UNIVERSITY OF KWAZULU-NATAL

INYUVESI YAKWAZULU-NATALI

IN EXPLORATION OF ALTERNATIVE BURIAL METHODS AND OPTIONS: THE CHALLENGES OF IDENTIFYING NEW CEMETERY LAND IN RICHARDS BAY

Submitted By:

Mthokozisi S Mhlongo: 214583550

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Supervisor: Dr K Mchunu

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Declaration

I, **Mthokozisi Siboniso Mhlongo,** the author of the work presented in this dissertation hereby declare that the work submitted in partial fulfilment of the academic requirements for the Degree, Master of Town and Regional Planning in the School of Built Environment and Development Studies in the faculty of Humanities at the University of KwaZulu-Natal, Howard College Campus is my own work. It has not been submitted before, for examination at any other University and all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. I confirm that the services of the editor were used in this dissertation.

STUDENT SIGNATURE

20 March 2017
DATE

Acknowledgements

Abstract

The main objective of this study was to explore alternative burial methods and options as a consequence of shortage of land for new cemetery development. The researcher is motivated by the challenges facing the UMhlathuze Municipality in identifying land for new cemetery development in Richards Bay. The research intends to investigate alternative burial options and methods such as grave recycle/re-use; cremation; natural burial; sea burial; resomation (bio-cremation); and second internment that can be considered in order to mitigate challenges of allocating more land for new cemeteries. The researcher felt it is important to conduct this research since there have been so many debates in the media, television series (such as Ashes to Ashes and Uzalo), conferences and international as well as national literature about alternative burial methods and options.

The research sample comprises of different religions, cultures and beliefs. It also encompasses males and females from different suburbs, and agri-villages within the Study Area (Richards Bay) in the uMhlathuze Municipality. Mzingazi and Mandlazini Agri-villages are very important in the research since residents from these villages have a strong traditional and cultural background. Many of them keep their livestock in their households, and they also perform small scale agricultural activities. The majority of the residents from the agri-villages are beneficiaries of land reform initiatives and some of them have performed home burials. This has caused confusion among community members since these villages are within the urban edge where home burial is not permitted. The researcher used qualitative study methods (Interviews and surveys with participants) with an intention of gaining an understanding of the land scarcity challenge facing the municipality in relation to cemetery development and to provide an insight into a problem and recommend ideas for possible solutions. The researcher manually analysed the data (by including (?) questionnaires with the same responses) in order to get the overall idea of participants' ideas prior to technical analysis obtained during the study. The results of the study are presented in the form of quotes together with the discussion of the result by the researcher.

The findings show that culture and religion play a very important in the study as they relate to burial practice and people's norms. Although there are other burial alternatives mainly practiced in Europe and Asia, many African people still regard the conventional burial as the preferred method. The findings and recommendations made in the study may be of great assistance not only to the uMhlathuze Municipality but also to other municipalities as well as interested institutions in South Africa, as it will provide a picture of how people perceive available alternative burial methods.

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AIDS	Acquired Immunodeficiency Syndrome
CBD	Central Business District
CRL	Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities
CSIR	Council for Scientific and Industrial Research
EIA	Environmental Impact Assessment
HIV	Human Immunodeficiency Virus
IDP	Integrated Development Plan
ITB	Ingonyama Trust Board
LUS	Land Use Management Scheme
MSA	Municipal Systems Act
MSA	Municipal Structures Act
NEMA	National Environmental Management Act
NWA	National Water Act
PPDC	Provincial Planning and Development Commission
SA	South Africa
SABC	South African Broadcasting Corporation
SACA	South African Cemeteries Association
SAHRA	South African Heritage Resources Authority
SDF	Spatial Development Framework
SPLUMA	Spatial Planning and Land Use Management Act
USA	United States of America
WULA	Water Use License Application

CHAPTER 1: INTRODUCTION AND RESEARCH FRAMEWORK

1.   Introduction

The study will focus on exploring alternative burial methods to conventional methods in Richards Bay, within uMhlathuze Municipality. The alternative burial methods to be discussed are grave recycle/re-use; cremation; natural burial; sea burial; resomation (bio-cremation); and second internment due to land scarcity for new cemetery development.

uMhlathuze Municipality is the third-largest municipality in the province of KwaZulu-Natal, which is situated on the north-east coast of the province, about 150 kilometres north-east of Durban. The uMhlathuze area covers 795 km² and the population is estimated at 366000 (2011 Census). It is the fastest growing city and home to the country's largest deep-water port and an industrial development zone It has two major Central Business Districts, namely Richards Bay and Empangeni; four townships (Esikhaleni, Nseleni, Vulindlela and Ngwelezane); two Agri-villages (Mandlazini and Mzingazi); and seven Traditional Authorities (Dube, Mkhwanazi, Madlebe, KwaBhejane/Khoza, Obuka, Mbuyazi and Mambuka. Richards Bay is considered to be the industrial and tourism hub, Empangeni the regional commercial hub and eSikhaleni the largest township/suburb.

Richards Bay has enjoyed high population growth as a result of being an industrial, harbour and tourism node. This has led to a situation where the Municipality is facing challenges of identifying suitable land for new cemeteries. (Municipal Spatial Development Framework, 2016).

The 2016 status of Municipal Cemetery Reports indicates that only two out of five municipal cemeteries have available graves left and they are intended to accommodate burials for another 40 years. However, the lifespan will be influenced by severe increases in the burial rate and even possible geotechnical instability of the soil as further development takes place, environmental issues as well as rapid urbanisation to uMhlathuze municipality (in particular Richards Bay).

There is no doubt that cemeteries are speedily reaching their fully capacity due to a number of reasons including urbanisation, and the HIV/AIDS pandemic. The process for the identification of new sites is extremely challenging in many cities due to a number of reasons, which amongst others include (but not limited to) shortage of well-located suitable land; environmental impact assessment; and geotechnical assessment.

As soon as a normal cemetery reaches its full capacity, it does not provide and suitable and feasible future alternative land uses such as museums, public parks or memorial gardens, and in most cases sterilising huge amount land within urban area.

According to Leuta and Green ([n.d]: 1 cited in SAPA, 2010; Moreosele *et al*, 2011; Davids, 2011) most South African local authorities have engage different stakeholders (in particular communities) about the challenges of land scarcity for the development of new cemeteries and appeal to consider alternative burial methods to the normal traditional burial .

In South Africa burial remains the most popular end-of-life practice and it is most commonly used by members of African traditional faiths, Islamic, Christian and Jewish. (Leuta and Green; [n.d]: 1)

There are different options of alternative burial methods such as cremation; green/natural; home burial; sea burial; resomation (bio-cremation); re-cycle; second internment; and re-use. In the African culture, the funeral and the unveiling of the gravestone play a significant role in the culture as acts of achieving closure by the family. (Leuta and Green; [n.d]: 1)

Irrespective of various beliefs and religions, burial is regarded by many cultures as the most reverent and dignified way to send off the departed and for the family to find comfort in having a specific gravesite to visit. The most common major challenge about the conventional burial system is that it uses large piece of land, which become unusable once it reaches its full capacity. (Leuta and Green; [n.d]: 1).

Cemeteries are quickly reaching their fully capacity and the process for the identification of new sites is extremely challenging in many cities for a number of reasons, such as shortage of well-located suitable land; environmental impact assessment; competing land uses for suitable land and geotechnical assessment. (Leuta and Green; [n.d]: 1).

It is without doubt that any kind of burial alternative will require financial support and spatial planning in respect of land identification. Therefore, the research intends to explore suitable burial alternatives that will consider different religions in the Richards Bay area, provide land availability and scarcity scenarios in respect of different burial alternatives that may be considered by the municipality.

Having understanding that land is not elastic and not expanding, the researcher concurs with authors like Flashman, Leuta and Green that it is time to explore alternative burial methods, however, it is important to ensure that culture, religion, customs and beliefs be taken into consideration and ensure that all citizens understand the objective of the municipality and its challenges in relation to land.

1.1   Problem Statement

The older cemeteries, which were initially considered to be large some years ago, often run out of space for new burials and there is shortage of vacant land to extend the existing cemetery or to develop new cemeteries. The high demand for burial land is as a result of an increase of population in the cities and

large towns. Rapid urbanisation in the cities and towns has resulted in the competition for well-located land for human settlements, commercial, industrial and community facilities such as cemeteries. (Dambudzo, 2012: 3).

This situation has a particular relevance to this study as there are plans to investigate and identify suitable land for cemetery development to mitigate the current challenges of land for new cemetery development which will accommodate alternative burial methods. Richards Bay is no exception. Since 2010 the Community Services and City Development Departments of the uMhlathuze Municipality have been trying to identify suitable land for development of new cemeteries but to date the process has not been finalised as result of shortage of land.

Rapid population density poses a threat to land distribution for the living (residential land) and in the same degree when the living eventually die and have to be committed back to earth, which requires a suitable place to rest (cemetery). In most cases, municipal housing development projects do not have corresponding land size set aside to cater for the cemeteries. Housing developments and cemeteries are now competing for land and there is insufficient land available for both land uses. Municipal spatial, human settlements and land use planners do not always include and integrate cemetery to municipal Spatial Development Framework/Plans (SDF). This approach towards cemetery planning contributes the current challenges of identifying land for new cemetery development since there are mainly treated as an afterthought, hence they are mainly regarded as a problematic land use in most cases.

Challenges facing the municipalities, including uMhlathuze Municipality are *inter alia* matters pertaining to land scarcity for burials, the timeous development of cemeteries, burial alternatives and the management of cemeteries in general.

Dr Timothy Fasheun, in his keynote address in the March 2015 South African Cemeteries Association (SACA) Conference mentioned cemeteries plays a sentimental value in our society as they house the memories of the families' loved ones. He stated that there is global challenge of land scarcity for burial, citing our cities as they have to respond to the growing death rate not only of the South African citizens only but also of foreign nationals. Housing developments and cemeteries are now competing for land, and there is not sufficient land available for both. He also stressed that land is not an expandable resource and it has to accommodate many competing needs.

1.2   Main Research Objectives

The main objective of the study is to determine whether the community will accept alternative burial methods to the conventional method. This involves exploration of alternative burial methods and options such as second interment, Sea Burial, Resomation (bio-cremation), Green/natural (Woodland), recycling of graves, cremation and freeze-drying process which will be investigated in detail.

To answer these questions, the following objectives are sets to undertake the study:

- To address the challenge facing the uMhlathuze Municipality in identifying land for new cemeteries development.
- To explore alternative burial methods and provide possible solutions which will have to be incrementally implemented through intense stakeholder engagement, participation and buy-in.
- To understand the different burial system practices in relation to culture, religion and beliefs, in order to inform possible burial alternatives.
- To evaluate the policy framework in relation to the development, management and maintenance of cemeteries by the Municipality by identifying the legislative gaps that allows for alternative burials in South Africa.

In order to test the strength of the hypothesis and the legitimacy of the study the following were posed:

1.2.1 The Main Research Question

The research question is broken down into a main question and sub-questions. The main question was designed in a manner that has a direct link to the study objectives. It was also designed to assist the researcher to prepare participants' questionnaires in order to obtain informed responses to and reach informed conclusions and recommendations regarding the alternative burial methods and options in Richards Bay. These may assist the uMhlathuze Municipality in addressing its cemetery development challenges as a result of land scarcity.

"*How will the Municipality address the challenges of different religions; customs; beliefs; and culture in exploring alternative burials options and methods as a result of a shortage of land for new cemetery development*"?

1.2.2 Research Sub-Questions

The research sub-questions were designed to provide support and to expand from the main research question. The sub-questions are also linked to the study objectives which to explore alternative burial methods and options in Richards Bay area.

- Is there enough land for new cemeteries?
- How may the alternative burial method/s be implemented?
- How will the municipality engage with all key stakeholders with respect to alternative burial options and methods?
- What is the municipal long term plan for cemetery development?

Table 1: Sub-objectives and sub-questions linkages

Objectives	Sub-questions
To address the challenge facing the uMhlathuze Municipality in identifying land for new cemeteries development	Is there enough land for new cemeteries?
To explore alternative burial methods and provide possible solutions which will have to be incrementally implemented through intense stakeholder engagement, participation and buy-in.	How will the municipality engage with all key stakeholders in relation to alternative burial options and methods?
To understand the different burial system practices in relation to different beliefs, cultures; religions and customs in order to inform possible burial alternatives.	How may the alternative burial method be implemented?
To evaluate the policy framework in relation to the development, management and maintenance of cemeteries by the Municipality by identifying the legislative gaps that allows for alternative burials in South Africa.	What is the municipal long term plan for cemetery development?

Source: Author's own illustration, 2016

1.3   Hypothesis

H₁   Cemeteries and burials have always been connected to beliefs, culture, and religion. It could be argued that alternative burial methods may receive resistance from the public since the majority of them have been practicing conventional burial for years. Government focus has always been on planning for the living (human settlements), while planning for the dead (cemetery) has always been an afterthought and this has led to challenges in identifying suitable land for development of new cemeteries.

1.4   Motivation/Significance of the study

The research is motivated by the challenges facing the UMhlathuze Municipality in the identifying of land for new cemetery development in Richards Bay. The research intends to investigate alternative burial options and methods such as grave recycle/re-use; cremation; natural burial; sea burial; resomation (bio-cremation); and second internment that can be considered in order to mitigate challenges of allocating more land for new cemeteries.

The municipal challenges include, among others, land ownership, geotechnical conditions, environmental issues, and land claims. The municipality owns about 16% of undeveloped land and the plans for the development of this land do not incorporate cemetery development. It is mainly focusing on human settlements with ancillary community facilities, commercial and industrial development. More so, the 16% of land owned by the municipality has geotechnical conditions challenges, environmental issues and is subjected to land claims. Part of Richards Bay has been claimed by Mambuka Traditional Authority and another by Mbuyazi Traditional Authority, while the area where Esikhaleni cemetery is located is claimed by Mkhwanazi Traditional Authority. Chapter 3 and Chapter 4 provide an overview of land ownership, and land claims status as well as geotechnical conditions and environmental issues.

About 35% of land is owned by Ingonyama Trust Board and 42% is privately owned. Development in both Ingonyama Trust Board and private owners' development plans does not incorporate cemetery development. Due to land scarcity and challenges facing the municipality to identify suitable land for cemetery development, the only solution for the municipality is to buy land from either Ingonyama Trust Board or private owners for cemetery development. The researcher is motivated by the fact land limitation provides an opportunity for the municipality to explore alternative burial methods since some of them such as cremation do not require large pieces of land for interment, but only require walls of remembrance.

The research is also motivated by the fact that burials have a strong connection to culture, religion, and beliefs. It is for this reason that the researcher conducted interviews with Religious and Traditional leaders to obtain their views on alternative burials as a result of land scarcity for future cemetery development.

According to Bazzell (2004:2) historically, cemetery and churchyard were part of daily community experience. However, urban growth and overpopulation led to a situation where cemeteries are now planned outside city centre i.e. city outskirts.

Nowadays urban populations are rapidly increasing due to reasons such as urbanisation, thereby creating unplanned development pressures and ongoing demand for suitable land for different land uses. Land is one of the limited resources in the urban areas. Due to competing land uses for limited land, cemeteries is always at the bottom of the priority list, which is why they the majority of new cemeteries are located in the outskirts of cities. The land scarcity and limitations situation requires that an alternative burial methods which will assist in saving the limited land resource be considered.

According to Bazzell (2004: 4) development pressures in the largest cities in the world have challenged town planners and residents to consider alternatives burial options such as cremation, vertical cemeteries, and recycling of graves.

The reseacher's interpretation of Bazzell's argument about the location of cemetery is that even though municipalities have to explore alternative burial methods, the location and landscaping should be central to the planning of new cemeteries.

1.5   Research Methodology

The research methodology outline used here, will explain the exact steps that have been taken to research this topic. It has helped the researcher to set boundaries beforehand and not waste too much time on irrelevant information. The researcher has used a number of methodological tools in undertaking this research.

The research methodology has been qualitative in nature, largely community based, also with municipal officials, religious leaders, traditional leaders and funeral undertakers involved in the burial and cemetery development process. The general approach upon which this research has been based is the qualitative approach as it is deemed to be the most appropriate method to be used when dealing with people's perceptions, attitudes and options.

The researcher has drawn on a variety of methods in order to arrive at a more balanced picture. Both secondary and primary resources were used to arrive at the desired result. Secondary research includes reference to reports on the topic, and other case studies of alternative burial methods locally and internationally.

It should be mentioned that this research has also been based on the practical experience one has been exposed to, working as an official in uMhlathuze Municipality, City Development Department. The findings required to construct this study have been obtained from methodological tools at the disposal of the researcher. These tools have been used to arrive at a concise and empirical analysis of the study.

In order to achieve the research objectives, a case study will be used, i.e. Richards Bay. The case in point provides an opportunity to investigate whether the alternative burial methods and options to conventional methods are accepted and supported by the residents.

In an attempt to do this, numerous interviews and surveys were conducted with key role players in the project, namely religious leaders, traditional leaders, municipal officials and funeral undertakers/directors. Lastly, a residential survey was conducted with the Richards Bay residents only.

1.6   Data Sources

The primary resources comprises evidence obtained through interviews and surveys (questionnaires) which are qualitative in nature, and which helped the researcher to gain an insight and understanding of the residents; municipal officials; and business people (funeral undertakers/directors) on alternative burial options and methods as well as the challenges facing the municipality in identifying alternative land for new cemeteries.

There were three major phases of this research which were (i) pre-field work activities; (ii) fieldwork activities and (iii) post field work activities. In the fieldwork activities, the theoretical background of cemetery planning and alternative burial options are discussed in the literature review. The primary data required was sourced and obtained during fieldwork activities (interviews and surveys), and the responses to the interviews/questionnaires are analysed and evaluated using techniques such as tabulating and correlation. The results are analysed and discussed in **Chapter 5.**

The qualitative research approach (Exploratory research) main objective was to:
- Investigate;
- Find insight to the problem; and
- Development solutions

1.6.1   Primary Data/Source

The qualitative research method was used to investigate exploration of alternative burial methods in relation to land scarcity challenges.

1.6.1.1   Interviews

Key contributors were interviewed and their responses to the questions were analysed. Interviewing key contributors assisted the researcher to better understand the situation in relation to alternative burial methods in order to make informed analysis. A systematic sampling technique was used to generate a sample of interviewees. A sample size (purposive self-section sampling) of 55 questionnaires were administered and structured as follows:

Residents Interviews/surveys: 36 questionnaires/interviews were conducted/distributed in nine (9) different areas within the study area.

Municipal Officials: 6 questionnaires/interviews were conducted/distributed amongst 6 municipal officials based on their experience and knowledge in relation to the subject:

Town Planners:

- Manager-Spatial Planning: Over 18 years of town planning experience and has extensive knowledge of spatial planning.
- Professional Planner: has over 8 years of experience in statutory planning and policy development.

Environmental Planner: has over 10 years of environmental planning processes and procedures and has been involved in a number of developments including cemetery development within the province of KwaZulu-Natal

Three Parks and Recreation officials (Head of Section Parks and Recreation; and two Superintendents): have over 20 years of cemetery development and management experience and have been working for the municipality since the 1980s and 2000s.

Interviews were conducted with the six key municipal officials that are directly involved in the cemetery development (from planning, monitoring and maintenance) and poses extensive experience cemetery development, maintenance and policies.

Below are brief summaries of different key persons who were interviewed:

1. Head of Section: Parks and Recreation, Mr E van Biljon
2. Manager: Spatial and Environmental Planning, Mrs Brenda Strachan
3. Superintendent: Parks and Recreation, Mr I Mthimkhulu
4. Superintendent: Parks and Recreation, Mr C Mntambo
5. Project Manager: Environmental Planning, Ms S Govender
6. Professional Planner: Ms L Zama

Mr van Biljon has been selected as one of the key respondents, since he has been involved in decision making with regard to cemetery development and maintenance. Furthermore, his experience and knowledge of cemetery issues has made him one of the key candidates in the study.

Mrs Strachan has been selected due to her involvement in the spatial and development planning field. She has been in charge of the municipal spatial development framework which provides long term development plans for Council including identification of suitable land for cemetery development.

Mr Mthimkhulu has vast experience and knowledge in cemetery planning and maintenance. He has been involved in cemetery planning for over 20 years.

Mr Mntambo has vast experience and knowledge in cemetery planning and maintenance. He has been involved in cemetery planning for over 20 years.

Ms Govender has vast experience and knowledge in the environmental management field.

Ms Zama has extensive knowledge and experience in land use management. She has been involved in the preparation of land use schemes and planning bylaws.

Funeral Undertakers: 5 questionnaires/interviews (In-depth interviews) were conducted with 5 different funeral undertakers with more than 20 years in the business in order to get their view on the alternative burial options and methods.

Traditional Leaders: 4 questionnaires/interviews were conducted with traditional leaders within the study area i.e. Mandlazini and Mzingazi Villages in order to get their opinion in the alternative burial option and methods.

Religious Leaders: 4 questionnaires/interviews (In-depth interviews) were conducted with different religious leadership including traditional Nazareth Church.

The study participants/contributors were identified based on their direct link and involvement in the cemetery and burial industry. Municipal officials were targeted based on their experience; traditional leaders were targeted based on their traditional role in the community and the manner in which they practice burials; religious leaders were targeted based on their role in burial and funeral ceremonies; funeral undertakers/directors were targeted based on their business involvement in the funeral parlour industry (the purpose is to get an idea whether alternative burials will affect their business or not); while local residents were targeted based on their different burial methods which are directly linked to beliefs, culture and religion.

1.6.1.2 Television Documentaries

Various SABC and E-TV television documentaries and series relevant to the research were and analysed. These documentaries include amongst others Uzalo and Ashes to Ashes TV series.

1.6.2 Secondary Sources/Data

Various secondary data and sources including journals; reports; bylaws, Acts, newspapers; census data, websites, maps, academic resources; municipal Spatial Development Framework; municipal Integrated Development Plan and the status of municipal parks and recreation report were used and analysed, which assisted the researcher to arrive at the informed conclusion.

Secondary data enabled the researcher to gather readily available material, published or unpublished to understand the issues central to the research topic. The material is focused and based on alternative burial methods both at local and international scale. The secondary data allowed the researcher to compare the present and past issues in relation to the study. The secondary data forms part of the literature review and is listed in the bibliography.

1.6.3 Sampling Method

The researcher used purposive and representative sampling method when selecting key research informants.

The researcher used purposive sampling for interviews with municipal officials, traditional leaders, religious leaders and funeral directors/undertakers. These research participants were selected based on their different roles in relation to cemetery development and burial.

The researcher also used representative sampling method for residents' interviews. The researcher believed that selected participants' views i.e. 36 represent the community at large.

Questionnaires were administered to find out which alternative burial method and option are preferred by the residents of the study area and how much they know about land scarcity in relation to the cemetery development as well as how much knowledge they have about these alternative burial methods and options. A systematic sampling technique has also been used to generate a sample of respondents. The case study consists of approximately 57 386 population, and a sample size of 55 has been used, of which 36 surveys were set aside for study area residents, so every first house per each 50 households from each sub-region/suburb has been surveyed to get the targeted sample size.

Closed and open-ended questions have also been used in the questionnaire. Open-ended questions have been used as it is a more effective way of obtaining qualitative information on the subject matter.

1.6.4 Data Collection/Capturing and Tools

Research primary data/information was obtained through interviews with different key research informants. Primary data/information provides information that cannot be obtained from secondary sources (literature review). Key research informants/participants were interviewed and their responses are analysed and interpreted in **Chapter 5.**

The research ensured that data collection tools are linked to the research objectives in order to obtain informed responses and arrive at an informed decision and recommendations.

Table 2: Linkage between Research Objectives and Data Collection Tools

Objectives	Data Collection Tool
To address the challenge facing the uMhlathuze Municipality in identifying land for new cemeteries development	Primary data (interviews/surveys), secondary data
To explore alternative burial methods and provide possible solutions which will have to be incrementally implemented through intense stakeholder engagement, participation and buy-in.	Primary data (interviews/surveys), secondary data
To understand the different burial system practices in relation to beliefs, cultures; religions and customs in order to inform possible burial alternatives.	Primary data (interviews/surveys)
To evaluate the policy framework in relation to the development, management and maintenance of cemeteries by the Municipality by identifying the legislative gaps that allows for alternative burials in South Africa.	Primary data (interviews/surveys),

Source: Author's own illustration, 2016

1.6.5   Data Analysis and Data Interpretation

The researcher has used the thematic data analysis tool. Thematic analysis is a qualitative research data analysis method. The researcher has used this tool to identify patterned meaning of dataset in order to avoid misstatements, misinterpretations, or fraudulent analysis.

The data collected through interviews and surveys was recorded first, and further interpreted and analysed using logical approach. In order to make sense of the data collected, Gantt charts, graphs and tabulation have been used with supporting statements. The comparison between current municipal cemetery and development plans and outcome of the municipal officials interviews have been analysed in details with an intention to identify the gaps and formulate a realistic conclusion and recommendations.

Interviews/surveys have been structured in a manner in which it be easily analysed and interpreted and provide a true reflection of what people feel about alternative burial forms. Some of the residents' questions have been structured in this manner i.e. **Yes**; **No**; **Not Sure and Other**, in order to enable the researcher to easily interpret how people think of alternative burial options. The field notes will form the core of the audit trail and assist to ensure thorough data generation and analysis.

1.6.6   Data Storage

As qualitative research, most of the data has been obtained through interviews (primary data/source), therefore secured storage is essential. Notes obtained from interviews have been jotted down. Electronic files have been stored in the personal computer with security password and external the hard drive with research information will be kept in locked filing cabinet. Hard copies of questionnaires have been kept in locked filing cabinet.

The protection of research data from physical damage, tempering, loss or theft is important to maintain the integrity of stored data. In order to ensure that the research data will be projected from all possible irregularities, the access to the data has been limited to the researcher (student) and the supervisor. The research notes, research questionnaires are kept in a safe (locked file cabinet). The digital/electronic data is kept in the personal computer with security password and with an up to date antivirus to avoid data losses.

1.6.7   Data Sharing

Sharing of research data between the student and the supervisor is kept professional and the electronic/digital data is shared via emails, which are accessible through username and security password. Large digital/electronic data will be shared via dropbox method which is accessible through

the username and security password.   The research data will be secured and stored in the discipline/department for a period of 5 years as outlined in the conditions of Research Ethical Clearance issued on 15 July 2016.

1.6.8   Data Evaluation

All closed questions - that is the statistical data (i.e. age etc) - have been tabulated and shown graphically. All open-ended questions have been weighted accordingly.

1.6.9   Validity and Reliability

This research is qualitative in nature and to a large extent based on primary sources, for example on interviews formulated to be able to achieve what the objectives are for the study.   Obtaining data from already existing studies, based on questions with the objectives for this study in mind, will result in high validity.

In order to ensure the true value of the data used in the study, the researcher established confidence in the truth of the findings for the participants/interviewees and the context in which the research was undertaken. The intention of the researcher with true value is to inform the reader that the researcher has a basis of confidence in the findings presented as the end product.

Interviews, literature information and data related to the research have been applied and described as accurately as possible to ensure applicability in the study.

Detailed description of the research methodology and stepwise replication in terms of interviews has been   applied   to   ensure   consistency.   This   means   that   for   each   interview,   the   same method/approach/steps has been followed to ensure consistency.

The reliability has been satisfactory to the objectives of the study. Data about the municipality owned cemeteries and their current status as well as common information/answers from interviews has been produced in the form of a tally or Gantt charts. One way of strengthening the reliability of the study will be to combine different data sources, research theories and methods for answering the same question. This will be achieved by using the triangulation of information method.

The information and data collected during the interviews and that of secondary resources has been thoroughly checked, through the triangulation of information method with an intention to strengthen the reliability of the study. The research conclusion and recommendations will be based on the findings from the field work (interviews) not from the researcher's pre-assumptions.

In a nutshell, the researcher used the following strategies to ensure credibility and trustworthiness of the research findings:

- Establishing a comparison case seeking out similarities and differences across accounts to ensure different perspectives are presented
- Demonstrating clarity in terms of thought processes during data analysis and interpretation
- Engaging with other researchers to reduce research biasness
- Demonstrating a clear decision trail and ensuring data interpretation is consistent and transparent.
- **Data triangulation**: using different methods and techniques to produce more comprehensive and high quality set of findings.

1.6.10 Limitations of the Study

The research required travelling in between sub-regions of the study area. The major contribution of this research lies in having assembled a range of important experiences and lessons on the aspects of alternative burial methods and options. But it must be noted at the outset that the study has some clear limitations:

- Richards Bay is the geographical area where the field study will be conducted: Arboretum; Birdswood; Veldenvlei; Brackenham; Aquadene; Wildenweide Meerensee suburbs; and Mandlazini Village and Mzingazi Village are where most of the interviews will take place. Thematically, the study is limited to the concept of land and alternative burials options meaning that the long-term access and planning will be central to the study. The concept of space is will be used to understand the access of land for alternative burial options.
- What is examined here is how people have understood alternative burial methods as well as their current experiences in the context of burial methods.

The following ethical issues were considered during the research:
- **Privacy and anonymity**: participants were guaranteed privacy
- **Confidentiality**: the research information has been treated in a confidential manner
- **Informed Consent**: participants were informed about the nature of the study. Participants may choose whether or not to participate in the research
- **Intrusiveness**: intruding on participant's time, space, and personal lives was avoided at all cost.

Atkinson argues that most research is dependent upon "successful negotiation and maintenance of access" to the membership of a research group, rather than individuals consenting to interview or trials and tests. (Hannahjane, 27: 2010 cited in Atkinson, 2009:19).

The vast majority of research data has been obtained in the form of individual interviews. Therefore, the researcher had an opportunity to apply ethical procedures, such as consent forms and offering anonymity in any written documents.

The participants were informed that their identity would be made anonymous by reference. The interviewees were also asked to sign a consent form which is a contract of trust granted by the interviewee, which holds the researcher accountable in the face of many unpredictable outcomes in line with the research.

1.7   Definition of Terms

The following terms are used in this study.

Agri-Village: in the context of the study area, the Agri-Village refer to a semi-formal area where people live with access to municipal services, practice livestock farming and agricultural activities.

Cemeteries: Rugg (2000: 261 cited in Curl, 1999) defined cemetery as a burial ground, especially a large landscaped park or ground laid out expressly for the deposition or interment of the dead, not being a churchyard attached to a place of worship.

Burial: means when land is excavated for the interment of a body or ashes or when a structure is employed for the interment of a body or ashes.

Crematorium: any building or structure in respect of which authority has been granted for human remains to be cremated therein or thereon is therefore referred to as a crematorium.

Cremation: the burning of human remains before their disposal.

Freeze reduction: means the process whereby the corpse is disposed of by freeze drying.

Funeral undertaker/director: means any person, organisation or corporate body in the business of, or which undertakes or organises the burial or reduction of corpses for gain.

Garden of remembrance: means a section of a cemetery set aside for the erection of memorials to an individual, a group of people or an event, memorial walls, niche walls, the establishment of ash graves and the scattering of ashes.

Grave: includes any place, whether wholly or partly above or below ground level in which a corpse is permanently interred or intended to be permanently interred, whether in a coffin or other receptacle or not, and also includes any monument, tombstone, cross, inscription, rail, fence, chain, erection or other structure of whatsoever nature forming part of or appurtenance to such grave.

Interment: means to commit a corpse or ashes to its final resting place.

Mausoleum: is an above-ground grave containing crypts designed to hold human remains in coffins. Once a coffin is entombed, the crypt is sealed and a front is attached.

Graves Recycling: is a process where the current remains and headstones are removed from the grave after 10 years (acceptable period), after which the grave is used for a fresh burial.

Second interment: it is method of extending cemetery life span by encouraging communities i.e. family members to share grave/s.

Resomation: it means a process of disposing human remains which produces less carbon dioxide and pollutants than cremation.

Home Burial: means to bury human remains on your own property.

Sea Burial: means the disposal of human remains in the ocean.

A Pauper: this is a person who dies and has no relatives to bury him or her. In most cases, this person is destitute.

Government Pauper: this person dies at the hospital and his or her relatives are not known.

Municipality Pauper: this person dies at home and has no relatives to bury him or her. In the case of the uMhlathuze Municipality, it takes the responsibility of burying that person.

Tariffs: the cost that is covered by municipality, for example, fencing the cemeteries and hardening of the roads, upgrading drainage systems, rehabilitation of building, initial clearance of bushes and landscaping. It is also the cost paid by community members to obtain the grave-pit in the municipal cemetery.

1.8 The Structure of the dissertation

The study consists of six (6) chapters. These chapters are as follows:

1.8.1 Chapter 1: Introduction and Research Framework

This chapter introduces the study area, problem statement, and research methodology and tools used to fulfil the research objectives. This chapter further outlines the research motivation, objectives, hypothesis, and research questions.

1.8.2 Chapter 2: Literature Review and Theoretical Framework

This chapter provides an overview of international and local debates on the research topic as well as case studies where alternative burials have been implemented. Attention is also placed on alternative burial methods and different countries' interventions in dealing with land scarcity for burial and alternative burial methods.

