

First Report, Final October 2016:

Identification and Acquisition of Authorisations and Approvals for the establishment of One or More Regional cemeteries for Stellenbosch Municipality (Project duration 2016 – 2018).

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1. Purpose of Report

This report constitutes the first report in a series of reports that identify and obtain the necessary land use rights and environmental authorizations to expand exiting cemeteries and establish local and regional cemeteries in Stellenbosch Municipal Area.

The first report dealt with a preliminary scan of all sites identified in terms of

- a) Ownership, Use, Zoning and Proximity
- b) Value (intrinsic, instrumental, systemic), Environment (Fauna & Flora, Ecological Rehabilitation, Geology, Pedology, Hydrology) and Policy Assessment (Access, Competing uses, SDF & IDP aligned)
- c) Digging graves: Soil excavability, permeability (distance from domestic water sources, drainage features and soil type), drainage features, gradient, basal buffer, grave stability, soil workability and cemetery size

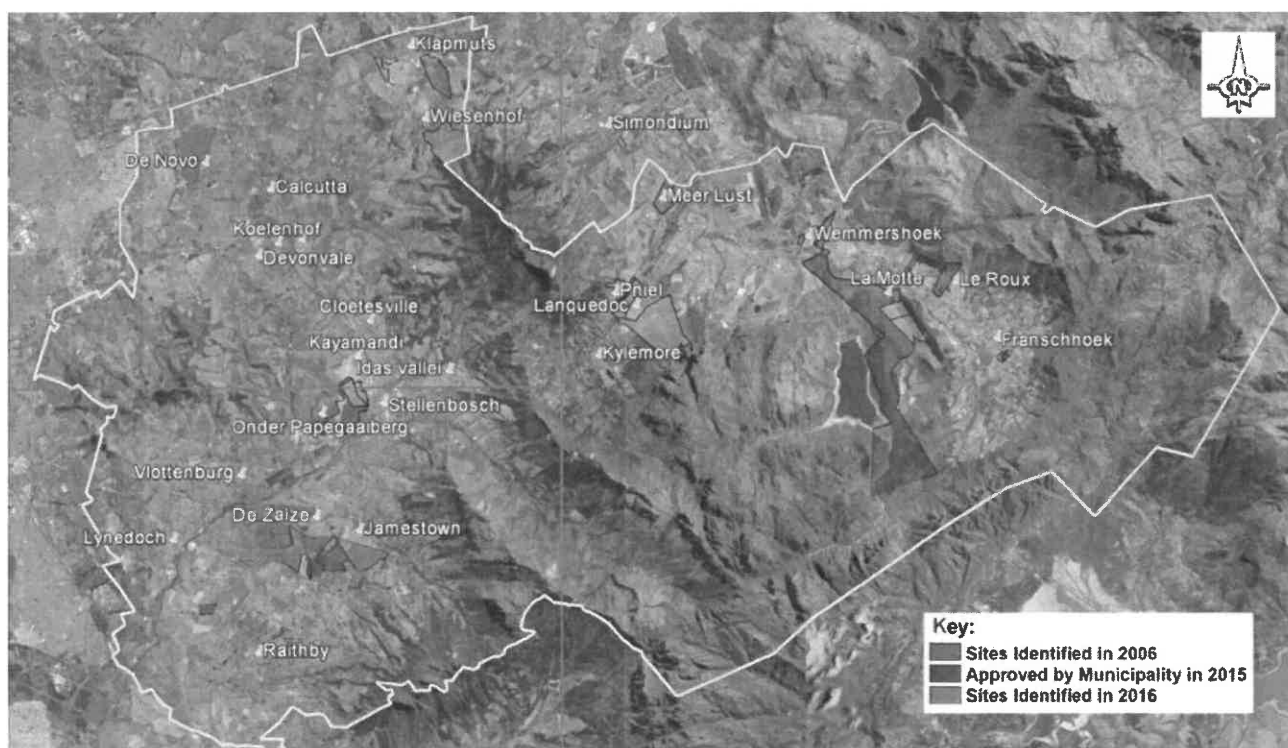
2. Site Identification

Selection was informed by the following studies and activities:

- a) Sites selected in the 2006 Cemetery Feasibility Study conducted by Dennis Moss Partnership.
- b) Sites identified during site visits by CK Rumboll and Partners in May and June 2016.
- c) Sites identified by the Property Management Department of Stellenbosch Municipality.
- d) Sites approved on a Stellenbosch Council meeting, 25 February 2015.

No	Property Number & Settlement (Alphabetic)	Existing Cemeteries	Identified			Approved by Municipality (February 2015)
			Feasibility Study 2006 (Dennis Moss)	Site Visits & Scan, 2016 (CK Rumboll)	Property Management: Stellenbosch Municipality 2016	
1	RE 10/727 De Novo					
2	RE/3666 Franschoek, DenneG					
3	Erf 1219 Franschoek, Le Roux					
4	Erf 516 Franschoek					
5	Erf 423 Franschoek					
6	Erf 41 Franschoek					
7	Erf 428 Franschoek					
8	Erf 42 Franschoek					
9	Erf 16 Franschoek					
10	Erf 739 Franschoek					
11	Erf 2885 Franschoek					
12	Erf 2886 Franschoek					
13	RE/502 Jamestown					
14	1166 Jamestown					
15	RE/527 Jamestown					

