



KWAZULU-NATAL PROVINCE

COOPERATIVE GOVERNANCE AND
TRADITIONAL AFFAIRS
REPUBLIC OF SOUTH AFRICA



THE SUSTAINABILITY OF CEMETERIES WITHIN LONG-TERM SETTLEMENT PLANNING

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- Although cemeteries and crematoria provide essential services to people, it was not until the COVID-19 pandemic that government started to pay greater attention to issues regarding the management and functionality of such facilities as well as plans for the future.
- In this regard, the Social Protection, Community and Human Development Cluster (SPCHD) tasked CoGTA with establishing a structure where relevant Sector Departments and representatives from each District Municipality could engage on issues relating to the management Cemeteries and Crematoria, both generally and in the context of COVID-19.
- As such, the Provincial Task Team for the Sustainable Planning and Management of Cemeteries in KZN (PTT) was established in 2020 and is currently functional. The PTT is comprised by representatives from each District and Local Municipalities as well as various Sector Departments and key organisations including, the Provincial House of Traditional and Khoi-San Leaders (PHTKL) and AMAFA.
- In support of its objectives, the Department was requested to develop a means of building the capacity of both Municipalities and the Private Sector in terms of establishing and/or expanding existing facilities. Internally developed, the current Provincial Protocols focuses, for now, solely on urban areas (where information is more readily available). Going forward, the next Phases of the project will review burials in “non-urban” areas (Traditional Authority and farm land) to determine a strategic way forward.
- One of the critical areas discussed within the Protocols is the need for alternative methods to burials – when understanding the current development and settlement context.



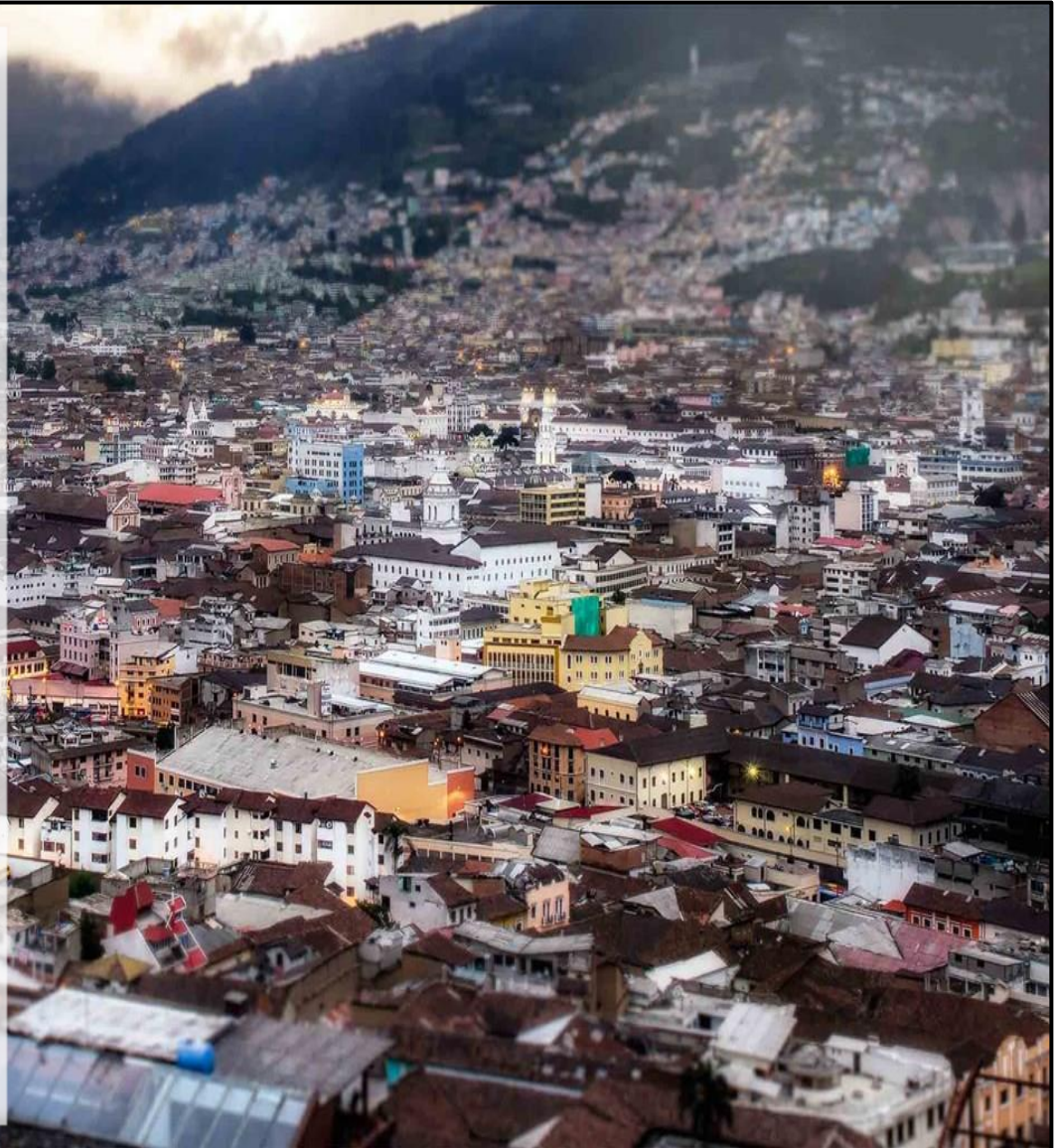
2. IMPACT OF URBANISATION

Many towns, across the country, are currently subject to rapid urbanisation due to limited accessibility to services and job opportunities in surrounding areas.

