shows how domestic chores involve physically and emotionally experiencing the polluted surrounding environment. The sink is attached to a toilet block which is not adequately maintained by a private contractor[88]. In addition, the waste collection area is also in close proximity to the sink. The process of washing clothes brings 'sad' feelings to her, her gaze must be fixed on the sink to avoid eye contact with the surrounding unpleasant dirty environment (See Figure 6.6). Within

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[88] The maintenance of the sanitary facilities (toilets) is the responsibility of a private contractor. The individual is an ANC volunteer and lives in Umlazi Township adjacent to Lamontville. According to the residents of Transit Mathini, cleaning is meant to be done on a weekly basis, but this schedule is not adhered to. There is discontent amongst the residents of Transit Mathini as this tender for cleaning their toilets was awarded to an individual who lives outside of Transit Mathini.

Transit Mathini, Thandi explains the pain she feels from using the communal sink in the following manner:

> If I look at the waste filth, I see food, bodily fluids, and sanitary towels. I feel like vomiting, it is disgusting…It is how we live here sister…it really saddens me.
>
> (Thandi, 22 years, Female, Xhosa, Transit Mathini, FGD)

Thandi is expressing her feelings towards washing clothes and dishes in the communal sink. She makes the decision to use the sink although she may jeopardize her health in an attempt to provide clean clothes for her family. These feelings highlight the challenges of waste management in neglected areas which affect women more than men. Such feeling are not tangible enough to be brought into the public spaces; the pain of inadequate waste management is internally absorbed.

Figure 6.5: Communal washing area in Barcelona – interviewing a woman sitting on the drain that collects waste
(Source: Author's own)

Figure 6.6: Women washing clothes in a communal sink at Transit Mathini next to discarded waste (Source: Author's own)

Emotions expressed about the environment were more common from women than men, as their daily activities are directly linked to the condition of their surrounding environment. In Transit Mathini, some efforts were made by the ward committee to alleviate the waste problems by placing warning signs at the washing area. The warnings describe a penalty for disposing of food waste and faeces in the washing area. However, these signs are inefficient as there is no alternative to disposing waste in a polluting manner. As the women lack resources, they are unable to move out of such environmentally polluted areas.

In other areas, attempts to keep the environment clean lead to challenges for women using the washing line. Yolanda expressed the anger that accompanies hanging out her laundry to dry:

> We hang the waste bags on washing lines, maggots from the waste creep onto our hands. It makes me angry because the clothes get dirty.
>
> (Yolanda, 40 years, Female, Zulu, Transit Gijima, household survey)

In the above quotation, Yolanda refers to how she is forced to hang bags of waste on the washing line to prevent dogs from ripping the plastic bags apart. She does not have an alternative secure place on the ground to store the filled refuse bags before disposal. Figure 6.7 shows a partially-filled refuse bag hanging on the washing line. She is angered by the maggots that move from the refuse onto the washing line, making her clothes dirty causing her to have to rewash the clothes. The action of hanging bags of refuse on washing lines is common throughout Lamontville, with some households keeping their waste on top of their houses until collection day to prevent polluting their living area. The negative emotions related to domestic chores create concerns specific to women that were not vocalised by the men who were engaged with during the research. Engaging with emotions creates a locally grounded understanding of the impacts of inadequate waste management on women. These emotions can provide insight into how waste management could be improved in marginalised areas. The next sections detailed how in waste infested areas, women from minority ethnicity groups bear the brunt of the burden for poor service delivery.

Figure 6.7: Refuse bags hanging on washing line to prevent dogs from reaching it – Transit Gijima (Source: Author's own)

6.6   Xhosa women and the environment

Many women in Transit Mathini always have black feet. During fieldwork I encountered women who had feet with black marks. The women walk barefoot and their feet appear dirty as formal shoes are reserved for visits outside of Lamontville. The effect of the black feet was extensively discussed in focus group discussions with women only in Transit Mathini. Several other household members in Lamontville responding to the household survey mentioned the meaning of black feet to Xhosa women. In the household survey and FGDs, the women expanded on the cause of their dirty feet:

> Listen sister, we have black feet, we walk around in a dirty area. Our feet are always dirty, it does not matter how much we wash them.
>
> (Onga, 29 years, Female, Xhosa, Transit Mathini, household survey)

Onga attributes their dirty feet to the dirty environment that she lives in. She further explains the effort required to remain clean and how constant washing of feet proves unproductive. Onga uses the expression 'we' (collective), to mean Xhosa women in Transit Mathini have black feet. The black feet are shared markers of common oppression which have formed a bond between Xhosa women (see Figure 6.8 for black marks on feet). The women and the broader community have ethnicised the marks on their feet, even though women and men from any ethnic group can have black marks on their feet. In this specific context, gender intersects with ethnicity and dirt that results from uncollected waste to stigmatise Xhosa women. Furthermore, the effect of the dirty feet is more pronounced for women living in Transit Mathini as waste collection is limited. The embodied effects of the polluted environment in which they live everyday

(i.e. black feet) are carried outside the community, where it affects the treatment they receive, for example, from health care services. Ana said the following about her visits to the clinic:

> I went to the clinic with my son, I was wearing flip flops and my feet were black, at the clinic I was told to stand aside.
>
> (Ana, 34 years, Female, Xhosa, Transit Mathini, FGD)

It is evident from Ana's comment, that women experience neglect at the clinic from the nurses[89] as their bodies are a representation of dirt. In the context of service provision, residents of Lamontville community compete for health care services[90], the waiting queues at the clinics are long and the service is slow. In a poorly resourced environment, the hospital staff use dirty feet as a marker of ethnicity to set aside Xhosa women and focus first on Zulu people as an act of prejudice and discrimination. This finding is similar to Young's (1990) observation that oppressed groups such as the Xhosa are defined by their bodies which are often seen as ugly, disgusting, impure or abnormal. Their feet are taken as showing that they do not belong in Lamontville because they are Xhosa. Numerous literature documents how ethnicity is activated in African societies when resources are limited (Battera, 2013; Chandra, 2007; Wantchekon, 2003).

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[89]Cresswell (2014) has argued that social hierarchies and social relations are both expressed as well as experienced through space; in Lamontville, nurses(who are Zulu) are in a position of authority and are able to describe the Xhosa women in a negative way.
[90]In other social spaces and public amenities such as libraries, Xhosa people are side-lined through the use of language. Zulu and English are used to share information on subjects including waste management, totally disregarding the Xhosa people who may not be fluent in English or Zulu.

The women's ethnicity further limits their mobility in other avenues in the community.

In Transit Mathini, women said:

> Our feet are dirty, They say Xhosa people are dirty… And if someone asks me, where do I live and my response is Transit Mathini, they look at our feet and yell, you have black feet, you are from Transit Mathini!
>
> (Muso, 34, Female, Xhosa, Transit Mathini, FGD)

Figure 6.8: A woman with black feet at Transit Mathini
(Source: Authors own)

The experience of Muso shows how her feet affect her position in Lamontville. The women are asked where they come from (their origin) when attending public meetings for support, or government initiatives. There is a stigma associated with living in a dirty and waste infested area like Transit Mathini. Furthermore, they are confronted with the exclusion of themselves as Xhosa women when searching for employment or in

attempting to be a volunteer[91] in Lamontville. The women are of the opinion that they are side-lined due to their bodies, specifically black feet which positions them as living in Transit Mathini. The black feet communicate deprivation, dirt and being a foreigner to the established community of Lamontville. Belonging is expressed through bodily performance in that women who appear with black feet in public spaces, feel a sense of exclusion, as they are not adhering to the prescribed norms of cleanliness. The concern of moving through the township with black feet was also mentioned by Lerato in a focus group discussion:

> We have black dirty sand, by the time I exit Transit Mathini, my feet are black. After taking a bath, my feet are black. Just before going to bed, my feet are black. We are always dirty, we take baths frequently.
>
> (Lerato, 34, Female, Xhosa, Transit Mathini, FGD)

The women in Transit Mathini tend to stay at home, avoiding contact with other people residing outside of Transit Mathini. Their black feet shape the lives of these women, limiting their spatial mobility within the township. The concern of ethnicity as marked by dirty feet is more of a concern for women who are searching for employment and engaging with the external community, and hence experience more frequent rejection based on constructed ethnic traits. The idea of dirt is further exploited by women who sell medicine for other women to clean themselves from bodily corruption due to their living conditions. The women who buy the medicine have internalised the notion of being unclean, polluted and inferior. During fieldwork in Transit Mathini, I was sold a

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[91]The politics of 'volunteering' exclude Xhosa women from 'volunteering' as 'volunteering' is attached to the Zulu identity and ANC affiliation.

bottle of brown water with floating particles as a concoction[92] that it was said would clean me and that I was supposed to need because I was walking in an area infested by waste. The women attempt to self-regulate their bodies in order to reproduce themselves as 'normal' women[93]. The bottle containing traditional remedy was sold to me based on my gender and race, my ethnicity and social standing were not a factor. The women who purchase this bottle are further depleting their limited financial resources but they do so due to a desire to cleanse themselves and escape stigma and discrimination. Applying the feminist political ecology approach in this section provides a lens for understanding how government intervention of improving people's lives through the housing upgrading system leads to environmental injustices (poor waste management) for minority ethnic groups, which in turn affects the bodily appearance of women. There are conflicts that arise between the Zulu and Xhosa women involving household waste which are discussed in the following section 6.7.

6.7   Ethnic conflicts and waste management

Ethnic tensions between the Zulu and the Xhosa are evident in Lamontville. These tensions are enacted (played out) by women using household waste in Transit Mathini. The ethnic conflicts are rife in Transit Mathini where the community is most deprived (i.e. landless) and with the largest proportion of Xhosas to Zulus in a sub-community within Lamontville. Within Transit Mathini, there is an impression among residents that Xhosa women are dirtier than Zulu women. Meaning Xhosa women are unable to handle

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[92]The concoction is ineffective as the dirt is external. The residents of Transit Mathini cannot control their external environment.

[93] Women make sense of their embodied selves through the social and cultural discourses which are invested onto their bodies (Bordo, 1993).

waste because they are foreigners to Lamontville Township. The following comment

highlight these tensions:

> Bule's mom is disposing her waste bags next to our home. My mother tells
> me that Bules's mom makes the area dirty. She comes from the other side
> and throws her waste bags in our area. That area is very filthy, with used
> disposable nappies...we also throw waste at the same area.
>
> (Mcebisi, 7 years, boy, Zulu, Transit Mathini, FGD, Ntuthukweni Primary School)

Mcebisi identifies Bule's mother as the person responsible for improper waste disposal

in their living area. Both mothers dispose of their household waste in the same areas,

but Mcebisi's mother who is Zulu blames Bule's mother who is Xhosa for polluting their

living space. According to this account, Bule's mother leaves the space surrounding her

home and crosses an imaginary boundary towards Mcebisi's mother's area to dispose

of bags of waste. The interaction between the two mothers represents the broader

position of many in the township community who believe that Xhosa people cross an

imaginary boundary - the boundary between KwaZulu-Natal and Eastern Cape and come

to make Lamontville a dirty area. Bule's mother is presented as being a polluter based

on her Xhosa ethnicity (thus, improper waste disposal is explicitly blamed on the Other)

and associated undesirability[94]. Crowley (1999) states that the politics of belonging is

the dirty work of boundary maintenance, and from the perspective of Mcebisi's [95]

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[94] According to Zulu people in Lamontville, Xhosa people are distinctly different. During fieldwork, I
frequently heard Zulu people saying that the Xhosa people are the only tribe who can 'eat red jam with
bread'. Red jam is cheaper than other bread spreads and is associated with poverty in KwaZulu-Natal.
Also, when referring to people residing in Transit Mathini, the Zulu people said the Xhosas are the only
tribe that can 'live in houses without windows'. This is in reference to Transit houses which only have one
window. Xhosa people are likened to animals as according to Zulu people, only animals can survive with
limited ventilation. This highly ethnicised township discourse is centred on the return of the Xhosa people
to rural areas of the Eastern Cape.

[95] Mcebisi's position is influenced by his mother. Othering of Xhosa people is instilled in Zulu children at
a young age.

mother, disposal spaces are only for people who belong in Lamontville, as ascribed to the dominant Zulu ethnic group. Zulu women due to their ethnicity belong in KwaZulu-Natal while Xhosa people are from Eastern Cape Province. This dispute mirrors the nature of Zulu and Xhosa interaction in transit housing and the authority that Zulu women possess over Xhosa women. The Xhosa women further explain their position in Lamontville:

> That side only Zulu people live there, iziNzule[96] live there. You cannot tell, that Zulu people live there. It is very dirty. It is worse than here.
>
> (Ana, 34 years, Female, Xhosa, Transit Mathini, FGD)

> It is next to the river, there are faeces on the ground. I could not believe Zulu people living there.
>
> (Dipuo, 27 years, Female, Xhosa, Transit Mathini, FGD)

The above comments indicate that the Xhosa women know the Zulu is supreme with desirable characteristics. According to Ana who is Xhosa, the Zulu is expected to be clean; she compares her living area with that of the Zulu women. The phrase 'you cannot tell' means, she is surprised that Zulu people live in a dirty area as to her way of thinking, dirt can only be associated with the Xhosa. Similarly, Dipuo is also stunned that Zulu people live in dirty areas. Their reflection of the Zulu, is in accordance with Szeftel (1994) and Dlamini's (1998) analysis on how the Zulu identity is constructed in KwaZulu-Natal to present the Zulu people as supreme, superior to and stronger than other ethnic groups who succumbed to colonial masters in the early twentieth century. There is an indication that the Zulu and Xhosa people are separated within Transit Mathini as Dipuo and other

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[96] IziNzule is a derogatory word that Xhosa people use to refer to Zulus, only in KwaZulu-Natal Province.

Xhosa women are able to identify localities where only Zulus live, making it easier for the women to insult each other.

Tensions between the women are played out along ethnic lines in the domestic sphere affecting the way the women relate to each other. Buhle another Xhosa woman explains waste wars resulting from a lack of waste disposal sites in the township:

> If I tell her (Zulu woman) to remove her waste from outside my house, and she refuses or if she leaves that side and chooses to walk around here to drop her waste in our area, a fight will break out.
>
> (Buhle, 19 years, Xhosa, Female, Transit Mathini, FGD)

Buhle also comments on how waste is used to unsettle the Xhosa women. She suggests that Zulu women leave their own residential areas and walk to their (Xhosa) space to dispose of their waste. There are limited waste collections areas in Transit Mathini causing people to walk long distances to dispose of their domestic waste. The action of disposing waste, if done by a person from a different ethnic group in an inappropriate place, is viewed as an act of aggression that can result in verbal and physical altercations. Other Xhosa women reported deliberate sweeping of waste onto their doorsteps by Zulu women. Maye opts for a more passive approach in dealing with waste litter that is discarded in her area by Zulu women. She says:

> They throw anyhow in your area, because it does not affect them. You will not say anything to them, because we do not communicate with each other here.
>
> (Maye, 30 years, Female, Xhosa, Transit Mathini, FGD)

During waste fights which the Xhosa women state are initiated by the Zulu, Maye, says 'you cannot say anything to the Zulu'. Maye merely observes the Zulu women who dispose of waste irresponsibly in her area. Since Maye is a Xhosa from the Eastern Cape and she does not belong in Transit Mathini, she remains silent in public spaces. The right to be in Lamontville, is contested in this way in the township closely linked to the domestic sphere where the presence of waste influences daily social power relations. Since women are less likely to be in formal employment, they spend more time at home and are responsible for household chores, which include moving around Transit Mathini to dispose of waste. The women directly deal with and feel the related ethnic tensions in their everyday lives and encounters. These conflicts mirror broader ethnic conflicts in South Africa which are enacted to secure power and access to resources. The following section discusses barriers faced by the community of Lamontville in attending public community engagements.