This chapter provides relevant issues put forward by different academics in the area of study linking their views to the relevant theories.

International experiences with regard to issues such as urbanisation is deemed to be good information to developing countries like South Africa. In turn, South Africa's experiences will be dealt with in the same chapter.

1.8.3 Chapter 3: Case Study

This Chapter provides an insight to the current challenges of limited burial space in the existing municipal cemeteries. It provides an overview of the problem, current status of municipal cemetery, municipal plans and strategies in relation to new cemetery development and exploration of alternative burial methods due to limited burial space in the existing cemeteries and challenges of identifying land for new cemetery development.

1.8.4 Chapter 4: Legislative Framework

This chapter assesses and examines the relevant local legislative and policy framework. It identifies legislative, policy and bylaw gaps in relation to the research topic. This chapter assists in understanding the current legislations and policies with regard to cemetery planning, development and management of different burial methods and options as outlined in such policies. This will in turn set the basis for analysing

issues that are deemed important and such issues are to be addressed in the subsequent chapters of this document.

1.8.5   Chapter 5: Research Findings and Data Analysis

This chapter provides data analysis and interpretation of all data collected from different respondents such as residents, municipal officials, traditional leaders, religious leaders and funeral directors/undertakers. The data is systematically presented in this chapter.

1.8.6   Chapter 6: Conclusion and Recommendations

This chapter provides an overview of the key findings of the dissertation with concluding remarks and recommendations based on the information collected and analysed in chapter 5 in relation to the exploration of alternative burial methods and options and what could be done to address and improve the current situation facing the municipality.

This chapter also outlines lesson learnt from the study interviews and literature review and recommends further detailed case studies to be conducted in relation to the alternative burial methods and integration with municipal long term plans.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.   Introduction

The purpose of this chapter is to review existing literature relating to the alternative burial methods and options. This chapter places emphasis on possible alternative burial methods that can be considered and those that have been implemented and tested by different municipalities/cities around the world.

Generally, cemeteries are regarded as an outcome of cultural practices, propriety, time, ownership, accountability and responsibility, which can be either complementary or conflicting. Cemeteries are discussed from two different approaches, either as a public resource or as a problematic land use. (Nita *et al*, 2013: 4 cited in Francis, Kellaher,and Neophytou 2000).

Leuta and Green, ([n.d]: 2) argue that there are various alternative burial methods that can be considered by municipalities as a result of land scarcity. Different city authorities are continuously engaging with communities encouraging them to consider and adopt alternative burial options.

2.1   The influence of ancient Roman

According to Hatton (1999: 47) there are two periods of Roman activity appear to predate the layout of the cemetery, the earlier evidence being related to the presence of a military ditch running N-W and dated to AD 43 on the basis of pre-Flavian Saurian pottery from the ditch-fill.

Morris (1992: 1) argues that burial can use to write a particular history, that of social structure of classical antiquity. Morris further argue that burial is part of a funeral and funeral is part of a set of ritual by which the living deal with death.

According to Morris (1992: 2) ritual can only be analysed as part of religious belief and that this in turn has little to do with external phenomena such as power, conflict, class and ideology. Morris further state that rituals somehow reflect an underlying social reality.

Greeks and Romans constructed and debated the meaning of their worlds through ceremonies such as funeral. (Morris, 1992: 2)

The researcher concurs with Morris argument, funerals and burials define the way people behave in more importantly as they have a direct linked to culture and religion.

According to Hatton (1999: 42) one of the major features which characterise the suburban areas in late Roman Britain is represented by the appearance of extensive and internally homogenous cemeteries for inhumation burials.

2.2 Exploration of Alternative Burial Methods: International Perspective

According to Dian (2004: 18 cited in Santarsiero *et* al, 2000), countries which have limitations for existing cemeteries or find it difficult identifying suitable land for cemetery planning have to re-examine their systems of disposing human remains.

Basmajian and Coutts (2010:1) argue that planning future interment space presents an odd assortment of challenges. There exists almost no standardized information available to guide planners in understanding the dimensions of future demand for cemetery space. They argue that there are several reasons why cemeteries are a public issue needing planning intervention; one is their sensitive contents and relative size make burial grounds essentially permanent land uses; and secondly, burial facilities are often perceived as nuisances when proposals are brought forward to expand an existing cemetery or construct a new one.

The researcher concurs with Basmajian and Coutts on reason two: cemeteries are neglected in all planning processes including human settlements projects. They are always treated as an afterthought hence in my view planning for dead irrespective of burial methods should be treated the same way as planning for the living. Planners have been conspicuously silent on the issue of cemetery planning.

According to Basmajian and Coutts (2010: 19) the continued demand for new cemeteries and the modification of existing cemeteries to house a variety of alternatives to standard embalmed burial have begun to emerge globally. They argue that whether grave recycling, natural burials, or some combination thereof, the plurality of alternatives has sparked a wide ranging discussion of how to manage death and burial.

SALGLA (2016) argues that cemeteries are just another form of land use in competition with other and that governments have had to play a role in mediating this contestation. SALGA further argues that there are conflicts resulting from traditional and religious associations with burials and land coming up against more utilitarian views.

2.2.1 Cremation

Hatton (1999: 47) state that from AD 70-80 a Roman cremation cemetery was set out, the main use of which continued until the end of the II century with periodic burials occurring till the late III-early IV century. Hatton (1999: 66) further states that it was reasonable to assume that the cremation cemeteries had to be managed for no reason other than to provide adequate facilities for the material act of cremation to be conducted.

Dambudzo (2012: 5 cited in Kong, 1999) stated that in Hong Kong there is a display of tension between the individual and the state and between the cultural/religious and the secular due to scarcity of land. This led to a point where some Chinese have converted to the practice of cremation from that of conventional burial.

Lowe (2013: 491) mentioned that about 74.4% of the United Kingdom's population are cremated upon death, and the rate of cremation is increasing annually. Though crematoria are not widely associated with greenhouse gas emissions it cannot be disputed that carbon dioxide (C_o2) and mercury emissions contribute to the anthropogenic impact on the environment.

Cremation is increasingly popular as an alternative to traditional burial in Europe. According to the Cremation Association of North America, a national survey shows that 46% of Americans will choose to be cremated, rather than buried. Reasons provided included saving money and saving land. (Flashman, [n.d]: 1).

Jackons (1998: 110) stated that cremation has been previously disfavoured by some of the religions as they perceived it as a hindrance to resurrection. However, it is now encouraged by different churches as an alternative burial option.

The most recent cremation practice which was witnessed by many people is of the dignified personality, the former President of Cuba, Fidel Castro, who was cremated in December 2016.

2.2.2 Resomation and Promession

Swedish government invented a different method to cremation is called promession. In this method, the body is frozen and crushed into powder, which can either be buried or used as fertiliser. Swedish also introduced another alternative method of body disposal which is called resomation where the body is melted. (Leuta and Green; [n.d]: 3).

According Lowe (2013: 2) resomation is currently legal and available in seven US states and 60 countries have expressed an interest in adopting the process. It does not require a purpose built building as equipment can be retrofitted inside existing crematoria.

The by-product of resomation process is an inert liquid which could be drained while the remaining bones could be crushed or buried. The technology use to perform the resomation processes is also considered for use in South Africa by the funeral directors/undertakers in response to the resistance towards cremation process (burning of the bodies). (uMhlathuze Municipal Status of Cemetery Report, 2016).

Figure 1: Resomation vs Cremation

Source: Google, Online

Figure 2: Resomation
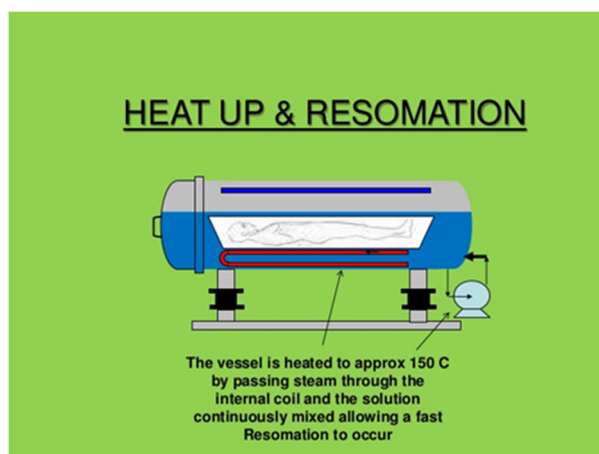
Source: Google, Online

2.2.3 Recycling of Graves

Overpopulation is more severe in the Asian cities more especially Hong Kong. The Hong Kong government burial grounds density is so high in such a way that interments only last for six years, thereafter, the graves are reused. (Bazzell, 2004: 27 cited in Brauchli, 1992: 1).

Europe and parts of Asia, Mexico as well as Brazil practices grave recycling as their means of reducing pressure on municipal cemeteries as a result of land scarcity. In Mexico City the standard rental period of a grave space is seven years, while in the Brazilian shantytown of Bom Jesus da Mata, grave space is rented for a period as one year for adults and six months for a child and after this period, the bones of the deceased are tossed unceremoniously into the municipal bone yard ossuary. Bazzell (2004: 28 cited in Grimes, 2000: 237).

2.2.4 Vertical Burial and Mausoleums

Mausoleum is an alternative burial method which attempts to densify by going up rather than out to disposal of the dead. It briefly became popular in the United States in the mid-19th century, and re-emerged in the 1950s as additions to existing cemeteries because they offered a simpler, cheaper, more compact form of embalmed burial that could blend easily into both the open landscape design of the lawn-park and the more ornate monument and memorial park cemeteries. In places where cremation remains unpopular for religious or cultural reasons, mausolea have provided needed high density burial space (Basmajian and Coutts, [n.d]: 17 cited in Sloane, 1991, p. 220).

Basmajian and Coutts ([n.d]: 21 cited in Mangaliman, 1997) stated that in places where space for cemetery expansion or new cemetery construction is limited, community, or garden, mausolea have begun to emerge as alternatives or additions to existing cemeteries.

Vertical burial has been widely embraced as a space saving alternative burial method in the United States of America. New Orleans city has been using crypts as an alternative burial method which often contains five or six levels for bodies. Whereas in countries such as Mexico and France a crypt contains many levels below grounds and above ground, this practice provides an opportunity of extending further the idea of vertical burial.

In United States, mausolea are increasingly being built in order to allow cemeteries that reached their full capacity to continue to receive bodies (vertical burial method). Bazzell (2004: 30 cited in Ragon, 1983: 272). Bazzell (2004) further argue that mausolea can contribute in increasing the capacity of cemeteries, the same way high rise residential buildings can accommodate more living bodies. In essence the home of the living and the home of the dead show a similar development. Bazzell (2004: 30 cited in Ragon, 1983: 272). Basmajian and Coutts ([n.d]: 21 cited in Mangaliman, 1997) also stated that in places where space for cemetery expansion or new cemetery construction is limited, mausolea have begun to emerge as alternatives or additions to existing cemeteries.

According to Bazzell (2004: 32) countries like France, Italy, North Korea, Mexico and Brazil, cemeteries are built on a scale that compares with modern day high rise residential buildings. Mexico City's Gayosso, features ten stories of niches for cremated remains, a crematorium, three chapels, a cafeteria, and parking space for 500 vehicles.

Figure 3: Mausoleum in Pyongyang, North Korea

Source: Umhlathuze Municipal Status of Cemetery Report, 2016)

2.2.5   Natural/Woodland Burial

One of the major social changes affecting burial is the growing awareness of the environmental consequences of modern life (Basmajian and Coutts, [n.d]: 19 cited in Harris, 2007). Basmajian and Coutts, [n.d]: 19 cited Mooallem, 2009; Rugg, 2000) further emphasise that in working toward community sustainability is also beginning to include after death practices that reflect a more thoughtful and careful understanding of the relationship of humans to the earth.

During 1993, the United Kingdom (UK) invented natural burial movement as methods to mitigate land scarcity and environmental issues. The natural burial is also known as 'woodlands'; green or 'eco' burial. There are about 230 woodland burial sites across Britain. The United Kingdom woodland burial option has been adopted in countries like United States of America (US) ⱡ Canada, New Zealand, Australia, Japan, Italy, Germany and the Netherlands. (Groote and Klaassens, 2010: 312).

Basmajian and Coutts (2010: 21 cited in Mangaliman, 1997) mentioned that in places where space for cemetery expansion or new cemetery construction is limited, community, or garden, mausolea have begun to emerge as alternatives or additions to existing cemeteries. Community mausolea are often cheaper and far less space intensive than standard cemetery plots. They provide a similar kind of burial experience, at least in terms of the treatment of the body, and a visible community memorial, but in a dramatically reduced footprint.

Leuta and Green ([n.d]: 2) argue that municipalities have to consider alternative methods to dispose human remains as a result of land scarcity. Municipalities are trying to encourage their communities to accept alternative burial methods.

Figure 4: Natural/Woodlands Burial

2.2.6   Burial at Sea

According to Fitzpatrick (2004: 36) burial at sea has been an accepted funerary rite for thousands of years. The ancient Egyptians were known to send their dead off to sea floating in some type of watercraft but the most familiar culture associated with burials at sea are the Vikings.

England: In England anyone can be buried at sea, even though the majority of people who are buried at sea are either former navy personnel or sailors. The burial must comply with environmental policies and regulations and a permit must be obtained from the authorities prior to the burial. The person being buried must not be embalmed and should be clad in light, biodegradable clothing (econ-friendly). Bell (2006)

Australia: In Australia burial at sea are regulated under the Environmental Protection, which is administered by the Department of Environment. People seeking to arrange burial at sea will require a sea dumping permit only. However, there is no automatic rights to a burial at sea since permits are only granted to those with a proven connection to the sea such as long serving navy personnel or fishermen. (Australia. Environment Protection act 1981: 17).

United States of America: According to Fitzpatrick (2004: 37) in the U.S any individual wishes to perform sea burial services must comply with all applicable laws and regulations and must also have all permits required to carry out a sea service from the U.S. Environmental Protection Agency. Fitzpatrick further

state that the tradition of sea burial in the U.S has lasted for thousands of years and will most likely continue as a tradition for some time to come.

Figure 5: Sea Burial in USA

Source: Google, Online

The most common factor about the sea burial is that it has always been associated with navy or sailors and fisherman, but over the years ordinary citizens in countries like USA, Australia and England have been practicing this method of burial, with permission from the relevant authorities.

2.3   Exploration of Alternative Burial Methods: Local Perspective

According to SALGA (2016: 7) since South Africa was first inhabited, people have been burying their dead following traditional customs and practices. Over the past two centuries funerals and burial sites and their management have evolved. As city centres emerged, management, maintenance, recordkeeping and environmental issues related to cemetery management became key issues of concern. People are increasingly migrating into urban areas and this development puts strain on the management of limited municipal resources.

Generally, the planning issues that arise concerning cemeteries and crematoria is the availability of free space with the right geophysical (soil and water), location, accessibility, environmental and other related characteristics suitable for the establishment of a cemetery. The challenge of the suitable cemetery lies in firstly avoiding and then mitigating environmental impacts associated with establishment of cemeteries in particular areas. (Provincial Planning and Development Commission, 2005: 13).

Local Government is a key role player in development of South Africa. Provincial government is mandated to support and build the capacity of local government to achieve the vision of sustainable local government in line with principles of cooperative governance.

The significant of HIV/AIDS and cultural practices has a significant influence on cemetery planning. In 2001, SKR Consulting envisaged that in 30 years from that time there will be an increased in demand for graves as a result of AIDS related deaths. (Provincial Planning and Development Commission, 2005: 19).

According to Leuta and Green, ([n.d]: 2) municipalities, especially metropolitans and secondary cities are facing a continuous challenge of land scarcity for alternative burial methods to mitigate the situation. The well-known burial method that is still widely practiced in South Africa is conventional/traditional burial, which is mainly practiced and exercised by different religions and cultures.

South African cities are running out of space to bury their dead. More than half the country's cemeteries are at full capacity. (SA breaking news, 2013: online). The eThekwini municipality began to run out of space in its 65 cemeteries since 2000. In Bloemfontein only three of the 12 cemeteries still have space while in Ekurhuleni east of Johannesburg 44 out of 63 cemeteries are full to capacity. (SA breaking news, 2013: online).

South African municipalities are facing up to the fact that land for cemeteries is fast running out and this calls for a change in long established cultural practices. It may in fact be the earliest recorded human ritual and is still a popular custom today, flowing from religious and cultural practice. In South Africa responsibility for cemeteries, funeral parlours and crematoria is the responsibility of local government. (Moodley, [n.d]: 62).

SALGA (2016: 4) concurs with Moodley that South African municipalities are faced with a number of challenges with regard to cemetery management and these can be grouped into the following categories:
- shortage of land for cemeteries;
- cemeteries located on unsuitable land: planners are generally faced with the challenge of finding suitable land for cemeteries, since land use for residential and commercial areas take pre-eminence over cemeteries; and
- insufficient budgets for cemetery management and purchase of new land.

SALGA (2016: 6) further argues that human death and burials are part of human life, while cemetery management is part of human settlement development.

It is for this reason stated above that municipalities need to consider alternatives burials to conventional/traditional burials which include cremation, sea burials, grave recycling and alkaline hydrolysis in which the remains are dissolved. However, the challenge is how to get around traditional

and religious beliefs. Most Hindus and a growing number of Christians are opting for cremation, which runs counter to many of the black cultures in South Africa. (SA breaking news, 2013).

2.3.1 Cremation

According to Mbonambi (2013; cited online in eThekwini Municipality Newsletter, 2011) there are 500 000 grave sites in Durban that are located in 65 cemeteries. This is one of the reasons the Ethekwini municipality embarked on a campaign to explore alternative burial methods due to shortage of land. Some of the alternative methods have been accepted by African people, and between June 2010 and June 2011 about 100 African people were cremated. The numbers of cremations between July 2010 and June 2011 were 2,494; Africans 100, Indians 1157, Coloureds 171, and Whites 1066.

Acceptability of the practice of cremation varies among the different population groups in South Africa. Cremation is estimated to be 99% percent among the Hindu community, 75 percent among the White Christian community, 2 percent among Africans and Coloureds. The cremation saves space, lengthens the life span of cemeteries, renders the human remains sterile because decomposition is fast tracked and it is friendly to some cultures. Cremation is an alternative to conventional burials and is strongly advocated in view of shortage of land for cemeteries. (Provincial Planning and Development Commission, 2005: 3).

In 2007, City of Cape Town reported a 50% growth in cremations practice by communities. Some prominent personalities in South Africa have chosen to be cremated and this can be used by different authorities to try and change people's perceptions regarding alternative practices to conventional burial. (Leuta and Green, [n.d]: 3 cited in Powell, 2007).

Reverend Makhenkesi Stofile, the former sports and recreation minister who passed away in August 2016, is one of the prominent personalities who chose to be cremated and the family fulfilled his wish.

According to Leuta and Green ([n.d]: 3 cited in CoT, 2011) the City of Tshwane is also facing challenges of burial space shortage which has led to a point where communities are encouraged to considered cremation and grave re-use alternative burial methods.

The Provincial Planning and Development Commission (2005: 3), argue that there is a view that people prefer conventional burial to cremation because they can go the spot where their loved ones were buried to pay their respects. However, the cremation concept provides a choice where people keep the ashes of their loved ones as remembrances. The researcher believes that, communities need to be informed about wall of remembrance in relation to cremation and ashes.

Judging from the above cremation statistics, it is evident that African people are slowly accepting alternative burial methods such as cremation, even though numbers are still small compared to the Indians and Whites population.

2.3.2 Mausoleums

In 2014 the City of Ekurhuleni revealed plans to bury the dead on top of each other and in mausoleums because of a lack of burial space and a struggle to secure land. (SA breaking news, 2014: online). The City revealed that in the next 30 years the municipality will no longer have space for conventional burials, so alternative burial methods have to be encouraged. The City also stated that until now, family members are allowed to be buried on top of their relatives (grave recycle/re-use). (SA breaking news, 2014: online).

City of Cape Town is exploring options of extending some of its existing cemeteries by above-ground burial using the mausoleums option. Mausoleums do not only require less space for burial but also allow bodies to be stored above ground. (Leuta and Green, [n.d]: 2 cited in Powell, 2007). The City has considered various alternative human remains disposal methods as a result of land pressure.

City of Cape Town has piloted a mausoleum project with an intention to assess whether the public is willing to use mausoleums as an alternative conventional graves. The prime challenge towards the implementation of mausoleums is to convince the public that this alternative method is feasible it is not in conflict with the traditional burial method that remains must be placed in the ground. (Leuta and Green, [n.d]: 2 cited in Powell, 2007).

2.3.3 Recycling of Graves

The recycling of a grave implies that the grave be re-used or recycled after a ten (10) year period subject to the required protocols being followed in terms of the Cemeteries and Crematorium Act 1996. This implies that any remains within the grave and the headstone on a grave are removed and the grave then be made available for re-use for a new interment. (Leuta and Green, ([n.d]: 2).

The completion of the necessary protocol such as obtaining approval from the Commission for Promotion and Protection of the rights of Cultural, Religious and Linguistic Communities as well as the approval of the communities, in particular the affected families is essential. However, in a long term planning i.e. beyond 10-20 years, recycling of graves will not solve the problem of shortage of burial space for municipalities. (Leuta and Green, ([n.d]: 2).

During 2000 and 2004 Ethekwini Municipality embarked on an awareness campaign to encourage people to consider grave recycling/re-use 10 years after the first burial. The campaign was successful when the majority of the population began to accept recycling and reburial (van den Berg, [n.d]: online). However, this alternative burial method was challenged by some of the residents, and religious leaders. (CRL Rights Commission, [n.d]: 2).

Alternative burial such as re-use of graves was not known in many communities in the past decades, it is still a foreign concept to many residents. Since there is shortage of burial space in public cemeteries, especially in urban areas, some people prefer re-use of graves for family members. However, concerns are raised when dealing with the recycling of graves for use by a non-relative member, especially when rituals and calling ancestral sprits are discussed. (Provincial Planning and Development Commission, 2005: 3).

Chapter 4 of the Cemeteries and Crematoria Act permits the recycling of grave if a period of ten years has lapsed after burial of the last body in that particular grave. (Provincial Planning and Development Commission, 2005: 18).

2.3.4 Second Interment

City of Cape Town and City of Tshwane has considered second interment and cremation as an alternative burial which contributes as an intervention to extend their existing cemeteries life span. The Second interment option encourages the public i.e. family members to share a grave after the prescribed period (10 years after the first burial). Although the majority black African communities within the City do not support cremation, however, second interment is gradually gaining support. (Leuta and Green, [n.d]: 3, cited in CoT, 2011).

Most religions, like the African religion strongly argue that for them, cemeteries are more than just burial places, they are places of spiritual and cultural reverence. To them the deceased person is not just looked upon as a dead person or body, but as an ancestor in one's family who should be venerated and never forgotten. (CRL Rights Commission, [n.d]: 2). Ancestors are believed to be living with God and playing a very prominent intercessory role in the life of a particular family. Consequently, the deceased person's bones and sanctified burial place become very important, and therefore should not be disturbed by anyone. Thus it is very important for each deceased person to have his or her own separate grave. (CRL Rights Commission, [n.d]: 2).

2.3.5 Green Burial Parks

Basmajian and Coutts ([n.d]: 22 cited in Linden-Ward, 1989) stated that even in places where the traditional cemetery reigns, burial grounds may still be incorporated into community life in creative ways. Returning to a view of graveyards as combined memorial and recreational space, like Mt. Auburn in the early 19th century, cemeteries of the future may be redesigned so that different uses overlap.

In communities where recreational space is limited, cemeteries can serve as valuable proxies, providing space for low impact activities like walking and running. (Basmajian and Coutts ([n.d]: 22 cited in Anderson & West, 2006).

New green burial grounds are being developed country wide, such as Legacy Park on the outskirts of Cape Town. (Safcei, [n.d]: 1). However, Leuta and Green ([n.d]: 2) argue that green burial parks such as Legacy Park are private sector initiatives which are developed as an alternative to municipal (public) cemeteries. The development of green burial parks do not present a better land intensification options, instead they present a better management option in particular, development and maintenance costs. It is however, not clear as yet whether this type of burial practice will be regarded as integrated recreational and burial spaces. (Leuta and Green, [n.d]: 2).

According to Rose-Innes (2012) the scope for new sites is extremely limited. Once a cemetery is full, it tends to become, quite literally, dead space, in that it has no future alternative function. Also, conventional cemeteries require considerable upkeep and resources to maintain them as the tidy, tranquil havens they are intended to be. South Africa's first green burial site was established a couple of years ago near Stellenbosch in the Western Cape, the Wiesenhof Legacy Park, a 300 hectare privately-owned nature reserve, which offers burial plots and memorialisation areas for ash scattering. The site's indigenous vegetation creates a natural habitat for wildlife, which includes zebra and springbok, and only 10 hectares will be used for burials. While traditional cemeteries have up to 80% of a site covered with graves, its difference is conservation. (Rose-Innes, 2012)

Rose-Innes (2012) further emphasise that it's not cheap to buy space at Legacy Parks for your final resting place, an ash scattering costs around R1 500, while a prime plot goes for R28 000. On the other hand, as the Legacy Parks managers also argue that traditional burial isn't cheap either, a typical funeral including an ostentatious coffin and headstone can easily set you back around R30 000 or more.

2.4   Theoretical Framework

The purpose of this section is to present a theoretical framework in relation to the study. In this section the relevant theories to the study are outlined which are Cultural theory, theory of Reasoned Action, Dissonance theory and Identity theory.

Theories of Reasoned Action and the Dissonance theory attempt to explain how attitudes are formed, and how they affect a person's actions. The theory of Reasoned Action explains the relationship between attitudes and behaviour, the Dissonance theory explains why people do not internalise certain information that is available to them Geyevu (2001). The Identity theory sets out to explain roles and behaviours. (Hogg *et* al, 1995:255)

The researcher felt it important to discuss these three theories as they enables one to understand better why it is important to change some attitudes that some people have towards various alternative burial methods.

2.4.1 Cultural Theory

The cultural theory maintains how humans perceive the world through cultural perceptions and explores the totality of a society's distinctive ideas, beliefs, values, and knowledge. (Sedgwick, 2005 cited in McGee and Warms, 2004:395).

The aim of this study is to explore alternative burial methods to the conventional practice of burial, particularly in light of ever-changing times as well as shortage of land for new cemetery development.

The cultural theory is a branch of anthropology. It is the reason why the researcher is convinced that this theory, as it deals with the origins of people, is therefore appropriate to this study as it aims to examine society's views on alternative burial methods, cremation as well as the impact of culture in relation to these alternative burials.

According to Sedgwick (2005) Cultural Theory explores the totality of a society's distinctive ideas, beliefs, values, and knowledge. Schalkwyk (2002:1) mentioned that culture designates the entire way of life, activities, beliefs and customs of a people, group or society and that it is the whole complex of distinctive spiritual, material, intellectual and emotional features that characterise a society or social group. It also includes value systems, traditional beliefs and practices which are linked with traditions or religion.

Culture is a shared custom amongst community members, and any problem or challenge that arises or affects the community, are commonly addressed through a certain norm, belief and values.

Sedgwick (2005); Schalkwyk (2002) and McGee and Warms (2004) view culture as a dynamic process that develops overtime and changes with difficulty. In terms of these authors a culture in response to the needs of its members and their environment, provides guidance to help its members solve life's regular problems and live in a meaningful way. They also believe that culture guides people in terms of how to behave, think and relate to each other. Diller (1999) argues that people are not prisoners of culture as it is constantly changing.

Researcher's interpretation is that culture influences the way we think, give, receive and perceive information, it represents the legacy from the past, as it was left to us by our ancestors and which is also influenced by their beliefs.

The researcher witnessed the influence of culture during the participants' surveys and interviews, where most of the responses (as outlined in chapter 5) relating to alternative burial methods were based on culture and norms. Culture has and will always be associated with people and their decision making in respective of ethnic groups. Understanding Sedgwick (2005); Schalkwyk (2002) and McGee and Warms (2004) interpretation of culture, the researcher concurs with them: change is never easy but it requires collective approach and common understanding of a particular vision. In the case of alternative burial methods, it is essential to develop a strategy that will be understood by all residents based on their different cultures, beliefs and religion in order to slowly instil the idea of change in respect of alternative burials since most people have been practicing conventional burials and other available burial methods are new to them.

In the Uzalo (2016), there have been episodes where eThekwini Municipality is airing awareness on grave reuse and grave leasing. One of actresses who plays the character of a traditional healer but is also a Christian, told the church members that changes is difficult more in particular where culture is involved. However, she suggested that Africans needs to perform traditional ceremonies and speak to the ancestors about alternative burials and request their approval of these alternatives due to scarcity of land for new cemeteries.   It is therefore evident that culture and ancestors have a strong relationship which needs to be carefully addressed in any preferred alternative burials.

2.4.2   The Theory of Reasoned Action

Fishbein and Ajzen (cited in Scott and Spencer, 1998: 440-447) developed the theory of Reasoned Action in 1967 having as a basis the expectancy value model. Fishbein and Ajzen mentioned that a person's attitude derived from their belief about an entity and values associated with those beliefs. They further

stated that beliefs are a person's opinion, knowledge or thought regarding a particular entity or belief that may refer to a person's expectations.

According to Southey (2011: 44 cited in Ajzen and Fishbein, 1969, 1980) the theory of Reasoned Action provides a model that has potential benefits for predicting the intention to perform a behaviour based on an individual's attitudinal and normative beliefs.

It is well known that the majority of Black Africans do not believe in cremation or other alternative burial methods such as second interment, sea burial etc because their ancestors did not practice it. Alternative burial methods are regarded as a strange and foreign practice to their historical traditions and customs. They strongly believe in the conventional method of burial since they believe that after a loved one has passed on they can always visit the grave and communicate with them. As much as some of the participants opted for different burial methods as alternatives to conventional methods, it is well understood that the implementation will require intense engagement and approach for it to be well accepted by the majority of local people.

People's behaviour is mainly based on the information at hand and belief associated with particular action. In this case people's response towards alternative burial methods is based on the information provided by the researcher and they applied their minds considering the outcome and implications of their choices. The alternative burial methods choices and behaviour were also based on their own indigenous knowledge and what they have been practicing over the years.

According to Scott and Spencer (1998:448) the theory of Reasoned Action has been successfully applied in providing explanations for a variety of behavioural trends and patterns in the society.

Figure 6 below illustrates the Theory of Reasoned Action which provides a model that has potential benefits for predicting the intention to perform a behaviour based on an individual's attitudinal and normative beliefs. Figure 6 also illustrates the interrelation between, belief, normative beliefs, evaluation and motivation which at the end lead to the individual behaviour and attitude based on a particular subject.

Figure 6: Theory of Reasoned Action
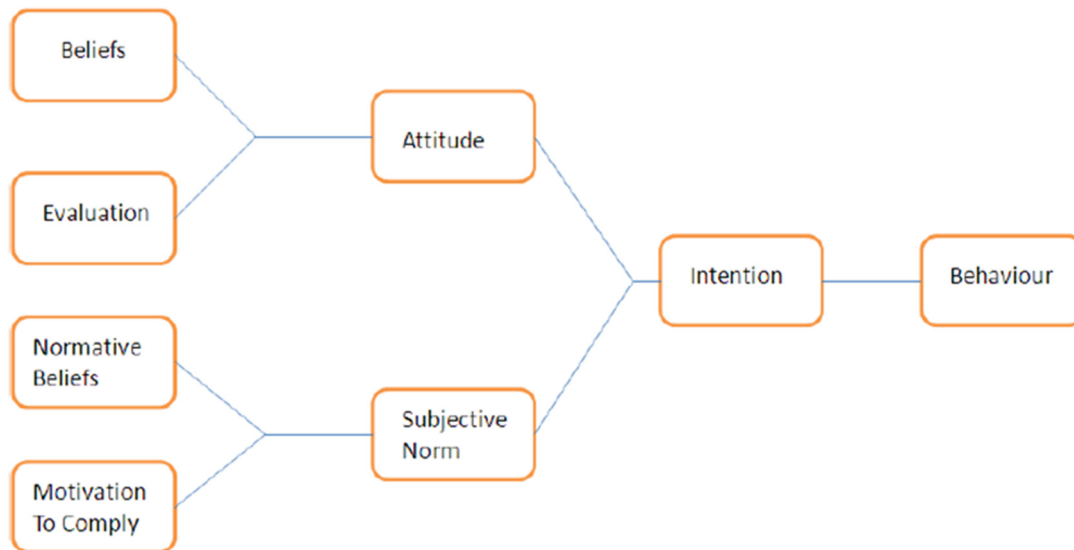
Source: Ajzen and Fishbein, 1969, 1980

Based on the above illustration (figure 6), the researcher has managed to examine the individual behaviour and decision towards alternative burial methods.

2.4.3   Cognitive Dissonance Theory

According to Scott and Spencer (1998:444), Festinger developed Cognitive Dissonance Theory in 1957. The theory is based on people's preference of information that is consistent with their current attitudes and beliefs rather than information that is dissonant. It is understood that a person always wants to believe that his /her attitude is correct. Thus, inconsistent information is perceived as undermining the person's attitudes and intentions and such a process ultimately produces tension. The person will therefore try to reduce the tension experienced by avoiding dissonant information and seek out information that is consistent with their attitudes.