This does not just mean an increase in the number of informal settlements in and around a major town, but also an increase in the number of people renting or purchasing property within that town.

As per the World Bank 69% of South Africans are already living in urban areas, and that statistic will increase to 71% by 2030, and 80% by 2050.

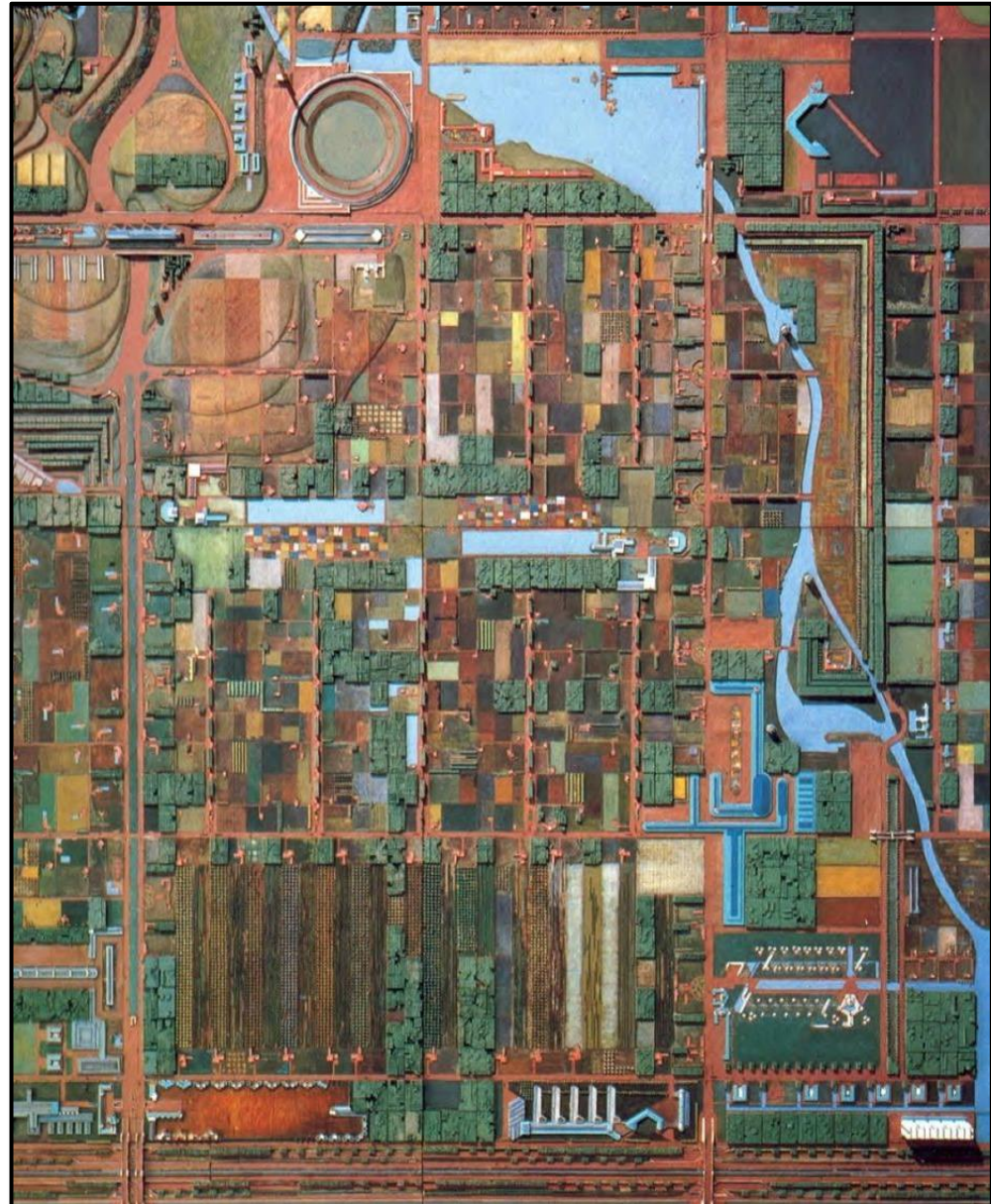
The most direct impact of this is an increasing pressure on infrastructure, housing, and public services – all of which require land.