6.8   Gender and public participation

Formal public participation in Lamontville takes the form of ward committee meetings as described in section 5.6. These meetings are scheduled monthly and represent a platform for all citizens in the township to participate in matters affecting their lives. Decentralization transfers power and responsibilities to the local government, based on the belief that knowledge is ingrained 'on the ground' and that the local scale is more sensitive to community-specific needs (Bénit-Gbaffou, 2011). Furthermore, there is a fundamental assumption from the national government that in these platforms every participant is equal and is able to raise their concerns. In addition to the formal political

engagements, there are other forms of contacts such as rallies, funerals and other adhoc meetings where community members can make contact with the relevant political structures. Public participation in Lamontville is skewed to favour those with political capital while largely excluding other segments of the community, for example women. The criteria for participating in 'democratic' government processes changes throughout the township, based on gender, ethnicity, marital status and political affiliation. This section explores issues relating to the representation of women in local democratic processes.

6.8.1   Physical barriers to public participation

In South Africa, formal barriers in the form of legislation that formerly prohibited the participation of the Black population in democratic processes have been removed with the dismantling of apartheid (Jürgens et al., 2013).The majority of the population who live in Lamontville attend monthly ward committee meetings (see Figure 5.16). At these meetings, community members can complain about service delivery issues, including lack of waste collection services. In the household survey, the major reason indicated for attending these meetings was 'to receive information about development issues', especially the allocation of government subsidized houses. However, women in the community still experience challenges with participating in local political processes that influence how household waste is managed. Even though 54.8% of the respondents reported in the household survey that they attend meetings (see Figure 5.16), women still struggle to attend these ward meetings and to find recognition in what is a male

dominated space. In focus group discussions, women cited several barriers to attending their local ward committee meetings in Lamontville:

> I am busy. I do not participate in ward meetings. I cook and take care of my children. The timing of the meetings is not appropriate for me.
>
> (Khethiwe, 43 years, Zulu, Female, Lamontville Central, Formal housing, FGD)

Khethiwe attributes her role as a caregiver at home, as the reason for not attending the ward committee meetings. The most suitable time for Khethiwe is when her children are at school. However, the meetings are usually scheduled in the afternoon on a weekday, which is not feasible for women like Khethiwe. Other women in focus group discussions also cited 'meeting times' as a barrier to attendance, as many are confined to their homes and are burdened by motherhood. Participation in meetings suits men, as they are more in control of their time and typically spend most of their day outside the home. During fieldwork, I observed a clear distinction between the gendered private/public divide, in that women broadly remain indoors and men readily occupy the streets (Alubo, 2001). The majority of the men who could not attend ward committee meetings were engaging in economic activities at the time of day when meetings generally take place. According to Collins (2002) Black African women are engaged in the bulk of reproductive and care work which allows men to fully participate in the public sphere, influencing the development trajectory of townships. Moreover, the distance to the meeting is also a barrier to participation for some women. Ndalo said the following:

> I cannot attend all the time. The meeting venue is far. I have to take public transport and the start time of the meetings is not defined.
>
> (Ndalo, 52 years, Female, Zulu, Lamontville Central, Family flats, household survey)

Ndalo in the focus group discussion mentions the distance from her home to the meeting venue as a hindrance to attending meetings. There is also a financial cost of travelling to meetings. In addition, the ward committee meetings do not often commence at the announced time resulting in her wasting more time away from home. Ndalo and other women conduct multiple tasks in their household and value the use of their time.

In focus group discussions, we further explored the dynamics of the meetings and women expressed that they were not heard at ward committee meetings. They expressed their frustrations in the following manner:

> In Lamontville, those meetings are useless, they do not start on time. There is nothing to contribute to. The agenda is only known by a few, what we say is only noted.
>
> (Shlobo, 39 years, Female, Zulu, Dizababa, Family Flat, FGD)

Shlobo also mentioned both the time and the venue of these meetings as additional reasons for non-attendance. The contributions made by women are merely noted and not discussed. The women further say these meetings are dominated by the aspirations of men. The meeting's agenda is unknown prior to the meetings and items to be discussed are agreed upon at an external venue and known only by a few political elites,

who lead the meeting[97]. This type of participation in a democratic society is not transparent. The various actors within Lamontville have different interests that are brought to the meeting and women find themselves ignored. A woman in Lamontville Central complained saying; *'We are expected to attend every rally, every gathering, I cannot afford to do that, some people work, some have domestic chores'* (Ayanda, 26 years, Female, Zulu, Lamontville Central, FGD). Women in Lamontville are time poor due to the triple burden placed on them (Mosedale, 2014; Moser, 1989). The women are engaged in reproductive, productive and community work thereby affecting their attendance in meetings. The residents of Lamontville, need to be visible in public gatherings in order to be known as active ANC members in the community. The nature of women's participation in the political process provides an illustration of inclusion and exclusion in the public spaces (Alubo, 2001). This type of public participation is incompatible with the lives of women in Lamontville, given their productive (paid work) and reproductive (unpaid domestic work) roles.

Dudu in Transit Mathini expressed how patronage relationships dictate which issues are included in the agenda for ward meetings in the following way:

> The meetings do not have an agenda, leaving them open for committee members to discuss matter of concern to them…We discuss problems that are encountered by their friends and families.
>
> (Dudu, 41 years, Female, Zulu, Formal employment, Transit Gijima, FGD)

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[97]This was confirmed when I attended a stakeholder meeting that did not have a formal agenda. It appeared as if the chair of the meeting relied on her memory for matters to be discussed.

Dudu comments on the structure of the ward meetings stating that only issues which are of interest to ward committee members and their direct associate (friends and relatives) are discussed. The concerns of ordinary community members are left out of what are intended to be public participation structures. Dudu also states that these meetings do not have an agenda and random topics are discussed without solid conclusions. The structure of this meeting is similar to that of the stakeholders meeting where the agenda is determined by the chair person who is member of the ruling ANC party. The meeting space is constructed for people who are aligned to the political party in power. Zandi in another focus group discussion also raised the issue of the agenda, where she was of the opinion that the agenda is established and agreed in a different location and presented to them in the meeting. This act of agenda-setting shows the power that political people in power enact over the ordinary community members. This format of conducting meetings makes it difficult for the community to monitor progress of activities allocated to the ward committee members. The citizens become passive spectators in political spaces; and the reality of the enactment of the decentralisation policy is that it is not inclusive in Lamontville Township.

In the ward committee meetings women feel they are controlled by the men. Phili explained her reasons for no longer participating in the meetings in this way:

> We excluded ourselves. If you are a woman you do not contribute. The men say we do not know anything and they (men) are right. We do not know politics...also they fight in those meetings.
>
> (Phili, 26 years, Female, Zulu, Barcelona, FGD)

In a different location in Lamontville, Phili also comments on the submissive position that women take in these meetings. Phili asserts that women remain silent because according to men, women are not aware of political developments[98] in the township. In Lamontville, political spaces are gendered favouring the voices of men while excluding women. The women further said men assume they know what women will ask about as it is common for women to raise concerns about their families. The women in this focus group discussion recalled an incident in a previous meeting where a woman complained about her child's chest infection as a result of living in insanitary conditions. She was ignored. There is a lack of appreciation that women have different understandings and contribution in matters concerning basic service delivery.

In public spaces, an individual's identity further prohibits some women from effective participation in democratic processes. The intersection of gender and ethnicity marginalises women who are Xhosa in public spaces. Women from Transit Mathini felt they were further marginalised in these meetings because of their ethnicity:

> We raise our hands until we drop them. We are ignored again and again…There is always fighting and arguing. They fight over housing allocation.
>
> (Sine, 30, Female, Xhosa, Transit Mathini, FGD)

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[98]While conducting a women's focus group discussion in Barcelona, a male ward committee member approached us and questioned the intention of our gathering. He then proceeded to instruct us to avoid local politics in our discussions. Perhaps this should not be surprising because according to Scheyvens (2014) in societies where women are rarely consulted, men tend to 'hang around' women-only gatherings to ensure that whatever is discussed, is not a threat to themselves.

According to Sine, Xhosa women are not given the opportunity to speak in ward committee meetings. Xhosa women, raise their hands at the meeting, and they are ignored. The presence of Xhosa women in a space for Zulu people is not acknowledged. Sine also suggested that the few Zulu women who live in Transit Mathini, can speak at the meeting, but she doubts if their contributions are actually considered. It is easy for Xhosa people to feel neglected, as they know they are not perceived as having the 'right' to be recognised in the public spaces in Lamontville because they originate from another province and are recent newcomers to the township. Noxolo a Xhosa woman also narrates her frustration with public meetings:

> If we try to speak, even in meetings, they undermine us, we do not respect each other.
>
> (Noxolo, 35 years, Female, Xhosa, Transit Mathini, FGD)

Noxolo reports that men do not respect the presence of women in the meeting space. Those that are perceived to be outsiders (i.e. Xhosa) are also disrespected and ignored in the ward meetings. Noxolo accepts that within her daily interactions with other women at Transit Mathini, there is tension, but she was under the impression that in ward committee meetings, the space would be neutral. Women in these meetings are not a homogenous group, some (Zulu) women can speak, while others (especially Xhosa women) are kept on the periphery. Decisions taken in these meetings which may be about waste and other services may not entirely be participatory as some segments of the community are excluded from discussions. The following section on 'women excluding other women' further probes the differences amongst women.

6.8.2   Women excluding other women

Historically women have been side-lined in decision making processes in South Africa. The appointment of women councillors is advocated as a way to enforce equal gender participation in the public sphere while giving women a voice in politics (Selokela, 2014). The constitution of South Africa promotes gender equality in participatory democratic processes. Further to the South African constitutions (1996, section 9), the municipal structure act addresses equal gender representation in municipal councils by calling for men and women to be equally distributed in municipal election candidate lists (McEwan, 2003; Selokela, 2014). In Lamontville, two of the three geopolitical wards are governed by Black Zulu women councillors who represent the ANC. Local government is the closest level of government to the community at grassroots level, and appointing a woman councillor is seen as a way to increase women's participation in public governance and ensuring the needs of disadvantaged women are heard (McEwan, 2003). The councillor is positioned to assist with waste-related matters at the local community level. However, the research undertaken for this thesis demonstrates that the intended objective to empower women has not been achieved. This section explores how women councillors[99] in Lamontville marginalise women and further polarise society.

Most of the interviewed respondents who were female claimed that their local woman councillor neither listened to their concerns nor responded to problems in their communities. Women frequently come into contact with the councillor through face to

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[99] The analysis and discussion in this section concentrates on female councillors in Lamontville. The third councillor is a male DA member (Indian) whom the community rarely made reference to.

face encounters, political rallies and ward committee meetings. These interactions are a source of distress for most of the women. In focus group discussions women from Lamontville said the following about their interaction with local councillors:

> I do not know her (councillor) help, I need an ANC card with our councillor; even for a proof of address, I need a membership card. We have the water and electricity letter but she still wants a membership card, she will ask you 30 questions.
>
> (Shlobo, 39, Female, Zulu, Dizababa, Family Flat, FGD)

Shlobo's remarks suggest that in her experience, the ward *75* councillor is unwilling to assist women with their request for documents needed to prove residence. This statement was made in response to a question about initiating waste recycling in the township and the contribution from local government. Shlobo asserts that should waste recycling commence the councillor will not be able to facilitate it since in other avenues, she is unhelpful. There is evidence of distrust between the community and the councillor which may affect waste recycling initiatives in the community. According to Suttibak and Nitivattananon (2008), partnership between local government and the community is necessary for implementing successful waste management schemes. The women's opinions on waste management are connected to broader local processes which work against them[100] in accessing public services more widely. Shlobo elaborates on the need to meet some criteria before the councillor can listen and assist members of the community who live in Lamontville.

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[100]For example, the women face similar line of obstructive questions in clinics; e.g. pregnant woman are asked 'why they fell pregnant' as a way of causing them distress.

Frequent contact with the councillor is required when requesting a 'proof of residence' letter which is often required to open a bank account. The water and electricity bill showing physical address are the only necessary documents for receiving a proof of residence letter from the councillor. According to Shlobo and the other women in the focus group discussion, there is also insistence on producing an ANC membership card before the councillor can assist. The councillor uses ANC membership as a way of enacting and enforcing control over poor people as well as ensuring continuing ANC political dominance. Shlobo suggests that the councillor questions women about matters that are outside her concern. The councillor thereby wants to monitor the women's regional affiliations and movements that may threaten her power. The actions of the councillor indicates the continued dominance of the ANC in all spheres which make it difficult for opposition parties to have any substantial meaningful existence. The councillor hopes that by asking many additional questions, residents would give up and leave without receiving a proof of residence letter. Sihle in Lamontville Central recalls an additional challenge that unmarried women have when approaching the councillor for assistance:

> She does not see us (we are invisible). We get a problem if the utility bill is in a different name to yours. We struggle to get the letter.
>
> (Sihle, 27 years, Female, Zulu, Lamontville Central, Formal house, FGD)

Sihle states that being unmarried is a challenge to being recognised as an independent person. As a result unmarried women are subjected to further discriminatory questions and are forced to explain to the councillor why their household utility bill is in a different surname to theirs. Even though the councillor is unaware of the women's living

arrangement, she questions why Sihle is unmarried (being unmarried is the reason for having a surname different to the one on the utility bill). Thus women like Sihle feel they are further marginalised because they are not married. Their deep disappointment towards the councillors, deters women from approaching the councillor with waste management challenges they are facing. A lack of interest in assisting them with the proof of residence letter is projected/equated to a lack of desire to assist with waste management. Case study 6.1 explores further the multiple challenges for unmarried women of attaining the proof of residence letter.

Case Study 6.1 : Zinyo Mlambo

Zinyo is a 34 year old Xhosa woman. She is from the Eastern Cape and has lived in the Transit Mathini area of Lamontville for eight years. She lives with her male partner and their two children aged 4 and 9 years. She is not married and is undocumented in Lamontville as she is living in Transit Mathini under her partner's permit. Only the partner's name appears on the permit. Zinyo faces many challenges with accessing government services since she is an 'immigrant' in Lamontville. During the period of fieldwork, she wanted to open a bank account for employment purposes but encountered several challenges with obtaining the required proof of address letter from the councillor. In order for Zinyo to get a proof of address letter from the councillor, she would need to produce a permit allowing her to stay at Transit Mathini. The system of obtaining a proof of address letter is different for residents of Transit Mathini compared to residents of other areas in Lamontville, who are only required to provide a water and electricity bill to obtain a proof of address letter. Transit Mathini operates in the same way as the former apartheid pass system that required so-called 'natives' to produce a pass document to be in urban areas. Zinyo's partner does not want her to get employment hence he does not give her his permit. Her partner attempts to control Zinyo by preventing her from obtaining an income.