Scott and Spencer (1998:444) state that accumulative evidence suggests that people try to maintain or protect their attitude and that attitude consequently serves a variety of cognitive or information processing functions.

Cognitive Dissonance Theory is based on three fundamental assumptions, which are discussed below:
- Humans are sensitive to inconsistencies between actions and beliefs: Some of the respondents have a belief that conventional burial is the only option and second interment; cremation and other alternative burials are wrong. Therefore, they believe they may be affected by this inconsistency.
- Recognition of this inconsistency will cause dissonance, and will motivate an individual to resolve the dissonance: most respondents feel that opting for alternative burials other than conventional

method is a violation of their principles but through consultation they believe they'll be motivated and resolved on possible solution in relation to the challenge.

- Dissonance will be resolved in one of three basic ways:
  - o Change beliefs: this is a simplest method to resolve dissonance between actions and simply to change your beliefs.
  - o Change actions: this method ensures that people never repeat an error again
  - o Change perception of action: this action allows people to change the way ~~you~~ they view/remember/perceive their actions

Figure 7 below illustrates the relationship between change beliefs; change actions and change perception and action.

Figure 7: Cognitive Dissonance Theory
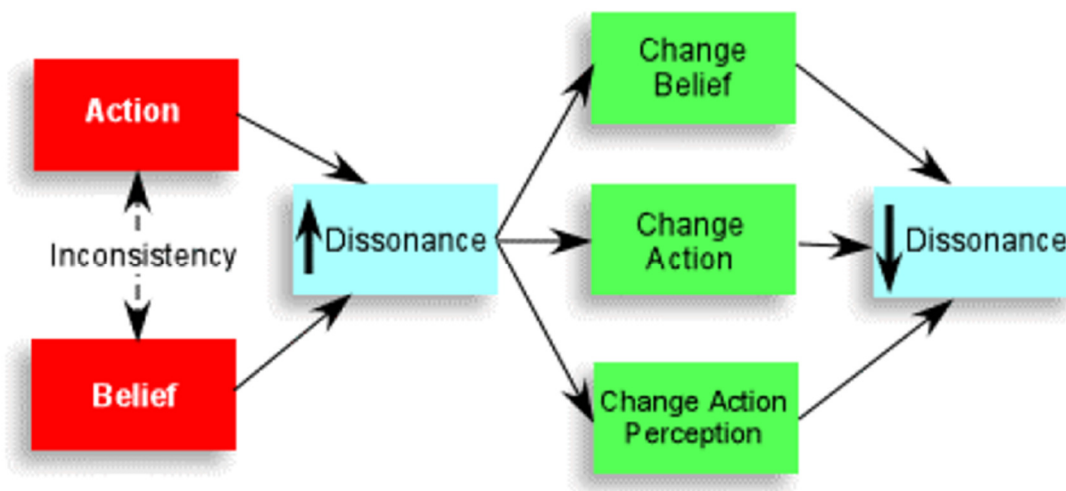
Source: Scott and Spencer, 1998

Theory of Reasoned action and the Cognitive Dissonance theory maintain that a person's attitude influences a person's behaviour. However, while the theory of Reasoned Action takes into account existing social influences, Dissonance Theory focuses on what a person believes to be right or wrong (ethics).

2.4.4   Identity Theory

According to Hogg, Terry and White (1995:255) Identity Theory is principally a micro-sociological theory that sets out to explain individual's role-related behaviours. It also explains social behaviour in terms of the reciprocal relations between the self and society. Identity theory is strongly associated with the symbolic inter-actionist view that society affects social behaviour through its influence on the self. In

identity theory, the self is reflexive in that it can take itself as an object and can categorise, classify, or name itself in particular ways in relation to other social categories or classifications. This process is called identification (McCall and Simmons, 1978). Through the process of self-categorisation or identification, an identity is formed. This theory explains how people define themselves within the context of their broader surroundings. (Hanslam, 2001: 26-57).

Fullan (1982) argues that when change is imposed upon a person or community, it is extremely resented. Fullan (982) also believes that change is voluntary, it can be threatening and confusing. In any event, the transformation of one's subjective realities is at the heart of change. There is a strong tendency for people to adjust to any approaching change, by changing as much as is necessary. Others assimilate change, others abandon changes that they were initially willing to try. Many fight change, while some simply try to ignore it. Fullan (1982) also stated that, people react differently when exposed to change and these reactions and associated feelings are natural. Fullan (1982:25), further state that people cannot avoid change since real change involves loss, anxiety and struggle.

Burke and Stets (2009: 3) mentioned that identity is the set of meanings that define who one is when one is an occupant of a particular role in society, a member of a particular group, or claims particular characteristics that identify him or her as a unique person. People possess multiple identities since they occupy multiple roles, they are members of multiple groups, and claim multiple personal characteristics, yet the meanings of these identities are shared by members of society. (Burke and Stets, 2009: 3).

Identity Theory seeks to explain the specific meanings that individuals have for the multiple identities they claim; how these identities relate to one another; how their identities influence their behaviour, thoughts, and feelings or emotions; and how their identities tie them in to society at large. (Burke and Stets, 2009: 3).

Individual and collective behaviour towards alternative burials methods are essential since it will assist the municipality to understand which direction and approach to follow. Exploration of alternative burials means 'change' therefore the researcher concurs with Fullan (1982) that it is important to avoid situations where change will be imposed to people as such action may leads to negative acceptance by the community. It is this reason why the study will assist the municipality to develop a proper approach in relation to alternative burials in order to ensure that it works with all citizens with different behaviours. In all essence individual identity is essential as it influences the behaviour.

2.5 Role of Cemeteries in life

Cemeteries might have the capacity to integrate cultural landscapes into cities and regions while increasing the ecological sensitivity of burial practices and the social acceptance of death as a natural process. (Wilson and Chiveralls, [n.d]: 1 cited in Barrett 2001).

According to Bazzell (2004: 12) the role of cemeteries in society has changed significantly since the beginning of human settlement. The location and design of cemetery have adapted to suit the mood and circumstances of people.

Nita, Loja, Rozylowicz, Onose and Tudor, (2013: 2 cited in Rugg 2000b; Kjøller 2012; Uslu 2010; Basmajian and Coutts 2010; Coutts, Basmajian, and Chapin 2011; Santarsiero et al. 2000; Petrisor, Lanos, and Talanga 2010; and Johnson 2001) mentioned that in several countries, such as Great Britain, Denmark, Turkey, the USA and Italy, cemeteries are considered an external or peripheral land use and in Romanian territorial planning cemeteries are placed at the boundary of urban growth.

2.6 Summary of Chapter

The chapter has revealed possible alternative burial methods solutions which may be considered, such as grave recycle/re-use; cremation; natural burial; sea burial; resomation (bio-cremation); and second internment from the international, local and regional perspective. Different authors have described how communities view alternative burial methods and what impact does it have to cultural and religious rituals. Thus, the Cultural, Cognitive Dissonance, Reasoned Action and Identity theories serve as a suitable framework to underpin this research since all four theories deal with a society's views on alternative burial methods as well as the impact culture has on it. Precedent studies (literature review) in this study highlight the challenges and importance of alternative burial methods that are already implemented and can be considered by other municipalities with land scarcity challenges and limited space within existing cemeteries.

In chapter 5, the researcher intends to interpret and analyse the response of populace through interviews in relation to different alternative burial methods available to the municipality for incremental exploration taking into consideration different beliefs, religions, and customs. Chapter 5 has direct links with this chapter since it provides an overview on how the general public views alternative burial methods and options at local level vs international level.

CHAPTER 3: CASE STUDY-RICHARDS BAY

3.   Introduction

This chapter provides an overview of the case study, its background, location, population distribution, status of the existing cemeteries and municipal challenges in relation to burials and land scarcity.

3.1 Geographic Location of the Study Area

Richards Bay is situated within jurisdiction of uMhlathuze Municipality, which is one of the 5 local municipalities within King Cetshwayo District Municipality, some 180kms north-east of Durban. It is one of the fastest growing developing towns and industrial centres in the country. (uMhlathuze Municipal SDF Review 2016/2017). It effectively forms a division between the eMpangeni and Richards Bay towns. (uMhlathuze Municipal SDF Review 2016/2017).

3.2   Population Distribution

Richards Bay consists of approximately 57 386 population, whereas the total of population of the entire uMhlathuze Municipal area is 366 000 (Census, 2011: online). Table 3 below provides population breakdown of the study area.

Table 3: Population Breakdown by Racial Group

Population group	People	Percentage
Black African	27549	48.01
White	17276	30.10
Indian or Asian	10457	18.22
Coloured	1863	3.25
Other	241	0.42
Total	**57386**	**100**

Source: Census, 2011: online

Table 3 above illustrates that the majority of people within the study area are African with approximately 48.01%. The second largest population are White people with approximately 30.10%. In third place are Indian or Asian population with approximately 18.22%, and in fourth place are Coloured population with approximately 3.25%. The other racial groups are approximate 0.42%. (Census, 2011: online). The Study area consists of seven formal suburbs and two Agri-Villages (refer to Table 5 below).

3.3 Language Efficiency

Table 4: Language Efficiency within the Study Area

First language	People	Percentage
isiZulu	22678	39.51
English	18887	32.92
Afrikaans	12015	20.93
isiNdebele	426	0.74
Other	397	0.71
isiXhosa	374	0.69
Setswana	348	0.60
Sesotho	293	0.51
Sign language	153	0.27
Sepedi	134	0.23
Xitsonga	75	0.13
SiSwati	58	0.10
Tshivenda	55	0.10
Not applicable	1493	2.60
Total	**57386**	**100**

Source: Census, 2011: online

Table 4 above indicates that 39.51% of the people within the study area speak IsiZulu; followed by English speaking people with 32.92%; and in third place with 20% are Afrikaans speaking people. The remaining 6.68% is the combination of IsiXhosa (0.69%); Setswana (0.60%); Sesotho (0.51%); Sign language (0.27%); Sepedi (0.23%); Xitsonga (0.13%); SiSwati (0.13%); Tshivenda (0.10%); other (0.71%)and not applicable (2.60%).

3.4   Formal Suburbs in Study Area

Table 5: Study Area Suburbs

Name	Population	Status
■ Arboretum Suburb	11972	Urban Formal
■ Meerensee Suburb	9353	Urban Formal
■ Aquadene Suburb	3603	Urban Formal
■ Wildenveide Suburb	2372	Urban Formal
■ Veldenvlei Suburb	4741	Urban Formal
■ Mzingazi Agri-Village	5957	Agri-Village
■ Mandlazini Agri-Village	6855	Agri-Village
■ Birdswood Suburb	4613	Urban Formal
■ Brackenham Suburb	7920	Urban Formal
Total	**57386**	

Source: Municipal GIS, 2016, Author's own illustration

Table 5 above illustrate nine (9) formal suburbs within the study area, of which seven (7) are urban formal areas, and two (2) Agri-Villages.

Map 1: Study Area Map
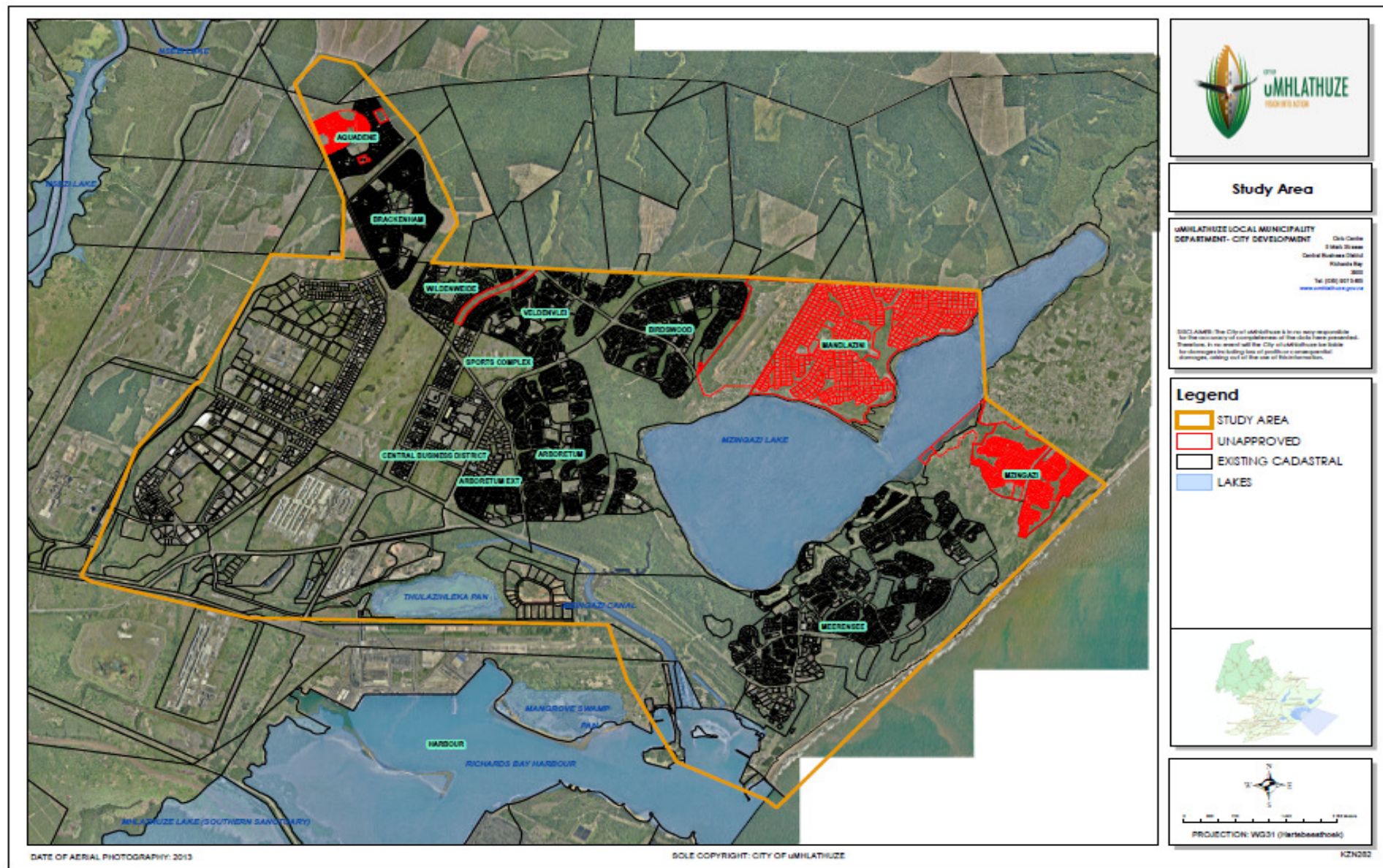
Source: uMhlathuze GIS, 2016, Author's own illustration

The UMhlathuze Municipality, like any other local municipality in the country, has to fulfil the objectives of local government as outlined in Section 152 of the Constitution, which includes amongst others:

- To ensure provision of services to communities in a sustainable manner, which included the identification, planning and management of monitoring of cemeteries within its area of jurisdiction?

During the early city planning in Richards Bay the cemetery i.e. Richards Bay Cemetery was located in close proximity to residential areas i.e. Brackenham, Aqaudene, Wildenveide and Velvenvlei, However, currently cemeteries are located on the outskirts of town i.e Esikhaleni cemetery due to shortage of land within and competing land uses for suitable land such human settlements.

Map 2: Existing and Proposed Development
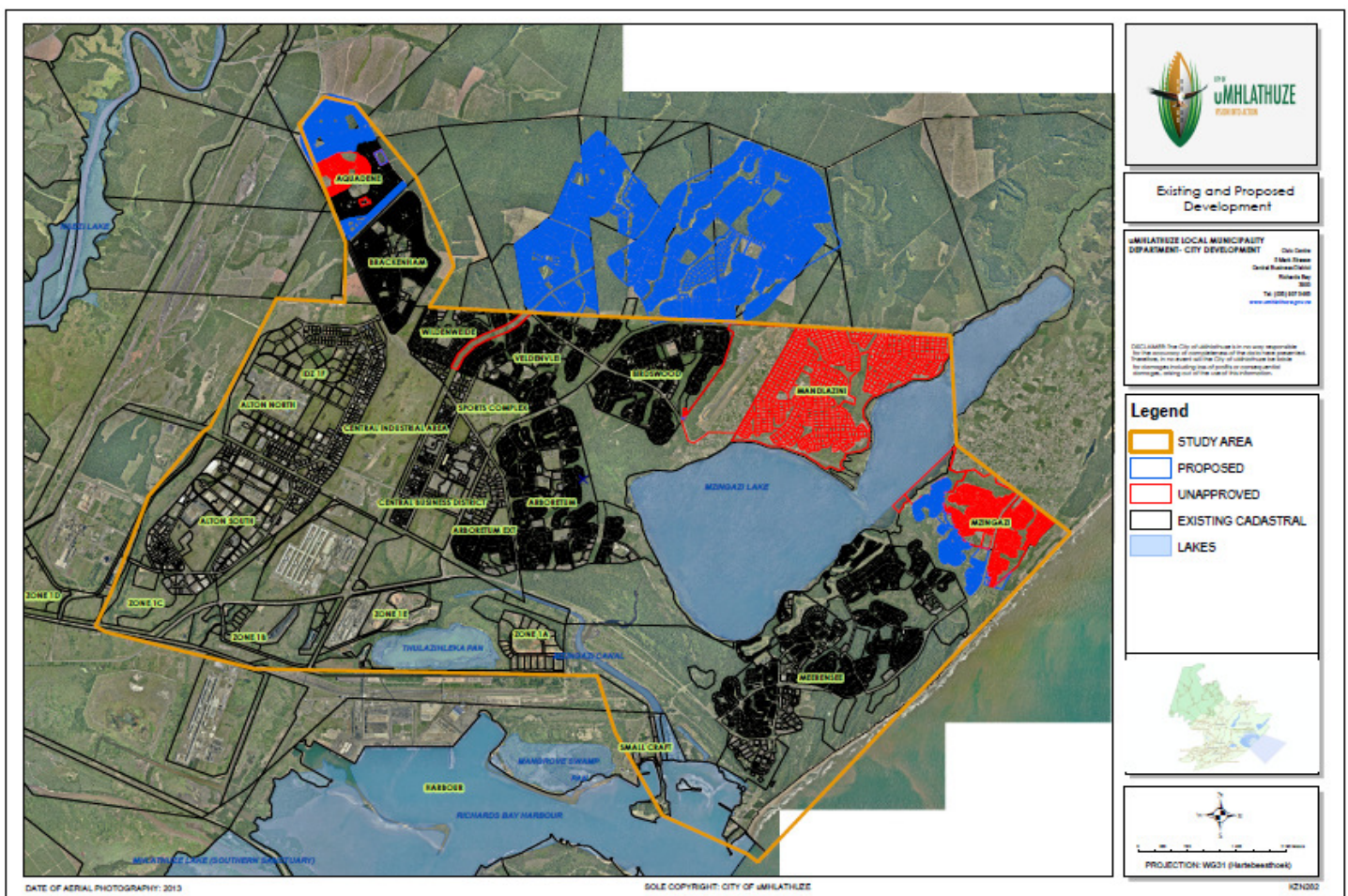
Source: uMhlathuze GIS, 2016, Author's own illustration

Map 2 above illustrates the existing development in black cadastral, existing agri-villages and Aquadene extension in red (unapproved cadastral), and the proposed/future

development (blue cadastral), within and adjacent to the study area. The planned residential developments do not cater for new cemetery development, the main focus is mixed use development consisting of residential, commercial, industrial, community facilities (excluding cemeteries) and ancillary uses. The planned mixed-use residential within the study area will yield approximately 8000 units.

Map 3: Land Use Map
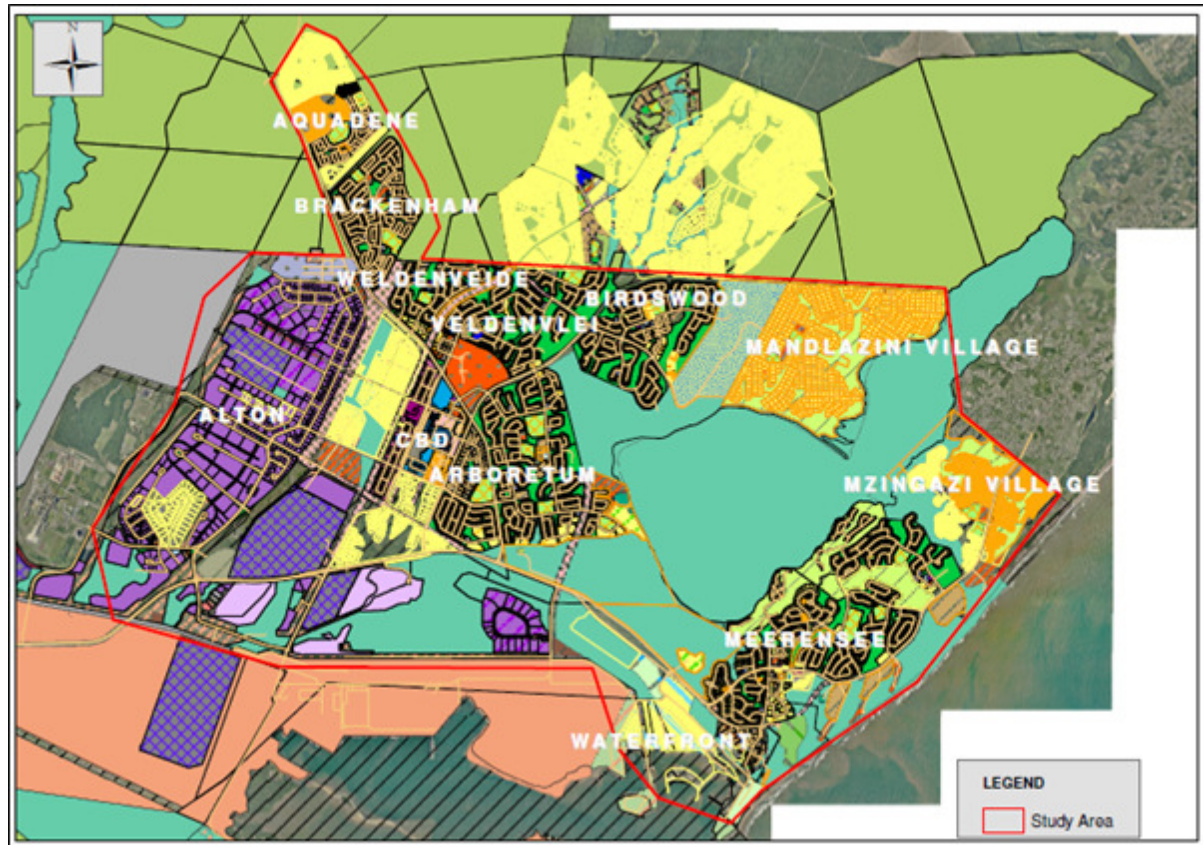
Source: uMhlathuze GIS, 2016, Author's own illustration legend needs more land uses

Map 3 above illustrates the existing land uses within and around the study area. The most dominant land use is mixed use residential (indicated in black cadastral and Agri-Villages in orange), followed by industrial (indicated in purple), open spaces and conservation (indicated in green). Richards Bay is having a high water table and is environmentally sensitive, as a result, identifying land for new cemeteries has proved to be a challenge, hence the study is aimed at recommending alternative burial options and methods, which will take into consideration environmental, cultural, beliefs, customs and religions issues.

3.5   The Status of Municipal Cemeteries

Table 6: The Current Status of Municipal Cemeteries

No.	Cemetery Name	Status
1	Richards Bay	Operational
2	Old Empangeni	Closed
3	Vulindlela	Closed
4	Esikhaleni	Operational
5	eNseleni	Closed

Source: uMhlathuze Municipal Status of Cemetery Report, 2016

Richards Bay Cemetery: it is situated in Richards Bay, approximately 6 kilometres from the Central Business District (CBD) and is approximately 40 hectares in extent. Richards Bay cemetery was officially opened in 1982, currently there are approximately 13 452 graves that are still available. Considering the existing mortality rate (2.3 per 1000), and the fact that eNseleni Cemetery has reached its full capacity, and the geotechnical stability of the soil that may decrease the expected life span of the facility Richards Bay cemetery the interments will result in a lifespan of 15 years. (uMhlathuze Municipal Status of Cemetery Report, 2016).

Esikhaleni Cemeteries: this relatively newly established cemetery was officially opened in July 2010 and already more than 8ha of the original 31ha has been used consisting of 10 800 graves. The remaining 23ha will cater for 31 050 graves and the expected life span is 30 years. However, this period may be reduced considering the growth of the population within the area and the increase in mortality rate (See Figure 8 below). (uMhlathuze Municipal Status of Cemetery Report, 2016).

The different life span for the remaining operational cemeteries is as result of different age for each, Richards Bay cemetery is about 33 years old, whereas Esikhaleni cemetery is only 6 years old. (uMhlathuze Municipal Status of Cemetery Report, 2016).

Old Empangeni Cemeteries: this cemetery is approximately 3 hectares, and was opened for burial during the 1980s. It reached its burial capacity during 2012 with the exception of some remaining unused reserved graves. Burials from Empangeni and surrounding areas are either accommodated at the Uthungulu Regional Cemetery or at Richards Bay or at eSikhaleni Cemeteries respectively. (uMhlathuze Municipal Status of Cemetery Report, 2016).

Vulindlela Cemeteries: this cemetery is approximately 2 hectares and was also opened during the 1980s. It also reached its burial capacity in 2012 with the exception of a few

reserved graves. Burials from this area are at present accommodated at the eSikhaleni Cemetery. (uMhlathuze Municipal Status of Cemetery Report, 2016).

eNseleni Cemeteries: this cemetery is approximately 1.6 hectares and was similarly opened during the 1980s. It reached its capacity in 2015. Interments from the area and the surroundings are accommodated at the Richards Bay Cemetery. (uMhlathuze Municipal Status of Cemetery Report, 2016).

Map 4: Spatial Location of Municipal Cemeteries
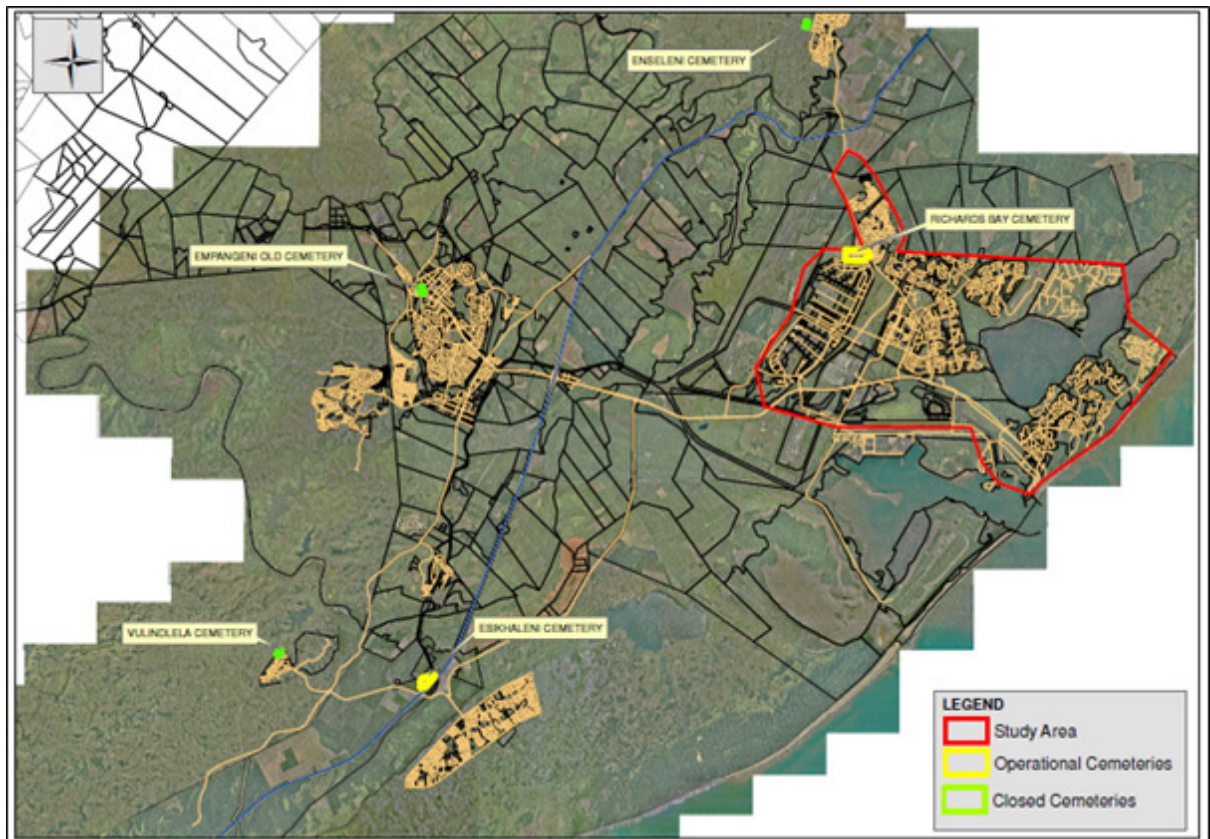
Source: uMhlathuze GIS, 2016, Author's Illustration

Map 4 above illustrates the spatial location of Municipal cemeteries. Three of the municipal cemeteries (Nseleni; Empangeni and Vulindlela) have reached their full capacity and have since been closed and only two municipal cemeteries are still operational i.e. Richards Bay and Esikhaleni cemeteries, with an estimated 15 years and 30 years lifespan, respectively.

Figure 8: Summary of Annual Burials for the past three years per each municipal cemetery
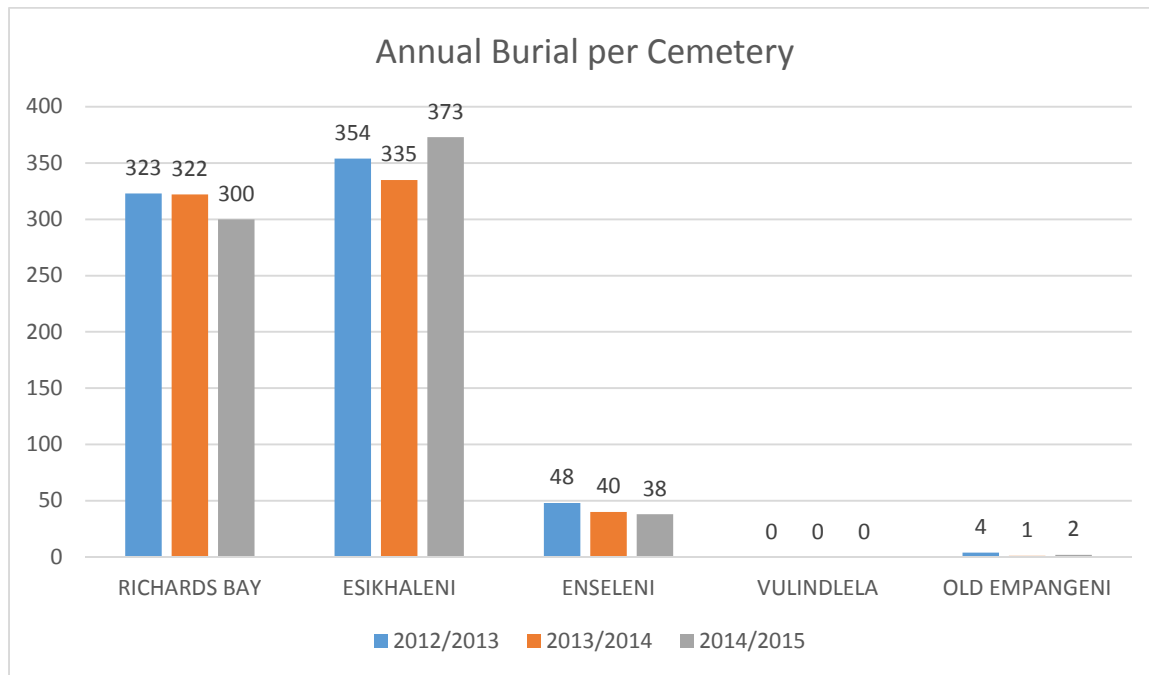
Source: uMhlathuze Municipal Status of Cemetery Report, 2016, Authors Own Illustration

Figure 8 Indicates that the Richards Bay and Esikhaleni are the most active municipal cemeteries. This is as a result that other three municipal cemeteries have reached their full capacity, and the recent one being Enseleni cemetery, which reached its full capacity towards the end of 2015. During 2012/2013 financial years Richards Bay cemetery had about 323 burials; during 2013/2014 it had about 322 and during 2014/2015 it had 300 burials; while Esikhaleni had about 354 during 2012/2013 financial year; 355 during 2013/2014 financial year, and 373 during 2014/2015 financial year.

It is for this reason the researcher intends to explore alternative burial methods that will assist the municipality to mitigate land scarcity challenges for new cemetery development. The new approach should assist in in terms of maximising of limited land resource.

