Analyzing the correlation between cemetery vandalism and locality in City of Johannesburg Municipality.

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#### Research Contributors

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#### Introduction

The popular interment It is believed that ancestors method used to lay our Death is not seen as a departed souls is through cessation of human life but commune with the families rather seen as a transition dignified traditional ground and with their burial in a respected space descendants. to the spiritual realm. termed 'cemetery'. Cities across the globe talk about Cemeteries are recognized green economy, sustainability and climate change responses, in their as public spaces for The level of criminal strategic documents and plans reflections, memorials, activities recurring in our however little is being said or done recreation and cultural cemeteries is alarming. about green burials in the context encounters. of sustainable development and sustainability.

#### Introduction cont.

CoJ is one of the strategic cities in South Africa. As capital city and economic hub the long - term vision emphasizes a range of Sustainable Development Goals.

Although evidence points to the role of impacts of urbanization, potential drivers of cemetery vandalism within the City of Johannesburg have not been determined.

As a city experiencing high rates of population growth and high mortality rates daily, it is imperative for a scientific study to be conducted.

#### Rationale

#### Constitutional mandate section 10

 Human dignity-everyone has inherent dignity and right to have their dignity respected and protected.

#### Mayoral flagship priorities

- Safer City-Work to improve public safety through initiatives such as community policing, investment in technology and infrastructure, and increased resources for law enforcement.
- Green Economy-Develop a plan to promote the growth of the green economy, including increased investment in green manufacturing and job creation, renewable energy, energy efficiency initiatives, and sustainable agriculture and food security.

#### CoJ By-Laws alignment

 Cemetery and Crematoria By-laws – places a responsibility on City council to uphold health and safety standards.

Total number 42

Active 5

Passive 37

Diepsloot, Kya Sands, Dainfern, Midrand, Lanseria, Fourways

Randburg, Rosebank, Emmarentia, Greenside, Melville, Mayfair, Northcliff, Rosebank, Parktown, Parktown North

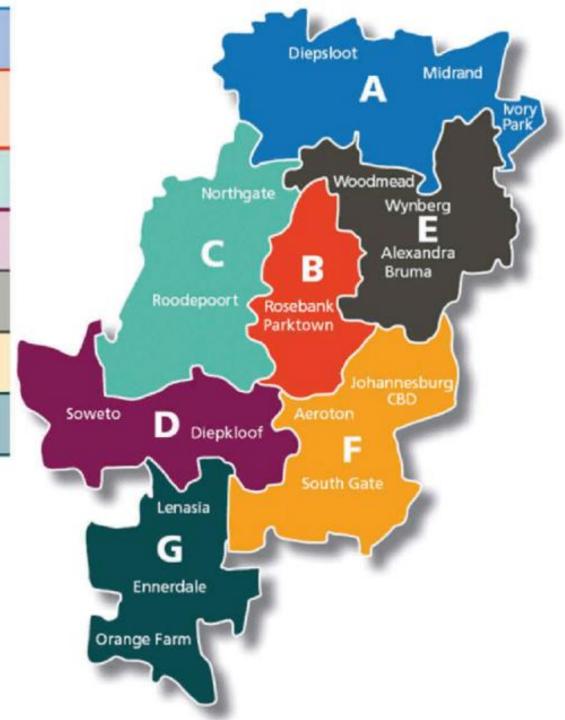
Roodepoort, Constantia Kloof, Northgate, Florida, Bram Fischerville

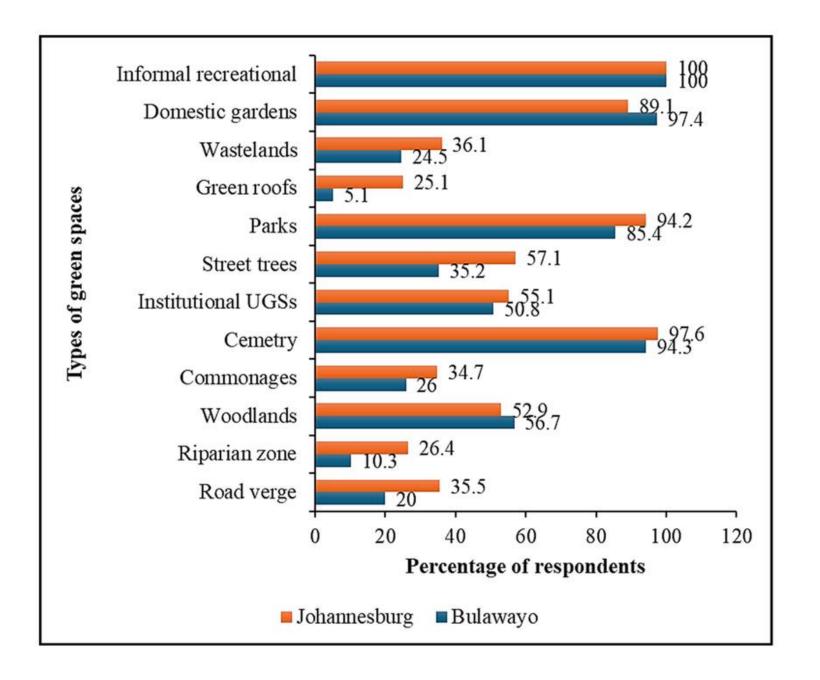
Doornkop, Soweto, Dobsonville, Protea Glen