Although Zinyo is a confident well-spoken woman, she lives in a home that is a potential site of oppression (Organo et al., 2013). Unequal power relations between women and men, make it difficult for women to pursue their own interests. An alternative that Zinyo was considering

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involved begging her neighbours for their permits and pretending to the councillor that she was their relative. Even with this approach, the councillor might still enquire about the difference in surnames. Zinyo's story bears out the centrality of marriage in the formation of a women's social position in South African society. Similar, restrictions apply when women from Transit Mathini complain about service delivery matters and when accessing health services and other institutions within Lamontville. It is evident that patriarchal social structures and institutions imply that women have to depend almost entirely on a man for the decisions in the family. This case of Zinyo, illustrates how the permit system keeps most women 'trapped' in Transit Mathini due to the fear of being discovered as being 'illegal' in urban areas.

The women who participated in this research also felt the councillors in Lamontville intentionally excluded them from development initiatives in the township. The challenges women face with councillors [101] are widespread amongst South African townships. Women frequently report that the councillor is very difficult to deal with defeating the intended purpose of involving women in local government. Their relationship with the councillor is characterised by distrust and suspicion. In response to how the councillor treats the women, some women choose to avoid political gatherings:

> We have been neglected by the councillor, so we do not involve ourselves. When there are gatherings at the council office, you must be known to join or else they will look at you until you leave.
>
> (Shlobo, 39 years, Female, Zulu, Dizababa, Family Flat, FGD)

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[101] When I was requesting permission to conduct this work in Lamontville, the councillor refused to speak to me directly. My father had to introduce me and state the purpose of my visit before I could address the councillor.

In the focus groups discussion, Shlobo comments on gatherings at the councillor's office where the councillor discusses employment opportunities. According to the women in the focus group the latest meetings were discussing employment through subcontracting and volunteering in street sweeping. These gatherings consisted of both male and female residents of Lamontville, but only those women who were politically connected were 'invited'. Towards the 'outsiders', the people at the gathering who are close to the councillor use passive aggression to exclude the others: 'they look at them until they leave', thereby excluding them from employment opportunities in waste management.

This analysis of how the female councillors in Lamontville exclude and marginalise other women illustrates how government schemes that are intended to aid women, are sabotaged by women in positions of power. The councillor uses her position of political authority to silence the ordinary township women, especially those who are unmarried, not ANC members and recent arrivals from the Eastern Cape. The social hierarchies not only work between women and men, but also within each of these categories. Occasionally the local municipality distributes food parcels to low income communities. The majority of women are also excluded from receiving such goods from the councillor, although only a limited number of people were intended to benefit from the scarce resource. Thus, political networks are also utilised when food parcels are distributed[102]. Only women who are known by the councillors receive food parcels:

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[102] Food parcels are from the local government and are meant to assist less privileged families. The parcels are distributed on an irregular and corrupt basis.

> …Let alone food parcels, underprivileged families are suppose to get food parcels but now even wealthy families get food parcels, the ward committee member selects the houses that will receive a food parcel.
>
> (Maha, 32 years, Female, Zulu, Lamontville Central, FGD)

According to Maha, food parcels are distributed by ward committee members who select households with connections that are well-off, although food parcels are intended for the neediest. Maha and other women in Lamontville, are of the opinion that they should receive these food parcels. However, ward committee members use ANC structures to distribute resources to women who are members of the ANC who are not more needy than non-ANC members. The food parcels may be small and insignificant but they play a role in the community's everyday hopes and expectation[103]. Such corrupt actions have been documented in other parts of Africa where ruling parties use patronage networks to distribute state resources to their clients in return for political favours (Dawson, 2014). Political networks pursue narrow interests of retaining power, while the economic and politically weak community members are further marginalised (Benit-Gbaffou, 2011). In the case of Lamontville the ANC-favoured citizens receive food parcels in return for their political support in the form of votes at elections.

The intersection of gender, political party membership and ethnicity as forms of exclusion from economic benefits was discussed by women in the focus group discussions conducted in Lamontville:

> People bow down behind her (the councillor). They have R4000 that enters their bank account every month, but maybe the waste volunteers do not get paid. They did not explain to you what a volunteer is. There are volunteers

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[103] The distribution of food parcels (amongst other goods) may explain the continued popularity of the ANC amidst rumours of corruption and non-perfomance in recent times (Southall, 2016)

who follow behind the councillor, they know today, the councillor is working in Umlazi, or working at Gijima, as I'm sitting here I do not know.

(Zeze, 27 years, Female, Zulu, Barcelona, FGD)

Zeze explains the nature and dynamics of 'volunteering'. The remuneration varies for different volunteering schemes. 'Volunteering' 'behind' the councillor is better paying than other forms of volunteering (for example in the expanded public works programme). In Lamontville, volunteering is attached to being an ANC member[104], and the most well remunerated volunteerism is extended to men only. Those volunteers who are getting a substantial stipend are men. This highlights the regular disparities that women experience in the political system and the labour market when considering volunteering as 'employment' in a corrupted system.

Volunteering is co-opted as a means of financially supporting ANC members. Lacking formal qualifications or employment, the men have time to follow the councillor around the different parts of the Lamontville, helping her garner political support. The councillor surrounds herself with male voices that she can trust and 'repays' them by employing them as volunteers. These male ANC volunteers who receive a good stipend reside in particular locations within Lamontville that are predominately dominated by Zulu people. Thus, Gijima[105] is a place within Lamontville that is dominated by Zulus. The aggressive nature of Zulu men in Lamontville is preferred by the councillor who

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[104]Non-ANC members are excluded from being volunteers.

[105]In conducting the research for this thesis, I avoided Gijima because it is the most violent section of Lamontville Township. Zulu 'culture' that involves expressing manhood through violence is still widely practiced. A focus group discussion was conducted in a transit camp in Gijima - Transit Gijima which is located on the edge of Gijima is hidden. This allowed me to enter via a back route and avoid driving through Gijima which is violent. Gijima means to run (flee). Many people who were involved in the armed struggle against apartheid reside in the Gijima area of Lamontville Township.

surrounds herself with them for protection as the township is still a dangerous place. Having access to a livelihood/work which is in the control of the councillor is dependent on gender and political affiliation. Thus, the appointment of women councillors despite the optimistic new South African gender equity legislation does not change the structures that oppress and exclude women at township level. The following section 6.9 discusses the division of gendered roles within the waste contractor.

6.9   'Sweeping is women's work': Gender and waste collection

Provision of formal household waste collection services involves a number of regular activities such as collecting waste, distributing refuse bags and street sweeping. Other activities such as delivering information leaflets to households, burning waste at illegal waste dumps and trimming grass do not take place as regularly. A clear pattern emerged in relation to the gendered division of labour amongst waste contract workers in Lamontville. Men and women are assigned different tasks based on their gender identity. They also have different degrees of managerial power and control over the collection and transportation of household waste. The gendered working dynamics were explained by the site manager:

> The men drive the truck and lift refuse bags. Women do street sweeping and distribute communication letters. Lifting refuse bags can only be done by men.
>
> (Phumudzo, 38 years, Male, Contract Site manager, Interview, Lamontville)

When interviewed, Phumudzo indicates that gender identities determine the division of work in waste collection between men and women. The men work with the waste collection vehicle; there is a designated driver with three male workers who collect the waiting filled household waste bags along the streets. These men determine the daily collection schedule and make decisions about which streets women will sweep[106]. The women are restricted to and made responsible for street sweeping, preparing refuse bags for dispensing, distributing communication letters and burning illegal waste dumps. In waste management contracting services, the work done by women is viewed as simple work that requires less physical strength and intelligence in comparison to men's work. Street sweeping is considered routine work and light work. These finding are similar to research in other regions of the Global South where street sweeping is considered work for women and is viewed as an extension of domestic chores (Foster, 2012; Scheinberg et al. 1999). Moreover, male workers are instructed by the site manager to monitor the work of women as women are said to be untrustworthy (Peter, Male, 47, Zulu, Contractor worker). The contractor takes advantage of the gendered inequalities in the wider South African society by reinforcing gender stereotypes. Therefore, activities such as the use of machinery, are seen as masculine. Further justification is provided for the separation of work between men and women, showing entrenched ideas of gender stereotypes:

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[106] The women sweep street litter into yellow bags. The male workers collect the yellow refuse bags that are filled by the women.

> Sometimes women work in the truck, however, it is too difficult for a woman. Sometimes filled refuse bags are too heavy and we work for extended periods of time.

> (Phumudzo, 38 years, Male, Contract Site manager, Lamontville Township)

According to Phumudzo, the contract site manager, women are perceived as being weaker and incapable of working with the waste collection truck. Men are associated with speed and efficiency as working in the truck requires workers to continuously run after the truck. These waste workers conform to a predetermined set of gender performance labels. The strength of a man is used to define the work; hence lifting of heavy bags into the truck is delineated as men's work. There is another dimension to working in the truck for women street sweepers. Women sometimes work in the truck depending on the contract manager. The dynamics of working in the truck are explained by a male truck worker in the following way:

> Working on the truck is just for men but if we are stretched and some women are left behind after others have gone for street sweeping, they are requested to assist.

> (Wilson, 32 years, Male, Contract waste worker, Interview, Lamontville Township)

According to Wilson, the women only work in the waste collection truck if the number of available male workers are limited. Alternatively, the women explained how working in the truck is dependent on their relationship with the site manager. The women agreed with Wilson's statements and added that they have to maintain a good working relationship with the site manager to avoid work that is considered strenuous. In cases of insubordination, women work in the truck as a form of punishment, contradicting the ideas of women being weak. Hence, it can be concluded that within waste management there is a hierarchy of activities and those activities that are perceived as difficult are

used to control the behaviour of women. However, during the seven months of field work undertaken for this research, women remained in their designated roles, none of them were observed working in the collection truck. Likewise, none of the men were observed sweeping streets or preparing refuse bags.

As stated earlier, there are national and municipal gender equality policies which are intended to give men and women equal opportunities at work. The disparities between policy and practice were interrogated during interviews with stakeholders. In waste management, local government officials justify hiring men over women. An official in local government said the following:

> At the contractors' level, we have always stated that equality should be recognised. In solid waste, there are types of jobs that you see are not good for women. With the municipal policies of gender equity, we have spoken to Human Resources, the policy is not good for us here at Durban Solid Waste, they say find a way to make it suitable, jobs like loading in a compactor….. I cannot make a 56 year old woman who is like a mother to me run behind a vehicle. As DSW we do not meet the 50% target. The municipality policy says 50%.
>
> (Mvelase, Municipal waste management official, Male, Interview)

Mvelase agrees that the Durban Solid Waste in the municipality does not reach the required target of an equal number of male and female contract workers. The municipal gender equality policy is not fulfilled at local government level creating inequalities which are filtered down to the contractors. This indicates that privatisation of waste services does not favour women. Durban Solid Waste devised a strategy to counteract the requirement of employing an equal number of women and men. Instead of

requesting an equal division of male and female workers, the contractor is required to hire 50% men and 50% women and youth. The youth includes males and females who are between the ages of 18-35 years. Employing the youth is favourable with the community, however it is also a method which excludes women from working in the waste contracts. According to Phumudzo the site manager, 28 people are employed by the contractor in Lamontville and there is an equal split in gender. However, during fieldwork in counting the number of women present as waste workers with the contractor in Lamontville, some of them could not be accounted for. Mthembu, another local municipal worker explains the position of women within contract work:

> DSW was one of the departments only hiring men and not women, even when we started hiring women, we would separate them. Women would only sweep, they have one job description. If four people usually work in the truck, it will be difficult to work if one is ill, obviously a sweeper is taken and that is a woman. The problem comes when they get pregnant and remain silent or somehow you are lucky you have a good body, most of them are overweight and you can not discriminate them.
>
> (Mthembu, Municipal waste management official, Male, Interview)

Mthembu indicates that women have only recently been employed as waste workers by waste contractors. Street sweeping is also viewed by local government employees like Mthembu as women's work. The separation of work by gender at the community level is influenced by local government preference, which is contradictory to national policy. Working in the collection vehicle has additional benefits of overtime, while the job description and basic salary is similar for both genders. This results in gender inequalities and discrimination against women in the waste sector. Other reasons for excluding women from formal employment as waste workers (especially as truck

operators and drivers) are due to maternity leave and perceived ideas of women being overweight. Sub-contracting of municipal waste collection gives preference to male employees. This, concurs with Samson (2010) who states that privatisation of services disadvantages women. The policy of gender equality is not implemented further thus, keeping women in positions of subordination.

The women working with the waste contractor accept their subservient position. The divisions amongst the workers are not contested by these women. Eunice who is a contract waste worker described how certain roles are only for women:

> Men cannot fold plastics, it is only done by women. It is something we are used to doing.

(Eunice, 34, Female, Zulu, Contract waste worker, street sweeper, Lamontville)

Eunice states that folding plastic refuse sacks is an activity that men are unable to do. Figure 6.9 shows a woman street sweeper folding plastic refuse sacks[107]. Folding of the refuse sacks is associated with timidity and passiveness by both the men and women spoken to in the course of the research. The idea of gender role stereotypes are entrenched in the women who accept their subordinate position while the men perpetuate their own dominant position. The men have a more authoritative position than women in the waste collection contract. Privatisation of waste services further marginalises women and keeps them in low level positions that reflect local cultural

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[107] Black refuse plastic sacks are folded to allow for easy distribution. It was while engaging in this activity that I was able to spend time with women waste sweepers who explained their working environment, especially their relationship with the waste manager as he was not present, hence they could speak freely.

beliefs. While women are limited to low status activities, such as street sweeping, they

are the group who are exposed to pollution and negative behaviour from the community.
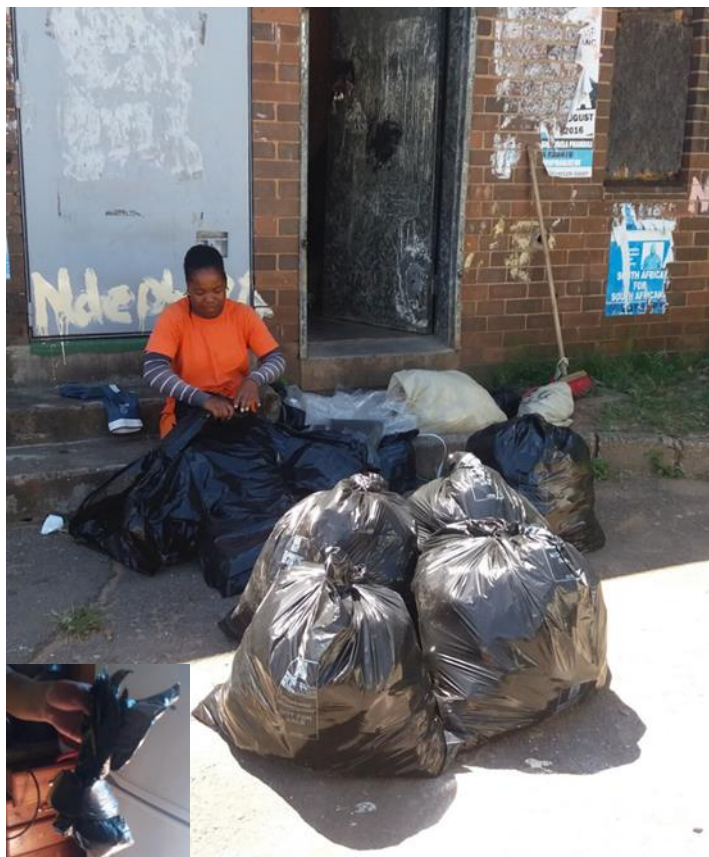
Figure 6.9: Woman folding plastic refuse sacks for distribution to households in Lamontville
(Source: Author's own)

The work done by women brings them into direct confrontation with the community.