3.6   Land Scarcity

KwaZulu-Natal has a significant proportion of land i.e. 2.8 million hectares managed by Ingonyama Trust Board, and administered by traditional councils. Based on South African history, land uses and development interventions were focussed around urban cores and developed areas - not rural areas. (Provincial Planning and Development Commission, 2005: 2).

A large portion of land within uMhlathuze Municipality is under private ownership i.e. Sappi, Mondi, Transnet, family trusts, Richards Bay IDZ, Transnet National Port Authority, Huletts and Ingonyama Trust Board. The land owners have their own future development plans which do not incorporate cemetery development and in the case of Ingonyama Trust land, the development follow the traditional way of land allocation by Izinduna and there is usually no proper planning in place. Table 7 below provides a breakdown of the land ownership in terms of hectares and percentages (%).

Table 7: Land Ownership Breakdown

Land Owner	Size (Hectares)	Percentage (%)
Ingonyama Trust Board	27953ha	35%
Private	33380ha	42%
Water Bodies (uMhlathuze Water)	5542ha	7%
Other (Including Municipality)	12460ha	16%
Total	**79334ha**	**100%**

Source: uMhlathuze Municipal IDP Review, 2016/2017

Table 7 above indicates that 42% of land within uMhlathuze Municipality is under private ownership; 35% under Ingonyama Trust Board, which is normally administered by Traditional Authorities; 16% of land is a combination of owners (including the municipality); and 7% of land is owned by Water Bodies. One of the biggest Municipal challenges in relation to land ownership is the distribution and allocation of land in the Ingonyama Trust Board, which is mainly administered by Traditional Authorities. (uMhlathuze Municipal IDP Review, 2016: 42).

The unplanned distribution of land in the Traditional Authority areas is common in the peri-urban and infill areas. This situation led to formation of unplanned settlements that put pressure on the Municipality for services provision. Identifying suitable land for new cemeteries is another challenge facing the municipality as a result of the fact that large parts of land are either in private or Ingonyama Trust Board ownership. Private owners focus is mainly commercial, residential and industrial. Cemetery is never incorporated into their development plans, while Traditional Authorities' focus is mainly residential, with few commercial components, which also do not incorporate cemetery land uses.

Map 5: Land Ownership
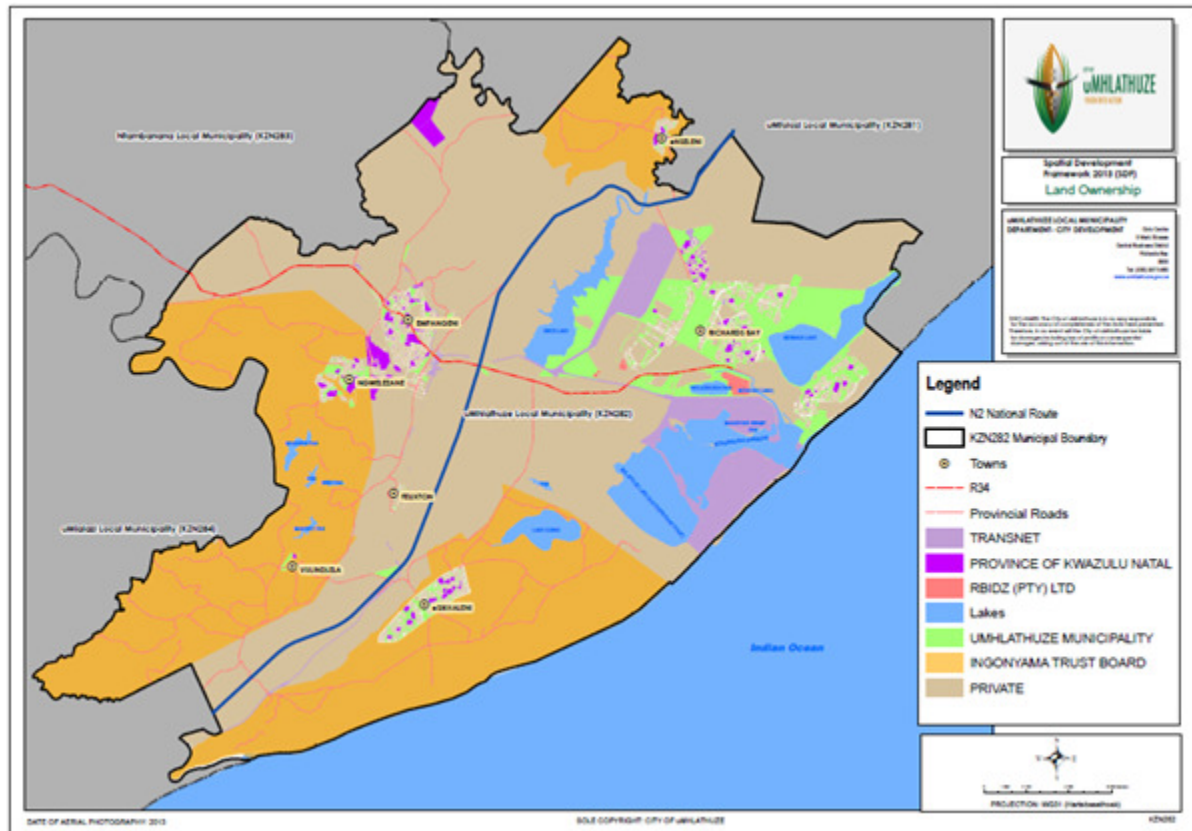
Source: Municipal SDF Review 2016/2017

Map 5 above illustrates land ownership distribution within the uMhlathuze municipality. The study area falls within an area which is owned by the municipality and privately owned land. As indicated in map 2, the majority of land (blue cadastral) within the study area is either earmarked for residential, commercial, industrial and community facilities (except cemetery development). The fact that the municipality owns only about 16% of land becomes a stumbling block to development perspectives. The 16% portion of land owned by the municipality is also subjected to environmental issues and unstable geotechnical conditions. The parcel of land that is not environmentally or geotechnically constrained is either earmarked for human settlements development, commercial or industrial development or is subjected to land claims.

The only solution for the municipality to address land scarcity challenge and cemetery development with alternative burial methods acceptable to communities, is to buy land from the private land owners or from Ingonyama Trust Board, which due to financial implications sourcing such land may also be impossible.

3.7   Geotechnical Conditions in the uMhlathuze Municipality

The uMhlathuze municipal area is characterized by hydrological and geotechnical constraints. Map 11 below outlines the following categories:

- Developable with minor constraints
- Developable with more costly constraints
- Developed
- No Development recommended
- No restriction on development

The study area is already developed and the surrounding land is classified as developable areas with minor constraints. However, minor constraints are mainly dependent on the type of development. For example, any development (including cemeteries) will require specialist studies such as geotechnical assessment, environmental assessment, and wetland assessment, more so in Richards Bay due to soil type i.e. sandy and high water table. Currently, some of the tombstones are slowly sinking due to unstable soil in the Richards Bay cemetery, which may lead to its 15 years current lifespan decrease since some of the available graves may not be used. Refer to Map 6 below illustrating geotechnical conditions and figure 9 illustrating descending tombstone in the Richards Bay cemetery due to unstable soil conditions.

Map 6: Geotechnical Conditions in the uMhlathuze Municipality

Source: Municipal SDF Review 2016/2017

51
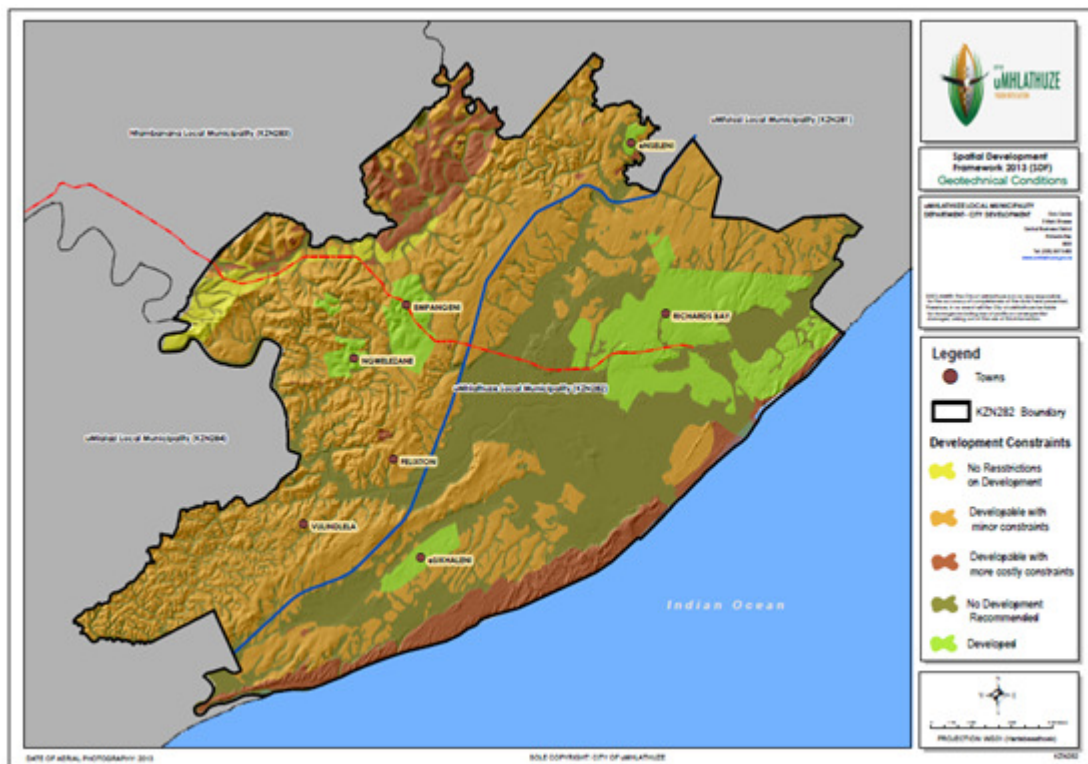
Figure 9: Descending existing Grave in Richards Bay Cemetery

Source: uMhlathuze Municipal Status of Cemetery Report, 2016

3.8 Land Claims Challenges

Richards Bay Town is subjected to land claims by two Traditional Authorities, being Mambuka and Mbuyazi Traditional Authorities. Each Traditional Authority has claimed half of the Richards Bay town. This matter has an impact on any future municipal development including cemeteries, where every development has to be assessed against any potential land claims, for example, Esikhaleni cemetery is situated on the claimed land. (uMhlathuze Municipal IDP Review, 2016).

Map 7: Land Claims Status
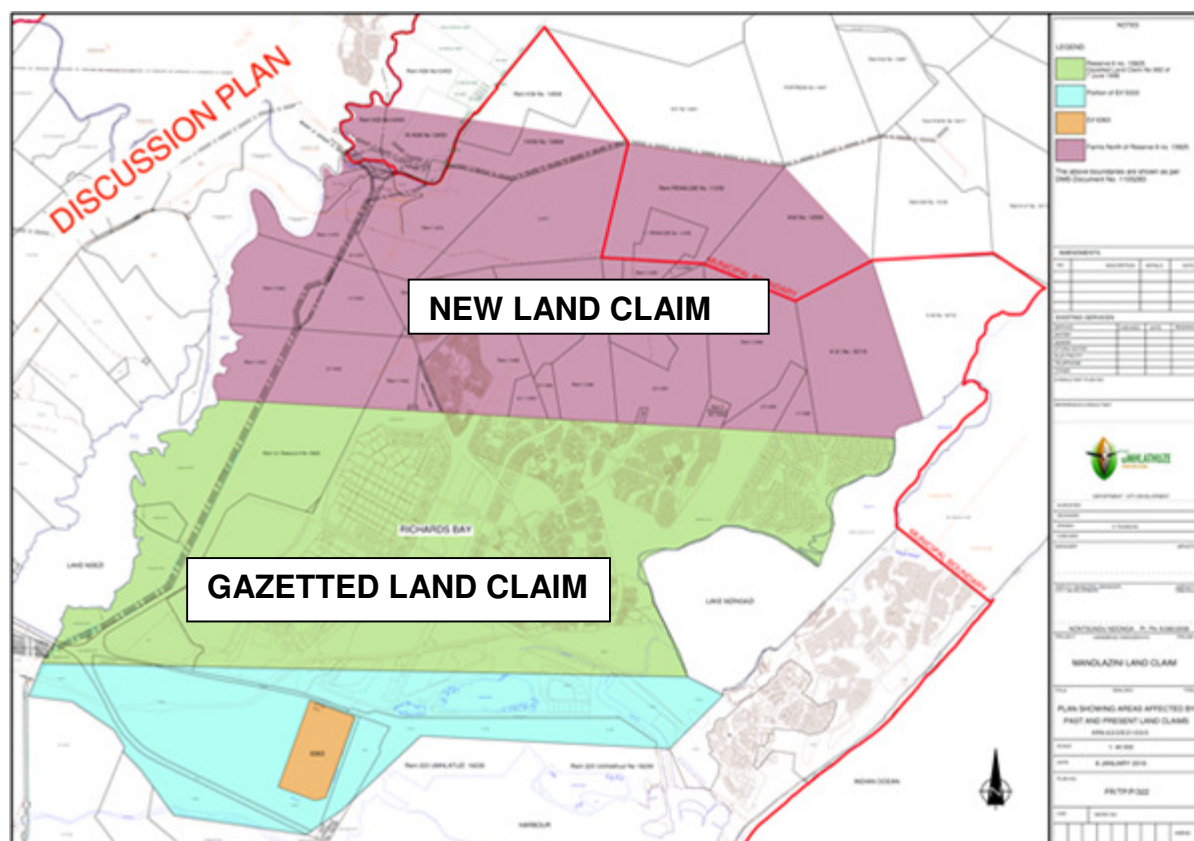
Source: Status of Land Claims Report, 2016

Map 7 above indicates that half of the study area (Richards Bay) is claimed by Mambuka Traditional Authority and the other half is claimed by Mbuyazi Traditional Authority.

3.9   Summary of Chapter

The challenges facing the uMhlathuze Municipality centred on identification of land for new cemeteries and exploring alternative burials are not unique to the municipality. Many cities and towns across South Africa are confronted by the same challenge and they opt for alternative burial methods like cremation. However, the road towards exploration of alternative burial methods requires stakeholder engagement since burials are connected to culture, beliefs and religion; and financial support - since any alternative burial method requires finance for planning processes and implementation.

Cemetery planning always competes with other community facilities and land uses such as schools, community halls, hospitals, clinics and human settlements project and projects always take precedence due to their direct link with pressing community needs. These community facilities are competing for the approximately 16% of land owned by the Municipality. However, 16% of land owned by the Municipality is affected by sensitive

environment, geotechnical issues since Richards Bay is covered by sandy soil. Richards Bay also has a high water table, which makes the area subjected to Water Use Licence Application for every development within 500 metre radius of a wetland. These challenges contribute to the land scarcity for development within the Municipality in particular Richards since it is regarded as landlocked due to environmental issues.

CHAPTER 4: LEGISLATIVE FRAMEWORK

4. Introduction

This chapter outlines the current South African legislative and policy frameworks in relation to cemetery planning, development, management, as well as different burial methods. It provides an overview of how cemeteries, conventional burial, and alternative burial methods are planned, and managed.

This chapter also outlines the national, provincial and municipal legislative and policy framework such as environmental related framework, spatial development framework, heritage, water, health, cemetery and crematoria that are critical in the planning, development and management of cemeteries. The main objective is to provide an overview of issues to be considered during cemetery planning processes and during the operational phase.

4.1   Constitution Act (Act No. 108 of 1996)

Constitution is the supreme law of the country/land, it provides the bill of rights, and intergovernmental relations.

The Constitution created the right to the environment as a fundamental right (the green rights). This means that all activities undertaken by government and private persons (including citizens, companies and associations) must be undertaken in accordance with this right.

The Constitution guarantees:

a) The right to an environment that is not harmful to human health or well-being (Section 24 (a)

 • Everyone has this basic right and may take legal action to protect it.
b) The right to have the environment protected (section 24 (b)

Section 152 of the Constitution outlines key objectives of local government, which are as follows:
"(1) *(a)* to provide democratic and accountable government for local communities;
(b) to ensure the provision of services to communities in a sustainable manner;
(c) to promote social and economic development;
(d) to promote a safe and healthy environment; and

(e) to encourage the involvement of communities and community organisations in the matters of local government.

(2) A municipality must strive, within its financial and administrative capacity, to achieve the objects set out in subsection (1"). (South Africa. Constitution act 1996:51).

Section 155 and 156 of the Constitution provides the requirements for management and administration of cemeteries to municipalities. The provincial government is responsible for monitoring and supporting role the municipalities in relation to cemeteries.

Attention is drawn to section 152(1) (b); (d); and (e) where the development of cemetery has to be planned and provided in a sustainable manner, promote safe and healthy environment and ensure community involvement in the planning processes and decision making. One of the main responsibilities of the uMhlathuze municipality is to plan and develop cemeteries for the benefit of its citizens and ensure that operation and maintenance resources are available for suitability purposes (funding, human capital and administration).

4.2   National Environmental Management Act (NEMA), (Act No. 107 of 1998)

NEMA establishes principles for decision making on matters affecting the environment. Principles directly related to waste management and the location of cemeteries and crematoria are included in Chapter 1 principles which include amongst others the following:

- People's needs must be put at the forefront when matters of environmental management are considered.
- Development must be socially, economically and environmentally sustainable
- Pollution, environmental degradation and waste must be avoided, minimised or remedied.
- Participation of vulnerable and disadvantaged interested and affected parties must be promoted with community wellbeing and empowerment also being promoted.

Section 24(2) and 24 D of the National Environmental Management Act, 1998 (Act No 107 of 1998), requires an environmental authorization prior to the commencement of certain activities that have a potential to impact adversely on the environment. The 2014 EIA Regulations of the said Act (in terms of Government Notice R983), lists certain activities related to the development of cemeteries which require a Basic Assessment EIA process to be followed prior to the commencement of the activity. There are no specific activities

relating to cemeteries listed under GN 984, requiring a full EIA process. (South Africa. National Environmental Management act 1998).

The activities identified below relate to the planning and development of cemeteries and the context is explained for each listed activity.

23.	The development of cemeteries of 2500 square metres or more in size.

Where there is an existing cemetery, which will be extended by 2500 square meters, the following listed activity applies

44.	The expansion of cemeteries by 2500 square metres or more.

Map 8: Environmentally Sensitive Areas in the uMhlathuze
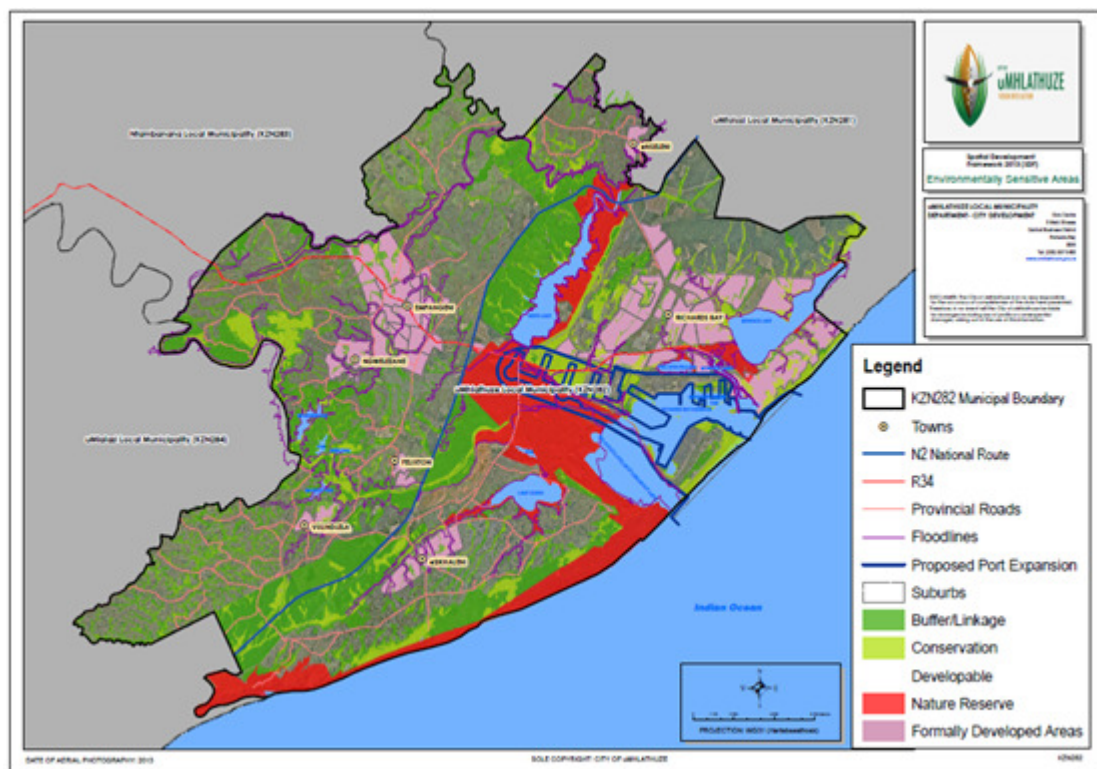
Source: Municipal SDF Review 2016/2017

Map 8 above will guide the municipality in identifying suitable land for new cemetery development from an environmental perspective, which will consist of different burial methods areas. Even though the majority of people are still in favour of conventional burial methods it is recommended that the municipal plans should accommodate alternative burial methods.

4.3   KwaZulu-Natal Cemeteries and Crematoria Act (Act No. 12 of 1996)

KwaZulu-Natal Cemeteries and Crematoria Act (Act No. 12 of 1996) regulate the establishment and operation of cemeteries in the province of KwaZulu- Natal. The Act provides for the development, operations, administration, maintenance, closure, reopening of cemeteries. It also provide regulations for disposal, exhumation, re-interment, and cremation of human remains. (Provincial Planning & Development Commission, 2005:12).

Section 3 of the Act states that no human remains shall be buried or cremated at locations other than cemeteries or crematoria established and operated under this Act. (Provincial Planning & Development Commission, 2005:12).

Section 9 of the Act specifies that, no cemetery or cremation may be set aside on the basis of race or home language, how such may be done on the basis of the deceased's residency in an area or according to a particular religion belief or affiliation. (Provincial Planning & Development Commission, 2005:12).

The Establishment of alternative burial methods in Richards Bay should conform to the requirements of the KwaZulu-Natal Cemeteries and Crematoria Act (Act No. 12 of 1996).

4.4   Heritage Resources Act (Act No. 25 of 1999)

The main objective of the Heritage Resources Act (Act No. 25 of 1999) is to protect and manage certain categories of heritage resources in South Africa. In terms of Heritage Resources Act, a "heritage resource" includes any place or object of cultural significance. The conditions of this Act states that no person may damage, destroy, disfigure and alter heritage objects without a permit issued by the South African Heritage Resources Authority (SAHRA) and no person may alter or demolish any structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority. Sites that have historical and archaeological significance should not be considered for the establishment of a cemetery. A Heritage Assessment may be essential on a site that is earmarked for cemetery development. (South Africa. Heritage Resources act 1999).

This piece of legislature has a direct impact in land identification for cemetery development. It provides archaeological processes to be followed during the township establishment process for the new cemetery development, where Amafa KwaZulu-Natal indicated whether the identified areas have any heritage and cultural significance to be preserved.

4.5   National Water Act (Act No. 36 of 1998)

The intention of the National Water Act is to promote the equitable access to water and the sustainable use of water, redress past racial and gender discrimination, and facilitate economic and social development. The Act provides the rights of access to basic water supply and sanitation, and environmentally, it provides for the protection of aquatic and associated ecosystems, the reduction and prevention of pollution and degradation of water resources. (South Africa. National Water act 1998).

The main potential environmental impact of a cemetery is upon surface or ground water supplies. It is thus necessary to prevent pollution through the burial and decomposition process associated with burial of groundwater water supplies. (South Africa. National Water act 1998).

Having understanding of the requirements and precaution of this Act, the alternative burial methods are essential to mitigate environmental issues, in particular Richards Bay area since it has high water table. (South Africa. National Water act 1998).

This piece of legislation is essential for cemetery development since it provide guidelines in relation to ground water preservation and impact. The study area has a high water table and the development guidelines outlined in relation to Water Use Licence will assist the municipality in identification of suitable land for cemetery which has less ground water impact.

4.6   National Health Act (Act No. 63 of 1977)

Regulations 4(1) of the National Health Act, state that no person shall bury a corpse in or on any premises which has not been registered by the local authority. However, this regulation does not apply to areas where the burials, the establishment and maintenance of cemeteries are regulated in terms of any other different law. (South Africa. National Health act 1977)

Regulation 5(1) indicate that any person pursuing the registration of any premises for the purpose of conducting any activities mentioned in Regulation 4(1), shall give notice of such intention and after the consideration of any objections (if any), the local authority will register the premises only if it is satisfied that it may not cause danger to health or any nuisance. (South Africa. National Health act 1977)

The above-mentioned regulations would apply equally in respect of any alternative burial methods and options.

4.7   Occupational Health and Safety Act 1993 (Act 85 of 1993)

Council has a responsibility to ensure that all activities conducted within its cemeteries comply with the requirements of the Occupational Health and Safety Act 1993 (Act No. 85 of 1993).   Irrespective of in-house functions being performed such as the digging of graves, cleaning of offices and ablutions and general upkeep of the areas concerned, external contractors are also used to perform certain functions and include but are not limited to funeral directors, monumental masons and other secondary parties that carry out services related to grass cutting, landscaping, grave preparations, construction, disposal of surplus materials etc. (South Africa. Occupational Health and Safety act 1993)

The municipality ensures that all the functionalities being performed are conducted by way of a formal agreement/permit between the Council and the external agent/contractor to ensure continuous compliance in terms of the relevant legislative requirements.   The purpose of this is therefore aimed at clarifying responsibilities and accountability and also to ensure that Council is taking the necessary measures to minimise its exposure or risks in relation to cemeteries by being pro-active. (Municipal Cemetery Strategy Report, 2016: 23).

4.8   Spatial Planning and Land Use Management Act (Act No. 16 of 2013)

Spatial Planning and Land Use Management Act (SPLUMA) provide a framework for spatial planning and land use management in the country; it specifies the relationship between the spatial planning and the land use management system and other kinds of planning. It also provides for the inclusive, developmental, equitable and efficient spatial planning at the different spheres of Government. (South Africa. Spatial Planning and Land Use Management act 2013: 2).

This piece of legislative promotes an inclusive planning process that encourages integrated development. Chapter 4 of this Act requires municipalities to prepare wall to wall Land Use Scheme and allocate land rights to all parcels of land within the municipality. The wall to wall scheme processes include earmarking land and zoning for cemeteries within the municipality.

4.9   Municipal Integrated Development Plan (IDP): 2016/2017

Chapter 5 of the Municipal Systems Act, requires that all municipalities prepare a five year Integrated Development Plan which is a strategic plan incorporating current and future plans of the municipality, ranging from human settlements, social facilities, economic development, infrastructure services provision etc. (South Africa. Municipal Systems act 2000).

As much as cemetery development is one of the municipal challenges, however, the future cemetery planning is not featured in the Municipal Integrated Development Plan, which creates the gap between human settlements planning (planning for the living) and cemetery planning (planning for the dead). The current municipal (Richards Bay) 2016/2017 IDP project plan and implementation plan focuses mainly on infrastructure and service delivery project such as water, sanitation, electricity, roads and human settlements.

4.10   Municipal Spatial Development Framework

Section 21 of the Spatial Planning and Land Use Management Act requires that the municipal spatial development framework must:-

"(b) include a written and spatial representation of a five-year spatial development plan for the spatial form of the municipality;
(c) include a longer term spatial development vision statement for the municipal area which indicates a desired spatial growth and development pattern for the next 10 to 20 years;
(d) identify current and future significant structuring and restructuring elements of the spatial form of the municipality, including development corridors, activity spines and economic nodes where public and private investment will be prioritised and facilitated;
(e) include population growth estimates for the next five years;
(f) include estimates of the demand for housing units across different socio-economic categories and the planned location and density of future housing developments;
(h) identify, quantify and provide location requirements of engineering infrastructure and services provision for existing and future development needs for the next five years; and
(i) identify the designated areas where a national or provincial inclusionary housing policy may be applicable".

The municipal Spatial Development Framework includes spatial growth and development patterns for the next 5, 10 and 20 years as illustrated in Map 9. The Spatial Development Framework also includes 35 years projected population growth at an estimated 1.45% and 2% annual growth for the whole municipal area of jurisdiction as illustrated in table 8 and table 9. The current and future housing developments are well articulated in the spatial development framework (Map 9). However, what is clear from the municipal long term development is the plan for future cemetery development. (Municipal SDF Review, 2016/2017).

Table 8: Projected Population Growth at 1.45%

2011	2015	2020	2025	2030	2040	2050
334,459	354,284	380,725	409,140	439,675	507,753	586,372

Source: uMhlathuze Municipal IDP Review, 2016/2017

Table 9: Projected Population Growth at 2%

2011	2015	2020	2025	2030	2040	2050
334,459	362,029	399,709	441,312	487,244	593,947	724,018

Source: uMhlathuze Municipal IDP Review, 2016/2017

Tables 8 and 9 above indicate the projected population for uMhlathuze at a rate of 1.45% and 2% respectively. It is perceived that at a 2% growth rate, the municipal population will double by the year 2050 (35 years from now). The impact of such a population increase on municipal services, community facilities and other governmental services is very significant.

The Municipal Spatial Development Framework also guides the form and location of future spatial development in a manner that addresses the imbalances of the past i.e. spatial injustice. It enables the municipality to manage its land resources in a developmental and sustainable manner. It provides an analysis of the spatial problems and provides strategies and programs to address the challenges.

Map 9: Municipal SDF
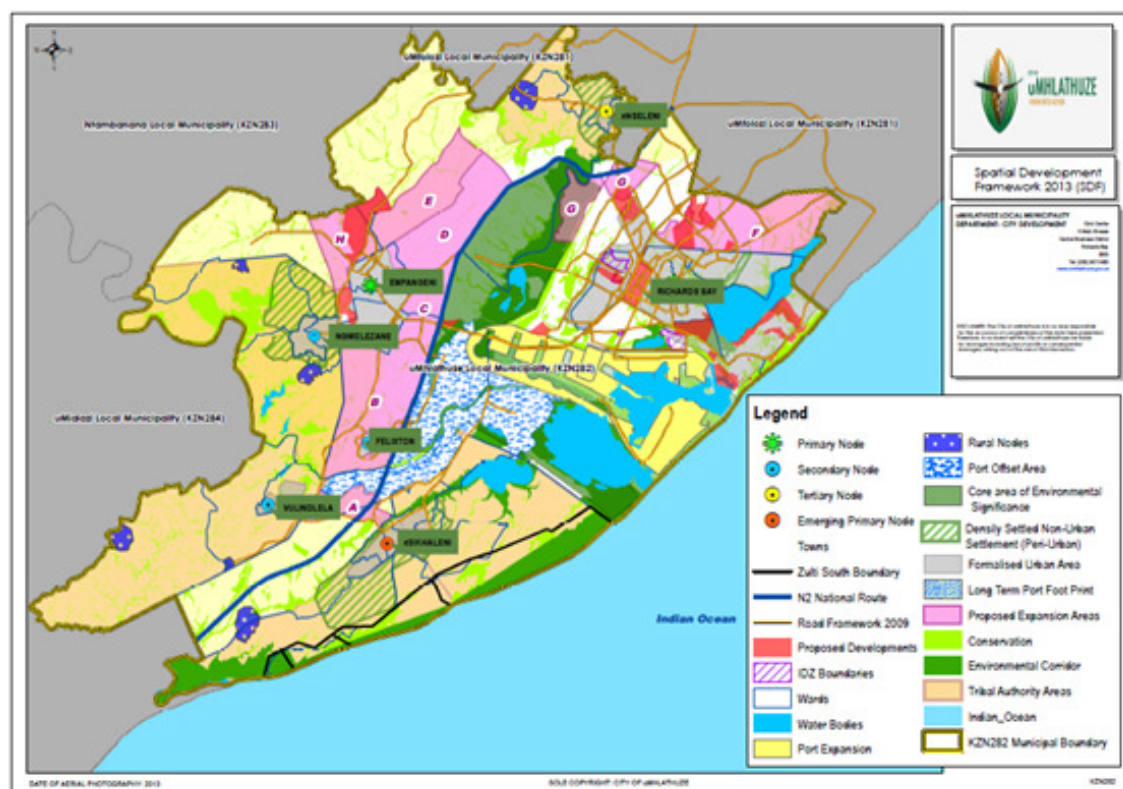
Source: Municipal SDF Review 2016/2017

Map 9 above illustrates the municipal Spatial Development Framework, where the purple area represent future expansion areas i.e. expansion area A to expansion area H, where the dominant land uses is mixed residential and commercial development. However, cemetery development is not incorporated in any of the future expansion areas.