16	RE 13/1674 Languedoc					
17	RE 1/619 Lyndoch					
18	Farm 342 Klappmuts					
19	8/744 Klappmuts					
20	RE/2/744 Klappmuts					
21	7/748 Klappmuts					
22	3/748 Klappmuts					
23	40/748 Klappmuts					
24	Erf 9 Kylemore					
25	Erf 21 Kylemore					
26	Erf 71 Kylemore					
27	Erf 35 Kylemore					
28	Erf 36 Kylemore					
29	RE1/1339 La Motte					
30	1653 La Motte					
31	1/1158 La Motte					
32	RE/1158 La Motte					
33	Farm 7/1041 Maasdorp					
34	Farm 28/1041 Maasdorp					
35	1/1006 Meer Lust					
36	RE/1 Pniel					
37	9/1173 Pniel					
38	2/1647 Pniel					
39	1357 Pniel					
40	RE1/1176 Pniel					
41	17/1685 Pniel					
42	4/941 Simondium					
43	Farm 2/81 Kayamandi					
44	181 Stellenbosch					
45	RE/33/175 Stellenbosch					
46	RE/183 Stellenbosch					
47	RE/1/1024 Wemmershoek					
48	202 Wemmershoek					
49	23/747 Wiesenhof					
50	Farm 29 Koelenhof (Calcutta)					



3. Selection Criteria

These sites were subjected to a set of selection criteria:

3.1 Initial (Ownership and Proximity) Assessment

The purpose of this assessment is to determine which identified portions of land can be utilized as a local or regional cemetery and to determine the time frames involved in obtaining the appropriate rights and authorizations.

1. Ownership: Does the property belong to Stellenbosch Municipality, a State Department or a private person.
2. Zoning: What is the official zoning of the property?
3. Current Land Use: What is the property used for?
4. Lease: Is the property leased. If yes, for how long is the duration of the lease.
5. Transfer: If the property is not owned by Stellenbosch Municipality, it has to be transferred.
6. Location: Is the proposed development an extension of the existing cemetery or is it a completely new cemetery.
7. Proximity: Is the cemetery accessible for the region or only for the settlement in which it is located?

This assessment was done according to information as per the following documentation and site visits: ownership records, zoning certificates and diagrams.

3.2 Environmental and Policy Assessment

The purpose of this assessment is to determine if there are any policies or natural aspects that may prohibit the expansion or development of cemeteries.

8. Intrinsic Value: What is good for the property? (Use & Heritage Value)
- 9.
10. Instrumental Value: What is the property good for? (SDF alignment)
11. Systemic Value: Does the property contribute to the health of any eco system and or habitat? Is the property important for conservation purposes (does it form part of a sensitive ecological corridor which may include part of stream, drainage systems & wetlands and may be subject to ground water pollution.
12. Current status: Is there any indigenous Fauna and Flora habitats on the property and are there occurrence high or are there stands of rare endemic plants.
13. Ecological Rehabilitation: What should the property look like if restored to its pristine form? How did it look like? What are the likelihood/ potential of the property being rehabilitated?
14. Geology: What are the Solid features of Earth
15. Pedology: Status of soils in their natural environment
16. Hydrology: Are there any drainage lines

17. Accessibility: Is there physical access to the site? How easily can the site be accessed? What modes of transport can be used to reach the site? What modes of transport are available?

18. Land Availability: What are the competing uses in the area?

This information was gathered as per data available, site visits, previous studies conducted (see Reference List) and a meeting with municipal officials representing different departments; Data available included zoning maps, ecological and hydrological data, geological data, roads network data, programmes & projects from other municipal departments.

The following departments participated during a meeting held on 4 August 2016 and outlined their concerns:

Planning and Economic Development	Competing conservation uses at Pappagaalberg
Engineering	Access in general
Property	Farm 29, Culcatta, Koelenhof should be added
IDP	Proposals should form part of Spatial Development Framework.
Human Settlements	Competing residential uses at James Town and La Motte
Informal Settlements	None
Community Services	The existing cemeteries should be considered for re-burials

3.3 Soil Scan

The purpose of this assessment is to determine if the site will be functionally appropriate to dig graves and bury people.

19. Soil excavability: Is the soil medium dense and firm
20. Soil permeability: Safe distance from domestic water sources (No – too close; Conditional - Certain forms of burials only i.e. walls of remembrance; Developable)
21. Soil permeability: Soil type (Clay Gravel, Silty Sand, Clay Sand, Silt) and permeability ranges. Poor subsurface conditions, either high water table or clay layers - grave surface flooding or perched water tables
22. Soil permeability: Safe distance to drainage features and sources (No – too close; Conditional - Certain forms of burials only i.e. walls of remembrance; No - Adequate surface drainage difficult - flat topographical features)
23. Drainage features: Present, Partial or Absent
24. Topography: Gradient 2° - 6°. No when slope exceeds 9°.
25. Basal Buffer Zone: 2.5m between grave & water table. No when basal buffer is absent.
26. Grave Stability: Verges & Sides to stand up.
27. Soil Workability: Ability of soil to compact on return to grave
28. Cemetery Size: Justify engineering geological & geotechnical investigation

This information was gathered as per data available, site visits and previous studies conducted and a meeting with the Directorate Community Services on 21 September 2016; Data available included hydrological data, geological data, a full assessment of Wemmershoek as a housing development was proposed on the site.