The men do not have contact with the community as they work on a moving vehicle. In

the household survey and focus group discussions, the community expressed negative

attitudes towards women working as street sweepers. A man in Lamontville Central said:

> Those women leave yellow bags scattered on the street and they work too
> slow. They block the driveway with waste bags. Last week I had to ask her to
> remove the waste bags and gather them elsewhere.
>
> (Nukeri, 41 years, Male, Zulu, Dizababa, Self-employed, Household survey)

Nukeri is of the opinion that street sweepers are not efficient. Community members in other sections of Lamontville, also complained about the working pace of street sweepers. Street sweepers collect litter and place it in bags that are a different colour to the normal black refuse bags distributed to households. Their work is clearly evident in the community. These yellow bags of street waste are collected by the truck and delays in fetching the bags inconveniences the community. Since the street sweepers are accessible because they work on the streets, they are confronted by residents of Lamontville. Street sweepers receive complaints about collection periods and other service delivery issues that they have to respond to. This leads to a gradual breakdown of the distinction in responsibility between the private and public sectors (see Amagoh, 2009; Grimshaw et al., 2002). Women become the face of the government in spaces where the government is unavailable.

Street sweepers further reported that the community members often disrespect them. Nondumiso a street sweeper states:

> People throw waste behind us, they tell us, it is your job to pick it up. They say, if I throw this in the bin, you will have no work. I think they wait for us to pass before disposing their waste… The plastics (refuse sacks) we give them are used to store blankets and when disposing waste, they use the Shoprite bag (supermarket carrier bag).
>
> (Nondumiso, 54 years, Female, Zulu, Street sweeper, Interview)

Nondumiso, comments on how community members disrespect street sweepers on the streets. Street sweeping is viewed as a lowly job by the township residents and the citizens of Lamontville intentional dispose waste at inappropriate areas to increase the

streets sweepers' workload. The street sweepers and the waste pickers experience similar negative attitudes from the community. In other instances, street sweepers are subjected to verbal aggression from local residents. A street sweeper articulates her encounter with a community member:

> I greeted a woman who was waiting for a taxi while I was sweeping Ntuli road. She responded by telling me that I stink and should walk far from her.
>
> (Aphiwe, 36 years, Female, Zulu, Street sweeper, Informal conversation)

Aphiwe recounts how she is insulted in the streets by other women because of the proximity to dirt their work entails and the low status and stigma associated with handling waste. In addition, since unemployment levels are high in Lamontville, the street sweepers are envied by other women who are not employed. The unemployed women may not be politically connected and/or Zulu; volunteers are commonly Zulu. Furthermore, the street sweeper stressed the negative impact their work imposes on their health. As street sweepers, women are exposed to a variety of toxic substances as they are responsible for burning the waste at illegal dumps. Figure 6.10 shows women burning waste that has accumulated at an illegal dumping spot. The effects of the waste related pollution are disproportionately distributed with women experiencing greater exposure to harmful air pollution than men. The following Case Study 6.2 explores the working condition of street sweepers in a different township within eThekwini municipality, revealing the similarities and differences compared with the working conditions of female street sweepers in Lamontville. Within the waste contractor the women value their time more than men, section 6.10 discusses the value of time to waste workers.

Figure 6.10: Women municipal waste workers burning an illegal waste dump next to an informal area Lamontville Township.

(Source: Author's own)

Case study 6.2: Female Street Sweepers in Cato Manor- eThekwini

I was introduced to this particular area of Cato Manor Township by a municipal official. The municipal official wanted to show me that residents in the transit area of Cato Manor behaved differently to those from Transit Mathini in Lamontville. For example, the municipal official was of the opinion that residents in Cato Manor dispose of their household waste in appropriate areas. However, Cato Manor is also experiencing challenges with waste disposal similar to Lamontville and waste collection areas are also insufficient. Figure 6.11 shows waste disposed in the township outside a waste collection area with low walls. Cato Manor is a growing urban township that is attractive to live in, as it is close to Durban central. Large amounts of waste are visible within Cato Manor and the increasing demands of urbanization has placed additional pressures on the local government (see Adebayo, 2012; Meth, 2013). As already demonstrated in earlier chapters, the traditional model of household waste collection that relies on formal weekly collection is unsuitable for townships.

Figure 6.11: Waste bags accumulating outside of waste collection area - Cato Manor
(Source: Author's own)

I was able have to observe the activities of waste workers in Cato Manor while having informal conversations with them. A private waste contractor collects household waste in Cato Manor as in other townships within eThekwini municipality. Likewise, the waste contractor has divided waste activities according to gender. The male waste workers operate the collection vehicle while the female waste workers distribute black refuse sacks and conduct street sweeping. In Cato Manor, an extension of street sweeping involves working inside waste collection areas, gathering waste items into black refuse sacks before collection by the truck. Figure 6.12 shows women inside the waste collection areas next to transit accommodation in Cato Manor.

Figure 6.12: Street sweepers working at waste collection area next to transit housing- Cato Manor
(Source: Author's own)

The women workers gather scattered waste litter such as glass, needles and decaying food. These workers are exposed to contamination and dangerous objects in the waste that negatively affect their health on a daily basis. Furthermore, they cited hazards of their work that included injury associated with sharp objects, physical strain from bending, exhaustion

and odour from the waste. They work without protective clothing such as masks. The medical aid cover available for government employees is not extended to contract workers; instead according to the waste workers, Durban Solid Waste is in the process of organising an immunisation for contract workers that will prevent all forms of diseases. The national level decisions about waste privatisation (multi-scalar processes of economic change), in townships, impacts the work and health of women waste workers.

6.10 Value of time to waste workers

The value of time is different for men and women who work as waste contractors. Regardless of the time spent working during the day, the salary for men and women is similar. As stated in the previous section, men are provided with an opportunity for a higher income through working overtime as truck operators. Extended working hours are a result of delays caused by vehicle breakdowns, as well as the time taken to dispose of the waste collected from Lamontville at the Mariannhill landfill site. Only the workers who operate the collection vehicle are entitled to overtime. The women are aware of the extra income associated with overtime, but appreciate the 'free time' from work in the afternoon. As a female waste worker explained:

> We work very hard, but only for 5 hours, we usually finish work before our stipulated time which is 4pm, we finish around 11 or 12. It gives me time to rest and care for my family. They will call anytime from now, saying they have finished sweeping. He (truck driver) will go and fetch them (street sweepers), the truck staff will remain until they have finished their work.

(Eunice, 34, Female, Zulu, Contract waste worker, street sweeper, Lamontville Township)

Eunice explains how women do not have access to and demands for time in the same way as men. Leaving work early allows her to rest and spend time with her children. Women face greater time scarcity than men because of double burdens as paid workers in the workplace and unpaid workers in the domestic sphere. This type of employment gives women the flexibility to be in formal employment without neglecting their domestic duties. Eunice's opinions were similar to Aphiwe's, a female waste picker:

> I am able to go home and start cooking before night time, I can wash school uniforms and get some rest. It is better than working in kitchens (domestic work).
>
> (Aphiwe, 36, Female, Street sweeper, Informal conversation)

Aphiwe comments about the availability of time within her job in waste management as opposed to working as a domestic worker for someone else. This also highlights that only a few jobs are available for women who have little or no formal education. Alternatively, men who are unskilled have the opportunity to work in the factories outside of Lamontville. Also factory work pays better than domestic work. Aphiwe values her time as she is responsible for cooking, laundry and caring for her children. The men employed in waste collection were more concerned with working more hours and working towards being a driver in the truck which needs additional licensing requirements. The unequal gendered division of time and remuneration in the waste contract work more generally reflect the roles of men and women in society.

6.11 Conclusion

This chapter that addresses the third research objective, demonstrates the gendered nature of household waste management in Lamontville. Attention to gender brings forth the manner in which waste management is still the overwhelming primary responsibility of women in Lamontville Township. In this respect, waste is associated predominantly with women as a result of economic conditions and cultural beliefs that confine women to the household and private domestic space. The division of domestic chores mirrors the gendered division of formal employment roles with the waste contractor, where activities are allocated based on gendered identities. In addition, social construction of gender reinforces the role of motherhood in waste infected areas, mothers care more about inadequate waste disposal and spend much time caring for their children and family. The discussion on motherhood in waste infested areas in section 6.4 of this chapter illustrates how the local government relies on mothers to be 'municipal caretakers'. It can be concluded that in marginalised urban areas like townships, women and mothers take on the responsibility of waste management in the absence of local government.

For women the constant interaction with waste brings about negative emotions that have been ignored in household waste management literature. The chapter argues that emotions associated with waste management are gendered as women are responsible for domestic chores that involve interacting with a waste infested environment. As described by Anderson and Smith (2001), space is felt and in Lamontville, negative feelings result from conducting activities such as washing dishes and clothing. The emotions are related to domestic chores, creating concerns specific to women that were

not vocalised by the men who were engaged with during the research. Exploring emotional geographies of waste management provides a deeper understanding of people's lived experience in post-apartheid South Africa. Negative emotions were more common in Transit Mathini where formal waste collection is minimal. Moreover, in Transit Mathini women have black feet due to the environmental pollution in the area. The black feet limit the mobility of the Xhosa women, as the feet are ethnicised. This is not to say that women from other ethnic groups did not have marks on their feet. The women are of the opinion that they are side-lined due to their body covering of black feet which position them as living in Transit Mathini. The black feet communicate deprivation, dirt and being a foreigner within the community of Lamontville. Belonging is expressed through bodily performance in that women who appear with black feet in public spaces, feel a sense of exclusion. Feminist political ecology reveals how multi-scalar decision and government intervention affect the body of a woman. The role of poor waste management in shaping feelings and emotions of women remains poorly understood.

It was evident that public participation structures in Lamontville side-line women. Many factors prevent women from getting involved in environmental decision-making at the local level through ward committee meetings. The patriarchal arrangement of space keeps women in the home while men engage with political developments in their community. Moreover the appointment of woman as councillors fails to meet its intended outcome of empowering women in political processes. In this regard, women are excluded by women councillors and public participation is based on the intersection of gender, class, marital status and political affiliation. The appointment of women

councillors does not change the structures that oppress and exclude women. Therefore decision taken at ward committee meetings, which may be about waste management and other services are not entirely participatory as some segments of the community including women are excluded.

CHAPTER 7: CONCLUSIONS

7.1   Introduction

This final chapter consists of three sections: (i) summary of the thesis findings (section 7.2), (ii) policy recommendations (section 7.2) and (iii) directions for further research (section 7.4). The aim of the thesis is to understand the problem of household waste management challenges in post-apartheid South African townships. The entire population of Lamontville Township, eThekwini Municipality, KwaZulu-Natal province was considered as the study population for the research. Key stakeholders in waste management whom are outside of Lamontville but within eThekwini Municipality were also included in the research and these stakeholders included waste service providers, waste pickers, and public institutions. Fieldwork was conducted over a period of 7 months and data was collected through focus group discussions, participatory group activities, a household survey, observations, document analysis and interviews. This research design (elaborated in chapter 3) was chosen in order to meet the following research objectives (as set out in chapter one, section 1.2):

(i)   To investigate the constraints and opportunities for waste recycling in South African Townships

(ii)   To review how current waste policies and practices in urban areas facilitate the exclusion of vulnerable members of society

(iii)   To understand the gender dynamics in household waste management

Each research objective is addressed in a separate empirical chapter. The three empirical chapters of this thesis (chapter 4, 5 and 6) are intended to complement each other and

when combined they account for the complex meanings of household waste to the different actors within the township community. The following section (7.2) presents a summary of the thesis findings as set out in chapter 4 to 6.

7.2   Summary of research findings

7.2.1   Objective One

The first empirical chapter – Chapter 4- addresses the first objective of the research by examining the constraints and opportunities of recycling waste in a post-apartheid South African township. The chapter commences with a description of the current waste collection practices in Lamontville Township. Waste collection is extended to some degree to all areas of the township, and the majority of the collected waste is disposed of in a landfill site which is common practice in most countries of the Global South. However, the formal waste collection network as provided by the local government is plagued by inconsistent waste collection periods, limited collection and discriminatory waste collection practices. This research reveals the failures of the national waste policy to integrate all citizens in the formal waste collection network. The different sections within the township community have unequal access to household waste collection. Household waste collection is dependent on housing type and geographic position which are proxies for socio-economic status. As a result, the peripheral areas (low-income areas and transition housing) of Lamontville Township receive limited waste collection services. Furthermore, waste service provision fluctuates depending on the social and political landscape in the townships. The barriers to waste recycling were

discussed based on the current waste management practices, as formal waste recycling in townships is limited.

This research grouped the barriers to formal waste recycling into four categories; physical, socio-political, organisational and financial barriers. The common themes amongst the barriers, is the impact of ethnicity, politics and the legacies of apartheid spatial planning that act to restrict development initiatives in marginalised areas. The population of Lamontville is growing as indicated by new settlement development and the current infrastructure is unsuitable for the expanding population. Some have argued that infrastructure in post-apartheid South Africa, works to systematically exclude some people from service delivery (Harrison and Huchzermeyer, 2003). The physical barriers work to exclude communities on the peripheral of the Lamontville. It was evident that the communities on the township periphery are predominately ethnic minorities (Xhosa people) from Eastern Cape Province.

The research found that the majority of the township community were willing to participate in waste recycling. However, they rejected a waste recycling scheme that would involve separating waste inside their homes mainly as a result of lack of space and due to their subjective views of household waste management. Similarly, source separation in the published literature is often shown to be hindered by spaces and the quality of infrastructure as well as attitudes towards the benefit of recycling (Lange et al., 2014; Wang, 2016). In some part of the township, especially Transit Mathini where ethnic tension are heightened, waste recycling was rejected. Literature on waste recycling in the Global South points to many variables, such as a lack of space, quality of

infrastructure and socio-demographic features that negatively affect the willingness to participate in waste recycling. Rarely is ethnicity and subjective opinions in multi-ethnic communities, as pointed out in this thesis, considered as a hindrance to waste recycling. This research contributes to the understanding of how multi-ethnic communities within resource scarce areas, use and perceive waste recycling stations. The use of recycling stations is not based on a seemingly rational decision, but on a range of societal factors; decisions are made in a negotiated daily reality that involves multiple claims and identities.