Table 10: SDF Expansion Areas

Expansion Area	Size (Ha)	Land Developable (Ha)
A	593	363
B	2 982	2 214
C	512	437
D	1 756	356
E	2 306	1 958
F	2 344	1 699
G	971	407
H	1 163	780
TOTAL	12 629	8 214

Source: Municipal SDF Review 2016/2017

Map 10: Human Settlements Projects
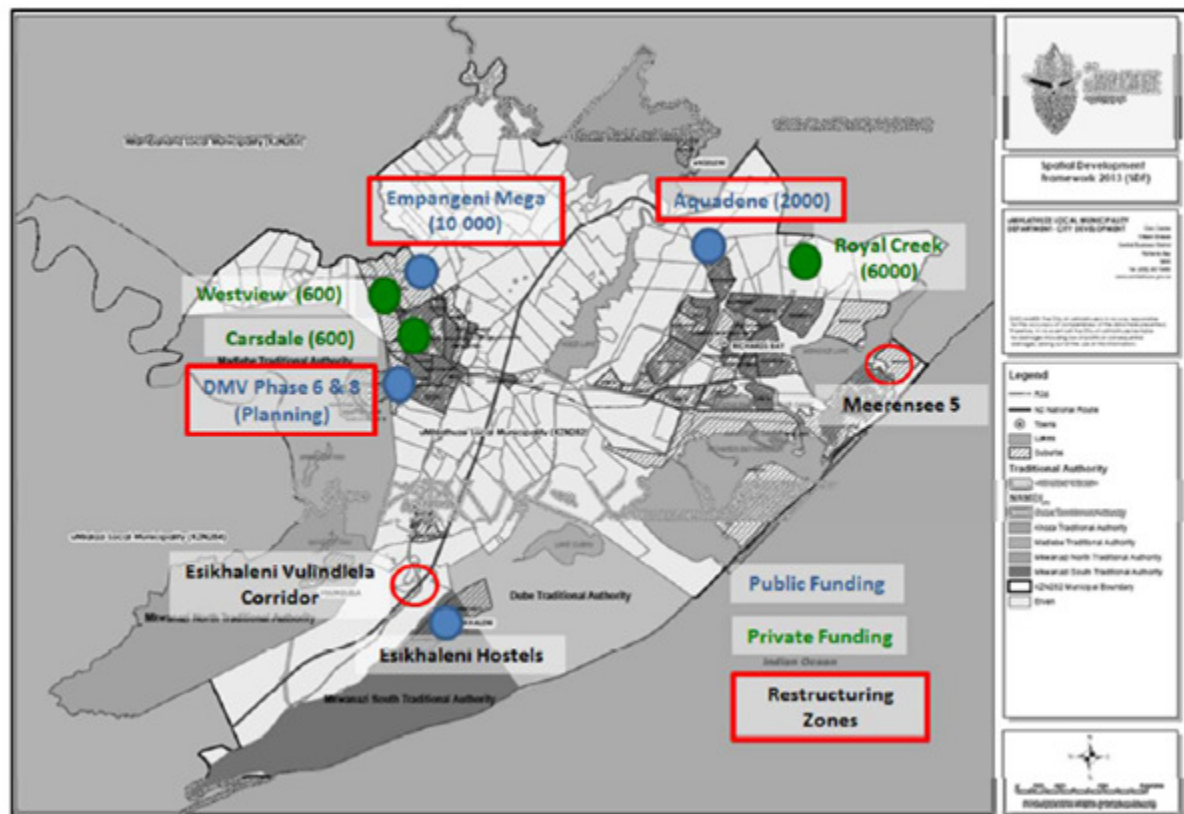
Source: Municipal SDF Review 2016/2017

Map 10 above illustrates planned municipal human settlements projects which will yield more than 22000 housing units of which about 8000 units will be situated within the study area (Richards Bay). The human settlements plan does not cater for new cemetery development.

Table 11: Spatial Development Framework Implementation Plan

NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3+	BUDGET REQUIRED	FUNDING SOURCE
	Agreement with Department of Minerals in respect of SDF Review proposed Expansion Areas development roll-out.	2016/2017	2017/2018	-	Operational	N/A
	Integrated ground, surface and stormwater (catchment) management plan.	2016/2017	2017/2018	2018/2019	R10 500 000	CoU (MoU with external)
	Biodiversity Plan		2017/2018		R1 000 000	CoU
PRECINCT/CONCEPT PLANS						
	Richards Bay Convention Centre Concept Expression of Interest	2016/2017	-	-	N/A	N/A
	The Ridge Development Concept	2016/2017	-	-	R400 000	CoU
	Richards Bay and Empangeni Civic Precinct Plans	-	2017/2018	-	R600 000	CoU
	Richards Bay CBD Framework Plan Review	2016/2017	-	-	R500 000	CoGTA
	Richards Bay Waterfront Detailed Development Concept	-	2017/2018	-	R800 000	CoU External
	Further detailed planning of intersection/opportunity nodes in terms of phasing and development guidelines. Includes Heatonville, Empangeni Milling, Buchanana etc.	-	2017/2018	2018/2019	R400 000	CoU External
	Preparation of Rural Settlement/Framework Plans for five identified Traditional Settlement Areas.	2016/2017	2017/2018	2018/2019	R480 000	CoU DRDLR External
	Urban Regeneration projects for the commercial precincts of Esikhaleni, Nseleni, Ngwelezela, Vulindlela (KwaDlangezwa) and Empangeni Rail.	-	2017/2018	2018/2019	R400 000	CoU External
	Review densification and residential infill study and expand current project scope of work to include all urban areas of the Municipality.	-	2017/2018	2018/2019	Operational	N/A
INFRASTRUCTURE AND SERVICES PLANNING						
	Update of Rail Framework Planning given SDF Review and proposed Expansion Areas.	-	-	2018/2019	To be determined	CoU
	Alternative and Renewable Energy Network Strategy/Plan	2016/2017	2017/2018	-	To be determined	CoU DoE
	Investigate site options for long term Cemetery development in uMhlathuze	-	2017/2018	-	R50 000	CoU

Source: Municipal SDF Review 2016/2017

Table 11 above indicates municipal Spatial Development Framework implementation plan, where the investigation for long term cemetery development options will be undertaken during 2017/2018. According to Strachan (Personal Communication: 2016), the investigation of a suitable site for new cemetery development as initiated in 2012, however, the municipality could not finalise the process due to limitations relating to land legal (land ownership), environmental issues as well as limited funding to undertake required specialist studies.

As much as the investigation of suitable land for future cemeteries is indicated in the spatial development framework implementation plan as a short to medium plan i.e. investigation of suitable site options for long term cemetery development in 2017/2018 financial year, the planning processes are not linked to the human settlements plans which make it difficult to balance planning process for the living and for the death.

Map 11: Settlement Patterns
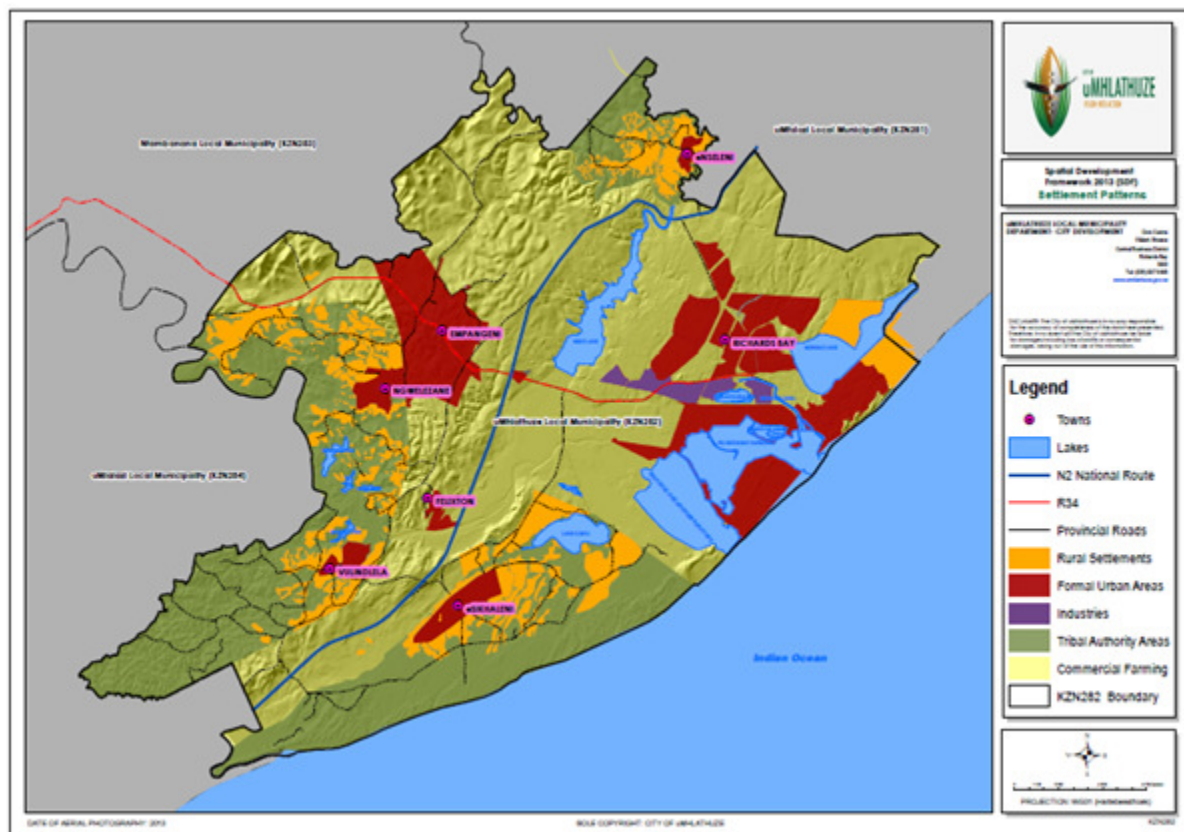
Source: Municipal SDF Review 2016/2017

Map 11 above illustrates uMhlathuze municipality settlement patterns where the study area consists of formal urban area (seven formal suburbs) and rural settlement (two Agri-villages).

4.11   Municipal Cemetery and Crematoria, Funeral Parlours Bylaw

The Municipal Cemetery Bylaw provides a clear guidelines and procedures for all activities in relation to cemetery.

Section 26 of the Municipal Cemetery Bylaw states that (1) any person desiring to have a body or human remains interred in a grave shall submit the appropriate form to the caretaker before the time of interment; (2) the Council may on payment of the applicable fees, allocate the use of any grave appropriated for an internment to any person who applied for it in terms of subsection (1); and (3) no body or human remains shall be interred within any cemetery without the permission of the caretaker. The permission will only be granted on submission of a written burial order, signed by the Registrar of Deaths authorising the interment, and on presentation and submission of such a notice of interment. (Municipal Cemetery and Crematoria, Funeral Parlours Bylaw; 1999: 6).

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Section 33 of the Bylaw prohibits the burial of more than two bodies at the same time, while section 35 states that (1) any person who wishes to apply for a second interment in the same grave may do so only after a period of two years has lapsed since the date of the first interment on condition that the grave was deepened prior or during the preparation of the grave for the first interment; (2) the applicant who wishes to have a body interred for the purpose of a second interment shall (a) apply on the prescribed form at least 24 hours before the interment shall take place; and (b) remove any memorial work on such grave at his own cost and comply with any requirements made by the caretaker in this regard. (Municipal Cemetery and Crematoria, Funeral Parlours Bylaw; 1999: 6).

In terms of Section 30 of the cemetery Bylaw, adult graves shall not be less than 1800 mm and child graves shall not be less than 1500 mm in depth.

The second interment is one of the alternative burial methods yet to be considered and it is quite clear that the municipality, through its cemetery Bylaw can implement such methods if supported by the public. However, the outcome of the interviews/surveys decided otherwise. The participants were asked if they would choose second interment as an alternative burial method but none of them were in favour of it.

The aforementioned legislative and bylaw requirements are in place to regulate and control burials/cremations as the uncontrolled operations will result *inter alia* in:

- health and environmental pollution hazards
- non reporting of deaths
- illegal human body parts trafficking
- illegal burial activities and criminal activities resulting in deaths not being reported
- influence/relate to future land use potentials and developments, etc.

Irrespective of the local municipalities' longstanding involvement in cemeteries provision and service delivery over the years, the private sector has also entered the market and shown their interest and involvement in the provision, development and management of private cemeteries in the country. Excellent examples are inter alia the newly established Fourways Memorial Park in Gauteng and the Natural Burial/Legacy Park concept marketed in Stellenbosch in the Western Cape.

4.12 Guidelines for Human Settlements Planning and Design

The purpose of these guidelines is not merely to assist professionals in producing efficiently serviced "townships", but rather to create sustainable and vibrant human settlements. Human settlement is regarded as any built environment where people live, work and play. (Guidelines for Human Settlements Planning and Design, 2005: 1)

The guidelines provide ten criteria that are deemed essential when planning the position of cemeteries:

- Soil Workability: ease of compacting
- Size of the cemetery: include future grave site and future development pressures
- Basal Buffer Zones: refer to the depth of soil between the deepest grave and water table
- Grave stability: refer to the stability of soil around the grave from the time of excavation to interment
- Site topography: take into consideration access to the graves and surface as well as subsurface drainage
- Soil permeability: to be considered in relation to possible pollutants into groundwater
- Measurements for graves
- The position: takes into consideration domestic water supply i.e. groundwater resources
- Site drainage: takes into consideration rainwater drainage into the soil, therefore the graves with the possibility of pollutants being conveyed from the site through the soil
- The position: takes into consideration drainage features to prevent storm water runoff from conveying pollutants to the stream and pose threat of exposing graves. 1:50 year flood line position forms part of the assessment.

The above mentioned cemetery development guidelines the focus at the time of its adoption was mainly based on conventional burial method. However, due to land scarcity challenges in relation to cemetery development, alternative burial methods guidelines and procedures are essential to assist municipalities in addressing these challenges through a people-centred approach to ensure stakeholder buy-in.

4.13   CSIR Guidelines for the provision of social Facilities in South African Settlements

Section 4 of the guidelines provides insight on social facilities provision access norms and thresholds for a range of settlement types. Table 12 below illustrates cemetery development thresholds for different range of settlement types:

Table 12: Average Cemetery Threshold by Settlement Type

Settlement Type	Average Threshold Population	Provision Criteria	Acceptable Travel Distance (KM)
Metropolitan Cities	17.2 ha per 100 000	Compulsory	30km
Large Cities/Small Metros	17.2 ha per 100 000	Compulsory	30km
Large Towns/Regional Service Centres	17.2 ha per 100 000	Compulsory	30km
Small-medium Towns	8.8 ha per 50 000	Discretionary	15 km to 30 km
Small Towns	8.8 ha per 50 000	Discretionary	15km
Dense Disperses settlement patterns	8.8 ha per 50 000 (medium) / 17.2 ha per100 000 (large)	Compulsory	25km
Villages	Very small - 0.88 ha per 5 000 / Small - 4.4 ha per 25 000	Compulsory	25km
Remote Villages	0.25 ha per 1 000	Compulsory	15km

Source: CSIR Guidelines for the provision of social Facilities in South African Settlements, 2012)

Assessing table 12 above the majority of cemetery requirements are compulsory, based on estimated population threshold. The study area (Richards Bay) is situated within uMhlathuze municipality with an estimated population of 366 000 people. This means that the municipality falls within Large cities/small metros category where cemetery planning criteria of 17.2 ha for every 100 000 people is required and a travel distance of 30 km is essential.

Currently both Esikhaleni and Richards Bay cemeteries that are still operational are located within reasonable distance from the study area. However, looking at the municipal area at large most of the traditional authority areas are located far from the municipal cemeteries. Even though majority of people in these areas practice home burials as time changes it is anticipated that more people in the traditional authority areas will choose municipal cemeteries as opposed to home burials. This means municipal cemetery planning with acceptable alternative burial options should be decentralised and be in line with requirements outlined in table 6 above.

4.14   Summary of Chapter

Government has introduced different legislative and policy framework such as KwaZulu-Natal Cemeteries and Crematoria Act (Act No. 12 of 1996), National Environmental Management Act (NEMA), (Act No. 107 of 1998), and Guidelines for Human Settlements Planning and Design (2005) in relation to planning and development of cemeteries. The municipality has also developed its own cemetery and crematoria, funeral parlours Bylaw (1996). However, there is a vivid gap in terms of different policy requirements in relation to cemetery development, burials and relevant procedures and the common factor is that these legislative and policy frameworks do not incorporate the available alternative burials methods procedures. This gap requires urgent attention in terms of amendment of certain legislations and policies to address the land scarcity challenges and provide guidelines for alternative burial methods and options. The following chapter (chapter 6) outlines the outcome of the research from residents' surveys, municipal officials, funeral directors/undertakers, traditional leaders and religious leaders in relation to exploration of alternative burials in Richards Bay in line with culture, religion, and beliefs.

CHAPTER 5: RESEARCH FINDINGS AND DATA ANALYSIS

5. Introduction

This chapter outlines the research findings obtained through interviews and surveys with different research participants such as residents, religious leader, traditional leaders, municipal officials and funeral directors/undertakers in relation to the alternative burial methods and options. The research findings respond to some of the questions raised in Chapter 1. The chapter outlines how respondents view cremation, sea burial, resomation, second interment, recycle/re-use, and green/natural burial/woodlands as alternative burial methods and options due to land scarcity challenges facing the municipality.

Firstly, this chapter provides an overview of residents' survey findings, which amongst others includes racial groups, age, gender, religion, cultural activities, current burial method and the preferred burial methods.

Secondly, the chapter also provide findings from religious leaders, their perspective to alternative burial methods in relation to religion; thirdly, traditional leaders' perspective to alternative burial methods in relation to cultural activities; fourthly, funeral directors/undertakers' perspective to alternative burial method in relation to business operations and; lastly, municipal officials' perspective to alternative burial methods in relation to long term planning, land availability for new cemetery development, and environmental issues.

This chapter also provides case studies on alternative burial methods from local and international perspective.

5.1   Research Findings

Surveys and interviews (of 55 people) consisting of 36 people (residents survey) from nine different areas within study area, interviews with six municipal officials, five funeral directors/undertakers, four traditional leaders, and four religious leaders were conducted and the findings have been analysed in this chapter. The research is qualitative in nature and used purposive sampling method as outlined in chapter 1 and the researcher chose purposive sampling as he wanted to concentrate on specific racial groups, with different roles within the population that he wanted to use as participants in the study.

5.1.1 Residents Interviews/Survey Results

Table 13: Racial groups

Racial Groups	No. of Respondents	%
Africans	20	56
Coloured	4	11
Indian	4	11
White	7	19
Asian	0	0
Other	1	3
Total	**36**	**100**

Source: Author own illustration, 2016

Table 13 above illustrates that 56% of residents are Africans, followed by Whites residents with 9%, while 11% are Coloureds respondents, another 11% are Indians respondents and 3% constituted other. The searcher interviewed more Africans with an intention to get more insight in relation to the research objectives, which are to explore alternative burial methods since burials are linked to different cultures, religions and beliefs. None of the respondents were Asian.

Based on the nature of the research and its close connection to culture and norms, the researcher chose to interview more Africans (20 Africans) since alternative burials is still a foreign practice to many them due to culture and tradition and they still believe in conventional burial method. Chapter 2 of the research provides an overview of literature review and how most Africans resists alternative burials.

Table 14: Religion

Religion	No. of Respondents	%
Christian	23	63
African Tradition	10	28
Hindu	2	6
Islam	0	0
Muslim	0	0
Other	1	3
Total	**36**	**100**

Source: Author own illustration, 2016

Table 14 illustrate that 63% of respondents are Christians, followed by African traditional religion (including Nazareth and Zion Churches) with 28%, Hindu with 6% and other with 3%. None of the respondents were Islam and Muslim.

Figure 10: Religion by Racial Group
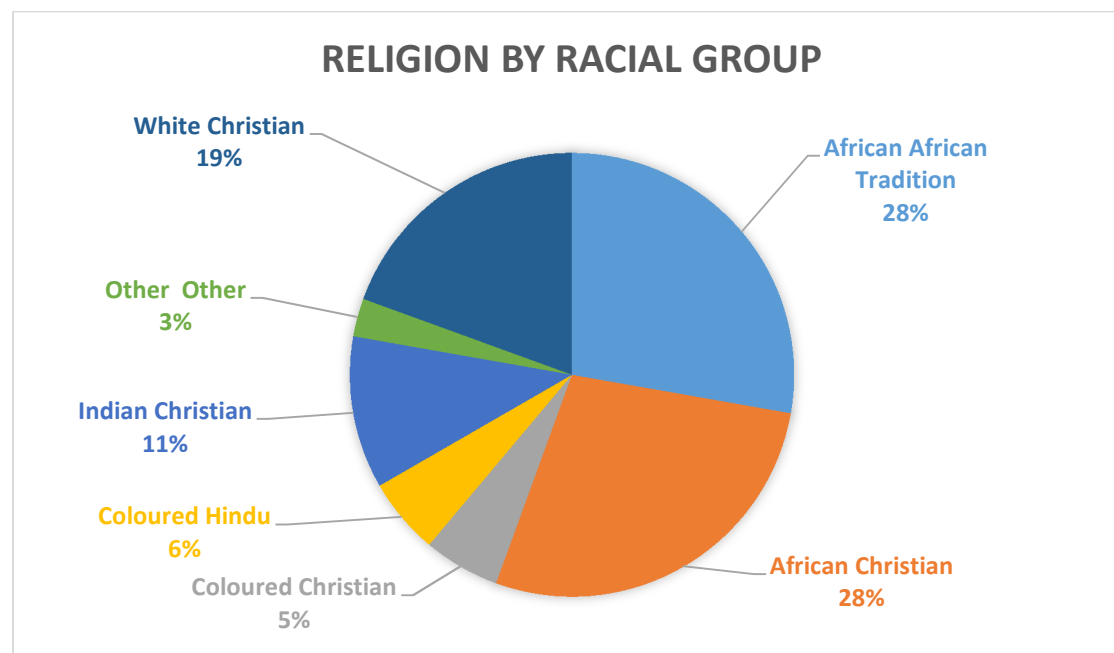
Source: Author own illustration, 2016

The research findings outlined in figure 10 above illustrate that 28% of respondents are Africans who are Christians; 5% are Coloureds who are Christians; 11% are Indians who are Christians and 19% are Whites who are Christians.

Figure 10 further illustrates that 28% of respondents are of African tradition, while 6% are Hindu and 3% fall within the category "other". The percentage breakdown paints a clear picture of respondents' religion and also provide an overview of the dominant religion amongst the respondents, which has an impact on burial methods It is no doubt that religion has a direct connection to cemetery. Every religion has its own burial methods which have been practiced from one generation to another. As much as alternative burial methods may be essential for the municipality due to land scarcity for new cemetery development and the expansion of the existing, consideration will have to be given to different religions in order to promote a people-centred and religious centred process.

Table 15: Age Category

Age Category	No. of Respondents	%
18-19	3	8
20-24	8	22
25-30	4	11
31-35	8	22
36-45	6	17
46-59	5	14
60+	2	6
Total	**36**	**100**

Source: Author own illustration, 2016

The research results depicted in table 15 above indicated that 8% of the respondents were between the age category of 18-19 years; 22% were between the age category of 20-24 years, while 11% were between the age category of 25-30 years; 22% were between the age category of 31-35 years; 17% of respondents were between age category of 36-45 years; 14% respondents are between the age category of 46-59 years and 6% were above 60 years old. Age is an essential part in this this study since is it is believed that youth would understand the change much better than the adults based on how they grew up and the level of education.

Table 15 further revealed that 64% of the respondents were still in the youth category i.e. (18-19 years and 31-35 years age categories), while 36% of the respondents fell outside the youth category i.e. 36-45 years and older than 60 years.

This wide age spread assisted the researcher to get the views of both adults and youth in relation to alternative burials, more especially youth as they are perceived as a new generation who understand 21st century changes and demands. The research findings in relation to alternative burials are illustrated in table 18. The age breakdown means that 64% of respondents (within youth category) would have a better understanding of alternative burial methods and its objectives and land scarcity challenges.

Table 16: Gender

Gender	No. of Respondents	%
Male	22	61
Female	14	39
Total	**36**	**100**

Source: Author own illustration, 2016

During the survey, different gender groups responded to the questionnaires. A total of 36 respondents were interviewed and table 16 above illustrate that 61% of respondents are males and 39% are females. During the surveys sessions, the researcher discovered that most females are not comfortable to respond, therefore responsibility was shifted to the male family members, hence the highest percentage of males as respondents. The huge gap between male and female responses means that men still hold power in decision making, while women have to follow and abide by those decisions. The research finding from alternative burial methods and in many different ways can be interpreted as male decisions. Even though the research was not based on gender equity, the gap is a true reflection that male figures still hold decision-making powers. It may be possible that some of the females would have opted for their choice of alternative burials but male figures had to make those decisions. It is this reason why the searcher, in chapter 6 recommends that gender equity be considered in the planning processes and decision-making in relation to alternative burial methods.

Table 17: Current Method of burial method

Burial Method	No. of Respondents	%
Conventional	24	66
Cremation	10	28
Sea Burial	2	6
Second Interment	0	0
Other	0	0
Total	**36**	**100**

Source: Author own illustration, 2016

Table 17 above provides an overview of the current burial practices by the total of 36 respondents, where the research results revealed that 66% of the respondents practice

conventional burial system, while 28% of respondents practice cremation and 6% of respondents practice sea burial. This is a true reflection that the majority of people still perceive conventional method as their option of burial. Even though 28% practice cremation conventional method remains the first choice. It is this reason why the researcher was motivated to undertake a study of this nature and get citizens' perspective on alternative burial methods as result of land scarcity. Suitability for new cemetery development and new alternative burial methods need to be considered.

Figure 11: Burial methods by Racial Groups

BURIAL METHOD BY RACIAL GROUP
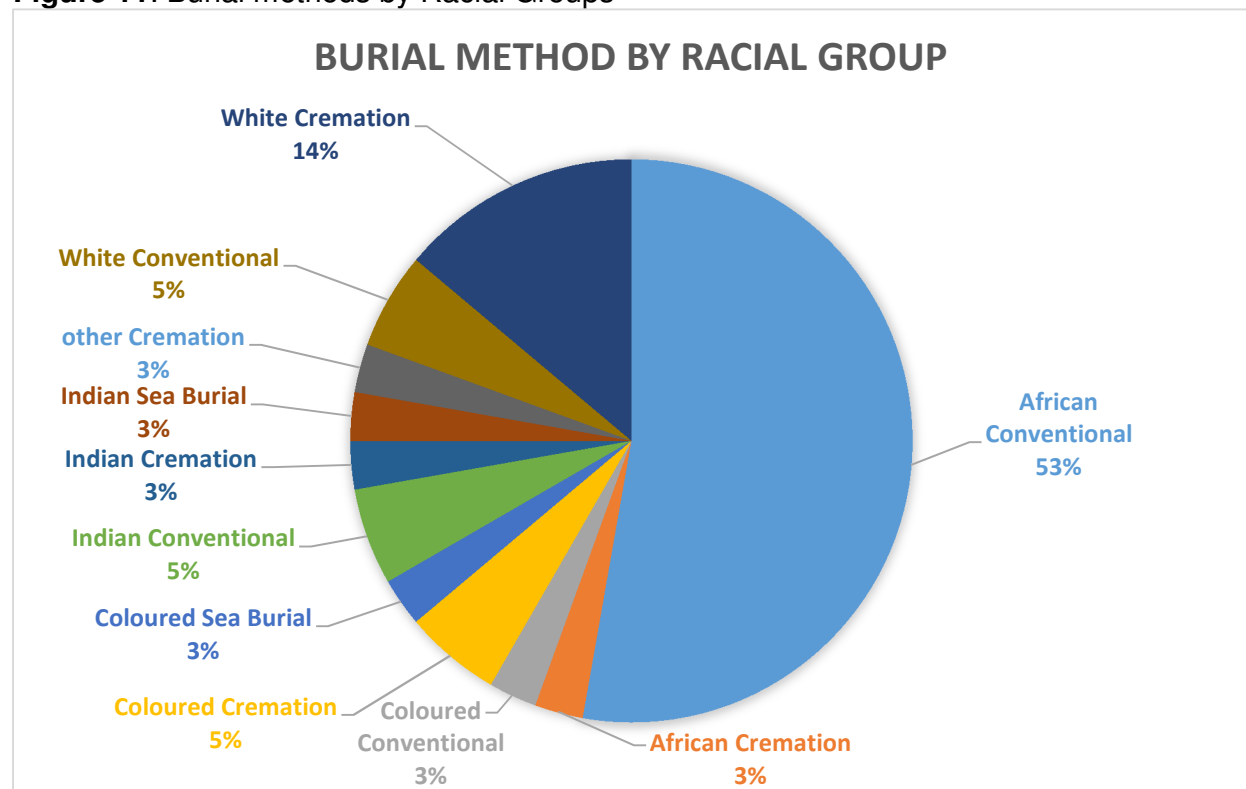
Source: Author own illustration, 2016

Further analysis has been done, where the currently practiced burial methods are linked to the racial groups. The purpose of this triangulation is to determine the percentage of burial methods per each racial group, and the results provide a clear picture as to which burial method is the most practiced. The results illustrated on figure 11 above emanates from the research finds of table 17 above which provide an overview of different burial methods per racial group. The results displayed in figure 11 above, indicate that the majority of respondents (53%) who practice conventional burial method are Africans; 3% of respondents are Coloureds; 5% of respondents are Indians; and 5% of respondents are Whites. Over the years Africans have been practicing conventional burial method, this is due to cultural and traditional connections. It is one of the reasons the researcher

opted to interview more Africans in order to get their perspective on alternative burial methods.

Figure 11 further illustrates the findings of racial groups in relation to cremation and sea burial methods. It illustrates that 14% of respondents who practice cremation are Whites; 3% of respondents are Indians, 5% of the respondents are Coloureds, 3% of respondents are Africans. 3% of respondents who practice sea burial are Indians and another 3% of respondents are Coloureds. The remaining 3% falls within "Other" category.

It is evident from Table 17 and Figure 11 above that the majority (66%) of the respondents, especially Africans (53%) practice the conventional burial method, and only 3% of Africans practice cremation. This means that Africans still believe in the conventional method as opposed to other alternative burial methods. Africans are very much attached to traditional and culture particularly in burials practices and convincing them to explore alternative burial methods will require intensive and continuous engagement, presenting its current challenges, future plans and case studies from both internationally and locally in relation to land scarcity and alternative burial methods. Each alternative burial method will have to consider cultural, traditional and religious elements since Africans are very much attached to these daily life elements

The research result illustrated in figure 11 above requires that the municipal approach towards alternative burial method needs to consider all racial groups as it is evident that conventional burial method is the most practiced burial method by different racial groups.

Table 18: Preferred Burial Options

Preferred Burial Options	No. of Respondents			Total	%
	Yes	**No**	**Not Sure**		
Cremation	21	12		33	58=Yes
					33=No
Sea Burial	9	24		33	25=Yes
					67=No
Resomation (bio-cremation)	13	20		33	36=Yes
					56=No
Re-cycle/Re-use	6	27		33	16=Yes
					75=No
Second internment	4	29		33	11=Yes

					80=No
Green/natural (Woodland)	12	20	1	33	33=Yes
					56=No
					3=Not Sure
Other	5	28		33	13=Yes
					77=No
None	**3**			**3**	**8**

In line with the research objectives - to explore alternative burial methods as result of land scarcity and challenges to identify land for new cemetery development - the researcher provided all 36 participants the opportunity to choose their preferred alternative burial methods from the list illustrated in table 18. The research findings outlined in table 18 assisted the researcher to understand the thinking and choices of respondents in relation to alternative methods and to provide an informed conclusion and recommendation to be actioned by the municipality.

The alternative burial methods and options mentioned in table 18 above were carefully explained and defined to all respondents, by this the researcher wanted to make sure the participants understand each and every option prior to selection.

The outcomes of the preferred burial methods as outlined table 18 are analysed and discussed below.

Cremation: the survey results illustrated in table 18 reveal that 58% (n=21) of the respondents opted for cremation as their most preferred alternative burial method, while 33% (n=12) of the respondents are not in favour of cremation and 8% (n=3) are not in favour of any alternative burial methods. The 58% margin of respondents opting for cremation as an alternative burial method is a reflection that citizens slowly understand other alternative burial methods and options to the conventional method.