3. LAND AVAILABILITY

- So, the more people that live or depend on a town, the more services (schools, clinics, water, sanitation etc.), businesses and accommodation is required – which attracts more people.
- And so the cycle begins again.
...BUT, LAND IS A SCARCE RESOURCE.
- If you picture a town as a blank canvas, almost 50% is used just for housing. The remainder of the canvas gets divvied up between: offices, businesses, retail, industries, schools, health facilities, worship sites, government buildings, stadiums, sports fields, open spaces, parks, tourism facilities, community halls, libraries, utilities, reservoirs, servitudes, landfills etc. – and a few existing cemeteries and crematoria.
- This picture is now looking quite overcrowded. So what about the area outside of town?





3. LAND AVAILABILITY

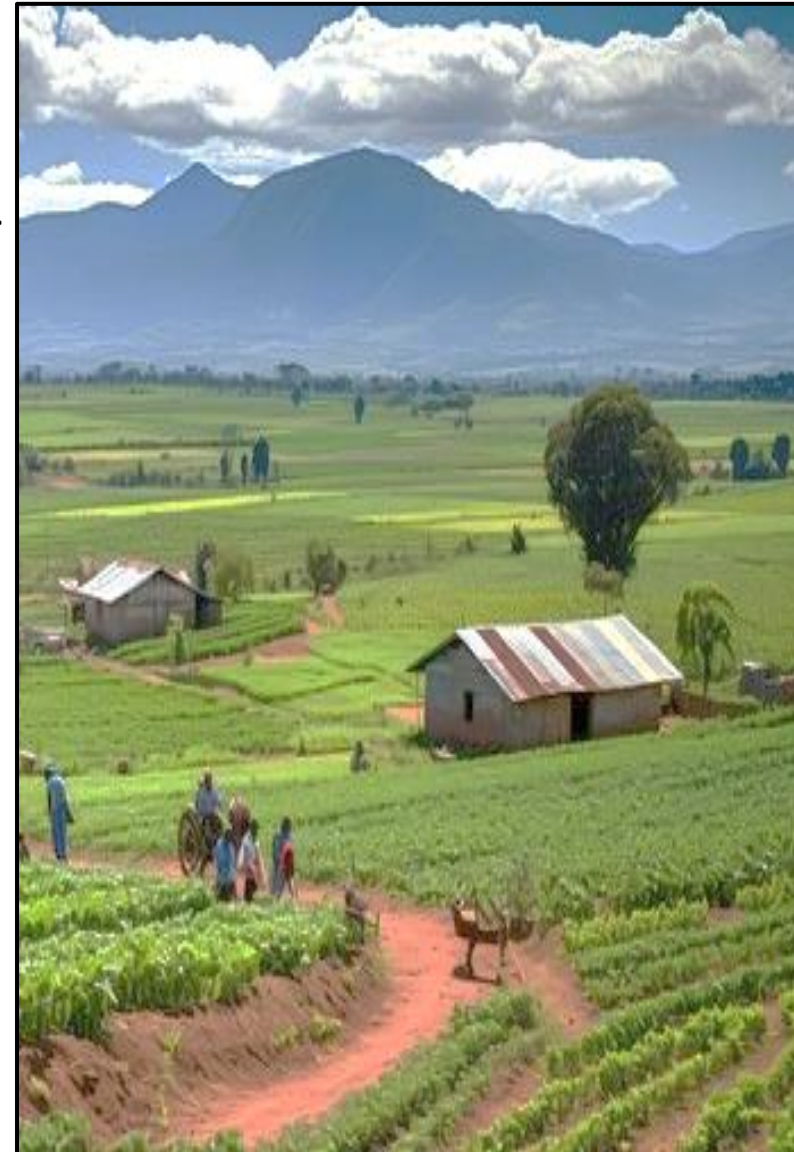
- Here land is predominantly used for either commercial agriculture, grazing, or it has already been settled – as Traditional areas, farm settlements, or through land restitution. Other uses would include some form of tourism, heritage sites, agro-processing, or social facilities.
- This “outer area” also includes: protected areas, private nature reserves, forests (protected by DAFF), wetland, Critical Biodiversity Areas, Ecological Support Areas, wetlands, World Heritage sites, dams, geologically sensitive areas etc. – all of which restrict development.
- Ok. But what if we found land that was not being used or preserved for anything else?





3. LAND AVAILABILITY

- Then we would also need to note that land which falls outside of an Urban Scheme area, and is not State owned land or Traditional Authority administered, is subject to the Subdivision of Agricultural Land Act 70 of 1970 (now PDALA). Subjective land cannot be transformed or subdivided for non-agricultural uses unless that land has a low-medium agricultural potential, or it has already been settled.
- In terms of Traditional Authority areas, it is most customary for burials to be undertaken on homesteads, as opposed to burials on communal sites. Most “rural” Municipalities have noted that engagements with Amakhosi for the proposed establishment of a public cemetery have not gone well.
- Ok. But what if we found land that was not being used or preserved for anything else, and is not on Traditional Land, or it has low-medium agricultural potential?
- Well then it would still have to meet specific locational requirements to be both credibly and legally suitable for the development of a cemetery.