7.2.2   Objective Two

Chapter 5 reviewed and confirmed how waste policies and practices exclude some segments of the community from attaining formal waste services. For this research, social exclusion is the process by which certain groups find their access to waste collection denied albeit as citizens of the new South Africa entitled to equal access within a democratic state. It was essential to contextualise the political landscape of today's South Africa in order to understand how service provision is undertaken in the post-apartheid era. The dominance of the ruling (ANC) political party was found to negatively affect service delivery in marginalised urban areas like Lamontville Township. How and where municipal waste services are provided is part of the strategies of political actors. Service provision in townships in the form of waste collection is provided predominately to community members who will vote for the ruling party in elections. Service delivery and the economy have been politicized to ensure the continued dominance of the ruling party.

The research reveals that politicians use waste management as an important avenue to retain patronage. The ANC spreads its power and influence (retains a professional bureaucracy) by employing municipal workers, contract workers and 'volunteers' in the community through political patronage. The politics of the ANC have permeated institutions including the waste management sector. Modernised waste management systems, such as waste recycling are discouraged in townships. One interpretation could be that waste recycling threatens the dominance of the ruling party as it is thought formal recycling schemes would reduce the number of employed people, leading to a decrease in the dominance of the ruling party. Decisions relating to implementation of national environmental waste management strategies were found to reflect political priorities rather than scientific validity. This is an indication of the incompetence of ANC's inability to manage a modern industrial economy in a way that provides efficient waste management service to the whole population. Therefore, waste recycling remains an activity that benefits only the privileged (suburban, middleclass, formerly-white) communities, who do not depend on the political structures for service delivery. Extending waste recycling into (predominately Black) townships could also be taken as a way of including less privileged communities into the imagined new South Africa.

Informal waste activities were identified within the study area. The presence of informal sector waste management activities is often attributed to failed strategies of managing waste and high poverty levels faced by urban dwellers in the Global South (Wilson, 2007; Nzeadibe, 2009). In Lamontville, informal waste pickers are unemployed, uneducated, disabled, and some belong to the ethnic minority group of Xhosa people. Some have argued that the informal sector is an adaptive response to scarcity by disadvantaged

groups in urban areas where there is an abundance of waste (Fahmi, 2005; Marello and Helwege, 2018; Oteng-Ababio et al., 2013). The economic position of waste pickers in Lamontville is exacerbated by national-level decisions and policy implementation relating to housing development. Waste pickers (especially women waste pickers) are trapped in the informal economy in order to maintain 'free' housing from government. Moreover, waste pickers face stigmatization from the community due to the nature of their work and prosecution from the government. Sasaki et al. (2014) and Viljoen et al. (2012) suggest that making a living in the informal waste economy is associated with deprivation, threats to well-being, and socio-political contestations for rights to waste. Although waste pickers in Lamontville are making a meaningful contribution in reducing the amount of waste destined for a landfill site, waste pickers are at the bottom of production and are exploited by middlemen and industry who are higher up the waste recycling hierarchy (see section 2.4). The marginalisation of waste pickers forms part of a greater debate on the exclusion of elements in the cities which are not compatible with a modernising economy.

Ethnic identity, political affiliation and geopolitical location are central to the understanding of social exclusion in the ecology of waste in South Africa. As shown in the preceding chapters, this is exemplified by the community of Transit Mathini who are predominately Xhosa people, living in temporary housing on the periphery of Lamontville Township. These transit residents are waiting for permanent RDP housing while receiving inadequate basic services. Therefore, the politics of waiting involves living in waste infested areas while remaining loyal to the dominant political party (ANC) in the hope they will eventually recognise their presence in the township. Adopting the

perspective of the feminist political ecology approach reveals that urban service provision is embedded in multiple structures of power (Elmhirst and Resurreccion, 2012), and in this particular context of the South African township, the ruling political party uses service provision to re-enforce their dominant position of power while transferring environmental burdens (e.g. poor waste management) to marginalised communities in which minority ethnic women are more affected.

7.2.3   Objective Three

The third research objective focussed on researching the gendered dynamics of household waste management and is addressed in chapter 6 of the thesis. It is important to recognise the similarities and differences of the experiences and realities of women and men in a post-apartheid township in order to position gender within household waste management. This research showed that household waste is primarily the responsibility of women in their households and community. This is consistent with the findings of other studies on household waste management responsibilities in the Global South (Beall, 1997; Nzeadibe and Adamu, 2015), which point to women as being responsible for waste because of cultural beliefs and socio-economic situations that place men as economically active, and therefore, 'out of the house'. A clear distinction was identified between the gendered private and public space divide in that women broadly remain indoors, while men readily occupy the streets. This division of space affects waste management at different scales: at home; neighbourhood and provincial levels; and also influences employment and political representation in the township.

Feminist political ecologists point to how gender is central in understanding the divisions of space. Although equal employment opportunities for women and men are encouraged by the South African government, the working arrangement of private waste contractors highlight the contradiction between the stated national and provincial government position on gender and the lived experiences of workers on the ground. The research presented in this thesis reveals how activities in waste collection contracts are allocated based on gender identities. Activities such as sweeping are assigned to women, while driving the collection vehicle is seen as a masculine activity. This distinct boundary in waste management needs to be addressed to achieve gender equality and further examine problems specific to women as the group that handles household waste. This research contributes to an understanding of how the activities of the waste contractors are felt at the scale of body. Applying the feminist political ecology framework provides the opportunity to focus on the national level decisions relating to waste service privatisation, which in townships results in disproportionate patterns of pollution that intersect with gender. For example, women are responsible for street sweeping, including the burning of illegal waste dumps, which affects their health.

The negative impact of environmental pollution is different for women who are mothers. The research presented in the preceding chapters of this thesis places the discourse of motherhood within contemporary neoliberal conditions of uneven distribution of environmental pollution. In areas with minimal waste collection services, motherhood involves devoting much time to their children's safety, as their waste infested living areas are a threat to their health. Hall (1998) and Mamabolo et al. (2009) argue that motherhood is constructed based on the local political, historical, and cultural contexts.

Multi-level decisions of privatising waste services for poorer communities places a burden on mothers who become what McDurty (1998) refers to as municipal keepers. Mothers clean their living areas, taking ownership of the responsibility of the local government to collect household waste. The time taken in cleaning and taking care of children prevents mothers from pursuing other avenues that may improve their lives. In waste infested areas, mothers are restricted to their living areas, limiting their chances of pursuing economic activities.

Women who live in waste infected areas, develop negative emotions that influence their daily activities. The feminist political ecology approach illuminates the way that improper waste management is not only about poor urban waste planning and financial constraints, but is also about embodied emotions that have a direct effect on the lives of women. Women characterised the emotional stress of conducting household chores in waste infested areas as suffering, shame, and sadness. Although emotions are intangible and subjective, they can reveal alternative ways of understanding the extent to which inadequate and inappropriate waste management affects marginalised groups. Space is felt and Wright (2012) asserts that attending to emotions has the capacity to deepen our perceptions of inclusion and exclusion. Research into waste management has remained relatively impervious to the role of emotions in areas associated with poor waste collection. Other studies have shown the emotional aspects of accessing water in water scares regions of Africa, as well as the role of ethnicity, gender, land ownership and age as key variables in producing uneven access to water (Bakker et al., 2008; Ge et al., 2011; Sultana, 2011; Truelove, 2016). This research argues that focusing on emotions

can bring about knowledge on the locally grounded impacts of poor waste management which could be incorporated into policy.

Spatial location and social identities influence the experiences of environmental injustices. Women residing in waste infested areas such as Transit Mathini, have black marks on their feet due to pollution. In this area where different social groups compete for scarce resources and services, black feet are constructed to reflect ethnicity. Ethnic allegiances are a dominant medium for organising people in areas where competing forms of political identity exist (Wantchekon, 2003). The black feet are constructed as belonging to the Xhosa women, who are a minority ethnic group seen as immigrants in Lamontville. This is not to say that women from other ethnic groups do not have black feet. Women's bodies that are covered with black marks are read, by the dominant Zulu group, to represent dirt, shame and being a foreigner within the township community in the Zulu-dominated province of KwaZulu-Natal. Belonging is expressed through bodily performance in that women who appear with black feet in public spaces, feel and experience a sense of exclusion, as they are not adhering to the prescribed norms of cleanliness. This thesis contributes to the understanding of how improper waste management changes the body coverage, which results in the exclusion of women from minority ethnic groups. The intersection of gender, ethnicity and dirtiness (prescribed norms of cleanliness) are central to a full understanding of gendering in household waste management.

This thesis also shows how women are left out of participatory local government activities due to their social identities. Many critics argue that women are the group that

is most likely to find themselves and their interests marginalised or overlooked in participatory processes of governance and development (Cornwall et al., 2007). Women are appointed to positions of leadership (e.g. local councillor) to empower other women, however, this fails to achieve the intended objectives. The intersection of the local political economy with gender, marital status, and ethnicity, marginalises women from accessing political structures that could assist with waste management. For example, women who are Xhosa, unmarried and not affiliated to the ruling ANC party, are prevented from participating in public spaces of decision making (i.e. ward meetings) and also from receiving government goods (e.g. food parcels, livelihood support). Similarly, Thompson (2016) states that opportunities and rewards are explicitly, and implicitly available to some and held back from others based on social identities. Public participation spaces of democracy and local government in Lamontville, are avenues for political parties to pursue narrow interests of securing their power, while the economic and politically weak are further marginalised.

7.3   Policy Recommendations

Increasingly over the past decade, the spotlight is set on the inability of local government to provide waste services in urban areas of the Global South. Rapid urbanisation and unplanned growth contribute to the generation of waste and its subsequent mismanagement (Sanneh et al., 2011). In South Africa, waste challenges are experienced more acutely in low income urban townships and other marginalised areas as service provision is mediated by the prevailing post-apartheid socio-political conditions. Several

policy recommendations arise from the results of the study set out in the preceding chapters and are discussed in this section.

The findings of the study point towards need for legal and institutional reform. Based on this research, a comprehensive review of all legislative aspects relating to household waste management in South Africa is recommended, with a view of aligning legislation to the realities on the ground. For example, terms, such as 'green economy' which are discussed in section 4.4.3.3 and the governments' policy adoption of the waste management hierarchy, indicates a transition towards sustainable waste management in South Africa. Such modern waste management practices are common and best practice across the Global North, however in countries of the Global South such as South Africa, waste management strategies adopted from the Global North are frequently incompatible with many aspects of the local economic, social and political situations. In Lamontville, enforcement of the local by-laws governing household waste, and other services such as water and electricity are poor. For example, the 'no dumping policy' is inappropriate in township areas as community members are simply unpunished for engaging in illegal dumping and indiscriminate waste handling – behaviours for which they frequently have no feasible alternative where formal waste disposal services are inadequate at best and non-existent at worst. The weak legal framework in combination with ineffective institutional structures has adverse effects on the quality of waste services in Lamontville and other similar townships. The implementation of waste management legislation should be limited to a few institutions whose role and responsibilities are well defined. Section 4.4.3.4 details conflicts amongst government institutions that negatively affect waste collection. Institutions should be strengthened

and capacity improved with competent appropriately qualified staff members in order to improve waste collection and disposal.

The next policy recommendation drawn from the findings is that local government needs to reconsider waste collection in marginalised areas. The research has demonstrated the need for understanding spatial planning in post-apartheid South Africa and its influence on household waste management. As described by Jürgens et al. (2013) the historical background of South Africa dictated the infrastructure that was deemed sufficient for township areas. Today the same apartheid-legacy infrastructure affects the quality of waste collection while further separating the community based on ethnicity and class. Waste collection is hindered by (amongst other things) apartheid-style family flats, distance to collection points and narrow roads. The burden of inadequate waste collection is unequally distributed; women and children suffer the most due to their marginal positions in society. Furthermore, the formal waste collection services should incorporate Transit areas of townships which are at present omitted from the legal framework, and currently receive only sporadic waste collection. Unless cognisance is given to the housing form, road infrastructure, physical geography and socio-economic levels, communities on the periphery will remain excluded from formal waste collection systems.

Policy makers must recognise that information sharing is important for sustainable waste management. Chapter 4 details how a lack of knowledge affects the management of household waste in Lamontville Township. In some parts of the community, household waste is burnt and buried and in other areas, waste is disposed of by dumping

in streams and wetlands. These are acceptable waste disposal methods for township residents. In this context, local government institutions must take an active role in educating the public and raising awareness on matters related to household waste management. The awareness must include factual information on the health risks of improper waste handling, the benefits of waste reduction and improving attitudes towards recycling. Parrot et al. (2009) states that public awareness and attitudes towards household waste can positively impact the whole waste management system. There is a need to design education programmes directed at different sectors (i.e. community groups, third sector organizations, schools) within the municipality. Since women are responsible for household waste, as demonstrated in Chapter 6; environmental and waste education should work towards eradicating the gendered stigma associated with handling (touching) waste. Currently in the community, phenomena such as social exclusion and unequal power relations between women and men (patriarchal social structures) diminish the likelihood of all community members from accessing information about better waste disposal. Therefore information on waste management needs to cater for new immigrants (ethnic minorities) while finding strategic ways of reaching people with restricted mobility (including women).

The outcomes of the focus on waste recycling in the first line of investigation of the study presented in this thesis suggest additional policy proposals. Formal household waste recycling in South Africa is still restricted to previously 'white' suburbs that are well resourced. Recycling should also be extended to townships, as research into waste recycling proves it is a sustainable waste management option that reduces waste destined for landfill sites (Troschinetz et al., 2009). The research undertaken for this

thesis reveals that the community of Lamontville is willing to partake in formal recycling of household waste. Some community members are familiar with and already engaging in waste recycling schemes at their places of employment (including as factory and domestic workers). In Lamontville Township, waste recycling schemes should be designed based on the current collection methods for each sub-community, to ensure maximum recovery of waste items and to enhance levels of participation. In addition to providing waste recycling, it is the task of government institutions to understand the ethnic dynamics prevalent amongst the community. Section 4.4.2 revealed the social and political barriers to recycling waste and how successful recycling is based on a range of societal factors that should be considered when designing and implementing a recycling scheme. In-multi ethnic complex communities such as Lamontville and other similar townships, policy makers should listen to and incorporate the voices of the community in the decision-making processes related to waste management and recycling.

Informal waste recycling activities by waste pickers were identified in Lamontville during the field work undertaken in this thesis. Waste materials are retrieved from waste dumps, house-to-house collections and street picking. Waste pickers self-regulate their working environment and operate on the margins of society due to the low status and stigmatised nature of their work. Although waste pickers are marginalised by government and the community, their contribution to waste reduction is visible in the township. In one case, a waste picker converted an illegal dump into a waste collection area and other waste pickers retrieve waste items in areas where the local government does not provide a waste disposal or collection service. In light of the above, policy

should acknowledge the role of informal waste pickers to improve waste management in South Africa. Countries in South America that have changed to formally recognise waste pickers as important stakeholders in waste management report that supporting waste pickers assists in reducing municipal spending and conserving natural resources (Gutberlet, 2008; Marello and Helwege 2018).