Alexandra, Wynberg, Sandton, Orange Grove, Houghton

Inner City, Johannesburg South

Orange Farm, Weilers Farm, Ennerdale, Lenasia, Eldorado Park, Protea South





Coj: 'We pride ourselves on being inclusive and diverse'

#### Inclusivity:

 All cultures, races, religions and indigent people are accommodated for in our public owned cemeteries.

#### **Diversity:**

oThere are various options of interment in our cemeteries such as underground traditional burial, cremation and mausoleum.

## Historical significance in our cemeteries







## Historical significance in our cemeteries







#### Problem statement

The conventional fencing of methods currently used in South Africa such as steel, palisade and concrete fencing which do not promote environmental sustainability.

Secondly these materials do not respond to climate change actions and are likely to be stolen or vandalized.

Due to inadequate security, unwanted pathways are created invading the privacy of mourners and attracting criminal activities.

All these hard materials are costly to install, exorbitant to maintain and risky to keep.

### Current conventional cemetery boundary fencing off







Type of Material used	Examples	Vulnerability to theft and vandalism	Value
Metallic elements	Wire, Steel , Metal & Iron	High	High
Concrete elements	Bricks, aggregates & stones	High	Medium
Combination elements	Palisade	High	Medium

## Significance of the study





Literature has indicated that there is little data on management of cemeteries in the City of Johannesburg. However, if scientific evidence is provided as in this dissertation, that shows improved ways of managing cemeteries.

Municipalities may be more inclined to adopt the recommendations of this study for safety reasons and better management of cemeteries in the cities. This study will therefore contribute immensely to the body of knowledge on management of cemeteries.

## Aim and objectives of the study

#### Aim:

 Examine how geographical, social, economic and demographic characteristics of different locations influence the frequency or severity of vandalism in CoJ owned cemeteries.

#### **Objectives:**

- To identify vandalized cemeteries as per their functionality and location.
- Evaluate and quantify the degree of damage.
- Assess the safety risks imposed to members of public in our cemeteries.
- Investigate the correlation between vandalism and locality.

## Research Design and Methodology



Pearson statistical analysis method was used to analyze correlation coefficients.



Regression analysis was used to model how locality factors predict vandalism.



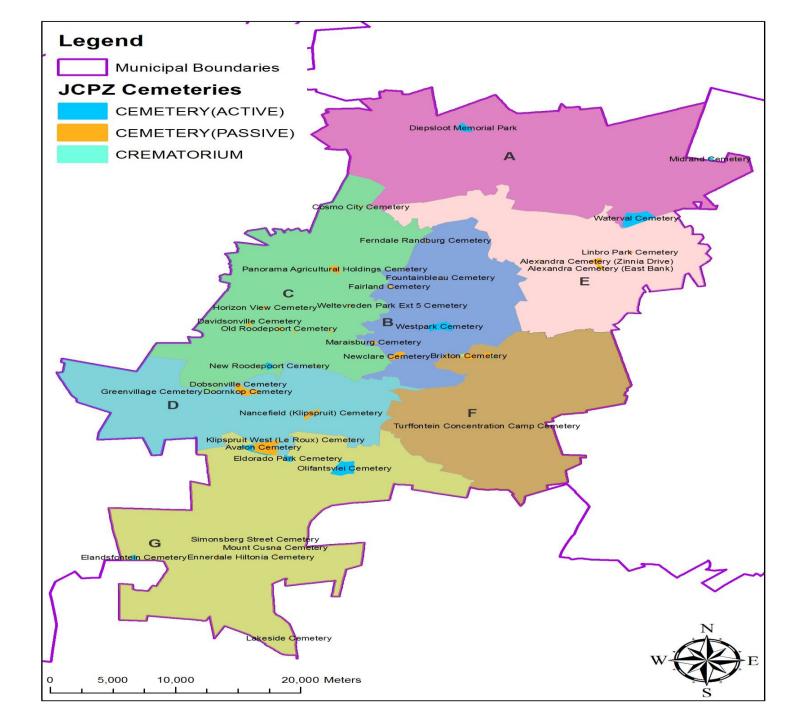
**GIS Mapping** was used to visualize vandalism incidents by location.