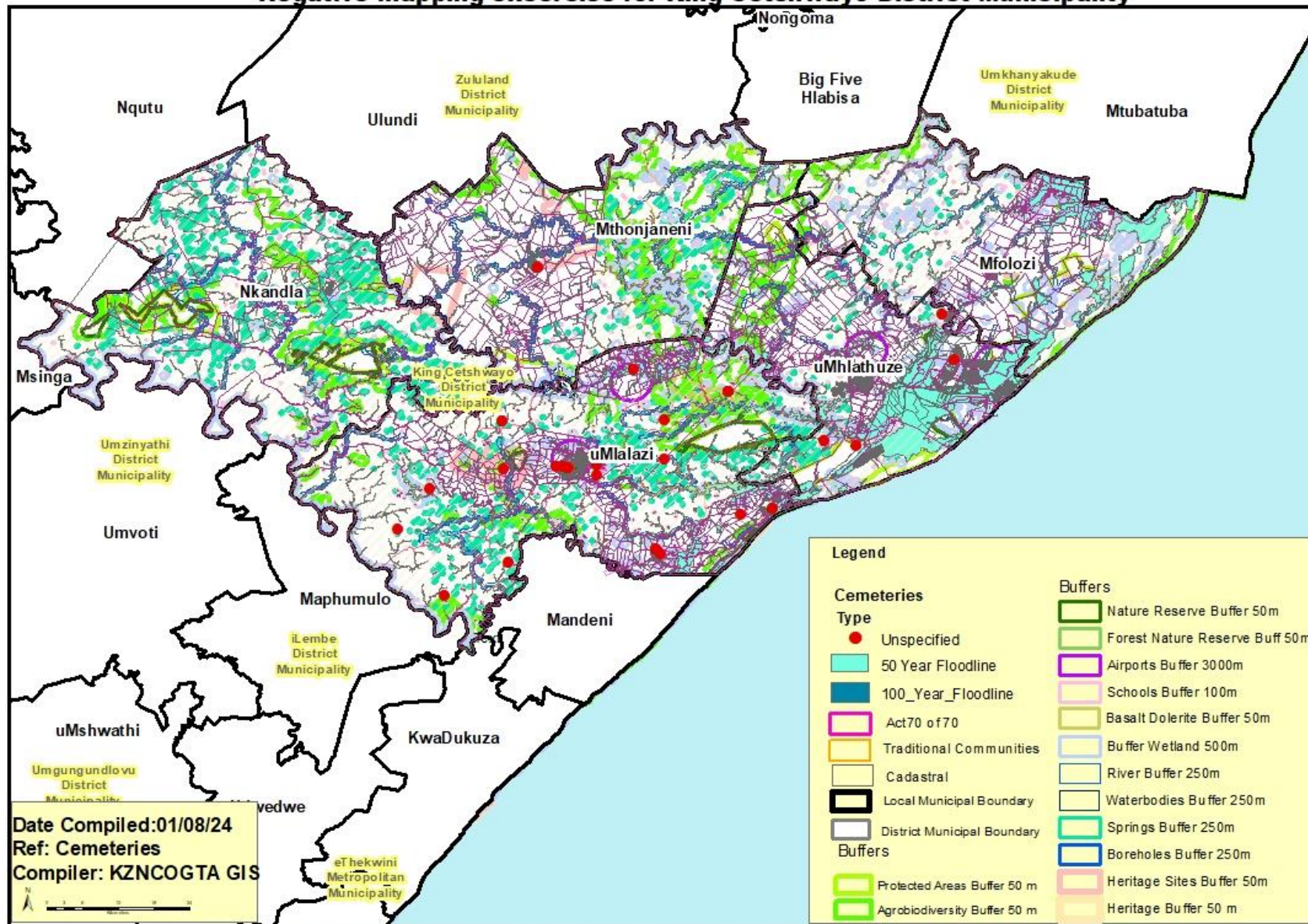
3. LAND AVAILABILITY

No.	Locational Requirement	Source
1.	Not be located below the 1 in 50-year flood line of a river.	Department of Water and Sanitation: Water Quality Management Policy with regard to the Management of and Control over Cemeteries as a Source of Water Pollution.
2.	Not be in close proximity to water bodies such as wetlands, vleis, pans, estuaries and floodplains. Should be at least 30 meters away from any other spring or watercourse and at least 10 meters from any field drain. <i>(World Health Organisation: Impact of Cemeteries in the Environment and Public Health)</i>	
3.	Not be situated on unstable areas, like fault zones, seismic zones, dolomitic or karst areas where sinkholes and subsidence are likely. Not be located within 300m radius of a sinkhole. <i>(Environmental Impact Assessment application form requirements – Groundwater, Soil and Geological Stability of the Site)</i>	
4.	Not be situated in or near sensitive ecological areas.	
5.	Not be situated in or on areas that are characterised by flat gradients, shallow or emergent groundwater.	
6.	Not be situated in areas characterised by steep gradients, or shallow bedrock with little soil cover, where stability of slopes could be a problem.	
7.	Not be situated in areas of ground water recharge on account of topography and/or highly permeable soils.	
8.	Not be situated on areas overlaying or adjacent to important or potentially important aquifers (Parsons aquifer classification), where such aquifers are to be use for water supply purposes.	