4. Initial Assessment

4.1 Cemeteries that can expand and new cemeteries smaller than 30ha

Extensions on **land belonging to Stellenbosch Municipality**, have been identified in Franschoek and Stellenbosch (Onder Pappagaaiberg) (expand graveyard sites on erven), Kylemore, Pniel (develop new cemeteries on erven adjacent to existing cemetery).

New cemeteries on **land belonging to Stellenbosch Municipality**, have been identified at Pniel (open space across existing cemetery).

No	Cemetery Extensions	Ownership	Zoning	Current Land Use	Location	Proximity
		SM, State, Private	As per SM	Used as	Extension or New	
1	Erf 739 Franschoek	Mun Gebied van Franschoek	Local Authority	Cemetery & Vacant Land	Extension:	Within Settlement
2	Erf 36 Kylemore	Mun Stellenbosch	Subdivisional Area for Residential Zone 1 and Transport Zone II (public road)	Cemetery & vacant land	Extension, adjacent property	Within Settlement
3	RE 9/1173 Pniel	Mun Stellenbosch (donated by BTT)	Agriculture Zone 1	Vacant land	Extension	Within Settlement
4	RE1/1176 Pniel	Mun Stellenbosch	Agriculture Zone 1	Open Space	New	Within Settlement
5	RE/183 Stellenbosch	Mun Stellenbosch	Local Authority (Cemetery)	Cemetery & Vacant land	Extension	Within Settlement

Extensions on **state land** within the jurisdiction of Stellenbosch Municipality have been identified in De Novo.

A new cemetery on **state land** within the jurisdiction of Stellenbosch Municipality has been identified in La Motte (existing cemetery does not have the appropriate zoning).

	Cemetery Extensions	Ownership	Zoning	Current Land Use	Location	Proximity
		SM, State, Private	As per SM	Used as	Extension or New	Regional or Settlement; Within Settlement
6	RE 10/727 De Novo	RSA, Prov. Gov. W.Cape	Agriculture Zone 1	Vacant	Extension	Within Settlement
7	RE/1339 La Motte	National Government RSA	Agriculture Zone 1	Housing & Vacant land	Fomalization (New) & Extension	Within Settlement

Extensions on **private land** within the jurisdiction of Stellenbosch Municipality, have been identified in Le Roux (Dennegeur), Franschoek, Languedoc, Klappmuts and Pniel.

New cemeteries on **private land** within the jurisdiction of Stellenbosch Municipality, have been identified in Klappmuts and Pniel.

	Cemetery Extensions	Ownership	Zoning	Current Land Use	Location	Proximity
		SM, State, Private	As per SM	Used as	Extension or New	Regional or Settlement; Within Settlement
8	RE/3666 Dennegeur, Franschoek	L'ormarins Pty Ltd/ Rupert & Rothchild Vignerons/ Dennegeur Bemagtigingsvennootsk ap La Motte Wynlandgoed Pty Ltd	Subdivisional Area	Vacant – Housing	New, adjacent existing cemetery on Erf 1219	Within Settlement
9	Erf 516 Franschoek	Hugenate Stigting	Institutional	Monument & Gardens	New, adjacent existing cemetery on erf 423	Within Settlement
10	RE 13/1674 Languedoc	Boschendal Pty Ltd	Agriculture Zone 1	Cemetery/ Vacant	Extension	Within Settlement
11	8/744 Klappmuts	Private	Agriculture Zone 1	Vacant	New	Within Settlement
12	40/748 Klappmuts	R44 Farm Pty (Ltd)	Agriculture Zone 1	Vacant, Farming	New, adjacent existing cemetery Farm 3/748 & 7/748	Within Settlement/ Regional
13	17/1685 Pniel (both sides of R45)	Boschendal Founders Estate 17 Pty Ltd	Agriculture Zone 1	Agriculture & Vacant land	New	Within Settlement

4.2 Regional cemeteries

Regional cemeteries are proposed in Jamestown, Lyndoch, Klappmuts, La Motte, Maasdorp (on R45 to Franschoek), Meerlust (T junction of R45 (Paarl to Franschoek) and R310 (to Stellenbosch)), Wemmershoek (R301) & Wiesenhof (R44).

Regional cemeteries on **land belonging to Stellenbosch Municipality**, have been identified in James Town, Koelenhof and Wemmershoek.

	Regional Cemeteries	Ownership	Zoning	Current Land Use	Location	Proximity
		SM, State, Private	As per SM	Used as	Extension or New	Regional or Settlement;
14	RE/502 Jamestown	Mun Stellenbosch	Agricultural Zone 1	Vacant/ Agriculture	New	Regional
15	Farm 29 Calcutta, Koelenhof	Mun Stellenbosch	Agriculture Zone 1	Vacant land	New	
16	RE/1/1024 Wemmershoek	Mun Stellenbosch	Agriculture Zone 1	Vacant land	New	Regional

Regional cemeteries on **state land** within the jurisdiction of Stellenbosch Municipality have been identified mainly in Eastern Stellenbosch or the Franschoek Valley in La Motte, Maasdorp, Meerlust and De Novo.