Figure 12: Cremation as an alternative burial method
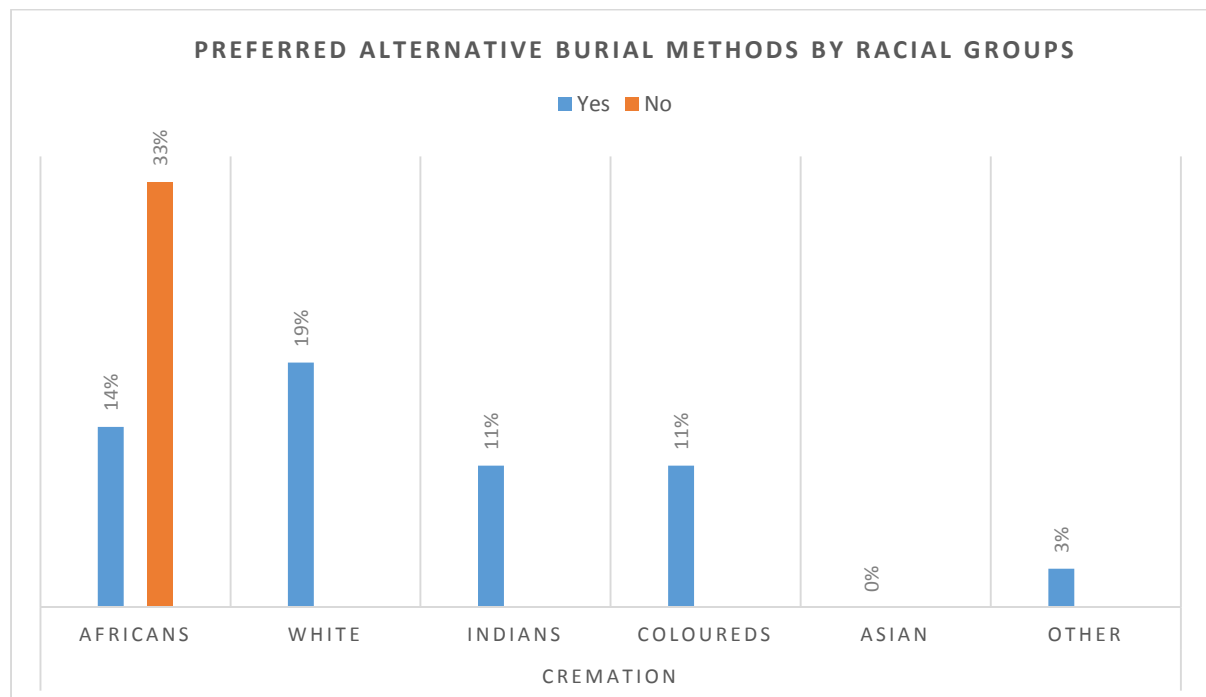
PREFERRED ALTERNATIVE BURIAL METHODS BY RACIAL GROUPS

■ Yes ■ No

Source: Author's own illustration, 2016

Extract from table 18

Preferred Burial Options	No. of Respondents			Total	%
	Yes	**No**	**Not Sure**		
Cremation	21	12		33	58=Yes
					33=No
None				3	8

Extract of table 18 provides a linkage between cremation as the preferred burial alternative method and racial groups (figure 12)

Figure 12 above illustrates that 14% of the respondents who chose cremation as their alternative burial method are Africans, 19% are White, 11% are Indians; 11% are Coloureds and 3% opt for other alternative of their choice which are clarified under the section "Other" below. 33% which constitute Africans only are not in favour of cremation as an alternative burial method.

Having an understanding that cemeteries and burials are directly linked to religion, culture and beliefs, and that every burial is linked to certain racial groups' cultural ceremony, therefore cemeteries and graves become sacred places, which mean culture had to be considered when exploring alternative burial methods. However, figure 12 above

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indicates that at least 14% of Africans consider cremation as an alternative to conventional burial method due to land scarcity challenges facing the municipality. Considering different Africans cultural and traditional attachments, 14% can be regarded as work in positive direction towards exploring alternative burial methods of which the municipality has to prioritise and conduct proper feasibility studies.

Resomation (bio-cremation): the survey results indicate that 36% (n=13) of the respondents choose Resomation (bio-cremation) as their preferred alternative burial method which makes it the second preferred alternative method, while 56% (n=20) of the respondents are not in favour of Resomation as an alternative burial method and 8% (n=3) of the respondents were not in favour of any alternative burial methods. Resomation is an enhanced cremation method, and it was well explained to the participants. However, 56% of them did not support this enhanced method, instead they preferred the ordinary cremation (58%), which means that cremation is the most preferred alternative burial method. This may be the starting point of the municipality in exploration of alternative burial methods.

Figure 13: **Resomation (bio-cremation) as an alternative burial method**
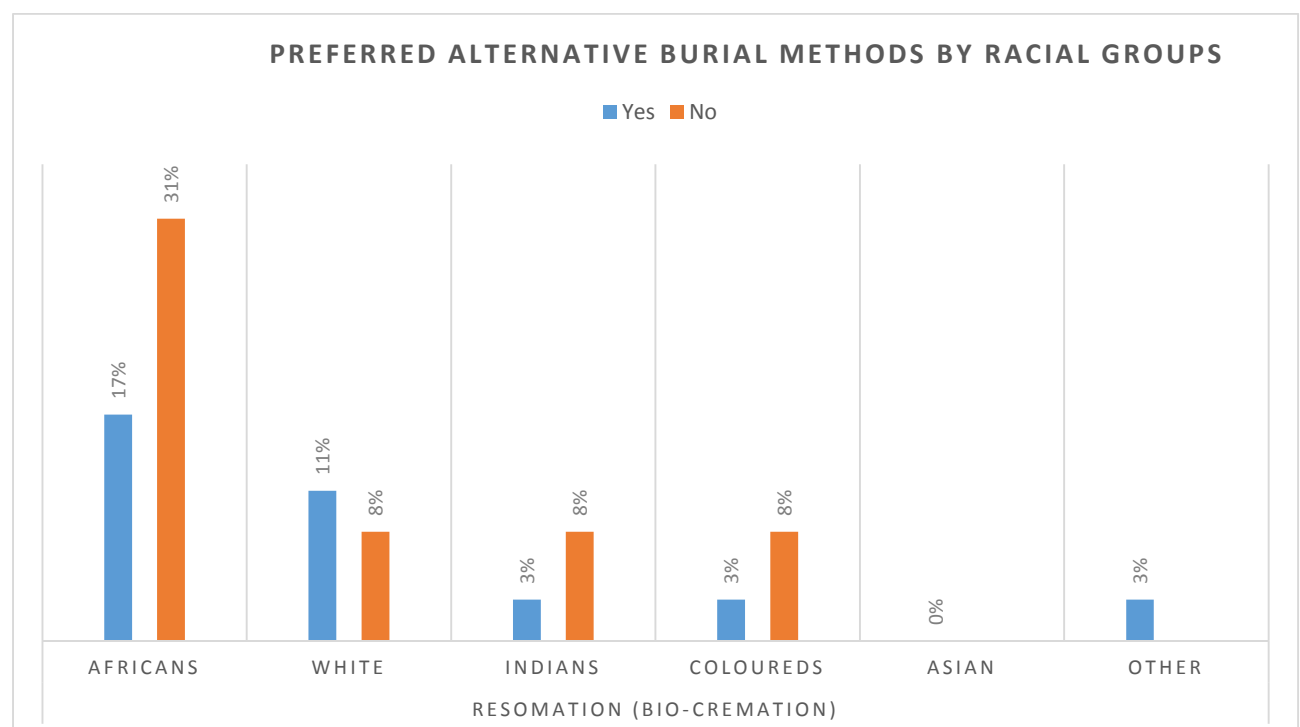
PREFERRED ALTERNATIVE BURIAL METHODS BY RACIAL GROUPS

■Yes ■No

AFRICANS — 17%, 31%
WHITE — 11%, 8%
INDIANS — 3%, 8%
COLOUREDS — 3%, 8%
ASIAN — 0%
OTHER — 3%

RESOMATION (BIO-CREMATION)

Source: Author's own illustration, 2016

Extract from Table 18

Preferred Burial Options	No. of Respondents			Total	%
	Yes	No	Not Sure		
Resomation (bio-cremation)	13	20		33	36=Yes
					56=No
None				3	8

Extract of table 18 provides a linkage between resomation as the preferred burial alternative method and racial groups (figure 13)

Figure 13 provides an analysis of how different racial groups perceive resomation as a preferred burial method. The survey results indicate that out of 36% (n=13) of respondents who opted for resomation as their alternative burial method, 16.6% (n=6) are Africans, 11% are Whites, 3% are Coloureds, 3% are Indians and 3% are other.

The survey's results also indicate that out of 56% (n=20) of respondents who do not support resomation as an alternative burial method, 31% are Africans, while 8% are Indians, Whites and Coloureds, respectively.

It is evident that the majority of people (56%) do not consider resomation as their prepared alternative burial method. These findings may assist the municipality to understand which of the alternative burial methods are preferred and may be accepted by the communities. Already, resomation is of the least preferred methods.

Green/natural (Woodland): the survey results indicate that 33% (n=12) of the respondents opt for Green/natural (Woodland) as their preferred alternative burial method, which makes it a the third preferred alternative method, while 56% (n=20) of the respondents are not in favour of it, 8% (n=3) of the respondents are not in favour of any alternative burial methods, 3% (n=1) of the respondents are not sure about this type of burial method.

Figure 14: Green/natural (Woodland) as an alternative burial method
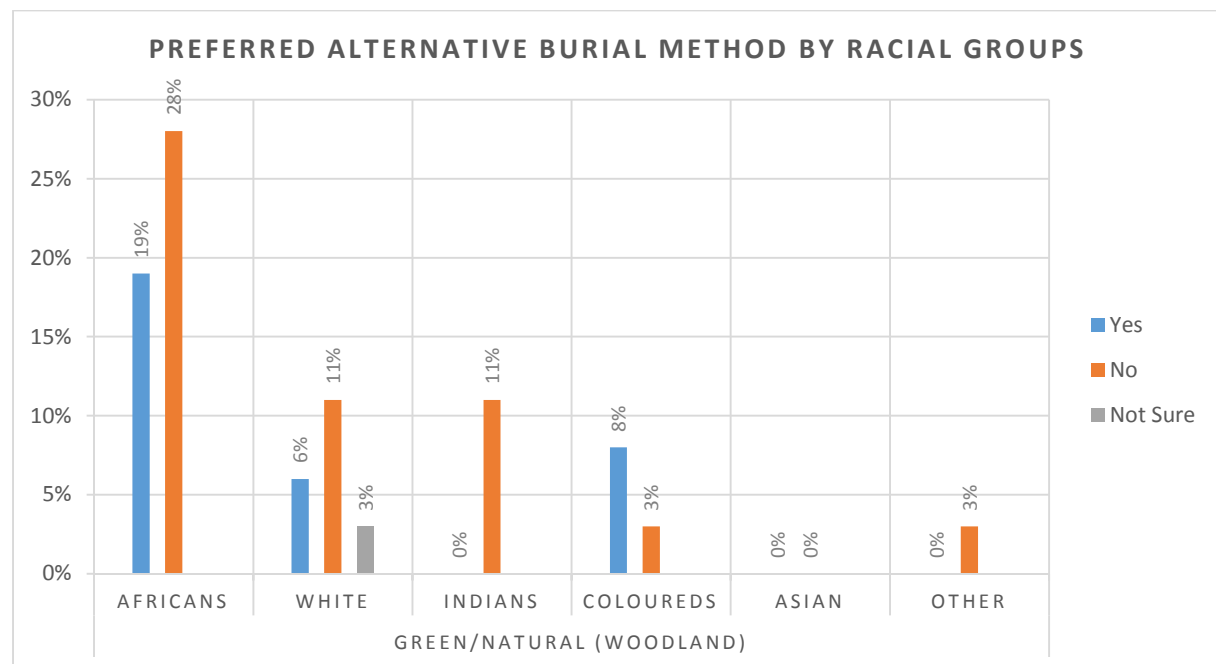
Source: Author's own illustration, 2016

Extract from Table 18

Preferred Burial Options	No. of Respondents			Total	%
	Yes	No	Not Sure		
Green/natural (Woodland)	12	20	1	33	33=Yes
					56=No
					3=Not Sure
None				3	8

Extract of table 18 provides a linkage between the green/natural (woodland) as the preferred alternative burial method and racial groups (figure 14)

The results outlined in figure 14 provide an overview of how different racial groups view green/natural (woodland) as an alternative burial method. The survey results in figure 14 illustrate that out of 33% of respondents who opt for green/natural (woodland), 19% are Africans; 6% are Whites, and 8% are Coloureds.

The survey results in figure 9 also revealed that out of 56% of respondents who do not support green/natural (woodland) , 28% are Africans, while 11% are Whites; another 11% are Indians; 3% are Coloureds; and 3% of White respondents are not sure about this alternative burial methods.

The above statistics in relation to green/natural (woodland) indicates that African (19%) respondents are willing to explore alternative burials. Having an understanding of green/natural (woodland) burial method, and how some of the Africans (rural areas and members of Nazareth Church) still practice burials where a coffin is not used, but only homemade mats and blankets, the highest number of Africans opting for this method may be emanating from such practice.

Sea Burial: the survey results indicate that 25% (n=9) of the respondents opt for Sea burial as their preferred alternative burial method, which makes it the fourth preferred method, while 67% (n=24) are not in favour.

Figure 15: Sea Burial as an alternative burial method
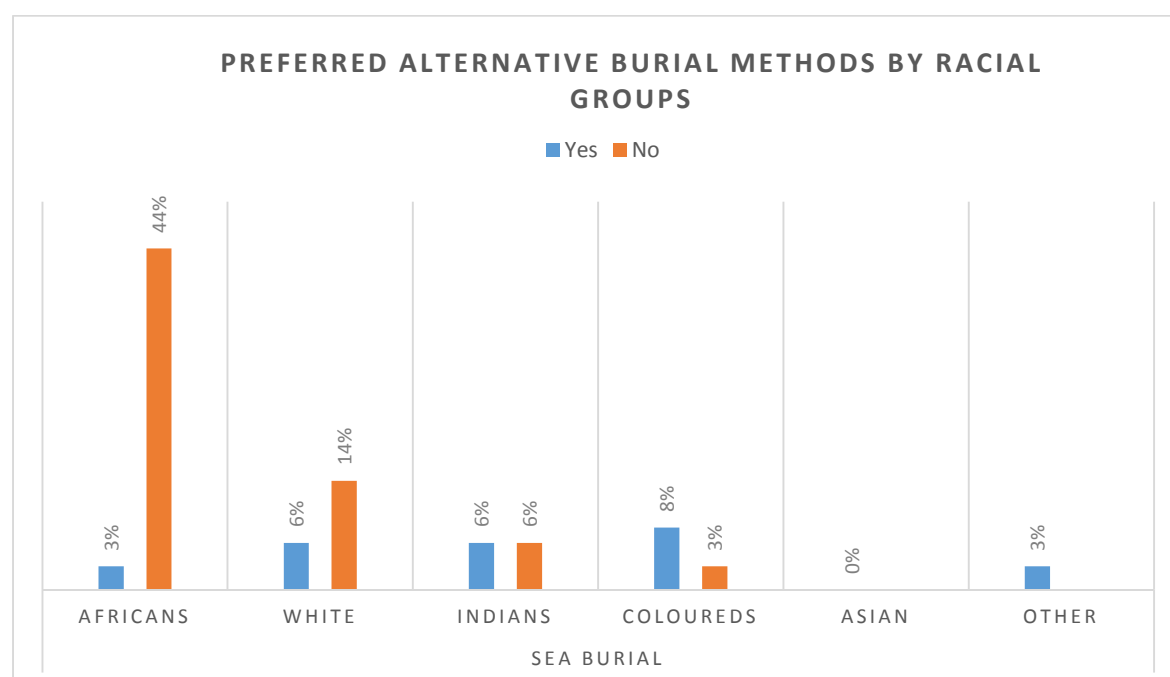
PREFERRED ALTERNATIVE BURIAL METHODS BY RACIAL GROUPS

■ Yes ■ No

Source: Author's own illustration, 2016

Extract from Table 18

Preferred Burial Options	No. of Respondents			Total	%
	Yes	**No**	**Not Sure**		
Sea Burial	9	24		33	25=Yes
					67=No
None				3	8

Extract of table 18 provides a linkage between the sea burial as the preferred alternative burial method and racial groups (figure 15)

Figure 15 above illustrates survey results in relation to sea burial according to different racial groups. There are 25% of the respondents who opt for this burial method of which 3% are Africans, 6% (5.5%) are Whites, another 6% (5.5%) are Indians and 8% are Coloureds. Figure 10 also illustrates that 67% of respondents do not support this method of burial, where 44% are Africans, 14% are Whites, 6% (5.5%) are Indians and 3% are Coloureds.

The research results in relation to this alternative burial method reveal that the majority of respondents (67%) are not in favour of this method.

Grave Re-cycle/Re-use: the survey results indicate that 17% (6 respondents) of the respondents opt for grave recycle/re-use as their preferred alternative burial method which makes it the fifth preferred method, while 75% (27 respondents) of the respondents are not in favour. ,

Figure 16: Grave Re-cycle/Re-use as an alternative burial method

Source: Author's own illustration, 2016

Extract from Table 18

Preferred Burial Options	No. of Respondents			Total	%
	Yes	**No**	**Not Sure**		
Re-cycle/Re-use	6	27		33	17=Yes
					75=No
None				3	8

Extract of table 18 provides a linkage between the recycle/reuse as the preferred alternative burial method and racial groups (figure 16)

The survey results illustrated in Figure 16 above indicates that 17% of respondents opt for grave recycle/reuse, of which 8% are Whites; 6% are Coloureds, 3% are "other" racial groups that opt for the same alternative burial method. Figure 16 also indicates that 75% of respondents do not support this alternative burial method, of which 47% are Africans, 11% are Whites; another 11% are Indians and 6% are Coloured.

The research results reveal that grave recycle/reuse is one of the least favoured alternative burial methods and this may assist the municipality in its planning processes for alternative burial methods.

Second internment: the survey results indicate that 11% (4 respondents) of the respondents opt for second interment as their preferred alternative burial method which makes it the fifth preferred method, while 80.5% (29 respondents) of the respondents are not in favour of this method.

Figure 17: Second Interment as an alternative burial method
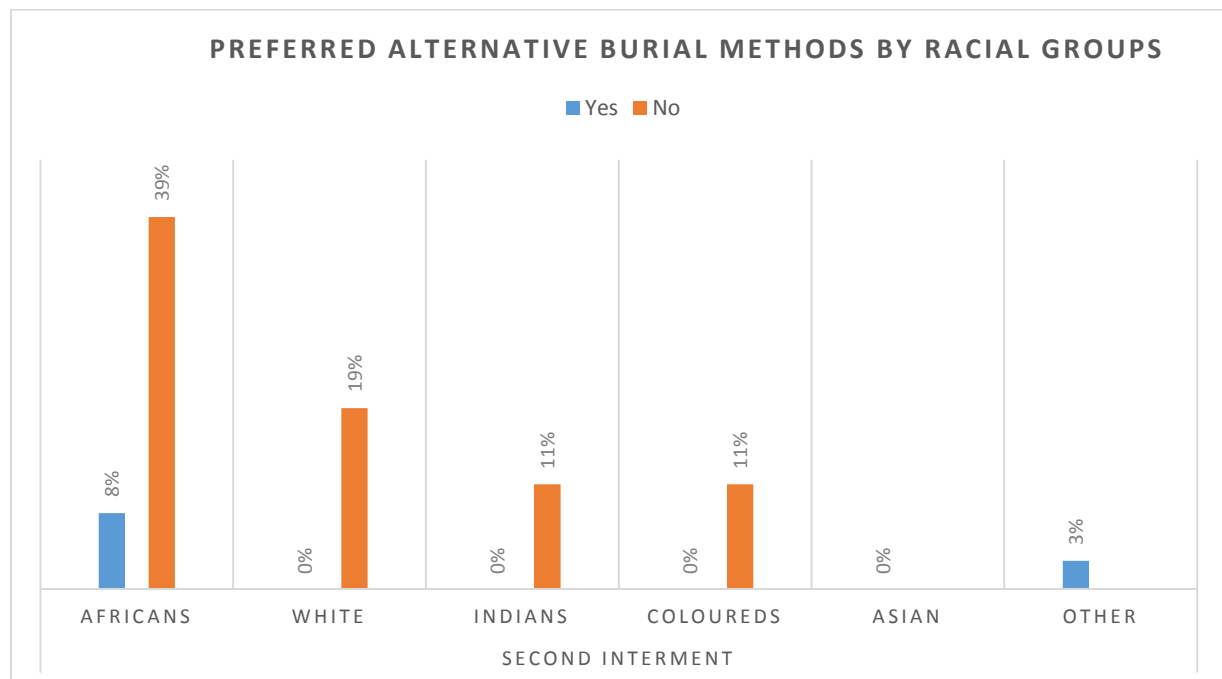
Source: Author own illustration, 2016

Extract of Table 18

Preferred Burial Options	No. of Respondents			Total	%
	Yes	No	Not Sure		
Second internment	4	28	1	33	11=Yes

						78=No
						3=Not Sure
None					3	8

Extract of table 18 provides a linkage between second interment as the preferred alternative burial method and racial groups (figure 17)

The researcher further analysed the survey results in figure 17 by linking the preferred burial method with racial groups, and the table illustrates that out of 11% of respondents opt for second interment 8% are Africans, 3 % are "other" racial respondents. The result in figure 17 also indicate that 80.5% of respondents do not support this method of burial of which 39% are Africans, 19.5% are Whites, 11% are Indians and 11% are Coloureds.

The results illustrated above are a reflection that the majority of respondents do not favour second interment an option that the municipality may explore as an alternative burial. Graves are still treated as sacred place where most people connect with ancestral spirits and some believe that second interment will somehow eliminate the cultural and traditional custom which is practiced by the majority of people (figure 17).

Other: the survey results indicates that a total of 13% **(**5 respondents) choose none of the above alternative burial methods, instead 8% (3 of the 5 respondents) opt for home burial (own yard/site burial), while 3% (1 of the 5 respondents) opt for home burial but inside the house and the other 3% (1 of the 5 respondents) would like his body to be dried up and used as compost. The survey result also indicates that 77% (28 respondents) had no preferred alternative methods of their choice.

Figure 18: Other (Respondents Choice) alternative burial method options
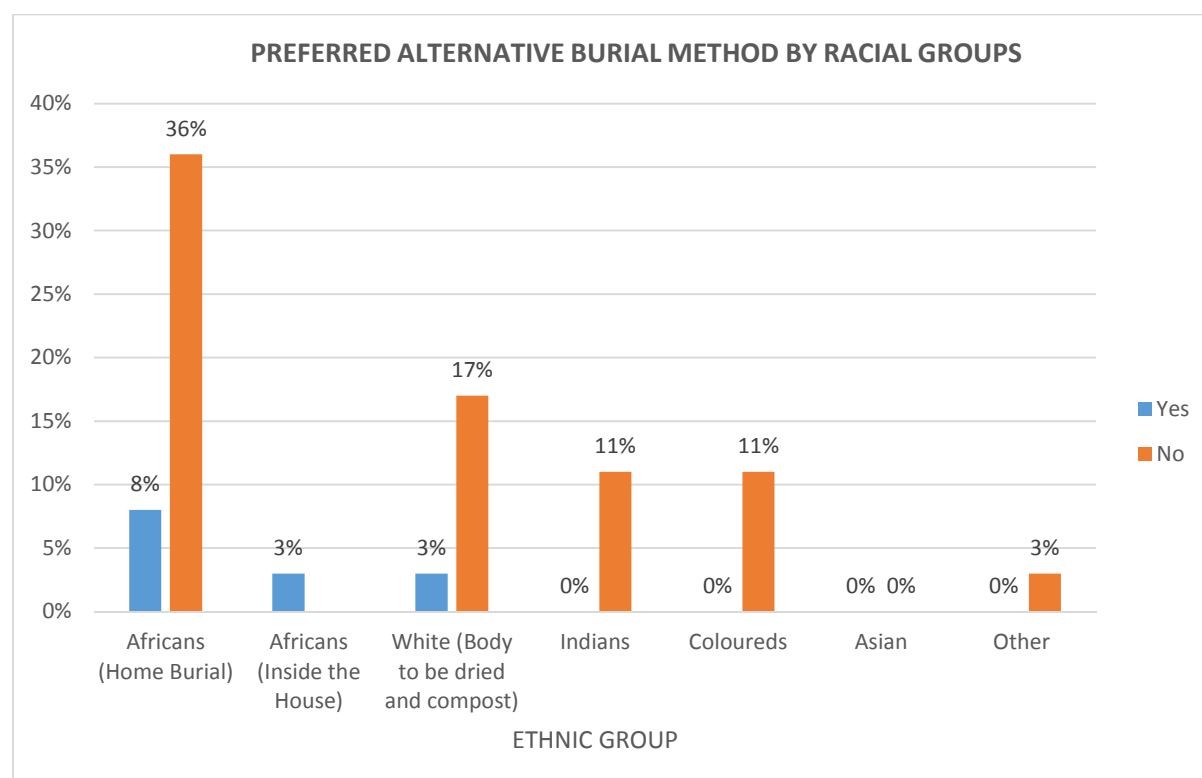
Source: Author's own illustration, 2016

Extract of Table 18

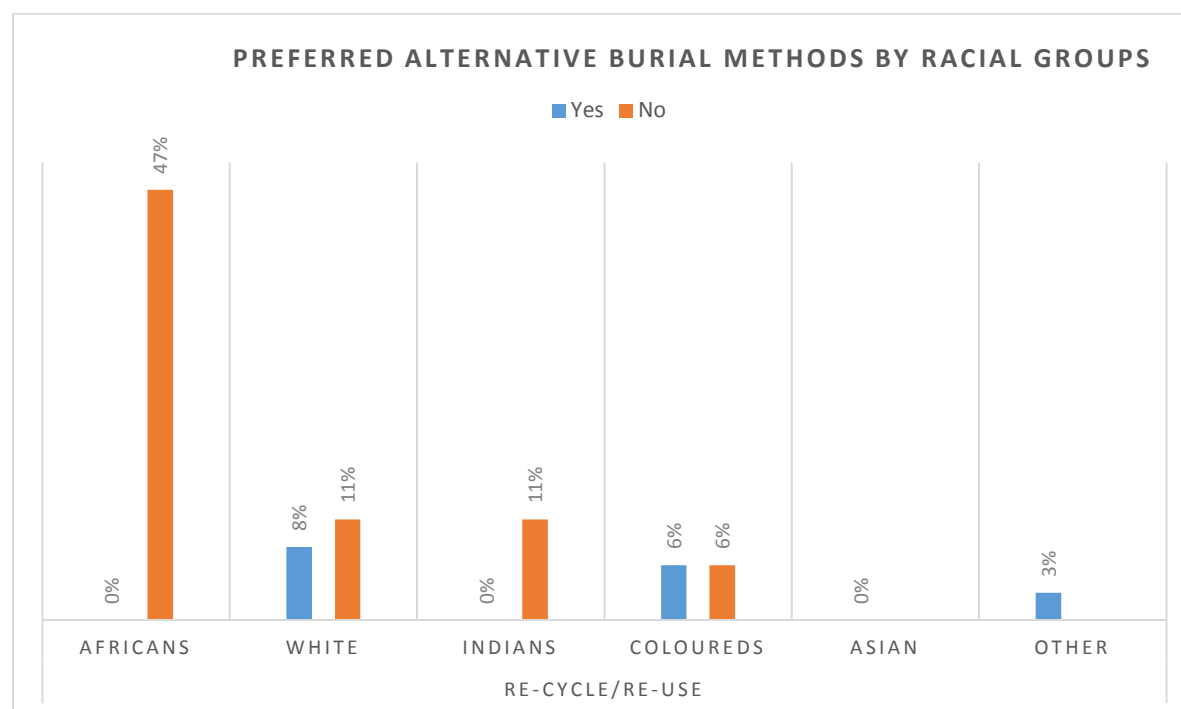| Preferred Burial Options	No. of Respondents			Total	%
	Yes	**No**	**Not Sure**		
Other	5	28		33	14=Yes
					77=No
None				3	8

Extract of table 18 provides a linkage between second interment as the preferred alternative burial method and racial groups (figure 18)

The survey results illustrated in figure 18 above indicate that 14% of the respondents opted for their own choice of alternative burial methods of which 8% are Africans who prefers home burials on-site, 3% are Africans who prefer to be buried inside their house, while 3% are White respondents who prefer their body to be dried and become compost. 77% of the respondents do not have a choice of alternative burials.

Home burial is mainly practiced in the Traditional Authority areas where there are community cemeteries and this has been practiced for many years. However, this approach is not feasible in the urban areas where development is managed and controlled

by Land Use Scheme and many municipal Bylaws such as cemetery, environmental health and nuisance Bylaws.

There are very few situations where someone is buried inside the house, this is due to many circumstances such as the "fear of the unknown" by family members. However, a similar burial method has been practiced in African culture where the head of the household is buried inside the cattle kraal (depending on this his wishes and whether the household has cattle kraal or not). This method of burial is not supported in the urban areas due to land use management controls and procedures. However, it is still practiced in traditional authority areas/rural areas.

Figure 19: Most preferred Alternative Burial Method
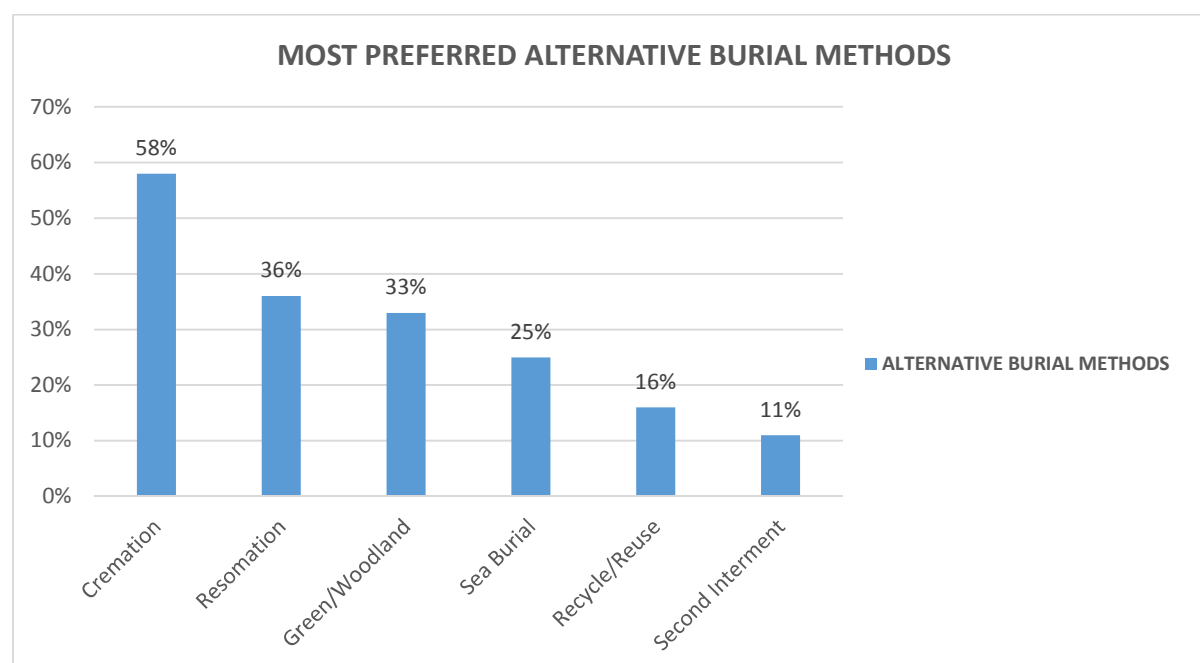
Source: Author own illustration, 2016

Figure 19 above indicates that 58% of respondents prefer cremation as an alternative burial method followed by resomation (eco-friendly cremation) with 36%, and green/woodland alternative burial method with 33%. The least preferred alternative methods with below 30% are sea burial with 25%, grave recycle/reuse with 15% and second interment with and 11%.

Table 19: Graveyard Visit

	No. of Respondents		%
Graveyard visit	Yes	18	50
	No	18	50
	Total	**36**	**100**

Source: Author own illustration, 2016

Table 19 above illustrates that 50% of respondents visit the graveyard and 50% do not visit the graveyard. Table 20 below provide more details on different reasons why people visit the graveyard.

Table 20: Why visit the Graveyard?

Frequency	No. of Respondents	Purpose	%
Daily	0	n/a	0
Once a week	2	1=To clean the grave	6
		1=To connect with ancestors	6
2 times a week	0	n/a	0
Once a month	6	3=To connect with ancestors	17
		3=To clean the grave	17
2 times a month	2	2=To connect with ancestors	11
Other	8	2=To clean the grave	11
		6=To connect with ancestors	33
Total	**18**		**100**

Source: Author own illustration

The survey results illustrated in table 20 above indicate that 11% of the respondents visit graveyards once a week of which 6% of the visits are based on connecting with the ancestors, and while another 6% of respondents visit the graveyard to clean their beloved one's graves.

Table 20 results further indicate that 34% of the respondents only visit the graveyard once a month of which 17 % do so to connect with ancestors while another 17% only visit the graveyard to clean the graves of their loved one. 11% of respondents visit the graveyard twice a month to connect with the ancestors.

About 44% of the respondents fall within "other" frequency, meaning they randomly visit the graveyard, where 11% of the respondents visit to clean the graves of their beloved ones and 33% visit to connect with their ancestors. The specific visiting period was not indicated during the survey, hence 44% falls in the "other" category. None of the respondents visit the graveyard daily or twice a week.

The above illustration provides evidence that cemeteries are treated as a sacred place by different racial groups, since 34% of the respondents visit the graveyard for ancestral visits. This information may assist the municipality to have a better understanding of people's behaviour towards cemeteries and that any alternative burial method should take into consideration such cultural and religious behaviours.