No.	Locational Requirement	Source
9.	Be located outside the 100-year floodplain.	National Health Act 61 of 2003 – Regulations relating to the Management of Human Remains R363 (22 May 2013)
10.	Be located at least 350m from ground water sources used for drinking purposes.	
11.	At least 500m from the nearest habitable building. <i>(create 500m buffer around the residential settlement footprint)</i>	
12.	A preferred burial site should have a soil of sand-clay mix of low porosity and a small and fine grain textured.	
13.	The water table should be at least 2.5m deep in order to allow for traditional grave depth of six feet (1.8 meters) - For areas with high water tables, the local government may determine a reasonable depth with additional walling recommendations to protect underground water. By contrast, the WHO recommends that the base of a grave must maintain a minimum of 1 meter clearance above the highest natural water table - Any variability in the water table should be taken into account. <i>(World Health Organisation: Impact of Cemeteries in the Environment and Public Health)</i>	
16.	Must maintain a minimum of 1 meter of subsoil below the bottom of the grave (i.e. the base of the grave must be at least 1 meter above solid rock).	World Health Organisation: Impact of Cemeteries in the Environment and Public Health
17.	Grave excavations should be backfilled as soon as the remains are buried.	
18.	Not be located on seasonally wet soils (often present close to waterbodies).	Environmental Impact Assessment (EIA) application form requirements – Groundwater, Soil and Geological Stability of the Site
19.	Not be located on dispersive soils (soils that dissolve in water – identified through sampling for dispersion testing).	
20.	Not be located where soils have a high clay content (clay fraction more than 40%).	
21.	Not be located in an area that is sensitive to erosion.	
22.	Not be located in an area with high potential or medium to high potential agricultural soils.	