	Regional Cemeteries	Ownership	Zoning	Current Land Use	Location	Proximity
		SM, State, Private	As per SM	Used as	Extension or New	Regional or Settlement;
17	RE 10/727 De Novo	RSA, Prov. Gov. W.Cape	Agriculture Zone 1	Vacant	New	Regional
18	Farm 7/1041 Maasdorp	RSA	Agriculture Zone 1	Plantation	New	Regional
19	Farm 28/1041 Maasdorp	RSA	Agriculture Zone 1	Settlement	New	Regional
20	1/1006 Meer Lust	RSA, Mun Drakenstein	Agriculture Zone 1	Vacant Land & Village	New	Regional

Regional cemeteries on **private land** within the jurisdiction of Stellenbosch Municipality, have been identified in Jamestown, Klapmuts, Lyndoch, and Jamestown.

	Regional Cemeteries	Ownership	Zoning	Current Land Use	Location	Proximity
		SM, State, Private	As per SM	Used as	Extension or New	Regional or Settlement;
21	1166 Jamestown	Mountain Breeze Farms Pty (Ltd)	Agriculture Zone 1	Vineyards	Extension, adjacent property	Regional
22	RE 1/619 Lyndoch	Charles Back Vineyards Pty Ltd	Agricultural Zone 1	Vacant/ Small Holdings	New	Regional
23	40/748 Klapmuts	R44 Farm Pty (Ltd)	Agriculture Zone 1	Vacant, Farming	Extension, adjacent property	Within Settlement/ Regional

4.3 Full cemeteries

Cemeteries that are **fully occupied** and need cleaning, remarking of graves, fencing and upkeep are listed below:

	Property	Owner	Zoning
24	Erf 1219 Franschoek, Le Roux	Mun Gebied van Farnschhoek	Local Authority Zone
25	Erf 41 Franschoek	Ned Ger Sendingkerk Franschoek	Local Authority Zone
26	Erf 42 Franschoek	Ned Ger Kerk Franschoek	Local Authority Zone
27	Erf 423 Franschoek	Roux David Marais	Local Authority Zone
28	Erf 428 Franschoek	Congregational Church Franschoek	Local Authority Zone
29	Erf 16 Franschoek	Ned Ger Franschoek	Local Authority Zone
30	RE/527 Jamestown (Unregistered Portion 6/527)	Mun Stellenbosch	Agriculture Zone 1 (Local Authority (Cemetery))
31	7/748 Klapmuts	Volle Evangelie Kerk van God in Suidelike Afrika Klapmuts	Agriculture Zone 1
32	3/748 Klapmuts	Volle Evangelie Kerk van God in Suidelike Afrika Klapmuts	Agriculture Zone 1
33	Erf 9 Kylemore (re use western side)	Mun Stellenbosch	Open Space II

32	Erf 21 Kylemore	Mun Stellenbosch	Subdivisional Area for Residential Zone 1 and Transport Zone II (public road)
33	Erf 71 Kylemore	Old Apostolic Church of Africa	Open Space II
34	Erf 35 Kylemore	Mun Stellenbosch	Open Space I
35	RE/1 Pniel	Gemeenskap van Pniel	Open Space for Pniel Cemetery Authority Use for rest of property
36	Farm 190, Stellenbosch	Mun Stellenbosch	Local Authority (Cemetery)
37	Farm 191, Stellenbosch	Mun Stellenbosch	Local Authority (Cemetery)
38	Farm 285, Stellenbosch	Mun Stellenbosch	Local Authority (Cemetery)

5. Environmental and Policy Assessment

5.1 Sites not considered

The following **sites are not considered** further for investigation and the reasons there are provided in the table below:

	Property	Use & Ownership	Zoning	Reason
39	Farm 342 Klappmuts	Vacant & Clinic (Ownership: Mun Stellenbosch)	Agriculture Zone 1	Proximity to settlement
40	RE/2/744 Klappmuts	Vacant, Farm Yard (SAFAMCO enterprises Pty Ltd)	Agriculture Zone 1	Proximity to settlement
41	1653 La Motte	Housing & Vacant land (Ownership: District Mun Cape Winelands)	Agriculture Zone 1	Earmarked for housing
42	1/1158 La Motte	Housing & Vacant land (Ownership: National Government of the RSA)	Agriculture Zone 1	Earmarked for housing
43	RE/1158 La Motte	Housing & Vacant land (Ownership: RSA)	Agriculture Zone 1	Earmarked for housing
44	Erf 2885 Franschoek	This site is home to short term accommodation facilities used for youth development	Local Authority	Used for recreation and youth development
45	Erf 2886 Franschoek	The is site is used for recreation and conservation	Undetermined	Used for recreation and conseration
46	2/1647 Pniel	Vacant	Agriculture Zone 1?	Slope gradient (16 – 20°) too steep for proposed development. Extension will nog go as far as portion 2.
47	4/941 Simondium	Cemetery & Housing (Ownership: Mun Drakenstein)		Existing Cemetery competing with Squatters. In neighbouring municipality but well located.
48	Farm 2/81, Stellenbosch Kayamandi	Vacant (Ownership: Mun Stellenbosch)	Local Authority	Earmarked for development of road network.
49	Farm 181 Stellenbosch, Kayamandi	Housing & Vacant land (Ownership: Mun Stellenbosch)	Agricultural Zone 1	Slope and proximity to housing.
50	Farm RE/33/175 Stellenbosch, Kayamandi	Housing & Vacant land (Ownership: Mun Stellenbosch)		Proximity to housing and development.
51	202 Wemmershoek (check topo)	Cemetery & Vacant	Open Space Zone II	Water course forms western boundary of property and the area is reflected as home to a critical biodiversity area. ' This cemetery can expand eastwards, but as a site opposite

				Wemmershoek is identified for a regional cemetery, the expansion is not required.
52	23/747 Wiesenhof	Tourism Facility & Cemetery (Ownership: Sieghard Gustav Kulenkampff)	Agriculture 1 & Open Space II (2530m ²)	The use of the land and the ownership differ. The only way forward would be to purchase the land.