Field surveys and interviews
were conducted to gather
qualitative data from
securities and cemeteries
caretakers and locals

#### Study Area

Johannesburg Metropolitan Municipality Cemeteries



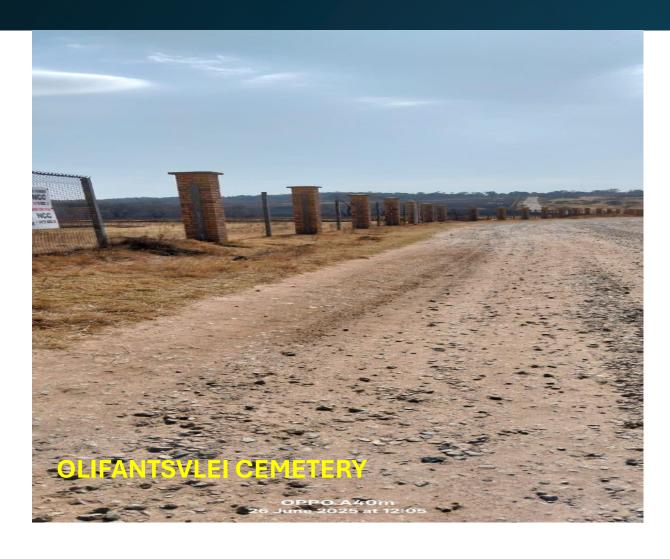
## Key variables applied

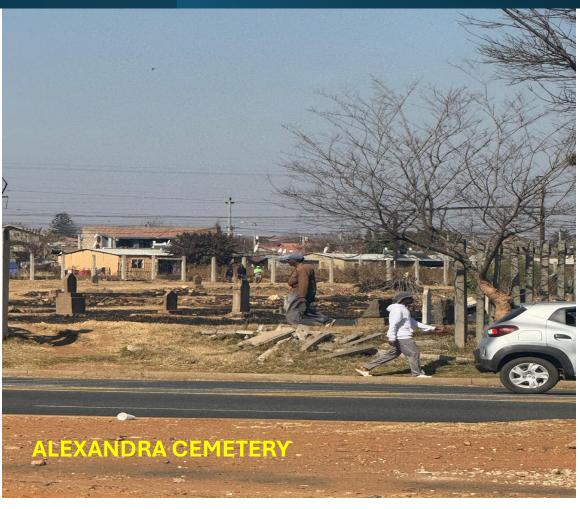
Dependent variable (Cemetery vandalism)	Independent variable (Locality)	
1.Frequency of incidents	Urban areas vs Informal settlement	
2. Type of vandalism (broken tombstones, theft etc.)	Crime rate in the surrounding neighborhoods	
3. Severity (minor damage vs extensive destruction)	Socio-economic status (income-levels ,unemployment)	
	Level surveillance (presence of security cameras, & fencing)	
	Cultural diversity or religious tension	
	Proximity to schools or hangout spots	
	Youth population	

## Preliminary findings

- OHigher vandalism rates are linked to informal settlements, low income and high-crime areas.
- Cemeteries near youth-dense areas experience more incidents.
- Cemeteries near shopping centers, railway stations and hangout spots are used as short cuts to reach the destinations.
- Neglected or unsecured cemeteries attract vandalism more than maintained ones.