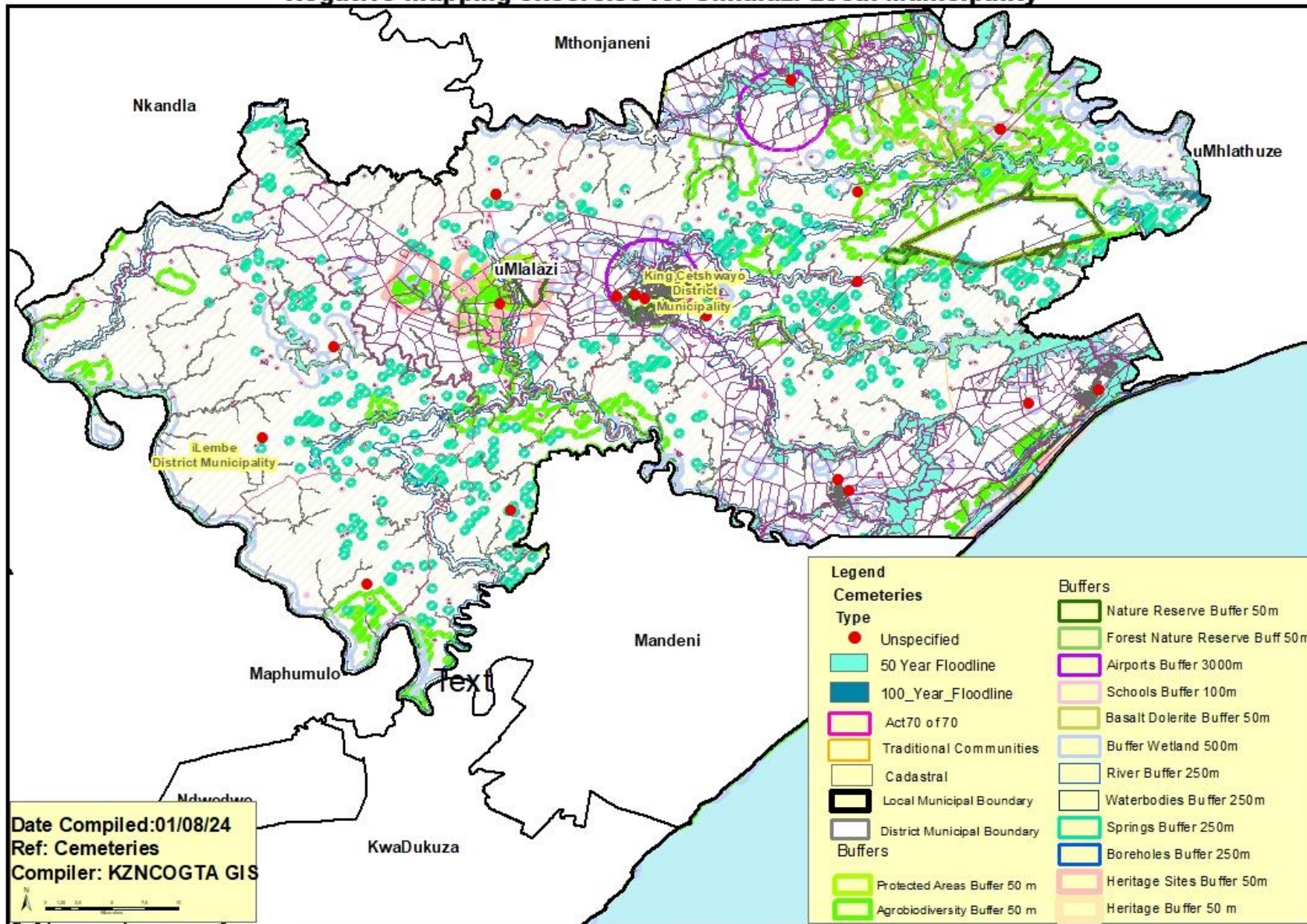


Negative mapping exercise for King Cetshwayo District Municipality





Negative mapping exercise for Umlalazi Local Municipality





3. LAND AVAILABILITY

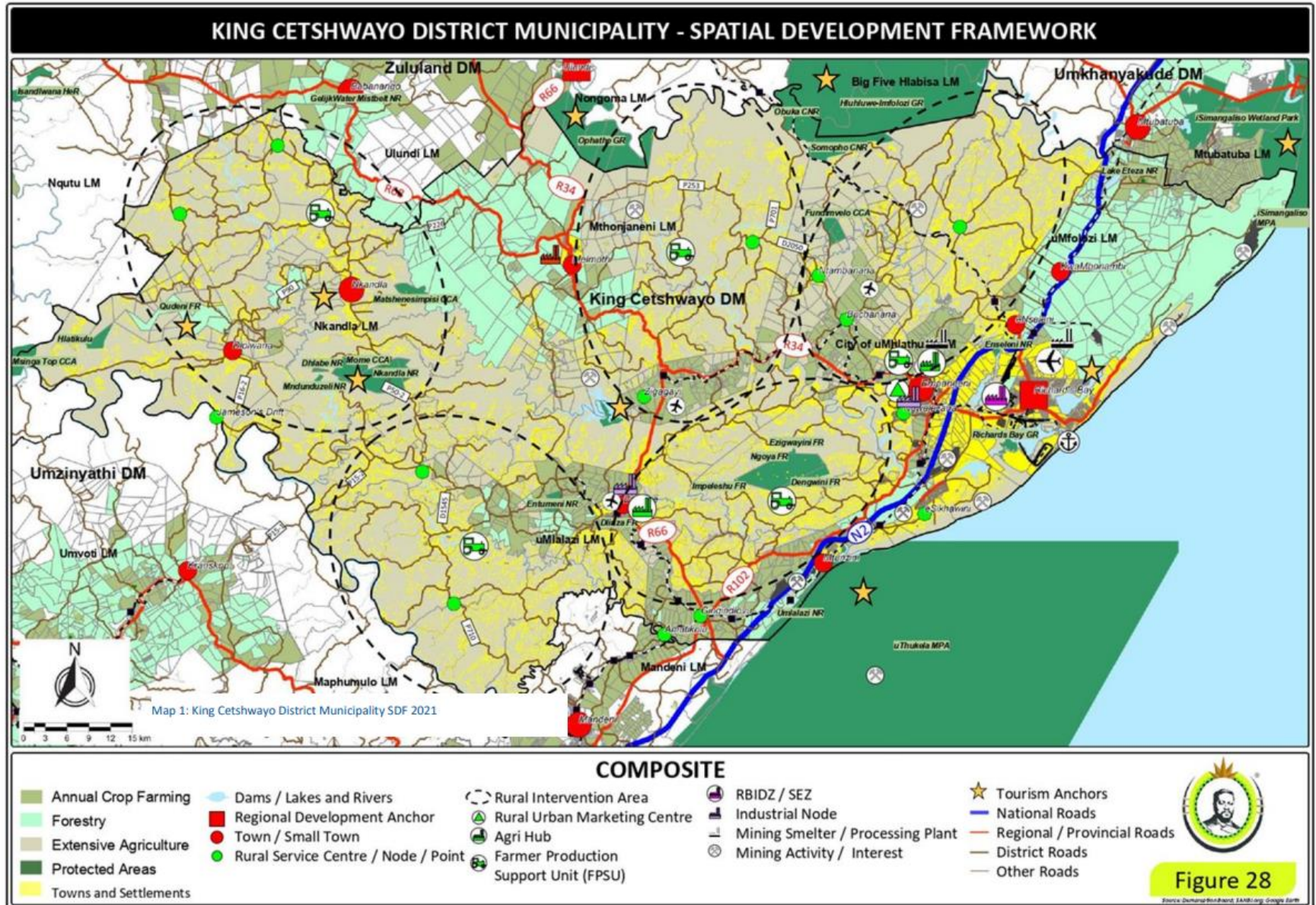




However, in order to decrease conflicting and unsustainable land use practices, we still need to test the identified feasible sites against the Municipal Spatial Development Framework (SDF) – which is the long-term plan for the Municipality in terms of growth and development.