5.2 Sites for investigation that has been approved by Council

Proceed with applications for extension of cemeteries or new smaller sites on sites owned and approved by Municipality of Stellenbosch.

Extension	Town/ Settlement	Property owned by SM	Approved by Council
	Franschhoek	Erf 739	No
	Kylemore	Erf 36	No
	Pniel	RE 9/1173 & RE1/1176	No
	Stellenbosch	Farms 183	Approved;



LEGEND

- fully occupied sites
- sites not considered
- cemetery extensions
- new cemetery sites

Proceed with applications for regional cemeteries on sites owned and approved by Municipality of Stellenbosch.

Regional Cemetery. Municipal Land	Town/ Settlement	Property owned by SM	Approved by Council
	Jamestown	RE/502	Approved
	Koelenhof	Farm 29	Not approved
	Wemmershoek	RE/1/1024	Approved

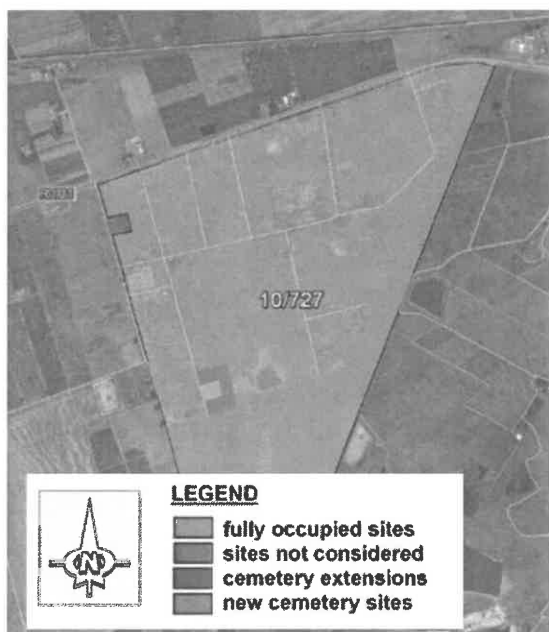


LEGEND

- fully occupied sites
- sites not considered
- cemetery extensions
- new cemetery sites

Agree to proceed with application for extension of cemeteries or new smaller sites owned by the state and approved by Stellenbosch Municipality.

Extension	Town/ Settlement	Property owned by State	Approved by Council
	De Novo	RE 10/727	Approved
	La Motte	RE/1339	Approved RE1/1339



Agree to proceed with application for regional cemeteries owned by the state and approved by Stellenbosch Municipality.

Regional on land owned by the State	Town/ Settlement	Property owned by State	Approved by Council
	De Novo	RE 10/727	Approved
	Meerlust	'Farm 1/1006	No

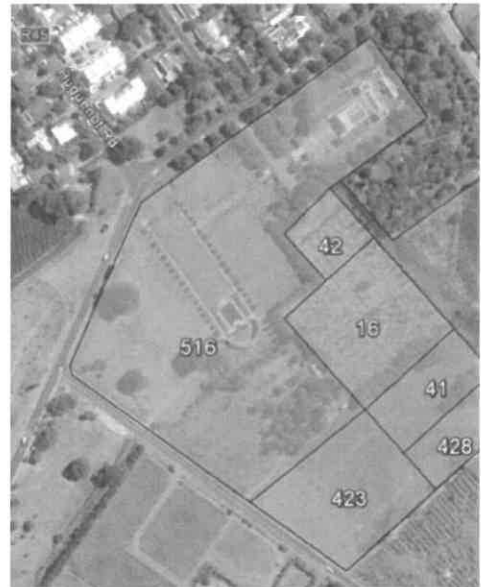


LEGEND

- fully occupied sites
- sites not considered
- cemetery extensions
- new cemetery sites

Sites on private land that could be investigated and serve as alternatives for extensions and are approved by Stellenbosch Municipality, are:

Extensions	Town/ Settlement	Property owned privately	Approved by Council
	Le Roux, Franschhoek	RE/3666 Dennegeur	Approved
	Franschhoek	Erven 516	No
	Languedoc	RE 13/1674	No
	Klapmuts	Farm 40/748	Approved



LEGEND

- fully occupied sites
- sites not considered
- cemetery extensions
- new cemetery sites

Sites on private land that could be investigated and serve as alternatives for regional cemeteries and are approved by Stellenbosch Municipality are:

Regional on land owned by privately	Town/ Settlement	Property owned privately	Approved by Council
	Jamestown	Farms 1166	Approved
	Lyndoch	RE 1/619	Approved
	Klapmuts	Farm 40/748	Approved



LEGEND

- fully occupied sites
- sites not considered
- cemetery extensions
- new cemetery sites

To proceed with the investigation, regional sites should be investigated and ground truthed to confirm suitability.