Figure 20: Graveyard Visit Frequency and Reasons by Racial Group
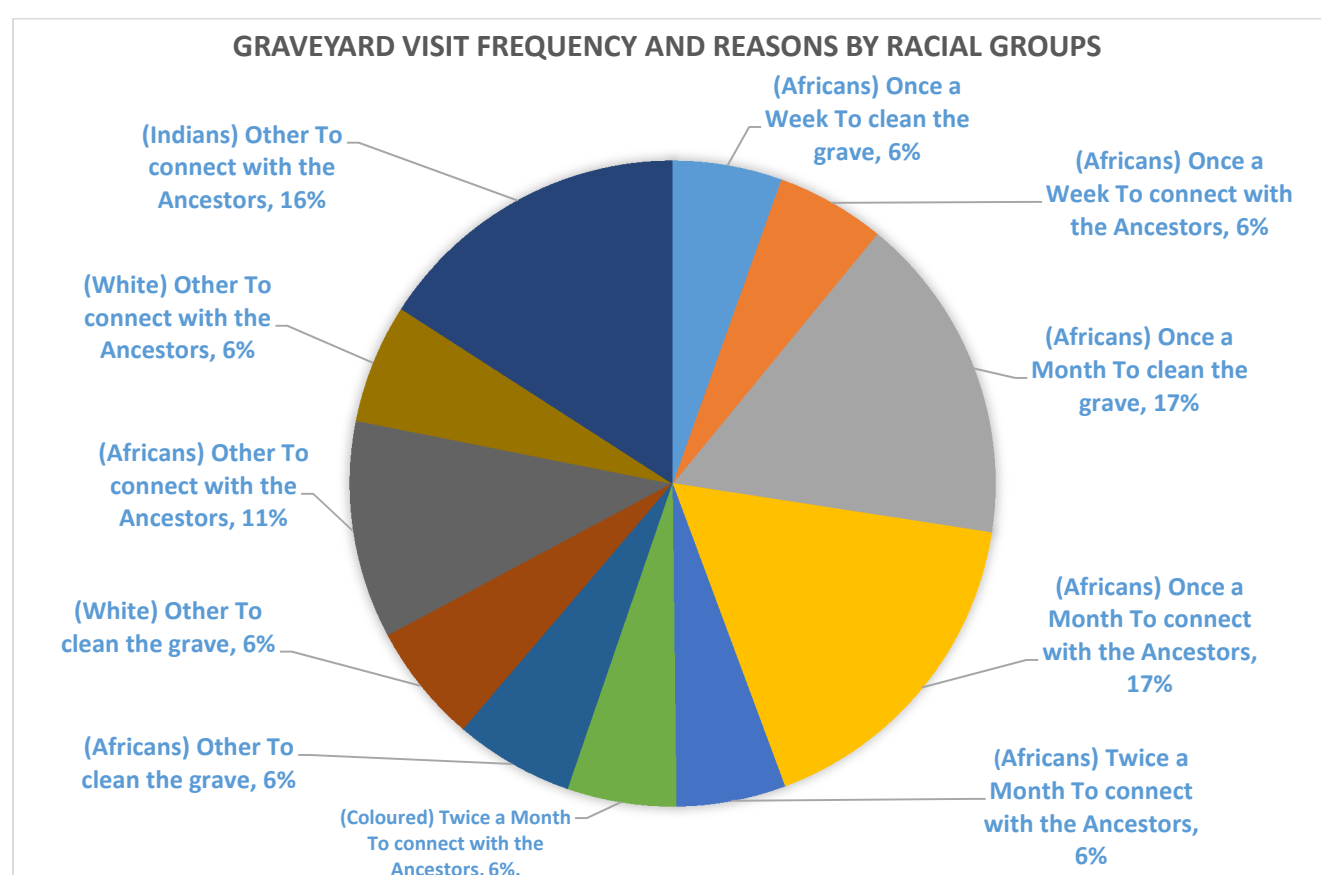
Source: Author own illustration

The survey results outlined in figure 20 above illustrate that 6% of Africans visit the graveyard once a week to clean the graves, 6% of Africans visit once a week to connect with the ancestors, while 17% of the Africans visit the graveyard once a month to clean the graves and another 17% of the Africans visit once a month to connect with ancestors.

About 6% of Africans visit the graveyard twice a month to connect with the ancestors and 6% are Coloureds who visit the graveyard twice a month to connect with the ancestors.

Figure 20 further illustrates that 16% of the Indians visit the graveyard to connect with the ancestors, 6% are Whites who visit the graveyard to connect with ancestors, 11% are Africans who visit the graves to connect with the ancestors, 6% are Whites who visit the graveyard to cleans the grave of the their beloved family members, and 6% of Africans visit the graveyard to clean the grave of their beloved family members. The visiting frequency this paragraph was not specified hence they fall within the "other" category.

Judging from the above illustrations it is evident that every racial group does visit the graveyard for different reasons. However, the survey results indicate that 66% of visits are purely based on ancestral connection. This is a true reflection that cemeteries and burials are very much connected to culture and beliefs. One of the Coloured respondents indicated that he visits the grave to connect with his ancestors to plea for success in life which is very much linked to a plea for luck. It is therefore essential to consider these elements when planning new cemeteries and exploring alternative burial methods as they have direct relationship between the dead and the living.

5.1.2 Religious Leaders Interviews Results

Four religious leaders were interviewed with an intention to solicit their views on alternative burial methods due to its direct link with religion. Below is the summary of results of Religious Leaders interviews:

Table 21: If the Municipality were to explore different burial options as result of land scarcity, which alternative burial option would you consider?

	Yes	No	Not sure	Total	%
Cremation		4		4	100
Sea Burial		4		4	100
Resomation (bio-cremation)		4		4	100
Re-cycle/Re-use	2	2		4	50=Yes

					50=No
Second internment	1	3		4	25=Yes
					75=No
Green/natural (Woodland)	4			4	100
Other (Specify) home burial	4			4	100
None					

Source: Author own illustration, 2016

The results of Religious Leaders interview of Table 21 above are reported below: The result in table 21 merely provides an overview of how Religious Leaders responded to the alternative burial methods.

Cremation: 100% of the Religious respondents are not in favour of cremation as an alternative burial method.

Sea burial: 100% of respondents are not in favour of sea burial as an alternative burial method.

Resomation (bio-cremation): 100% of respondents are not in favour of Resomation (bio-cremation as an alternative burial method.

Re-cycle/Re-use: 50% of the respondents opt for grave recycle/re-use as an alternative burial method to conventional method, while the remaining 50% are not in favour of this alternative burial method.

Second internment: 25% of the respondents opt for second interment as an alternative burial method while 75% are not in favour of this method.

Green/natural (Woodland): 100% of the respondents support green/natural (woodland) as an alternative burial method.

Other: 100% of respondents opt also chose home burial as an alternative burial method.

Figure 21: Preferred Burial methods comparison between Religious Leader and Residents
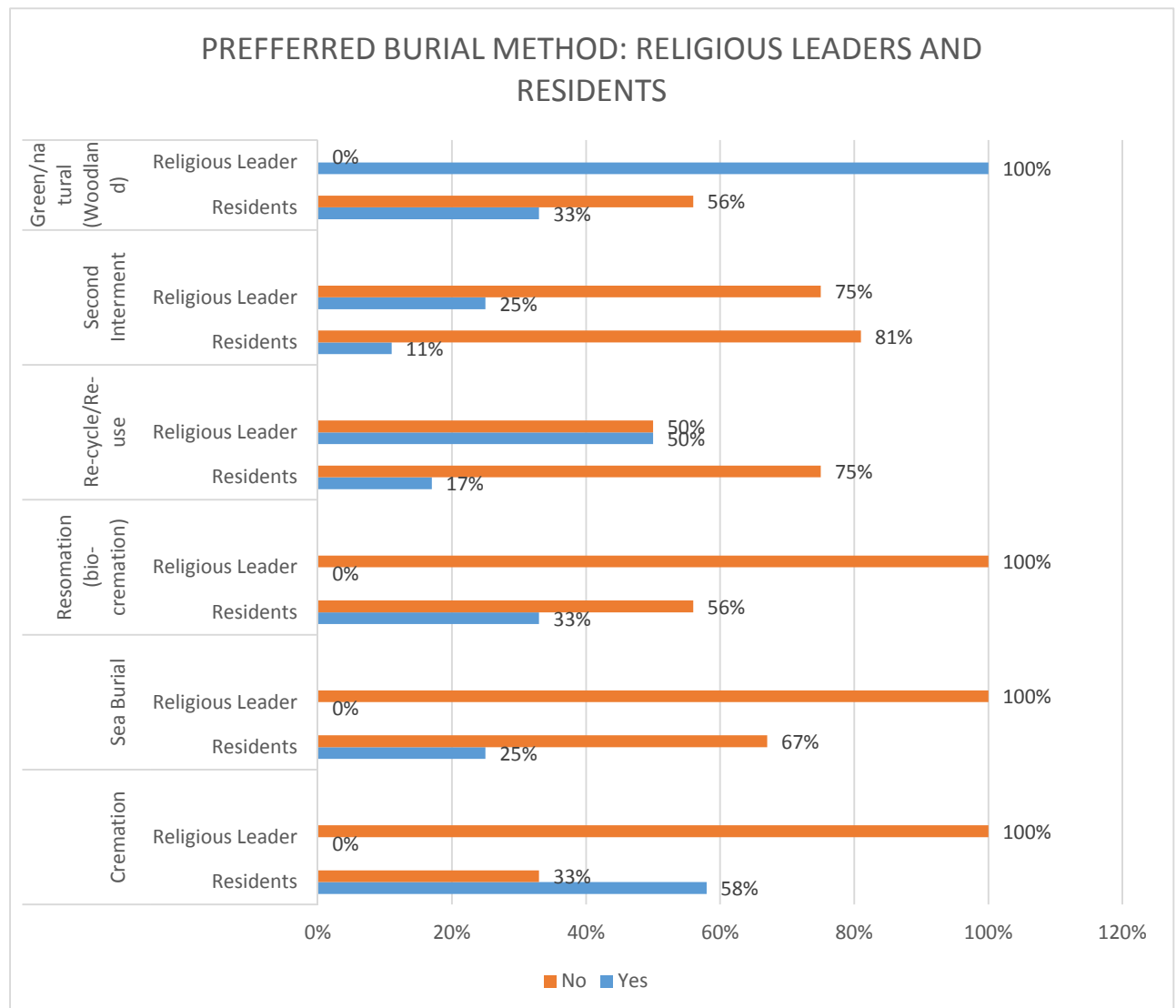
Source: Author's own illustration, 2016

The researcher having an understanding of the close connection between burials and religion, decided to triangulate information from residents' and Religious Leaders' preferred methods of alternative burials in order to ascertain the differences and provide recommendations.

Cremation: Figure 21 above illustrates preferred burial methods comparison between Religious leaders and residents. Figure 21 indicates that 100% of the Religious leaders do not support cremation as an alternative burial method, while 58% of the residents opt for cremation as an alternative burial method and 33% of the residents do not support cremation.

Second Interment: in terms of survey results illustrated in figure 21 indicate that while 25% of the Religious leaders opt for second interment as their alternative burial method,

only 11% of residents prefer this method. The researcher also discovered that 75% of Religious leaders do not support this method and 81% of the residents also do not support this method.

Re-cycle/re-use: the survey results illustrated in figure 21 above revealed that 50% of the Religious leaders opt for grave recycle/re-use, while only 17% of residents opt for this burial method. Figure 21 further indicated that 50% of Religious leaders do not support this method and 75% of residents also do not support this method.

Resomation (bio-cremation): the research results illustrated in figure 21 above indicate that 100% of Religious leaders do not support resomation (bio-cremation) as an alternative burial method, as well as 56% of residents also do not support this method and only 33% of the residents opt for this method.

Sea Burial: in terms of survey results illustrated in figure 21 above, 100% of the Religious leaders do not support sea burial as an alternative burial method, while 25% of the residents opt for this method and 67% do not support this method.

Green/natural (Woodland): the survey results in figure 21 indicate that 100% of the Religious leaders opt for green/natural (woodland) as an alternative burial method, while 33% of the residents opt for this method as an alternative burial method and 33% of the residents do not support this method.

It is evident that there are certain alternative burial methods that are favoured by the residents but not preferred by the Religious leaders, such as cremation, sea burial and resomation where 100% of Religious leaders do not support these methods while 58% of residents support cremation, 25% support sea burial and 33% support resomation. Religious leaders believe these methods are against the religion. However, having an understanding of the role of Religious leaders in the burial ceremonies and final sending off of people, their buy-in is essential to ensure that all stakeholders understand the purpose of alternative burials in relation to religion, culture and beliefs and understand why the municipality may explore alternative burial methods i.e. challenges of identifying suitable land for new cemetery, environmental issues, and geotechnical condition issues.

The following questions were also asked to the Religious leaders:

Table 22: Do you think alternative burial options to conventional burials will have an impact on religion; culture, and beliefs?

	No. of Respondents	**%**
Yes	4	100
No	0	0
Not Sure		0
Total	**4**	**100**

Source: Author own illustration, 2016

The survey results illustrated in table 22 above indicate that 100% of respondents strongly believe that any alternative burial options will have a huge impact in religion, culture and different beliefs. Based on the perception, a strong religious case in relation to the alternative burial method will have to be developed in order to get the buy-in of religious leaders. As much as they have opted for alternative burials such as second interment (25%); and grave recycle/reuse (50%), still they believe that these methods will have an impact on religion, culture and beliefs.

Table 23: What do you think will be best way for the Municipality to introduce alternative burial options in the City?

Approach to alternative burial methods	No. of Respondents	%
Community meetings	4	100
Establish a Committee consisting of all stakeholders	0	0
Not Sure	0	0
Total	**4**	**100**

Source: Author own illustration, 2016

Table 23 above shows that 100% of religious respondents strongly believe that the best way to introduce alternative burial method in the city is through community meetings and workshops which should be arranged by the municipality, where all stakeholders will have their views and be part of the decision making processes. Community meetings are also essential to understand residents' concerns, get their input and get their buy-in as stipulated in Chapter 4 of the Municipal Systems Act.

Table 24: Do you think alternative options to conventional burials are the solution to land scarcity?

Alternative burial methods as solution to land scarcity	No. of Respondents	%
Yes	2	50
No	2	50
Not Sure	0	0
Total	**4**	**100**

Source: Author own illustration, 2016

Table 24 above illustrate that 50% of the religious respondents believe that alternative burial options will provide a solution to land scarcity challenges facing the municipality. They believe that alternative burial methods are the better solution to land scarcity, as compared to mass burial. Even though it will have an impact culturally, religiously, and as well as regarding beliefs since people still prefer to visit the grave of their loved ones for spiritual purposes. So some alternative burial methods, such as sea burials, will not offer such opportunity.

The remaining 50% strongly think that alternative burial options will not provide solutions to land scarcity challenges. The Nazareth religion believe that people are from the soil and that is why they do not use coffins to bury people, therefore any alternative burial will have an impact in the Nazareth religion. They believe that the municipality can still afford to buy land for new cemeteries. One of the Religious leaders said that some of the alternative burials such as cremation and sea burial will have a huge impact on the judgement day, and he mentioned that those cremated and those buried in sea will not be easily resurrected. He further indicated that even Jesus Christ was buried using conventional method that is why he managed to resurrect.

5.1.3 Traditional Leaders Interviews Results

Four traditional leaders were interviewed with an intention to obtain their views on alternative burial methods due to its direct link with culture and beliefs. Below is the summary of results of Traditional Leaders interviews:

Table 25: What ethnic group do you belong to?

Ethnic Group	No. of Respondents	%
Africans	4	100
Coloured	0	0
Indian	0	0
White	0	0
Asian	0	0
Other	0	0
Total	**4**	**100**

Source: Author's own illustration, 2016

The figures in table 25 above illustrate that 100% of respondents are Africans. This is no surprise since the majority of traditional leaders in South Africa are Africans.

Table 26: Which religion do you belong to?

Religion	No. of Respondents	%
Christian	1	25
African Tradition	3	75
Hindu	0	0
Islam	0	0
Muslim	0	0
Other	0	0
Total	**4**	**100**

Source: Author own illustration, 2016

Table 26 above illustrate that 75% of respondents are African traditional religion (including Nazareth and Zion Churches) and 25% of respondents are Christians.

Table 27: What is your gender?

Gender	No. of Respondents	%
Male	4	100
Female	0	0
Total	**4**	**100**

Table 27 above illustrate that 100% of respondents are males, this based on the fact that traditional leadership is still dominated by males. Even though females are now part of some traditional Council, they are still dominated by males.

Table 28: Which method of burial system does your Religion/Culture practice?

Gender	No. of Respondents	%
Conventional	**4**	100
Cremation	0	0
Sea Burial	0	0
Second Interment	0	0
Other	0	0
Total	**4**	**100**

The survey results illustrated in table 28 indicate that 100% of traditional leaders practice conventional burial methods which are mostly connected to their religion and culture.

Table 29: If the Municipality were to explore different burial options as a result of land scarcity, which alternative burial option would you consider?

	Yes	No	Not sure	Total	%
Cremation		3		3	75
Sea Burial		3		3	75

Resomation (bio-cremation)		3		3	75
Re-cycle/Re-use		3		3	75
Second internment		3		3	75
Green/natural (Woodland)	1	2		3	50=No 25=Yes
Other (Specify) home burial	3			3	75
None	1				25

Source: Author own illustration, 2016

The survey results illustrated in table 29 above indicate that 75% of Traditional leaders do not support cremation, sea burial, second interment, grave recycle/re-use and resomation (bio-cremation) as the alternative burial methods that can be considered by the municipality as result of land scarcity for new cemetery development. However, 25% of the Traditional leaders respondents support green/natural (woodlands) burial as an alternative that can be considered by the municipality as a result of land scarcity challenges and 50% of the Traditional leaders are not in favour of this option.

75% of respondents (other) opt for home burial (on yard/site burial) as an alternative to conventional burial method. This option of burial is dominant in the traditional authority area (rural areas) and is not feasible in the urban areas where development is managed and controlled by Land Use Scheme, and municipal Bylaws.

25% of respondents opt for none of the offered alternative burial methods and options. These survey results can be interpreted as that the Traditional leaders still perceive the conventional method as the only method of burial and any other available alternative method is against the tradition and culture. It is evident that the road towards exploring alternative burial will require intensive engagement with different community structures

and that the elements of religion, culture and beliefs be always associated with any proposed alternative burial methods.

Table 30: Do you think alternative burial options to conventional burials will have an impact on culture; beliefs; and religion?

Alternative burial methods as solution to land scarcity	No. of Respondents	%
Yes	4	100
No	0	0
Not Sure	0	0
Total	**4**	**100**

Source: Author own illustration, 2016

It is evident from the survey results illustrated in table 30 above that 100% of the respondents strongly believe that alternative burial options will have an impact on the culture, beliefs and religion, while 50% of Traditional leaders argue that Africans believe in ancestors therefore alternative burial methods will have an impact on African culture if not addressed in any of the proposed alternative methods. The researcher determined that 25% of respondents argue that conventional burial still provides sense of memorial and that grandchildren deserve to know where their forefathers are buried. Again, 25% of respondents mentioned that African tradition differs from one race to another therefore such will need to be carefully considered for any preferred alternative burial.

5.1.4 Funeral Directors/Undertakers Interviews Results

Five Funeral Directors/Undertakers were interviews with an intention to get their insight on alternative burial methods from a business perspective and the researcher felt it would be important to involve them in the study. However, what is presented here in respect of funeral directors/undertakers does not influence the study conclusion and recommendations. Below is the summary of interviews results:

Table 31: How long has your business been operating?

Years in Business	No. of Respondents	%
5-10Years	1	20
10-15 Years	0	0
15-20 Years	2	40
20+ Years2	2	40
Total	**5**	**100**

Source: Author's own illustration, 2016

Table 31 above indicates that 20% of the respondents have been funeral directors/undertakers for between 5 to 10 years; 40% of the respondents have been funeral directors/undertakers between 15-20 years and the remaining 40% of the respondents have been funeral directors/undertakers for more than 20 years. The experience in the business was essential as the researcher desired to get an informed opinion in particular from those who have been in business for many years.

The spread out experience of the funeral directors/directors assisted the research in understanding the impact of alternative burial methods in the funeral parlour industry since most of the respondents have been in the business for more than 20 years.

Table 32: Do you think the Municipality will ever face the challenges of land scarcity for new cemeteries?

Land Scarcity for new cemeteries	No. of Respondents	%
Yes	3	60
No	1	20
Not Sure	1	20
Total	**5**	**100**

Source: Author's own illustration, 2016

The research findings illustrated in table 32 above indicate that 60% of the respondents think that the municipality will face land scarcity challenges for the development of new cemeteries; while 20% of the respondents do not think the municipality will ever face land scarcity challenges. The remaining 20% of the respondents are not sure whether or not the municipality will have challenges in identifying land for new cemeteries.

Table 33: Will your business be affected if the municipality was to explore alternative burial options as opposed to the conventional system?

	No. of Respondents	%
Yes	4	80
No	1	20
Not Sure	0	0
Total	**5**	**100**

Source: Author's own illustration, 2016

The research findings outlined in table 33 above indicates that 80% of the respondents believe that their funeral parlour businesses will be affected if the municipality was to explore alternative burial options as opposed to the conventional burial system. One of the funeral directors/undertakers mentioned that their business will have to adapt to the new burial methods and procure appropriate equipment and technology and they believe their businesses will lose income and people will lose jobs due to alternative burial methods which will require latest technology which in most cases does not require human beings to be operated.

The research findings also released that 20% of the respondents believe that their business will not be affected when the municipality was to explore alternative burial methods since people will still need funeral services irrespective of burial methods, and a mortuary will always be needed.

5.1.5 Municipal Officials Interviews Results

Interviews were also conducted with the six key municipal officials who are directly involved in the cemetery development (from planning, monitoring and maintenance) and possess extensive experience cemetery development, maintenance and policies.

Below are brief summaries of different key persons that were interviewed:
1. Head of Section: Parks and Recreation, Mr E Van Biljon
2. Manager: Spatial and Environmental Planning, Mrs Brenda Strachan
3. Superintendent: Parks and Recreation, Mr I Mthimkhulu
4. Superintendent: Parks and Recreation, Mr C Mntambo
5. Project Manager: Environmental Planning, Ms S Govender
6. Professional Planner, Ms L Zama

5.1.5.1   Manager: Spatial and Environmental Planning, Mrs Brenda Strachan

Brenda Strachan has over 18 years' experience in town and regional planning. She's been involved in spatial planning projects (including cemetery development) planning both in the public and private sector.

Does the Municipal Long Term housing development plan cater for new cemetery development?

The respondent mentioned that municipal planning processes had always been about living people. Over the years the municipality has been relaxed about cemetery planning due the capacity in the existing cemeteries. However, in recent years the municipality has experienced challenges in the cemetery development and will commence with the identification of suitable land for cemeteries in the 2017/2018 financial year. However, it must be noted that the lifespan of cemeteries in Richards Bay is affected by geotechnical conditions, environmental issues, and land claims issues.

Has the municipality embarked on an exercise to identify land for new cemeteries?

The respondent indicated that broad ideas will be required for the exercise in order to ensure that all key aspects are taken into consideration such as specialist studies, stakeholder consultation, scenario planning in respect of cemetery development and its possible alternative burial methods.

What is the impact of conventional burial system in the municipal spatial planning?

The respondent cited that the amount of land that is reserved for cemeteries would have been fine 40 years ago, but nowadays, the demand for new cemetery land has become a challenge for the municipality due to increase in population due to urbanisation, high birth rate and competing land uses for limited land resource.

What are main challenges of the Municipality in relation to new cemetery development, and how has it been addressed?

The respondent mentioned that land ownership, location, cost of land, size of land and legal processes in establishment of cemeteries contribute to municipal challenges in relation to cemetery development. Another big challenge facing South African municipalities including uMhlathuze is the adoption of first world conditions and trying to implement them in the third world cities such as the approach to alternative burials hence the resistance of citizens to accept these alternatives.

Do you think alternative burial methods will address land scarcity challenges for new cemeteries?

The respondent stated that any alternative burial method has social elements and while cremation is one the well-known alternative burials, the acceptance depends on people's religion, culture and beliefs. For any alternative burial method it is important to respect the rights and dignity of the deceased as it common that the rights of the deceased are violated, where decisions are taken about them while they cannot defend their own dignity.

5.1.5.2 Project Manager: Environmental Planning, Ms S Govender

Sharin Govender has over 10 years environmental planning experience. She has worked on different environmental impact assessment projects.

What are the environmental requirements for cemeteries development?

The respondent stated that the environmental requirements for cemetery development depend on the threshold. If the proposed cemetery size is less than 20ha, the basic environmental assessment is required. However, if the identified land is above 20ha, the full environmental impact assessment is required.

What is the impact of conventional burial in the natural environment?

The respondent mentioned that the impact of conventional burial methods depends on the environment of the particular area. Richards Bay is prone to this impact due to high water table, unstable soil and wetlands.

Do you think alternative burial methods will have a major impact on the natural environmental?

The respondent mentioned emissions resulting from cremations. However, bio-cremation (resomation) can be adopted to mitigate this impact. Any alternative burial method will have to reduce impact on watercourses, biodiversity and quality of water.

5.1.5.3 Professional Planner, Ms L Zama

Londiwe Zama has over 8 year's town planning experience in the field of statutory planning and policy development.

Does the Municipal Land Use Management Scheme accommodate future cemetery zones in line with future housing development?

The respondent revealed that the current Land Use Scheme does not feature the future cemetery development in relation to the housing development. However, the new municipal Land Use Management Bylaw will make provision for cemetery development in line with the Cemetery and Crematoria Act.

Do you think alternative burial methods will address land use challenges in relation to new cemeteries?

The respondent mentioned that the alternative burial methods make sense given the scarcity of land. The same way we plan residential densities, needs to be applied in cemetery development.

5.1.5.4   Superintendent: Parks and Recreation, Mr I Mthimkhulu

Innocent Mthimkhulu has over 20 years in the field of cemetery planning and maintenance.

How will the municipality address the challenges of land scarcity for new cemeteries?

The respondent mentioned that exploring alternative burial methods to conventional method is one of the possible options given the environment in terms of the ever increasing municipal demographics. The municipalities need to look at possibilities of decentralising cemeteries to ensure accessibility to all its citizens.

The respondent further indicated that the majority of people who live in traditional authority areas still believe in home burials and convincing them to explore alternative burial methods will require extensive engagement.

Has the municipality thought about exploring alternative burial options?

The respondent mentioned that the municipality has tried twice to advertise expressions of interest for establishment of new cemeteries with alternative burial methods such as cremation but both attempts were unsuccessful. This may be caused by lack of understanding of available alternative burial methods.

What do you think will be the reaction of residents to the alternative burial options?

The respondent stated that judging from his experience and involvement in cemetery development and management, the majority of residents would not accept the alternative burial, more in particular, Africans.

How will the Municipality address the challenges of different religions; customs; beliefs; and culture in relation to the burials?

The respondent believe that a proper level of engagement is essential to create a level of understanding between all key stakeholders in relation to alternative burial methods, even though it will take some time for many people to understand alternative burial methods.

How will the alternative burial method be implemented?

The respondent believe that incremental implementation of any alternative burial method will assist to minimise resistance from the people.

Do you think alternative burial methods will address land scarcity challenges for new cemeteries?

The respondent indicated that the successful implementation of alternative burial methods mainly depends on the acceptance by local people. Many people still believe that the municipal cemeteries have enough space for long term burials i.e. 30 years for Esikhaleni cemetery and 15 years for Richards Bay from now. However, the lifespan of the existing cemeteries (Richards Bay and Esikhaleni), may be affected by geotechnical conditions in Richards Bay cemetery and possible land claims issues for Esikhaleni cemetery.

Has the Municipality budgeted for alternative burial options and their financial implications for the next 5 years?

The respondent stated that there is always an attempt to address the issues of alternative burial methods but sometimes the budget is re-directed to other municipal service delivery community needs.

5.1.5.5   Superintend: Parks and Recreation, Mr C Mntambo

Cyril Mntambo has over 20 years in the field of cemetery planning and maintenance.

How will the municipality address the challenges of land scarcity for new cemeteries?

The respondent believes that exploring alternative burial methods is the best way to address land scarcity challenges in the municipality. However, the cemetery development is always competing with human settlements development (planning for the living vs planning for the dead.

Has the municipality thought about exploring alternative burial options?

The respondent mentioned that the municipality has a wall of remembrance for cremation purposes.

What do you think will be the reaction of residents to the alternative burial options?

The respondent argues that people's reaction will be different in relation to alternative burial and issues of culture. It is possible that youth may accept alternative burial methods, and adults may resist.

How will the Municipality address the challenges of different religions; customs; beliefs; and culture in relation to the burials?

The respondent indicated that community forums will be more effective than ordinary campaigns. Ward Councillors will be required to lead the forums as they are the voices of the local people.

How will the alternative burial method be implemented?

The respondent believe that optimisation of the limited space in the existing cemeteries to implement alternative burial methods may be considered. There are few Africans who are now practising cremation meaning alternative burials are slowly accepted by certain members of the public.

Do you think alternative burial methods will address land scarcity challenges for new cemeteries?

The respondent mentioned that land is a resource that is not elastic and there is always a competing factor between human settlements, cemetery and other community services development priorities where in most cases human settlements development takes precedence.

Has the Municipality budgeted for alternative burial options and their financial implications for the next 5 years?

The respondent indicated that discussions on budget for alternative burial options are underway and relevant municipal officials are sent to cemetery development conferences to get information and strategies for alternative burial methods implementation.

5.1.5.6   Head of Section: Parks and Recreation, Mr E Van Biljon

Ernst van Biljon has over 25 years in the field of parks, sports and recreation, cemetery planning and maintenance.

How will the municipality address the challenges of land scarcity for new cemeteries?

The respondent mentioned that the municipality will have to identify Traditional Authority areas land as well as private land for cemetery development purposes.

Has the municipality thought about exploring alternative burial options?

The respondent mentioned that municipal cemeteries provide a cremation wall of remembrance for residents who opt for this particular burial method. A mausoleum alternative burial is another method that can be considered by the municipality. It is an external free-standing building constructed as a monument enclosing the interment space or burial chamber of a deceased person or people. It is usually referred to burial above ground.

What do you think will be the reaction of residents in the alternative burial options?

The respondent is adamant that civil society will eventually accept the alternative burial methods. However, continuous stakeholder engagement is essential until people realise and accept the changes as a result of land scarcity.

How will the Municipality address the challenges of different religions; customs; beliefs; and culture in relation to the burials?

The respondent mentioned that due to cultural, religious and beliefs issues, this makes it difficult to change people's minds about alternative burial methods. However, they will eventually accept the change.

How will the alternative burial method be implemented?

The respondent believes in an incremental approach regarding the implementation of any alternative burial method. He mentioned that White culture has changed over the years and cremation is no longer an issue to them, therefore an incremental approach and continuous stakeholder engagement will add value to the process.

Do you think alternative burial methods will address land scarcity challenges for new cemeteries?

The respondent indicated that alternative burial methods may address land scarcity issues only if the municipality will work with all key stakeholders, in particular civil society.

Has the Municipality budgeted for alternative burial options and their financial implications for the next 5 years?

The respondent mentioned that the municipality will continue with the conventional burial method until alternatives are discussed and accepted by the people.

The respondent indicated that some of the alternative burial methods are not covered in the Cemetery and Crematoria Act, such as sea burials, resomation and natural/woodland. This means that, the Act itself needs to be reviewed prior to the implementation of certain alternative burial methods by the municipality. However, cremation is covered in both the Act and the municipal bylaw and this method can be prioritised as phase 1 of the implementation of alternative burial methods to a larger extent.

5.2   Status of Metros Conventional burial vs Cremation

Figure 22: Status of Metros Conventional Burial and Cremation: 2009/2010
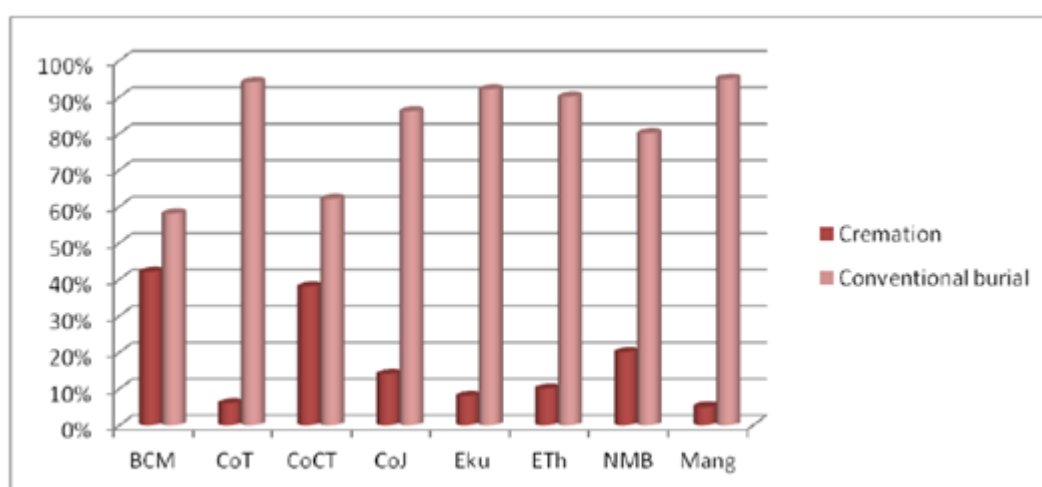
Source: State of Cemetery Report-2013

Figure 23: Status of Metros Conventional Burial and Cremation: 2010/2011

Figure 24: Status of Metros Conventional Burial and Cremation: 2011/2012

Figure 22, 23 and 24, demonstrates that the conventional/traditional burial method is very dominant in the South African cities. On the other hand alternative burial such as cremation is practised at a very small scale. City of Cape Town has maintained their considerable number of cremation outputs, Buffalo City Metro had a significant increase in cremation output between 2009/10 and 2010/11 but dropped in 2011/12. This indicates that most communities in South Africa are still very much accustomed to traditional/conventional burial and it will take some time for them to adopt other available methods of interment.