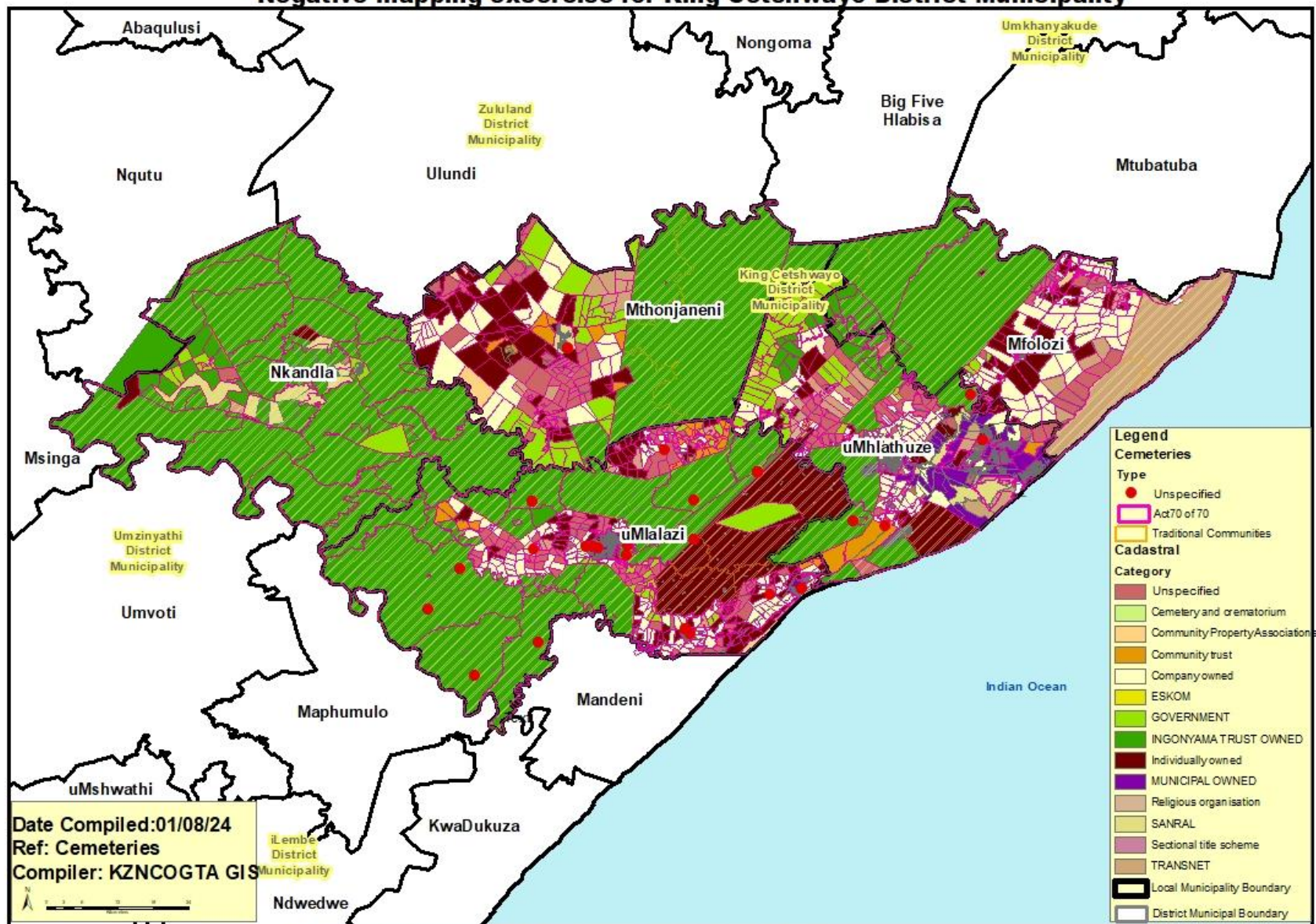
This will cross-reference possible sites with the following:

- Areas that have already been developed (settlement footprint);
- Areas for current and future catalytic projects;
- Areas required to support planned government projects over the MTEF period;
- Areas of current and future nodal areas as well as corridors;
- Areas for public and private investment in support of economic growth and development;
- Planned locations for future housing developments;
- Future proposals for the location of required bulk infrastructure and services (including social facilities);
- Areas with medium-high grazing potential; and
- Areas with Eco-Tourism, Cultural and/or Heritage significance/importance.





Negative mapping exercise for King Cetshwayo District Municipality





3. LAND AVAILABILITY

- Is that it? Not quite. Finding land is one thing, acquiring said land is completely different.
- Due to its limited revenue collection and economic add-value, cemeteries are not given the time nor the budget that it needs to function properly.
- In our engagements with Municipalities, it was noted that a large number of existing facilities have closed due to limited capacity, and that a large number of the ones that are still operational only have a few hundred graves left.
- Of those same Municipalities, only a very few have identified new sites or areas of expansion – even though all Municipalities are aware that the legislated environmental and planning authorisations could take up to 3 years.
- The main issue, at this point, is that senior management within Municipalities are just not taking the issue seriously. Cemetery Plans are not being budgeted for. Land acquisition is not being budgeted for. Environmental studies are not being budgeted for.