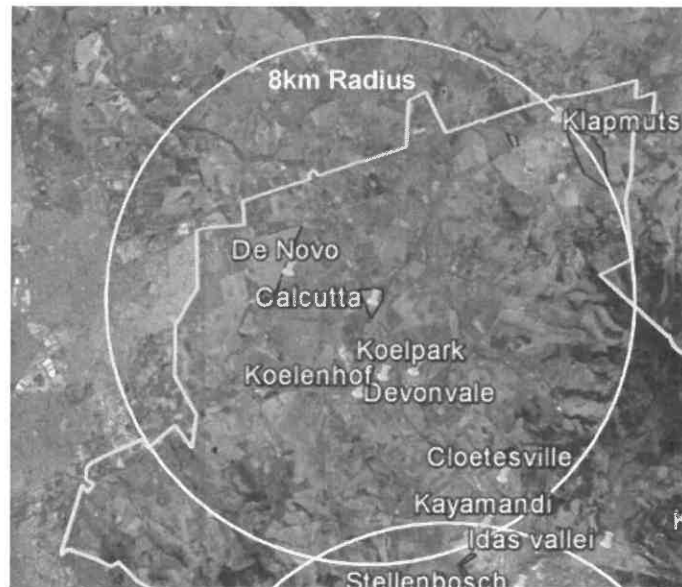
A strategy or strategies should be researched to consider the reuse/ alternative use of full cemeteries.

5.3 Sites for regional cemeteries

The following three regions were identified and sites per region are listed according to priority.

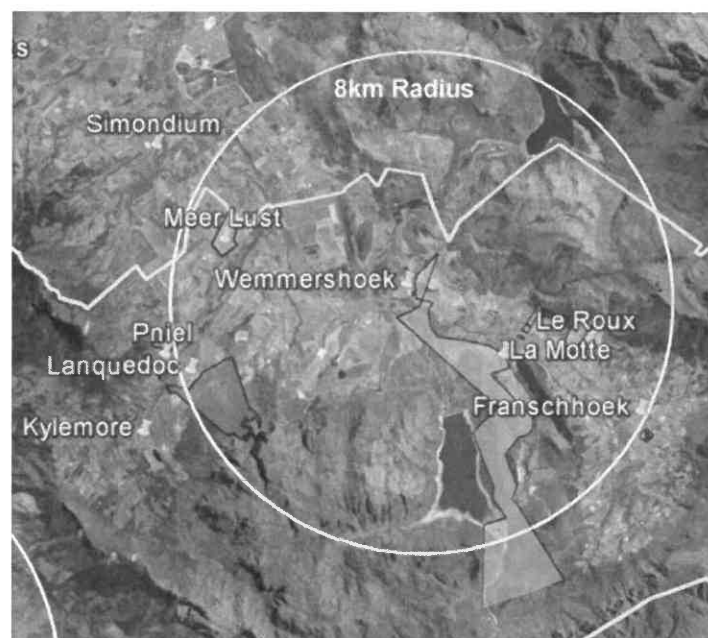
Region 1: Northern Stellenbosch

Priority	Town/ Settlement	Property	Ownership	Approved by Council
1	De Novo	RE 10/727	State	Approved
2	Klapmuts	Farm 40/748	Private	Approved
3	Koelenhof	Farm 29	Stellenbosch Municipality	No



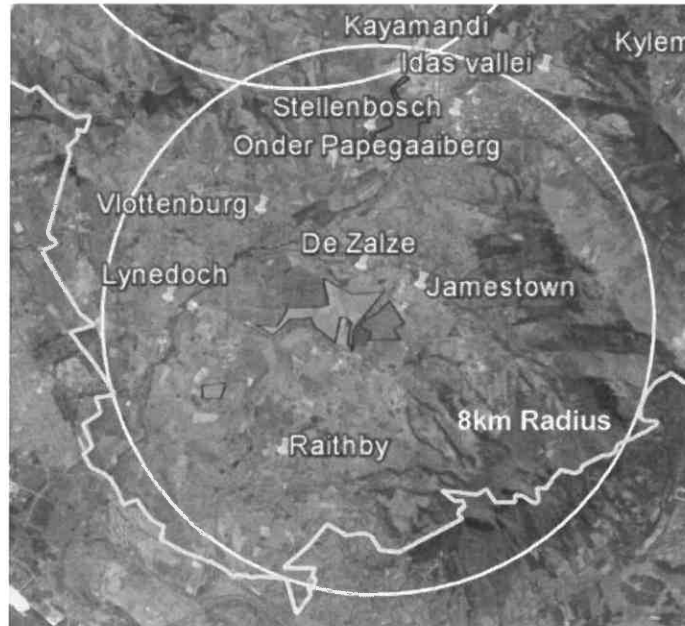
Region 2: Eastern Stellenbosch (Franshoek Valley)

Priority	Town/ Settlement	Property	Ownership	Approved by Council
1	Meerlust	Farm 1/1006	State	No
2	Wemmershoek	RE/1/1024	Stellenbosch Municipality	Approved



Region 3: South Stellenbosch

Priority	Town/ Settlement	Property	Ownership	Approved by Council
1	Jamestown	RE/502	Stellenbosch Municipality	Approved,
2	Lyndoch	RE 1/619	Private	Approved



5.4 Recommendations

Stellenbosch Council to approve the following sites to be investigated as regional cemetery sites in addition to the sites approved as per Council Meeting of 25 February 2015.

Town/ Settlement	Property	Ownership
Koelenhof	Farm 29, Region North	Stellenbosch Municipality
Meerlust	'Farm 1/1006, Region East	State

Stellenbosch Council to approve the following cemetery extensions in addition to the sites approved as per Council Meeting of 25 February 2015.