7.4 Future research directions

The research presented in this thesis has revealed areas that can be explored in the future. This doctoral study investigated the gendered dynamics of household waste management in Chapter 6. It was evident that privatization of waste services through contracting reinforces women's subservient position in society. In addition, what was evident during field work, although not extensively explored, is the detrimental impact of privatisation on women's health. Women working as waste contractors are responsible for burning illegal waste dumps, thereby inhaling toxic substances. A more thorough exploration should be conducted on how national neoliberal policies (re) create gendered inequalities in society. Such a line of research inquiry would assist in making stronger claims towards improved household waste management through eliminating gendered divisions of work in marginalised areas. Somewhat connected to this issue are considerations with regard to the working environment in the informal sector. Research on the informal waste economy in the Global South documents the working conditions of informal waste pickers, which is often characterised by exploitation, poverty and risks to the worker's health (Ezeah and Roberts, 2012; Wilson et al., 2006). Therefore, strategies should be drafted to reduce the dangers faced by waste pickers. Further to that, investigation should be conducted into how national level

decisions on housing (and other services) impact the lives of women who are pushed towards the informal economy.

Another significant area of inquiry would involve exploring the nature of service provision within transition housing. There is a gap in understanding how services such as waste management are distributed in temporary government housing. The temporary state of the transit settlements within townships does not only deprive these communities of waste services but also affects their political status. In order to fully understand the extent of political, economic and social marginalisation it would be central to carry out research in transition housing to capture people daily struggles for basic services. In Transit Mathini and other areas of Lamontville, the research revealed service delivery is deeply enmeshed with political corruption. It was beyond the scope of this work to investigate corruption in service delivery, yet during field work, it was highly evident that personalised relationships with political (ANC) elites created spaces for political patronage. More investigation should be carried out into corruption within service delivery, and its influence on marginalised communities. Further research could provide information for political interventions promoting inclusive, fair and equitable access to government goods such as promised in the urban townships of the new democratic post-apartheid South Africa.

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APPENDICES

Appendix 1

Signed consent forms for the focus group discussions and interviews with adults.

DEPARTMENT OF GEOGRAPHY, ENVIRONMENT AND EARTH SCIENCES, UNIVERSITY OF HULL

Consent Form: Focus Group Discussions

I, ███████████████████████ Section *LAMONTVILLE*

Hereby agree to participate in this study to be undertaken by Mbali Pewa

and I understand that the purpose of the research is to:

Examine the sustainability of waste recycling in Lamontville, KwaZulu-Natal. The study will examine the constraints and opportunities for implementing a recycling scheme for the Lamontville community.

I understand that

1. Upon receipt, the focus group transcripts will be coded and my name and address kept separately from it.

2. I acknowledge that my participation in this research is voluntary.

3. Any information that I provide will not be made public in any form that could reveal my identity to an outside party i.e. that I will remain fully anonymous.

4. Aggregated results will be used for research purposes and may be reported in scientific and academic journals.

5. Individual results will not be released to any person except at my request and on my authorisation.

6. That I am free to withdraw my consent at any time during the study, in which event my participation in the research study will immediately cease and any information obtained from me will not be used.

7. I agree not to share the information discussed in focus groups with people outside this groups.

8. All audio recording will be discarded when the research is finished

Signature: ██████████████ Date: *20/10/16*

The contact details of the researcher are: Landline: 035 7924629 or Email: m.k.pewa@2015.hull.ac.uk

The contact details of the Departmental Ethics Officer are: Department of Geography, Environment and Earth Sciences, University of Hull, Cottingham Road, Hull, HU6 7RX, UK tel. +44(0)1482-465320.

DEPARTMENT OF GEOGRAPHY, ENVIRONMENT AND EARTH SCIENCES, UNIVERSITY OF HULL

Consent Form: Interviews

I, ███████████████████████████   Section ██████████████████████████

Hereby agree to participate in this study to be undertaken by Mbali Pewa

and I understand that the purpose of the research is to:

Examine the sustainability of waste recycling in Lamontville, KwaZulu-Natal. The study will examine the constraints and opportunities for implementing a recycling scheme for the Lamontville community.

I understand that

1. Upon receipt, the Interview transcripts will be coded and my name and address kept separately from it.

2. I acknowledge that my participation in this research is voluntary.

3. Any information that I provide will not be made public in any form that could reveal my identity to an outside party i.e. that I will remain fully anonymous.

4. Aggregated results will be used for research purposes and may be reported in scientific and academic journals.

5. Individual results will not be released to any person except at my request and on my authorisation.

6. That I am free to withdraw my consent at any time during the study, in which event my participation in the research study will immediately cease and any information obtained from me will not be used.

7. All audio recording will be discarded when the research is finished

Signature: ████████████   Date: 21/10/2016

The contact details of the researcher are: Landline: 035 7924629 or Email: m.k.pewa@2015.hull.ac.uk

The contact details of the Departmental Ethics Officer are: Department of Geography, Environment and Earth Sciences, University of Hull, Cottingham Road, Hull, HU6 7RX, UK tel. +44(0)1482-465320.

Appendix 2: Map of Lamontville Township

Lamontville

Esri, NASA, NGA, USGS | Esri South Africa, Esri, HERE, Garmin, METI/NASA, USGS

0.4km
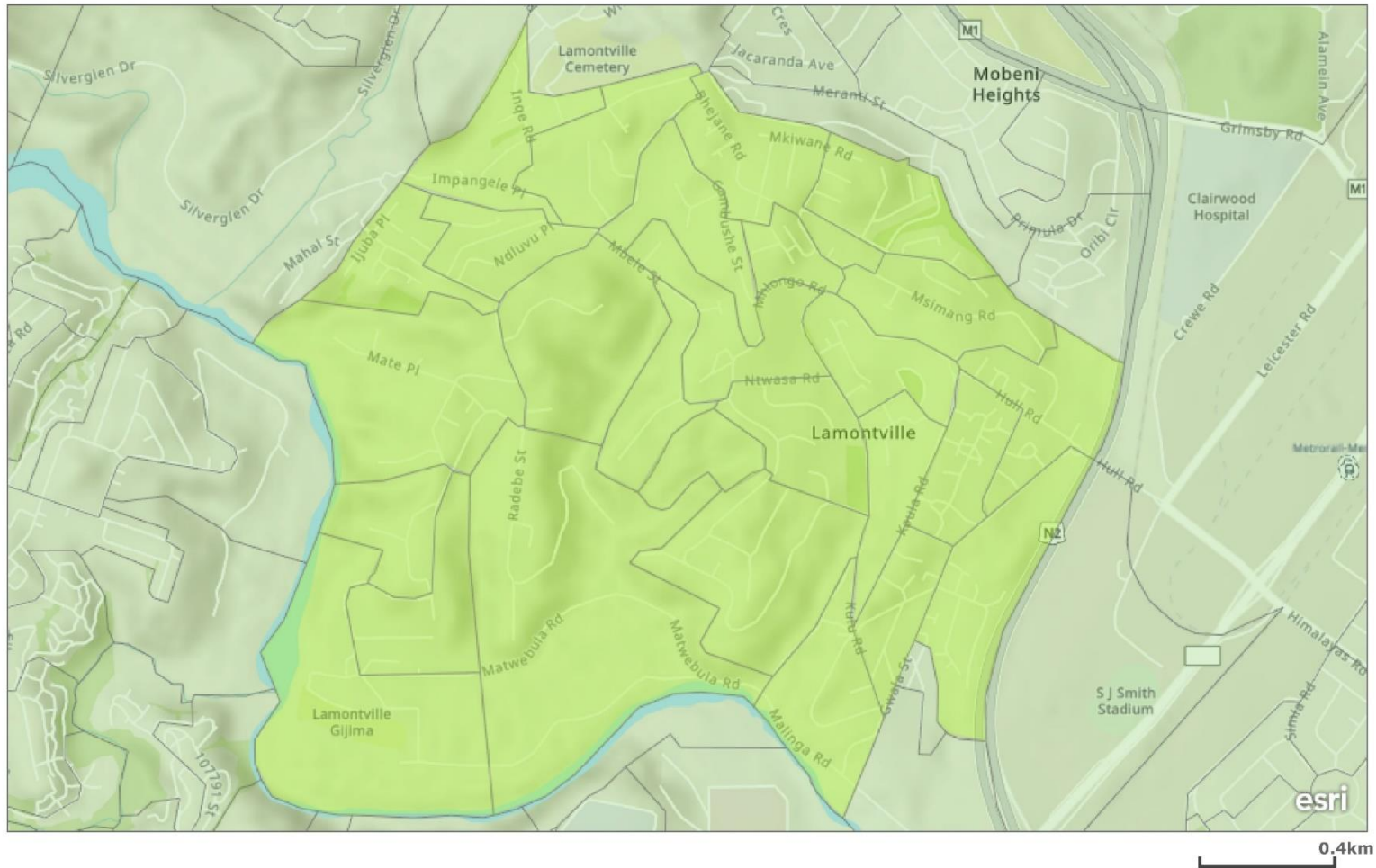
Appendix 3

Letter from the Ward 74 councillor giving the researcher permission to conduct research in Lamontville Township.

ETHEKWINI
MUNICIPALITY

21 September 2016

Dear Ms Mbali K Pewa

840605 0332 080

The Ward 74 Councillor has granted Ms Mbali K Pewa permission to conduct research on Waste Management in Lamontville Township.

Councillor Octavia Nolubabalo Mthembu

COMMISSIONER OF OATHS
ETHEKWINI MUNICIPALITY
EX OFFICIO DISTRICT OF DURBAN IN
TERMS OF SECTION 6 OF ACT 16 OF 1963
(AS AMENDED) CITY HALL SECRETARIAT
Dr Pixley Ka Seme Street, Durban, 4001

Guide for focus group discussions in Lamontville Township

I am a researcher form University of Hull working on my doctoral thesis on the sustainability of waste recycling for vulnerable groups. This is aimed at understanding the constraints and opportunities of recycling waste in Lamontville as well as to explore the possible ways recycling can benefit marginalised people. I am especially interested in your understanding of solid waste practices in the context of environmental, social and economic impacts of waste disposal. The group discussion should take approximately 2 hours and 30 minutes. The focus groups will commence with discussions over waste recycling and followed by a discussion of waste disposal practices.

If you have questions at any point during the discussions, do not hesitate to ask. You do not have to be in agreement with others during the discussion. You are free to express your opinion. With your permission I would like to record your response to accurately capture your responses.
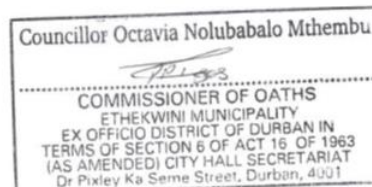
Your personal details will not be captured on the audio recorder. The information is confidential and no direct reference to your name will be made. This information will be combined with information from other discussion groups and will be used for Mbali Pewa's doctoral thesis at University of Hull. My role as a researcher is to guide the discussions. A summary of the results of the focus groups will be provided at the end of the focus groups

Focus groups Question Guide

1. Can you tell us about yourself?

2. Can you tell me how you deal with waste in your home and community?

3. In your understanding, can you tell us what is waste recycling?

4. How can waste recycling benefit you and your community?

5. How could a waste recycling scheme be designed to suit your needs?

6. With specific reference to waste management; What do you think are the major issues affecting vulnerable people?

7. What do you think are the challenges of waste management faced specifically by men/women?

8. Do you have anything else to add to what we have been discussing?

Appendix 5

A consent form signed by the parent consenting for their child to participate in focus group discussions and participatory activities

DEPARTMENT OF GEOGRAPHY, ENVIRONMENT AND EARTH SCIENCES, UNIVERSITY OF HULL

ISICELO SEMVUMO YOMZALI

Mzali,

Sicela imvumo yakho ukuba sikhulume nomtwana wakho mayelana nohlelo lokuqoqwa kukadoti ukugcina indawo yethu ihlanzekile.

Ozithobayo

Mbali Pewa

Sayina *P. Magogo*   Usuku 16 /11/16

Izinombolo zikaMbali; 035 7924629 noma email: m.k.pewa@2015

B.L.P. TSEKISO (PRINCIPAL)
ENTUTHUKWENI PRIMARY SCHOOL
DATE: 16. 11. 2016
073 021 3347
busitsekiso@gmail.com

DEPARTMENT OF EDUCATION
ENTUTHUKWENI PP SCHOOL
BOX 28
2016 -11- 1 6
...VILLE 4027
TELEPHONE: 031 462 3971
KWAZULU NATAL

Appendix 6

The interview guide for focus group discussions with children in primary and high schools in Lamontville Township.