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5.2.1 Burial and Culture

Many cultures believe that burial is the most respectful way to treat the dead body, and find comfort in having a specific gravesite for family and friends to visit. The primary drawback to burial is that it requires space. With population growth and the death toll from HIV/AIDS, our cemeteries are rapidly filling up. (Brettell and Sargent, 2001:157)

Brettell and Sargent (2001:157) define culture as the notion of human consciousness or the products of human consciousness (i.e. systems of thought and technology), by means of which humanity attempts to assert control over nature. Culture does, however, also encompass the beliefs, traditions and/or rituals that come to define individuals or a community's values and ways of life'.

According to Ayisi (1972:1) `the culture of a people may be defined as the sum total of the material and intellectual equipment whereby they satisfy their biological and social needs and adapt themselves to their environment`.

Cemeteries or graves are places of long term memorials as well as being the resting place of one's body. Graves are useful in all culture as they are the place where the families of the deceased can go and visit in order to communicate with the dead.

5.2.2 Burial and Religion

Martinelli (1993) describes religion as a person's attempt to understand his or her relationship with the world. Andrew and Boyle (1999) define religion as an organised system of beliefs concerning the course, nature and purpose of the universe, especially the belief in or worship of a God or gods.

South Africa is a multi-religious society and all these different religious groups have their different ways and views in relation to burials. This in a nutshell means culture and religion plays a vital role in the burials, therefore alternatives to conventional/traditional burial require thorough religious and cultural considerations.

5.3 Alternative Burial Methods in the African Context: Cremation

Apart from the wide range of alternative burial methods to traditional/conventional throughout the world, cremation remains the most popular and dominant alternative burial

method. It is practiced in most of the countries throughout the word including African countries such as South Africa, Zambia, Zimbabwe and Botswana. Cremation is also been practiced in Richards Bay (study area), however, only by certain groups of people, especially the White people.

5.3.1 Cremation in Zimbabwe

Since early 2000 the Harare Municipality announced that the popular Warren Hills Cemetery was full and had been closed. It is due to this situation that the Authorities called on Zimbabwean residents to consider cremating as their burial alternative method as a result of shortage of land. However, the number of Zimbabweans i.e. Black African opting for cremation is still low compare to the White population. This is a result of culture, religion and beliefs. (Kawadza, 2016: Online).

5.3.2 Cremation in Zambia

The shortage of land for burial sites has become an issue of public concern in Zambia. The capital city of Lusaka has recently seen the opening up two new private cemeteries, (Mutumbi Cemetery and Remembrance Park and Leopards Hill Memorial Park), where people can bury their dead at a fee. Nawa, 2010).The majority of Zambians cannot however afford to bury their departed loved ones at such sites because of the huge costs involved. The local authorities (particularly in Lusaka and Chipata) have run out of land for burial sites and this situation is prompting people from certain circles within society to start considering cremation. The concept of cremation has been received with mixed feelings by Zambians; some argue that the practice is not part of the new Christian religion to which most Zambians subscribe. (Nawa, 2010).

5.3.3 Cremation in Botswana

Botswana is a multi-religious country. Cremation has been mostly practiced by the Hindu society. Christians are not against cremation and most churches have no problem with people holding evening prayers for a person to be cremated. However, most Christians prefer to be buried, as it is a culture of their churches. They believe cremation is not an issue of theological interest. Some people consider cremation as an alternative way of burying their loved ones, as a way of averting land shortages particularly in the urban centres. (Old daily news, 2000: Online).

5.4 Religions and Alternative Burial Methods (The Case of Cremation)

5.4.1 Islam

The Muslim community does not believe in cremation. They believe that cremation is some kind of punishment to that particular person. They believe that Allah has forbidden them to use fire on his creation. They believe that the body continues to feel even in death; in other words, it continues to exist even after the soul has left it. Islamics believe in two lives and they strongly believe that the use of a coffin or cremation means the deceased will not resurrect. (The funeral source, [n.d]: Online).

5.4.2 Christianity

Christianity in general is not against cremation although numbers of them are totally against it. The Roman Catholic Church used to condemn this practice. Up until 19 May 1886, the Catholics were not allowed to join societies that believed in cremation or to have their bodies cremated. During World War II German Catholics favouring cremation were excommunicated. Until 1997, Church regulations stipulated that cremation was to take place after the funeral service has taken place. However, some branches of Christianity still oppose cremation. (The funeral source, [n.d]: Online).

5.4.3 Hinduism and Buddhism

Both Hinduism and Buddhism communities are not against cremation. They support the use of cremation. The reason for the Hindu to choose destroying the corpse by fire over burying in the ground is that it is believed that cremation helps detach the spirit from the body and in so doing, encourages it to pass on to the other world To the Hindus, the dead body is sacred since the soul has left the body. (The funeral source, [n.d]: Online). In South Africa the statistics show that about 99% of the Hindu community practice cremation.

5.4.4 Judaism

Judaism community has traditionally disapproved of cremation which was the traditional means of disposing the dead in the neighbouring nations of Israel and Judah. During the 18th and early 19thcenturies, as Jewish cemeteries in many European towns became overcrowded or were fast running out of space, cremation became an approved means of corpse disposal amongst liberal Jews. (The funeral source, [n.d]: Online).

5.5   African Culture and Beliefs

According to Ngubane ([n.d]: Online) customs and rituals vary between cultures and between religious affiliations within any community. Human burial practices are a manifestation of the human desire to demonstrate respect for the dead. Burials are an attempt to bring closure to the deceased's family and friends, thus lessening the pain. Christian burials observe the ecclesiastical rites of burying the deceased under the ground. Similarly, most Africans believe that burying their loved ones in the grave is the most respectful practice and a gateway to the ancestors.

Africans in South Africa are faced with difficult ideological and lifestyle choices. Educated and enlightened Africans emphasize the fact that culture is dynamic, but in adopting Western values, in the name of civilization, modernity, progress and development, they are also at the same time alienating themselves from their traditional norms and values. (Ngubane, ([n.d]: Online). Western culture continues to play a significant role in influencing African burial systems. Modern ways of burial are now the norm, especially in the towns and cities. The growth of the population and the resulting scarcity, in and around the cities, of unused land for burial grounds, has also influenced burial practices. (Ngubane, ([n.d]: Online).

In traditional belief, to die is to go back home where you belong, thus Zulu people use the words ukugoduka, ukuya kobabamkhulu, ukudlula, ukuya kwelamathongo. These words imply that when one dies one re-joins relatives and friends who have gone before. When departing this world, one needs to return home with respect, dignity and a proper burial. (Ngubane, ([n.d]: Online). Traditionally, respectable Zulu people were buried at home, behind or at the side of their family huts, while the head of the family was buried at the top of the cattle kraal. Cemetery burials came about only through interventions by missionaries in the nineteenth century. (Ngubane, ([n.d]: Online).

During the old days Xhosa people did not bury their dead. It was only in 1818 that a prophet by the name of Makana, who built a considerable reputation for his magical/supernatural powers, decreed that from time forth the dead should be buried. Those who disobeyed this law, he said, would incur the wrath of the spirits. (Elliot, 1970: 129). Eliot (1970: 129) further outlined that later, people begun to change, they buried their dead. The tribal way of burial in the African Communities was for the corpse to be wrapped in a blanket and placed in a recessed shelf at the side in the bottom of a grave about four feet deep. Then stakes and stones were placed across the opening of the recess to stop the earth from filling it in. As the grave was filled, thorns were thrown in to

prevent wild animals from digging and witches from tempering with the body for nefarious purposes. (Elliot, 1970: 129).

As time elapsed, the old ways and customs of burials were replaced by new ways. Thus, instead of covering the corpse with a blanket, people started to use coffins or caskets. This shows that culture, customs and traditions do change. Over time cultures adjust to the demands of the present and the environment. Although the belief that the environment dictates cultural patterns is no longer accepted, there must be some degree of synergy between environment and culture. (Tischler, 1996: 81-82).

I fully concur with Tischler hence the main objective of the study is to explore different burial methods in line with different cultures, beliefs, religions and customs. The purpose is to ensure that possible alternative burials are not imposed to the people but they rather involved in the process in order to understand the municipal long term challenges in relation to land scarcity for new cemetery development. Capacity building, and consumer education on land scarcity and alternative burials is essential in order to get the buy-in from the broader public.

5.6   Alternative Burial Methods Awareness Programmes by Municipalities

The researcher had a privilege to witness eThekwini and City of Johannesburg metros, alternative burial methods awareness through two television series, which are Ashes to Ashes from E-TV and Uzalo from SABC 1.

Ashes to Ashes (2016) awareness was based on cremation as an alternative burial method. In this series, a young man chose to be cremated when he passes on but his parents were against this option. Eventually he passed on and his sister processed all the cremation documents with the funeral parlour as per his wish. However, the parents were not aware that the cremation process had been initiated and when they come to fetch the body they were given the ashes of their son and they were not happy as they never supported cremation as it was against culture and beliefs. The series awareness was based on individual choice vs family culture and beliefs; it was also based on cremation as alternative burial method which requires community engagement and buy-in - in particular Black Africans.

Uzalo (2016) awareness was based on second internment and grave leasing. In this series a household head (father) passed on and was buried in the municipal cemetery. Due to

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limited space and land scarcity challenges for new cemetery, the municipality advised families to claim family graves by means of renewing grave lease agreement to ensure that graves more than 10 years old were legally leased, failing which the municipality initiate second interment or grave reuse of the unclaimed graves.

A particular family with only two remaining children was not aware of the lease process and as they were preparing for their father's unveiling ceremony, they discovered that another person had been buried in their father's grave as they did not renew the lease agreement. This situation led to a point where two families had to agree that the recently buried body be exhumed and re-buried on a different grave through traditional ceremonies. Once again grave reuse/recycle and grave leasing is a foreign concept to many people, in particular Black Africans and continuous community engagement and awareness is essential. (Uzalo, 2016).

5.7   Summary of Chapter

This chapter has sought to give us an indication of the current situation regarding conventional burial and alternative burial methods in relation to land scarcity, religion, culture, and beliefs and locally. It also provides an overview on how people perceive alternative burial methods.

The majority of respondents indicated that alternative burial methods may address the land scarcity solution. However, it does not mean there are ready for the alternative burial methods since such transition will take some time to be well received by communities. The approach will have to start from community engagements in order to get the civil society buy-in and any alternative burial method will have to be incrementally implemented. It has become clear that even though people have an understanding of land scarcity and alternative burials but they are not ready to practical implement such alternative.

The municipal respondents believe that culture, beliefs and religious issues will have a major impact in the implementation of alternative burial methods, hence it is important to involve communities from the initial phases of the process to ensure people-centred development. It remains essential to understand, respect and recognise different cultural and religious requirements in relation to burial, at the same time not ignoring the shortage of land challenges and costs related to cemeteries development, whilst alternative burials methods need to considered. Community capacity building and education initiatives to

address resistance originating from cultural and religious beliefs in relation to cremation as an alternative burial method should be promoted and implemented.

The most common factor from municipal officials' responses is that cemetery planning and provision is usually based on ad hoc requirements and is has never been a priority in terms of municipal Spatial Development Framework Plan and other relevant development plans.

It was discovered during the interviews that human settlements development compete with cemetery development and therefore requires that cemetery development planning processes be part of the strategic urban planning processes instead of being considered in a fragmented or isolated way.

Judging from the resident's survey results in relation to the preferred alternative burial methods, it is evident that some of the respondents understand some of alternative methods which may be considered since they have they through the interviews chosen alternatives such as cremation as most preferred alternative method of burial as an alternative to conventional method. However, continuous stakeholder engagement, informed and scenario planning is essential to ensure that key stakeholders are involved and form part of the decision making in respect of the proposed concepts and approach in relation to the alternative burials.

In the African context, most countries like South Africa, Zimbabwe and Bostwana, alternative burials such as cremation are practiced, and this alternative burial is mainly practiced by Hindus and Whites, while most Africans are not comfortable with such burial methods.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6. Introduction

Burials have been part of human lives for decades, but the manner in which it is practiced has changed over the years i.e. 100 000 years and is viewed as the sign of respect for the deceased. Burials have a close connection to different cultural and religious ceremonies. (Biyela, 2016: Personal Communication).

The study's main objective was to determine whether communities accept alternative burial methods to conventional methods. In answering the question the researcher set four objectives to undertake the study. However, the researcher believes it is important to provide an overview of burials and the manner in which it has been practiced by different racial groups over the years and how transition has unfolded.

6.1 Conclusion and Summary of findings

Burial is one of the most important areas associated with people. Many people, in particular Black Africans have been burying their deceased family members following the traditional customs and practices, and this includes onsite burial or home burial in particular by rural communities. Over the years burials and funerals have evolved. In Africa burials are deeply rooted in cultural beliefs and religions, different ceremonies are performed to ensure that the deceased is laid to rest with dignity. Many Africans perform these burial rituals to ensure the deceased protects the family. Over the years the most common method of burial associated with cultural rituals is home burial in particular to Black Africans.

Biyela (2016: Personal Communication) mentioned that the transition from home burial to cemeteries was never easy as it took approximately 20-30 years for people to adjust to the change.

Even though home burial is still in existence in the rural communities, the majority of people have accepted the change as they are now using cemeteries for burials (including rural communities), since the majority of people are increasingly moving to the urban areas. It also worth mentioning that, as much as the majority of people are moving to the urban areas for better life opportunities and to establish their families in such areas, some of the families still believe in home burial, in such a way that some of the families still practice home burial were a body is transported back to rural area from urban area for burial.

Commonly, burials were taking place on Saturdays, and this became a norm. However, such practice is not associated with the tradition or religion, it generally emanates from the fact that most people are working during the week and the available time for burial ceremonies in most cases, is the weekend. However, this situation has led to a point where cemeteries are full during the weekends due to a number of burials and some close to each. It is this reason why some of the families have opted for week days burials, in particular Wednesday.

With the above statements, in relating to transition from home burial to cemeteries and from Saturday burials to mid-week burials, the researcher is trying to express that change happens, even though it takes time but it eventual happens given the pressing circumstances and acceptance by all key stakeholders in particular communities.

Having presented an overview of communities' perceptions on alternative burial methods in the previous chapter, this study should not be ignored by the uMhlathuze municipality. The research results reveal that about 66% of people practice conventional burial method, of which 53% constitute Africans and only 34% practice alternative method (28% cremation and 6% sea burial), as much as the majority of people (58%) opted for cremation as their alternative burial method. However, the 58% margin in relation to the preferred alternative burial method, may not mean people are ready to implement alternative burials as such will gradually happen, and what is important is to give people enough time to adopt and accept to/the change.

Even though there are wide range of alternative burial methods and options as outlined in literature review chapter, conventional burial remains the dominant and preferred means of burial within the municipality and South Africa at large. Communities play a significant role in cemetery and related activities, therefore the researcher concludes by stating that it is important to re-assess the way internment is conducted i.e. explore alternative burial methods. It is also important to consider the reality that currently, the majority of people still believe in conventional burial methods based on different religious, and cultural rituals. It is not doubted that the existing cemeteries are running out of burial space and alternatives has to be considered, however, it worth noting that such transition may only receive mass support in 20-30 years from now and may not happen in our life time. Therefore, municipal long term planning in terms of interments is essential given the factor that the majority of people still believe in conventional burial method.

Burials cannot be isolation with the religion. The research findings revealed that the majority of religious leaders are not in favour of cremation (100%), sea burial (100%), and resomation (100%) as alternative burial methods. It also noted that traditional leaders also do not support alternative burials, instead they opt for home burials (onsite/backyard burial method), and except for 25% who opt green/natural method.

Having understood the role of Religious and Traditional leaders (in particular areas) in the burial ceremonies, the researcher believe that the research results are a testimony that not only the general communities are not ready for alternative burials but even community leaders such as religious and traditional leaders are not yet ready. It is believed that through continuous engagement and scenario planning will religious and traditional leaders in relation to alternative burial methods and challenges of conventional methods, key stakeholders begin to understand the importance of changing the manner in which interments are practiced.

Leuta and Green ([n.d]: 5) state that while municipalities are eagerly incorporating various burial methods to their burial planning processes, South Africans at large needs to undertake an in-depth self-examination on traditional burial practices and why they should support alternative burial methods.

The in-depth self-examination recommended by Leuta and Green, is important but, the transition in relation to implementation of alternative burials may take some time to be realised and it is possible that, it may not be realised in the near future. Nevertheless, the municipality will have to develop a good stakeholder communication strategy and promote people-centred development processes, informed decision making (bottom–up approach) and adopt incremental implementation approach.

Tradition forms a fundamental part of a people's beliefs, customs and values. Convincing people to change the way they practice burials will require continuous community engagement and ensure that people are involved in the decision making in order to understand the challenges and the vision in relation to land scarcity challenges within the municipality and exploration of alternative burial methods and options to conventional interment. Communities should therefore be presented with sustainable alternative burial methods, environmentally viable, efficient, effective and reasonable means of interment to create a sustainable living environment.

Among many cultures, the cemetery is much more than just a place of burial but it is also a place of spiritual and cultural connection. In some cultures, such as the African culture, it is a place of connecting with ancestors. As a result, there is resistance among some communities to adopt alternative burial methods such as the second interment, grave recycle/reuse, and cremation. This resistance contributes to the challenges of addressing scarcity of land for new cemeteries and burial space in the existing cemeteries. The research results indicate that about (66%) visit the graveyard for ancestral spiritual connection which is a factual reflection of burial-cultural connection.

It is evident from the research findings that the majority of people are not in favour of second internment (80%) and grave recycle/reuse (75%) since they believe these methods interfere with the deceased's peaceful rest. Culture, religion and beliefs are central to this resistance, since most traditions and religions believe that exhuming the deceased body is inhuman and immoral.

The shortcoming of the conventional burial method is that large amount of cemetery space is utilised which becomes dormant or sterilising large portions of urban space and once the existing cemetery is full, and it has limited to no future alternative land uses, which is the case with eNseleni, Vulindlela, Empangeni cemeteries. They can no longer be used as they do not offer opportunities for alternative future land uses.

Burials are sometimes subjected to two elements, firstly the individual choice on how one would like to be sent off and secondly the family cultural practice. Sometimes individual's choices clashes with family or community cultural practices, and in most cases the individual choice is ignored if it goes against cultural norms. An individual may choose to be cremated but the family may decide to violet his/her decision because he/she cannot defend themselves. This is what Brenda Strachan referred to (page 102) as the violation of the rights and dignity of the deceased by the living.

This The introduction of alternative burial methods such cremation, second interment, grave recycle/reuse is a new dawn in particular to many people in particular Africans, therefore it requires comprehensive planning and preparations prior to incremental implementation.

6.2   Recommendations

This research has seen alternative burial methods as calamity to many people, in particular Africans. In essence, conventional burial method is still the preferred burial method to the majority. Even though the research results suggest such, it does not mean that the municipal land scarcity challenge will disappear. It is therefore recommended that, the people be given time to adjust to the proposed alternative burial methods and the stakeholder engagement processes has to commence now.

The research results suggest that the public believe that the municipality still has sufficient land for burial purposes, which is not the case from a planning perspective. It is for this reason why the municipality has to starts engaging with all key stakeholders and present its challenges and possible solution which are to be implemented incrementally, and allow communities to gradually adapt to alternative interments as it has happened during the home burial to cemetery transition. In a nutshell, it is recommended that people be given enough time to adjust to alternative burial methods options.

The study recommendations emanate from the research objectives.

Exploration of alternative burial methods and provide possible solution:

There is no doubt that the municipality faces challenges of identifying land for new cemetery development, as a result of geotechnical conditions and environmental conditions of the area, limited space. It is also understood that any alternative burial method will have financial implications, it is therefore recommended that the municipality adopt an incremental implementation and phasing approach of communities' most preferred alternative burial method such as cremation be implemented. However, the research outcome reveals that people are not yet ready for alternative burial method therefore they have to be given enough time to digest and eventually accept the alternative interment.

The municipality must undertake feasibility studies in relation to the identification of suitable land for new cemeteries, and it has to find reasonable solutions to re-design available space in the existing cemeteries i.e. Richards Bay and Esikhaleni, and earmark enough space for alternative burial such as cremation and wall of remembrance while exploring options to identify suitable land for new cemetery. Cremation can be used as test in exploration of alternative burials at multi-racial scale.

Gender equity be considered in the planning processes and decision-making in relation to alternative burial methods, since the research findings indicates that the male figures still hold the decision making power (61% respondents) and women (39% respondents) have to respect and implement decision taken on their behalf.

Alternative burial methods in relation to culture, religion and beliefs:

It emerged from the interviews that people's perception on alternative burial methods are influenced by culture and religion. Recognising and respecting every cultural, traditional and religious requirement in relation to burials, it is recommended that clear guidelines have to be developed for the implementation of alternative burial methods and options in line with cultural, religious and beliefs of different communities.

Community education initiatives to address cultural, religious and beliefs concerns relating to alternative burial methods such as cremation, second interment, and grave-reuse to conventional burial should be continuously promoted until all stakeholders reach an agreement. In a nutshell, people have to be given time to adjust to the proposed changes through incremental implementation.

Challenges of identifying land for new cemeteries development:

The spatial and land use planning process should be used to secure appropriate land for the future long term provision and development of cemeteries by focussing on and incorporating the needs in all strategic urban planning processes. Land suitable for urban development, housing and industrial expansion stands in direct contrast with land provision for cemetery development and therefore requires that such be part of the strategic urban planning processes instead of being considered in a fragmented or isolated way.

The municipality needs to allocate adequate funding for proper cemetery planning processes such as community engagement, preparation of specialists studies such as wetlands, geotechnical, heritage and environmental assessment. The budget of R50 000 earmarked for cemetery site identification during 2017/018 financial year is not sufficient and it is indication that the cemetery planning is not prioritised compared to other land uses within the municipality hence is has a great challenge in relation to land scarcity. New cemetery development to incorporate community preferred alternative burial methods.

Evaluation of legislative and policy framework:

The research outcomes discovered that government legislative and policy framework introduced since 1994 has both positive and negative elements. Legislative and policy framework such as KwaZulu-Natal Cemetery and Crematoria Act (Act No. 12 of 1996) and Municipal Cemetery and Crematoria, Funeral Parlours Bylaw (1996) to address to incorporate relevant alternative burial methods such as sea burials, resomation and natural/woodland which may be used in future. Government and municipal authorities need to put programmes in place that will ensure proper amendment of relevant legislative and policy framework in line with exploration of alternative burial methods.

6.3   Lesson Learnt and Areas of Future Research

The challenge of land scarcity for new cemetery development and possible alternative burial methods requires continuous research until all key stakeholders understand the municipal vision. The cultural, religion and beliefs matters cannot be dissociated with burials and any exploration of any alternative burial methods such as grave recycle/reuse, second interment, sea burial, cremation will require intensive stakeholder engagement in order encourage and promote people centred and grassroots led engagements as well as decision making.

Alternative burials methods were implemented in the early 1970s in Europe, Asia and America due to the status of their cities and towns in relation to high rate of urbanisation against availability of land for cemetery development. Even though some of these burial alternatives are now welcomed and accepted by the respective residents, government had to initiate different capacity building, incremental implementation plan and information sharing programmes, detailed scenario planning in order to get a buy-in from all key stakeholders. This is an important matter which cannot be ignored, therefore further studies focusing on educating people about alternative burial methods and challenges of limited space in existing municipal cemeteries are recommended.

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8. APPENDICES

Appendix 1: Residents Questionnaire

SAMPLE QUESTIONNAIRE FOR ALTERNATIVE BURIAL METHODS AND OPTIONS IN RICHARDS BAY: RESIDENT'S INTERVIEWS

A. GENERAL

Mark the Sub-region (tick in the box below)

Sub-Regions	Number of Questionnaires	
■ Arboretum Suburb	4	
■ Meerensee Suburb	4	
■ Aquadene Suburb	4	
■ Wildenveide Suburb	4	
■ Veldenvlei Suburb	4	
■ Mzingazi Agri-Village	4	
■ Mandlazini Agri-Village	4	
■ Birdswood Suburb	4	
■ Brackenham Suburb	4	
TOTAL	**36**	

1.   What ethnic group do you belong to?

African	Coloured	Indian	White	Asian	Other

2.   Which religion do you belong to?

Christian	Muslim	Hindu	Islam	African Tradition	Other

3.   What is your age?

18-19	20-24	25-30	31-35	36-45	46-59	60+

4.   What is your gender?

Male	Female

5.   Which method of burial system does your Religion practice?

Conventional	Cremation	Sea Burial	Second Interment	Other

6. **If the Municipality were to explore different burial options as result of land scarcity, which alternative burial option would you consider?**

	Yes	No	Not sure
Cremation			
Sea Burial			
Resomation (bio-cremation)			
Re-cycle/Re-use			
Second internment			
Green/natural (Woodland)			
Other (Specify)			
None			

✓ Please provide details for your response

7. **Do you visit the graveyard for whatever reason?**

Yes	No

8. **If so, how often you like to be visit the graveyard and for what purpose (tick the box below)**

FREQUENCY	√	PURPOSE
Daily		
Once a week		
2 times a week		
Once a month		
2 times a month		
Other		

Appendix 2: Municipal Officials Questionnaire

Spatial Planning Officials Interviews

1. **Does the Municipal Long Term housing development plan cater for new cemetery development?**

Yes	No	Not Sure

  ✓ Please provide details for your response

2. **Has the municipality embarked on an exercise to identified land for new cemeteries?**

Yes	No	Not Sure

  ✓ Please provide details for your response

3. **What is the impact of conventional burial system in the municipal spatial planning?**

Substantial	Moderate	Not Sure

  ✓ Please provide details for your response

4. **What are main challenges of the Municipality in relation to new cemetery development, and how has it been addressed?**

Land Identification	Geotechnical Conditions	Environmental Conditions	Other

  ✓ Please provide details for your response

5. **Do you think alternative burial methods will address land scarcity challenges for new cemeteries?**

Yes	No	Not Sure

  ✓ Please provide details for your response

Environmental Planning Officials Interviews

1. **What are the environmental requirements for cemeteries development?**

Basic Assessment Application	Full EIA Application	Wetlands Assessment	Geotechnical Assessment	Other

  ✓ Please provide details for your response

2. **What is the impact of conventional burial in the natural environment?**

Substantial	Moderate	Not Sure

   ✓ Please provide details for your response

3. **Do you think alternative burial methods will have major impact the natural environmental?**

Yes	No	Not Sure

   ✓ Please provide details for your response

4. **What are the environmental requirements for cemeteries development?**

Basic Assessment Application	Full EIA Application	Wetlands Assessment	Geotechnical Assessment	Other

   ✓ Please provide details for your response

5. **What is the impact of conventional burial in the natural environment?**

Substantial	Moderate	Not Sure

   ✓ Please provide details for your response

6. **Do you think alternative burial methods will have major impact the natural environmental?**

Yes	No	Not Sure

   ✓ Please provide details for your response

SAMPLE QUESTIONNAIRE FOR ALTERNATIVE BURIAL METHODS AND OPTIONS IN RICHARDS BAY: MUNICIPAL OFFICIALS INTERVIEWS

Parks and Recreation Officials Interviews

1. **How will the municipality address the challenges of land scarcity for new cemeteries?**

Explore suitable Alternative burial options	Identify and buy privately owned land	Not Sure

   ✓ Please provide details for your response

2. **Has the municipality thought about exploring alternative burial options?**

Yes	No	Not Sure

   ✓ Please provide details for your response

3. **What do you think will be the reaction of residents in the alternative burial options?**

Accept the alternative burial options	Do not accept the alternative burial options	Not Sure

   ✓ Please provide details for your response

4. **How will the Municipality address the challenges of different religions; customs; beliefs; and culture in relation to the burials?**

Awareness campaigns on alternative burial options	Community forums in order to develop memorandum of understanding with communities	Not Sure

✓ Please provide details for your response

5. **How will the alternative burial method be implemented?**

Intense community engagement and education on alternative burial options	Incremental implementation of suitable alternative burial options and continuous awareness	Not Sure

✓ Please provide details for your response

6. **Do you think alternative burial methods will address land scarcity challenges for new cemeteries?**

Yes	No	Maybe

✓ Please provide details for your response

7. **Has the Municipality budgeted for alternative burial options and their financial implications for the next 5 years?**

Yes	No

✓ Please provide details for your response

SAMPLE QUESTIONNAIRE FOR ALTERNATIVE BURIAL METHODS AND OPTIONS IN RICHARDS BAY: MUNICIPAL OFFICIALS INTERVIEWS

Land Use Management Officials Interviews

1. **Does the Municipal Land Use Management Scheme accommodate for future cemetery zones in line with future housing development?**

Yes	No

✓ Please provide details for your response

2. **Do you think alternative burial methods will address land use challenges in relation to new cemeteries?**

Yes	No	Not Sure

✓ Please provide details for your response

Appendix 3: Traditional Leaders Questionnaire

SAMPLE QUESTIONNAIRE FOR ALTERNATIVE BURIAL METHODS AND OPTIONS IN RICHARDS BAY: TRADITIONAL LEADERS INTERVIEWS

Mark the Sub-region (tick in the box below)

Sub-Regions	Number of Questionnaires	
■ Mzingazi Agri-Village	2	
■ Mandlazini Agri-Village	2	
TOTAL	**4**	

1.   What ethnic group do you belong to?

African	Coloured	Indian	White	Asian	Other

2.   Which religion do you belong to?

Christian	Muslim	Hindu	Islam	African Tradition	Other

3.   What is your age?

18-19	20-24	25-30	31-35	36-45	46-59	60+

4.   What is your gender?

Male	Female

5.   Which method of burial system does your Religion/Culture practice?

Conventional	Cremation	Sea Burial	Second Interment	Other

6.   If the Municipality were to explore different burial options as result of land scarcity, which alternative burial option would you consider?

	Yes	No	Not sure
Cremation			
Sea Burial			
Resomation (bio-cremation)			

	Yes	No	Not sure
Re-cycle/Re-use			
Second internment			
Green/natural (Woodland)			
Other (Specify)			
None			

✓ Please provide details for your response

7. Do you think alternative burial options to conventional burials will have an impact on culture; beliefs; and religion?

Yes	No	Not Sure

✓ Please provide details for your response

Appendix 4: Religious Leaders Questionnaire

SAMPLE QUESTIONNAIRE FOR ALTERNATIVE BURIAL METHODS AND OPTIONS IN RICHARDS BAY: RELIGIOUS LEADERS INTERVIEWS

1. If the Municipality were to explore different burial options as result of land scarcity, which alternative burial option would you consider?

	Yes	No	Not sure
Cremation			
Sea Burial			
Resomation (bio-cremation)			
Re-cycle/Re-use			
Second internment			
Green/natural (Woodland)			
Other (Specify)			
None			

✓ Please provide details for your response

2. Do think alternative burial options to conventional burials will have an impact in religion; culture and beliefs?

Yes	No	Not Sure

✓ Please provide details for your response

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3. What do you will be best way for the Municipality to introduce alternative burial options in the City?

Community meetings	Establish the Committee consisting of all stakeholders	Not Sure

✓ Please provide details for your response

4. Do you think alternative burial options to conventional burial are the solution to land scarcity?

Yes	No	Not Sure

✓ Please provide details for your response

THANK THE RESPONDENTS FOR THEIR TIME AND CLOSE INTERVIEW.

Appendix 5: Funeral Directors/Undertakers Questionnaire

SAMPLE QUESTIONNAIRE FOR ALTERNATIVE BURIAL METHODS AND OPTIONS IN RICHARDS BAY: FUNERAL DIRECTORS/UNDERTAKERS (BUSINESS OWNERS) INTERVIEWS

1. How long has your business been operating?

5-10Years	10-15 Years	15-20 Years	20+ Years

2. How many employees do you have?

5-10	10-15	15-20	20+

3. Do you think the Municipality will ever face the challenges of land scarcity for new cemeteries?

Yes	No	Not Sure

✓ Please provide details for your response

4. Will your business be affected if the municipality was to explore alternative burial options as opposed to the conventional system?

Yes	No	Not Sure

✓ Please provide details for your response

THANK THE RESPONDENTS FOR THEIR TIME AND CLOSE INTERVIEW.