3. LAND AVAILABILITY

- Even if a suitable site was found, one would still have to undertake a development application requesting for authorization from the competent authority in terms of different pieces of legislation.
- In this regard, there are three primary applications which are undertaken for most types of developments, including cemeteries:
 - The submission of a Basic Assessment Report (BAR) or Scoping and Environmental Impact Report to EDTEA as per the requirements of the National Environmental Management Act 107 of 1998 (NEMA) Environmental Impact Assessment Regulations (R543 of 18 June 2010), as amended;
 - The submission of a Water Use Authorization application to DWA in terms of the National Water Act 36 of 1998 (NWA); and
 - The submission of a Planning application (for the rezoning, sub-division, and/or consolidation of land) to the Local Municipality in terms of SPLUMA.
- As most of us are aware, whilst the EIA and WULA applications can, in parts, be undertaken in tandem, the SPLUMA application is generally undertaken once Environmental Authorisation has been received – some 247 days later (in the case of substantive applications).
- In this regard, the SPLUMA application could be for a subdivision or consolidation of properties, but it will most definitely be for a rezoning to a zone that allows for the development of a cemetery as a free entry use.



3. LAND AVAILABILITY

- As part of this rezoning process, Planner's would need to determine the compatibility of the cemetery with surrounding uses wherein the CSIR Guidelines for the Provision of Social Facilities in South African Settlements notes that such a facility is only compatible with: police stations, fire stations, nature conservation areas, industry, or a District Hospital.
- Further, unlike other forms of urban land use, rezoning to a cemetery is generally a long process, more specifically related to public participation - which is often fraught with difficulties.





4. THE SUSTAINABILITY OF A CEMETERY

- As we have noted, land is a very scarce resource which needs to be used carefully to maximize its potential to be both sustainable and productive.
- A cemetery, however, is counter-intuitive wherein it sterilizes a property as well as its surrounds (including underground) for future development, diversification, or expansion. Cemeteries cannot be “densified” in terms of upward vertical expansion, but rather downward (up to 3 tier burials) but this is hindered by a number of complex environmental requirements and sensitivities.
- Whilst no one actively wants to live in close proximity to a cemetery, the cemetery itself needs to be accessible to its users and therefore, cannot be too far away from its supporting population.
- Accordingly, cemeteries have often, in the past, been located on the outskirts of a settlement or town - which is away from habitable buildings but close enough for public transportation. Although it may have started off this way, with rapid urbanisation, that gap has quickly closed in where a number of those cemeteries now exist as a barrier for future growth in a particular direction, or an island of inactivity in a densifying residential area.
- So, what does all of this mean?
- Based on long-term population projections, the general estimation of graves, average use of current facilities, and the outcomes of a GIS negative mapping exercise, we estimate that the KZN Province will run out of land for burials in around **15 to 20 years** – which is not taking into consideration the accelerated effect of another pandemic or natural disaster.



5. WHAT CAN WE DO?

- In the short-term, Municipalities can, and have, increased the number of burials per facility by undertaking second and third tiered internments - but this puts more and more pressure on the natural environment.
- Some Municipalities have also started reopening closed cemeteries after undertaking new surveys of previously identified environmentally sensitive areas. With newer technologies, it means that these sensitive areas are more specifically defined to allow for additional burials – but over time, these sensitive areas can expand or shift, which may affect excavated areas.
- In the short-term, Municipalities can amend their Policies and By-Laws to solely cremate both Paupers and Indigent persons.
- As a matter of urgency, Municipalities need to develop Cemetery Plans that determine long-term land requirements and identify feasible sites through a negative mapping exercise. The outcomes of this Plan will need to feature within both the IDP Budget and the Municipality's Capital Expenditure Framework. Remember, unless donated by the State (Premier or Public Works), land acquisition will have to be undertaken with Municipal funds (MFMA).
- In the medium-long term Municipalities may need to explore the option of transforming historical cemeteries, within prime areas, to other uses which may support economic development. However, due to historical, religious and cultural significance, this can be an uphill battle.
- In the long-term, from a planning perspective, the development of a cemetery is an unsustainable land development practice, wherein other forms of internment or disposal need to be investigated and pursued as a matter of urgency.

5. WHAT CAN WE DO?

- SACA and SALGA could assist with facilitating engagements/exhibitions for Provinces around alternative methods of disposal (aquamation etc.) and newer (and greener) cremation technology.
- As a priority, Provincial Departments and SALGA, need to actively work together to engage with interfaith leaders on the matter of alternative burial methods and, most importantly, determine a measurable way forward.
- We, as Provincial Departments, require dedicated teams to engage with Municipalities on the management and planning of cemeteries and crematoria so as to identify challenges and areas of intervention.
- District Municipalities need to embed standing items as part of their DDM Social Cluster agendas to ensure that such challenges are giving the necessary airtime and prioritisation that it needs as well as related resources.
- In terms of KZN, the assessment of the functionality and management of Cemeteries and Crematoria are undertaken through Annual Local Government Assessment Reports as well as through the assessment of both the Spatial Development Framework (SDF) and the IDP.
- District Municipalities to explore the development of District Cemetery Plans, where Local Municipalities are unable to develop such documents in the near future.
- Work together. Learn from each other. Create a network of support.

THANK YOU

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KWAZULU-NATAL
TOGETHER**