1. Who is responsible for throwing waste away at home? Udoti ulahla ngubani ekhaya?

2. What do you like/or not like about the way waste is handled?Yini ongayithandi ngodoti?

3. Have you seen waste being separated in Lamontville? Wake wawubona udoti uhlukaniswa?

4. How can you assist in waste management and separation?Yini ongasiza ngayo ngodoti?

Appendix 7: Map of the housing distribution in Lamontville Township by type.
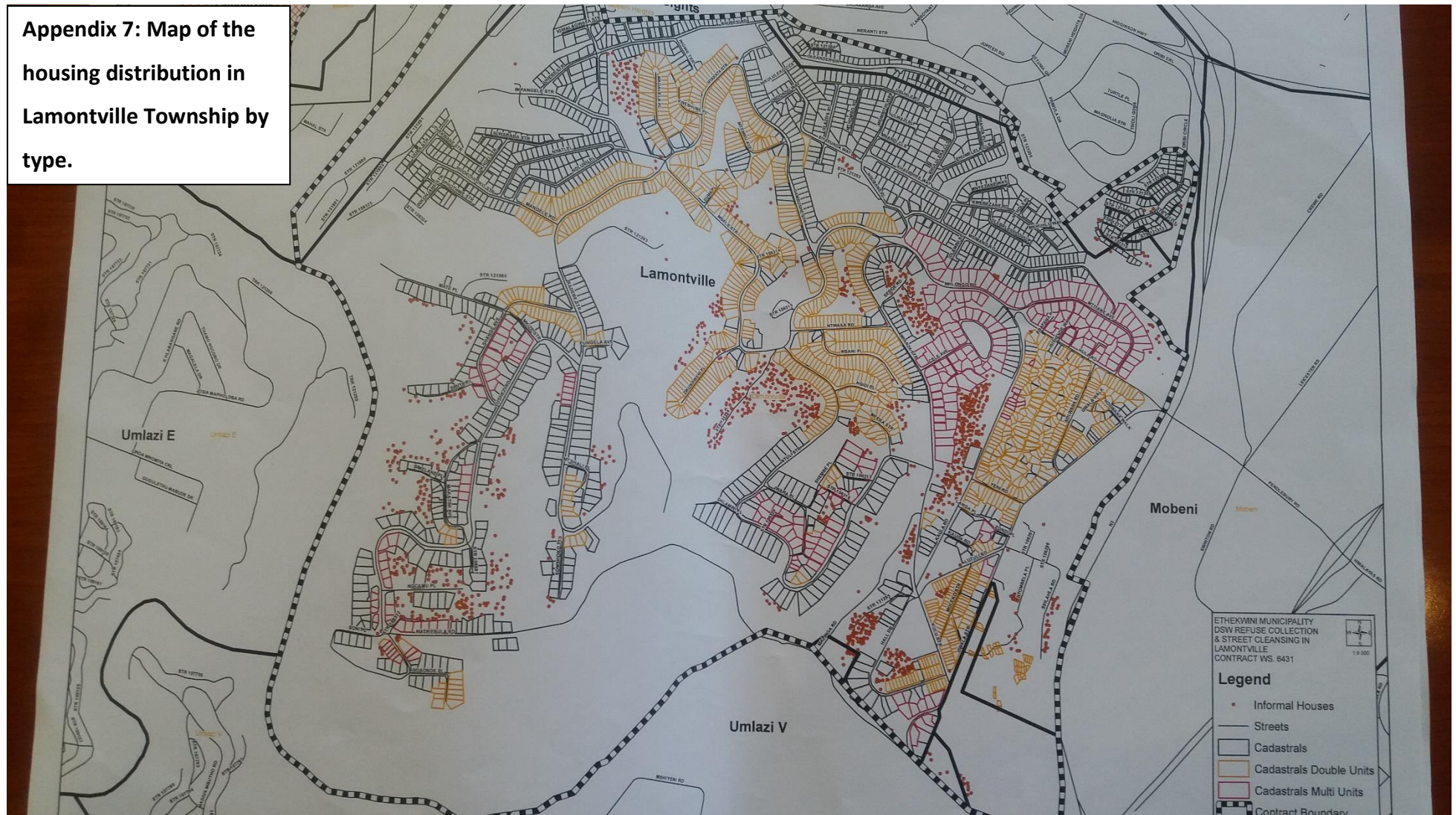
Appendix 8: Map of the seven sub-sections of Lamontville Township

Transit Gijima

LTA

Lamontville Central

Madlala Village

Barcelona

Lamontville Central

Wema Hostel

Transit Mathini
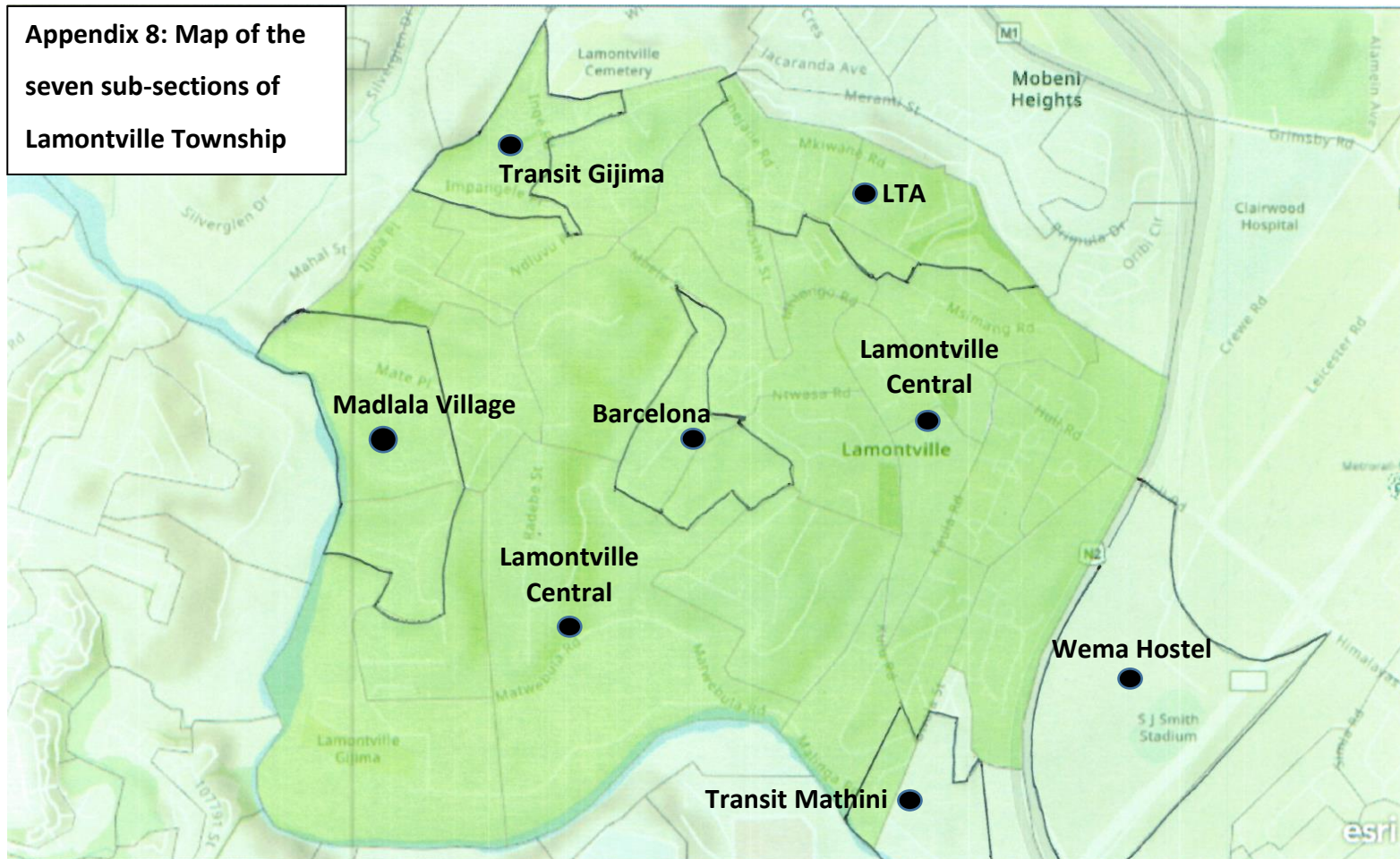
Appendix 9

The questionnaire for the household survey of waste management

Examining the Sustainability of Waste Recycling in South Africa

Questionnaire for Household Members in Lamontville Township

Section A: Household Information

i. Date:

ii. Time start:

iii. Name of Interviewer:

iv. Section where household is situated:

v. Place where interview is conducted:

vi. The household position of the person responding:

vii. Household Information:

Age range in years	Males	Females	Social Grant	Disability
0 - 8				
9 - 17				
18 - 25				
26 - 40				
41-60				
Over 60				

Section B: Background Information of the Household Representative

1. Gender

Male ☐   Female ☐

2. Age

.... Years   3. Dependants............

Children..................

4. Spoken Language

Zulu ☐   Xhosa ☐   Other ☐

5. Marital status?

Married ☐

Single, never married ☐

Divorced/separated ☐

Cohabitation ☐

Widow/Widower ☐

Other........................... ☐

6. What is the highest level of education you have attained?

Primary school ☐ ....   High school ☐........

Technical/College ☐......   Diploma/degree ☐......

No formal education ☐   Other.......................................

7. Are you currently?

Employed Part-time ☐   Retired/Pensioner ☐

Employed Full- Time ☐   Student ☐

Employed seasonal ☐   Unemployed ☐

Other Specify.............

8. Any other livelihood activities...

9. What is the total monthly income of the household?

R3500 ☐

Less than R3500 ☐

More than R3500 ☐

10. Which of these devices (in working order) do you have at your home now?

Cell Phone ☐   Television ☐
DSTV ☐   Vehicle ☐
Land line phone ☐   None of the above ☐
Radio ☐

11. Where is the toilet for the people living in this house?

Toilet inside the house ☐
Toilet attached to house ☐
Toilet outside the house, but on the same property ☐
Communal toilet ☐
No toilet available within walking distance ☐

12. What sort of toilet is it?

Flushing toilet ☐
Longdrop ☐
Bucket system ☐
Other specify.......................

13. Do you own the house you live in?

Yes ☐   No ☐   Not sure ☐   Family Home ☐

14. How long have you resided here?

.....................years
.....................months

15. What type of property do you live in?

Formal house ☐...
RDP ☐
Informal housing (Shack) ☐
Family flats ☐
Informal housing (eMathinini) ☐
Other...

16. What do you consider as the most important challenge in Lamontville?

Rank the following from 1 to 8, with 1 as the least challenging and 8 as the most challenging.

Alcoholism ...... Public Transport ......
Crime ...... Waste management ......
Drug dealing ...... Sexual Harassment ......
Housing ...... Storm water management ......
Other challenges...

Section C: Household Waste Management Practices

17. Where do you dump your household waste?

Roadside front of house ☐
Roadside in communal area ☐
Communal waste area ☐
Open plot ☐
Dig a pit and burn the waste ☐
Other...

18. Does your household receive black waste bags?

Yes ☐ No ☐ Sometimes ☐

If Yes, how many bags do you receive per month? ......

If No, why not ? ....

If Sometimes, why? ....

19. Who is usually responsible for disposing of household waste in your household?

(You can choose more than one)

Father ☐	Mother ☐	Paid worker ☐
Daughter ☐	Son ☐	Grand Mother ☐
Boys ☐	Girls ☐	Grand Father ☐
Anyone who is home ☐		Not sure ☐

20. In your opinion, who is the most vulnerable to harm in the management of waste?

(Choose one from below)

Females ☐	Males ☐	Children ☐
The Elderly ☐	Disabled ☐	Other..................

Explain why....................................

21. Are you satisfied with the waste removal service provided to Lamontville by eThekwini Municipality?

Yes ☐ No ☐ Not sure ☐

Explain..

Section D: Waste Management and Vulnerability

For each of the questions below, circle the response that best characterises how you feel about the statement, where 1 = Disagree, 2 = Neutral, 3=Agree

22. Women are more concerned about solid waste disposal as this affects the health of their family.

Disagree	Neutral	Agree
1	2	3

23. People living in informal houses throw solid waste indiscriminately (in streets, drains, river) because they have no other means of disposing it.

Disagree	Neutral	Agree
1	2	3

24. Picking up solid waste litter in the community is the role of the children.

Disagree	Neutral	Agree
1	2	3

25. Different ethnic groups (Zulu/Xhosa) dispose household waste differently.

Disagree	Neutral	Agree
1	2	3

26. People who live in dirty areas (waste infested) are themselves dirty.

Disagree	Neutral	Agree
1	2	3

27. I believe that people living in townships litter more than those living in suburbs

Disagree	Neutral	Agree
1	2	3

Section D: Waste Reduction Activities

28. Does your household reuse any household waste?

Yes ☐   No ☐   Not sure ☐

If Yes, which waste component do you reuse and why?......

If No, why......

29. Does your household compost any waste?

Yes ☐   No ☐   Not sure ☐

If Yes, which waste component do you compost and why?......

If No, why......

30. Does your household separate waste (glass, plastics, cardboards etc..)?

Yes ☐   No ☐   Not sure ☐

If Yes, which waste component do you separate?......

If no, why......

31. Have you participated in a waste separation (collection) scheme in Lamontville in the past 5 years?

Yes ☐   No ☐   Not sure ☐

Explain......

32. Do you know anything about waste recycling?

Know much ☐   Know little ☐   Know nothing ☐

[If respondent says they know nothing about recycling explain to them before asking Q33]

33. If a recycling scheme was initiated would you participate?

Yes ☐   No ☐   Not sure ☐

If yes, go to Q34   If No, go to Q35

34. What is your preferred waste recycling scheme design?

Kerbside waste recycling ☐

Drop off recycling scheme ☐

Take to recycling station ☐

Other ☐

35. If No or Not sure, Why......

36. Do you know of any waste recycling companies in eThekwini municipality?

Yes ☐   No ☐

Location and/or the name of the company......

37. How can the municipality assist your household with waste recycling?......

38. Are you willing to pay for your waste to be recycled?

Yes ☐   No ☐   Not sure ☐

Section E: Waste Recycling attitudes

The following questions address your attitudes towards household waste recycling.

For each of the questions below, circle the response that best characterises how you feel about the statement, where 1 = Disagree, 2 = Neutral, 3 = Agree

	Disagree	Neutral	Agree
39.I would participate in a recycling scheme to earn money.	1	2	3
40.Recycling will reduce the amount of waste in Lamontville.	1	2	3
41. Whether I recycle or not, it will not make a difference.	1	2	3
42.Recycling will be successful if inspectors are hired to monitor it.	1	2	3
43. Recycling waste is the right thing to do.	1	2	3
44.We need to recycle waste to reduce environmental pollution..	1	2	3
45. Waste recycling is for suburban areas	1	2	3

Section F: Communication with Community Members

46. In the past 5 years, have you been educated by the department of solid waste on household waste management?

Yes ☐   No ☐   Not sure ☐

47. Indicate below the ways you find out about waste management (you may choose more than one)

Community meetings	☐
Radio	☐
Television	☐
Newspapers	☐
Leaflet / brochure/newsletter	☐
Non-governmental organisations	☐
We do not have any access to information	☐

Other..................

48. How often are community meetings held?

Weekly ☐   Monthly ☐   Quarterly ☐

Never ☐   As required ☐   As required ☐

Other intervals.......................

49. Do you attend these meetings?

Yes ☐   No ☐

If yes, why?...

If no, why?...

Additional Comments ....
....
....
....