Town/ Settlement	Property	Ownership
Franschhoek	Erf 739	Stellenbosch Municipality
Kylemore	Erf 36	Stellenbosch Municipality
Pniel	RE 9/1173 & RE1/1176	Stellenbosch Municipality
Franschhoek	Erven 516	Private
Langedoc	RE 13/1674	Private

6. Project Status

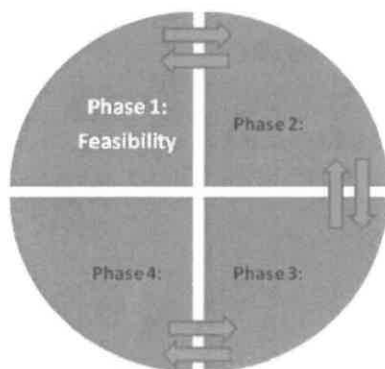
The following Phase 1 (Set up and Feasibility) activities were completed:

Activity 1: Professional team (as per tender document) confirmed.

Activity 2: Representatives of professional team to meet with relevant officials to discuss assignment and outcomes

Activity 3: Project plan was refined.

Activity 4: Sites were visited and possible regional sites were identified



Activity 5: A preliminary analysis (desktop feasibility) for existing and possible sites considering qualifying factors i.e. location, surrounding land uses, accessibility and capacity were conducted.

Activity 6: Opportunities and constraints were identified. Recommendations were made.

Identify opportunities, constraints & make recommendations informed by Dennis Moss 2006 feasibility study and based on:

<p>a. Geotechnical & geohydrological information</p> <ul style="list-style-type: none"> • Conditions of the soil, bedrock, groundwater, surface water and drainage (aquatic aspects, water resources, crossings of water ways and flood lines) and topography (i.e. detect any services crossing the area, physical features like rocks, wetlands, existing structures, steep slopes). • Soil excavatability, permeability including safe distance to domestic water source, soil type and predicted permeability ranges, safe distance to drainage features, site drainage, site topography in particular gradient, basal buffer zone (between source of pollution and water table), grave stability (sides and verges) and soil workability. 	<p>Preliminary for some sites and completed for others</p>
<p>b. Services connections and options (i.e. water, sewerage, electricity, roads and storm water and costs estimates and designs. Obtain confirmation letters.)</p>	<p>Completed</p>
<p>c. Anticipated Waste and volume thereof (incl. preliminary costing).</p>	<p>To do</p>
<p>d. Access, traffic, transport infrastructure & modes of transport. (Trips to be generated, traffic direction, points of congestion and public transport services inclusive of needs.</p>	<p>Completed</p>
<p>e. Environmental constraints including natural vegetation and issues.</p>	<p>Completed</p>
<p>f. Heritage aspects and constraints.</p>	<p>Completed</p>
<p>g. Policy Alignment with IDP and SDF</p>	<p>Completed</p>
<p>h. Land use, ownership (title deeds), real rights (diagrams) i.e. servitudes incl. services, usufructs, leases or any other restrictive title conditions (including for adjacent & surrounding properties)</p>	<p>Completed</p>
<p>i. Location & capacity, legal, social & financial aspects and context.</p>	<p>Completed</p>

Activity 7: A final report was compiled outlining cemeteries that

a. cannot expand (& capacity)

- b. can expand 2 500m² or less
- c. can expand beyond 2 500m²
- d. Can be established as regional cemeteries (±30ha).

Activity 8: A regional scan and preliminary identifying alternative sites for regional cemeteries other than identified sites were conducted

7. Way Forward: Activities to Follow, Phase 2 and 3

Activity 9: Compile a cost benefit analysis. (Cost internal and external services, cemetery development including obtaining rights and analyse social and economic impact).

Activity 10: Obtain power of attorney and mandate to develop land and to negotiate for land not approved as yet. See point 5.2 of this report for Recommendations.

On completion of Activity 10, Phase 2 and 3 can start.

This report must be read in conjunction with the report as per Reference List.

List of References

Dennis Moss Partnership Inc. October 2006: *Cemetery Feasibility Study, October 2006*

Dennis Moss Partnership Inc. February 2005: *Municipal Land Management Policy Framework, February 2005.*

Dennis Moss Partnership Inc. *Papagaaiberg Spatial Development Plan, October 2006, For Stellenbosch Municipality*

Dirk Hatting and Associates. *June 2003: Strategic analyses: municipal apartment buildings known as Aurora, Lavanda and Phylaria situated in the wc24 municipal area (24 June 2003) (IDP 2002 – 2006, working document for Piet Smit).*

Municipality of Stellenbosch: *Appendix 2: draft by-law relating to the management and administration of Stellenbosch municipality's immovable property*

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TDA
CAPE TOWN

*The City of Cape Town's Transport
and Urban Development Authority*

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12 November 2018

EnviroAfrica CC,
P. O. Box 5367
Helderberg
7135

Attention: Mr. Emile Esquire [via e-mail: emile@enviroafrica.co.za]

Dear Sir

ERF 73, KLIPHEUWEL: PROPOSED DEVELOPMENT OF A 25M HIGH TELECOMMUNICATIONS MAST AND BASE STATION APPLICATION – PRE-APPLICATION BASIC ASSESSMENT REPORT