## Extensive destruction



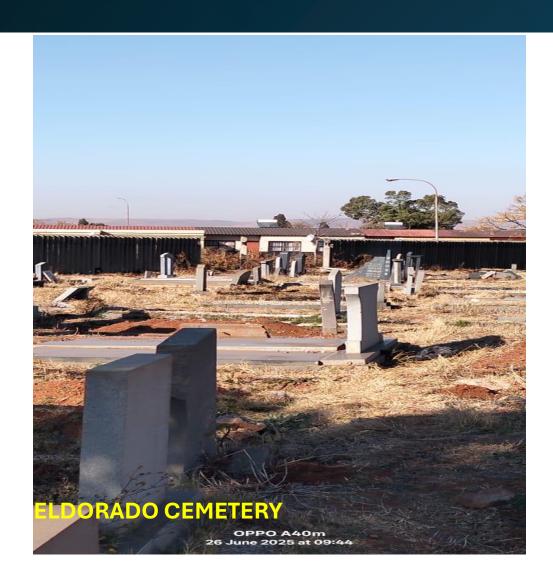


## **Extensive destruction**





## Minor damage





## Illegal dumping in





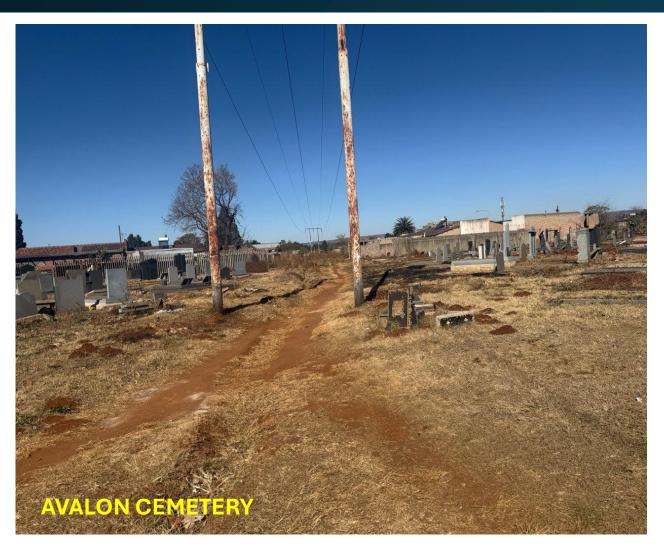
## Vagrancy in the cemeteries







## Unwanted walkways created in the cemeteries





## Key information and valuable equipment exposed







#### Recommendations

01

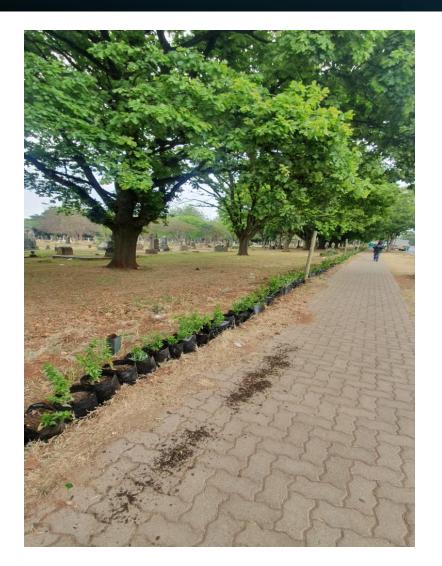
Going green is considered one of the twentieth-century and C40 ways of ensuring that the actions of the current generation do not negatively affect future generations.

02

It is recommended that Municipalities adopt green fencing for green economy and sustainable development and better management of cemeteries. 03

Types of species to be used need to be low maintenance requirements, longer life span, have deterring functionality such as thorns etc.

# Inception Green fencing at Brixton and Alexandre Cemetery



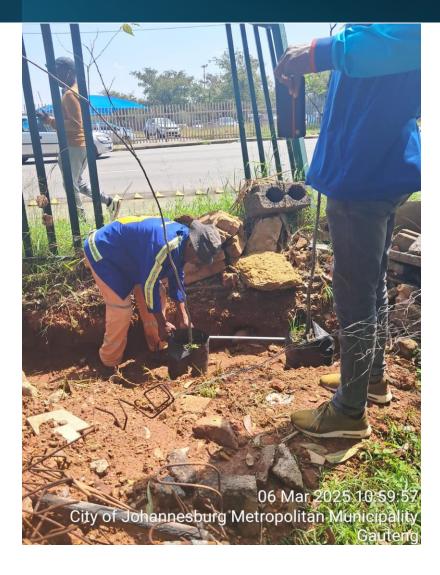




## Green fencing at Braamfontein Cemetery







#### Established green fencing at Avalon Cemetery







# From nna setlogolo sa bakwena, moilalehlaka, moroka a meetse a pula ke ale leboga