Appendix 10

Socio-demographic information from the households in the survey

	Age category (years)						
Township	18-23	24-30	31-39	40-49	50-59	60-	Total
Barcelona	1	6	8	10	2	5	32
Madlala Village	1	6	12	9	0	0	28
Transit Mathini	1	5	7	14	5	1	33
Transit Gijima	1	5	8	8	4	2	28
LTA	0	4	9	6	2	6	27
Wema	2	3	4	4	3	2	18
Lamont Central	2	3	16	13	7	3	44
	8	32	64	64	23	19	210

	Gender		
Township	Female	Male	Total
Barcelona	22	10	32
Madlala Village	15	13	28
Transit Mathini	24	9	33
Transit Gijima	15	13	28
LTA	18	9	27
Wema	4	14	18
Lamont Central	21	23	44
	119	91	210

	Ethnicity			
Township	Zulu	Xhosa	Others	Total
Barcelona	14	15	3	32
Madlala Village	13	12	3	28
Transit Mathini	9	24	0	33
Transit Gijima	11	17	0	28
LTA	20	6	1	27
Wema	14	4	0	18
Lamont Central	30	9	5	44
	111	87	12	210

Employment	Township Barcelona	Madlala Village	Mathini	Gijima	LTA	Wema	Lamont Central	Total
Full time	6	7	13	4	3	8	20	61
Part time	0	5	4	4	5	3	3	24
Seasonal	0	2	0	3	4	3	2	14
Retired pensioner	3	0	1	1	6	1	3	15
Student	0	0	0	0	0	2	1	3
Unemployed	15	11	13	7	3	1	6	56
Self employed	8	3	2	9	6	0	9	37
	32	28	33	28	27	18	44	210

Township	Education Levels High School	Diploma Degree	No Formal education	Primary School	Other	Total
Barcelona	24	4	1	3	0	32
Madlala Village	28	0	0	0	0	28
Transit Mathini	26	3	0	4	0	33
Transit Gijima	25	1	0	1	1	28
LTA	16	10	0	1	0	27
Wema	13	5	0	0	0	18
Lamont Central	26	14	0	3	1	44
	158	37	1	12	2	210

Appendix 11: Map showing Umlazi Township, Folweni and KwaMashu Township
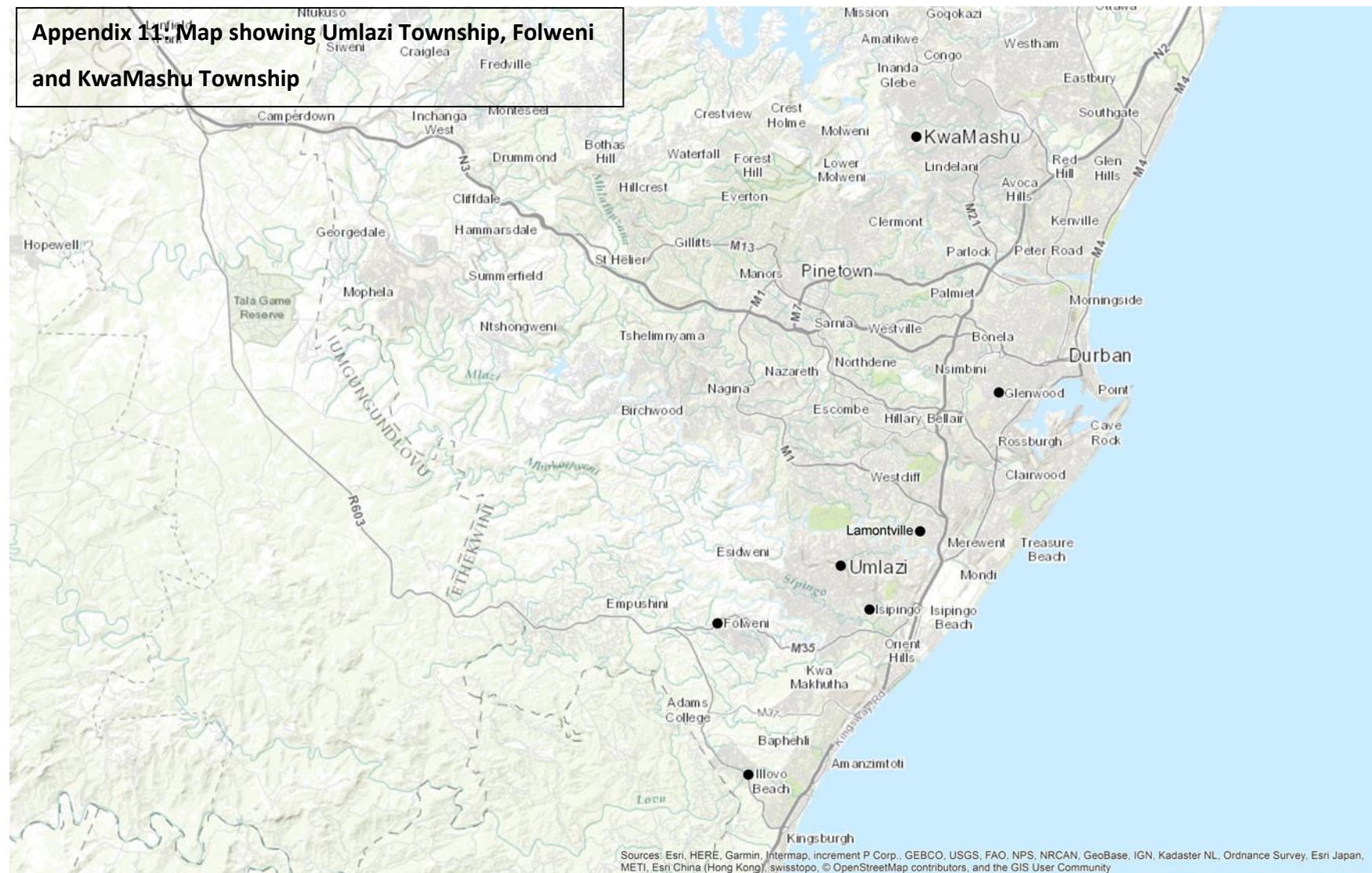
Appendix 12: Map showing Umlazi Township, Chatsworth Township and Isipingo

A newspaper article reporting a clean-up campaign in KwaMashu Township, a township within eThekwini Municipality

Clean-up month launched

LWAZI MZOBE, ROMITA HANUMAN and THEMBA KHUMALO

A STREET parade through the City centre officially marked National Clean-up month and Arbor Week, where Municipal officials urged residents to ensure that the City is kept clean at all times.

EThekwini Municipality's Durban Solid Waste (DSW) Unit launched the campaign on 1 September at the Victoria Bus Terminal in Julius Nyerere Avenue. The launch began with a street parade from Durban Christian Centre and ended with a formal programme and clean-up.

Ward 28 Councillor Ntando Khuzwayo encouraged people who visit the City on a daily basis to take responsibility. "This is your City, you must ensure that it is clean," he said.

Khuzwayo also appealed to street traders to stop littering and ensure that they conduct their business under healthy trading conditions to eliminate threat of diseases and contamination.

Simon Nyawo, Manager at

Residents of Ward 46 came out in numbers to clean up their area. Pictured are the participants and the piles of dirt collected.

Picture: THEMBA KHUMALO

DSW, encouraged everyone to start their own clean-up campaigns so that they contribute to the City's cleanliness. "As we mark three years of the clean and maintain my City programme, we need each individual to be responsible and ensure that we don't litter. We are pleased that this programme has

expanded to all wards in the eThekwini region, with the community, schools and organisations coming together to clean up," said Nyawo.

DSW Manager, Nana Ndlovu was encouraged by the attendance of the youth. Ndlovu appreciated various educational institutions which stepped up to assist,

including the Durban University of Technology, University of KwaZulu-Natal, Rossburg College, Nqabakazulu High School and Greyville Primary School.

A similar initiative took place in Ward 46 to observe National Clean-up Month. The community came out in their numbers to clean the area. Passport documents and used syringes were discovered on site.

Meanwhile, a pile of medical waste has been found in a dump site in KwaMashu's E-Section. The waste was found during a Clean and Maintain My City programme led by DSW.

DSW's Education Officer, Sandile Myende said the used drips and needles had been disposed near people's homes. "This is against the law. Our greatest concern is the children who end up paying the price for this irresponsible act," said Myende.

The City's Environmental Health Unit is dealing with the case in an effort to find a lasting solution.
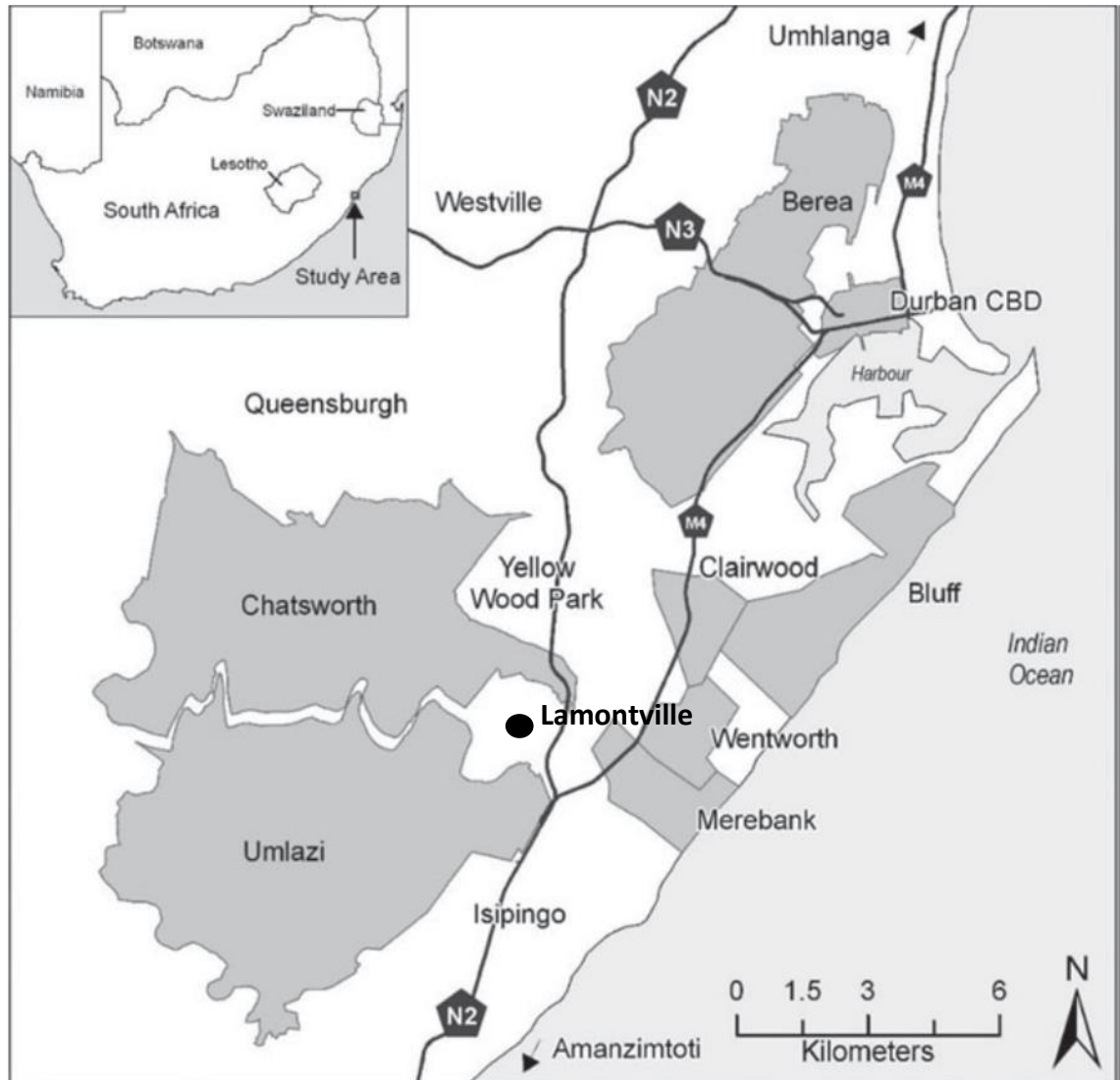
lwazi.mzobe@durban.gov.za
romita.hanuman@durban.gov.za

Appendix 14

Baboon skin used for witchcraft activities at Wema Hostel.

Appendix 15

Map of suburb areas next to Lamontville Township

(Source: Njokweni, 2011)

Appendix 16

A security guard stands at the entrance of Marianhill landfill with a firearm.

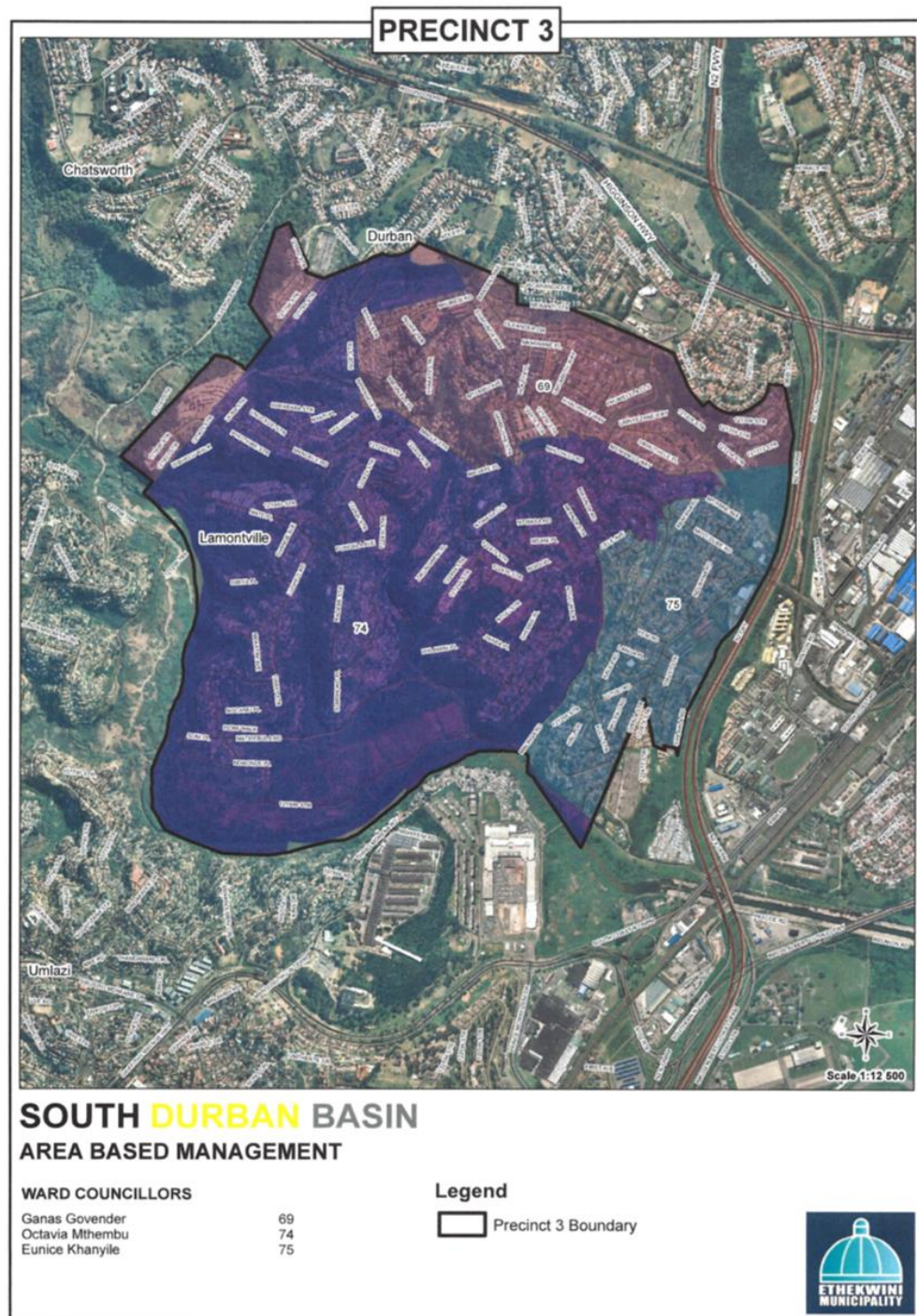
(Source: Author's own)

Appendix 17

A child carrying scrap metal at a reclamation plant in Isipingo.

(Source: Author's own)

The three electoral wards (74, 75, 69) in Lamontville Township

Appendix 19

The certificate awarded for volunteering in the eThekwini Municipality's waste management initiatives.

(Source: Author's own)

Appendix 20: Mariannhill landfill site