The abovementioned Report, dated September 2018, refers. The following technical comment is provided:

1. CITY HEALTH: Environmental Health Department

- 1.1 The base station infrastructure (or any future combination of such infrastructures) shall not at any time cause the public to be exposed to RF levels that exceed the ICNIRP public exposure guideline.
- 1.2 The projected RF exposure levels within the area to which the public has reasonable access to, must be determined and certified by a qualified person and supplied to Council's Director Health Services, prior to the erection of the cell mast infrastructure. Such qualified person must provide a certified statement that the projected RF exposure levels are within the ICNIRP public exposure guidelines.
- 1.3 Appropriate steps must be taken by the applicant, to the satisfaction of Council, to ensure that:
 - 1.3.1 The public exclusion zone is determined by a qualified person and forwarded to Council prior to the erection of the infrastructure. Such exclusion zone must thereafter be adequately sign posted with the appropriate health warning signs in accordance with international best practice.
 - 1.3.2 Access control measures must be implemented to ensure that unauthorized persons do not gain access to the public exclusion zone.
- 1.4 Regular measurements are taken to ensure that the cell base station and related infrastructure meet the ICNIRP public exposure guidelines. Such measurements are to be at the cost of the applicant and made available to the Executive Director Health Services.
- 1.5 In the event of such measurements showing that the ICNIRP public exposure guidelines are being exceeded, Council reserves the right to withdraw the LUPO and NBR permission and

cause the cellular telecommunication infrastructure to be decommissioned at the cost of the applicant.

- 1.6 Health standards are to be reviewed periodically based on ongoing scientific research, the applicant will be required to decommission (including site rehabilitation) or upgrade any communication structure that does not meet the most recently published health standards of the World Health Organisation, the International Committee on Non-Ionising Radiation Protection (which have been adopted by the National Department of Health) and the Independent Communication Authority of South Africa.
- 1.7 Should the Health Department determine that the current limits of the electromagnetic radiation pose a significant health risk, decommissioning shall be required and the site be rehabilitated to the satisfaction of this Department.
- 1.8 The City of Cape Town Cellular Telecommunication Infrastructure Policy is to be complied with.
- 1.9 Numerical simulations of predicted RF EME levels must be submitted to City Health's Senior Mechanical Engineer, for verification and assessment, prior to approval of the site. This Department may request further information or verification from the applicant, which may include numerical simulations of predicted RF EME levels done by an independent certified institution. These readings must be submitted with reference to compliance with the latest public exposure limits, i.e. what percentage it is of the ICNIRP guidelines.

2. SPECIALISED ENVIRONMENTAL HEALTH: Mechanical Engineering - Noise Division

- 2.1 All antenna and ancillary on the mast are to be clearly indicated on the plans, including the exact position of each antenna and ancillary. This must be done for the short term, medium term, and long term planning. Any deviations from this plan needs to be cleared with the City of Cape Town prior to any installations/augmentations have been made.
- 2.2 The tilt angle of each transponder is to be provided.
- 2.3 The distance in metres from the bottom lip of the lowest transponder to the final ground level is to be provided.
- 2.4 At the 50m public exclusion zone band of 5m, the height safety factor above the head level of a man that is 2m in length or walking in that area at that range is to be depicted graphically.
- 2.5 All geometric sketches including all angles and distances to scale are to be provided.
- 2.6 It is questioned if any stand-by generators will be installed. If so, what noise mitigating measures will be put in place.
- 2.7 No aviation lights are indicated on the plans. Two aviation lights are to be installed on the proposed mast and indicated on the plans.

3. TRANSPORT DEVELOPMENT AUTHORITY (TDA): Development Management Department

- 3.1 The submission and approval of a consent use application to permit the freestanding base telecommunication station is required once the necessary Record of Decisions have been received from the competent authorities, Heritage Western Cape and Department of Environmental Affairs and Development Planning.

4. TRANSPORT DEVELOPMENT AUTHORITY (TDA): Environmental Management Department

Pre-App BAR

- 4.1 Page 6 of the Pre-App BAR under the Site Description section it erroneously states that the proposed 25m high telecommunication mast and base station will be located on Erf 72 Klipheuwel. This must be corrected.
- 4.2 Page 7 of the Pre-App BAR under the Site Description section indicates the mast proposed will be a tree mast. The report does not indicate the type of tree this mast design will be e.g. palm tree, Norfolk pine, etc. This disguised type must be provided.
- 4.3 The EMP is not supported in its current format. Many inconsistencies and information not pertaining to the subject erf is evident. The following sections requires amendment:
 - 4.3.1 Project description
 - 4.3.2 Access
 - 4.3.3 Receiving environment

Heritage

- 4.4 The NID submission and HWC response to the NID submission is noted. The NID submission, the HWC response letter and the heritage screener refers to Erf 72 and the application is applicable to Erf 73. The EAP must please follow up and confirm with HWC if a revised letter from them is required in this regard.



- 4.5 It is noted that the heritage screener document focusses mostly on heritage resources related to archaeology. The NID submission did not reflect the site in relation to the Agter Paarl/Paardeberg cultural landscape, Klipheuwel Radio Station or the Koeberg/Swartland Farms Cultural Landscape within the larger landscape.

The above comments and requirements raised by the City of Cape Town are to be addressed in the Draft Basic Assessment Report.

Pat Thum

Regional Manager: Environmental & Heritage Management – Northern Region