

Developing a Culture of Urban Forestry Management in SA

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Urban Forestry

Think of the trees and forests in your vicinity, close to where you live, with which you have a close connection.... Trees or groups of trees that you take the dog for a walk under, or trees or forests you drive past on your way to work. Now take a look at these trees:



Stone Pines in Cape Town



Hypothesis of Biophelia

Imagine the trees in your mind's eye
and these on the screen have been
earmarked for felling!?



Urban Forestry

Some Important Questions?

- What is Urban Forestry and Arboriculture?
- Why do we need it?
- Don't trees just grow naturally?
- Why is an Urban Forestry Management Plan-UFMP - needed and why should we care?
- How are trees and forests in urban areas managed currently?



Comparison of Stellenbosch Urban Forest – Socio-economically



Urban Forestry

The natural environment making a contribution to the cultural in farming.

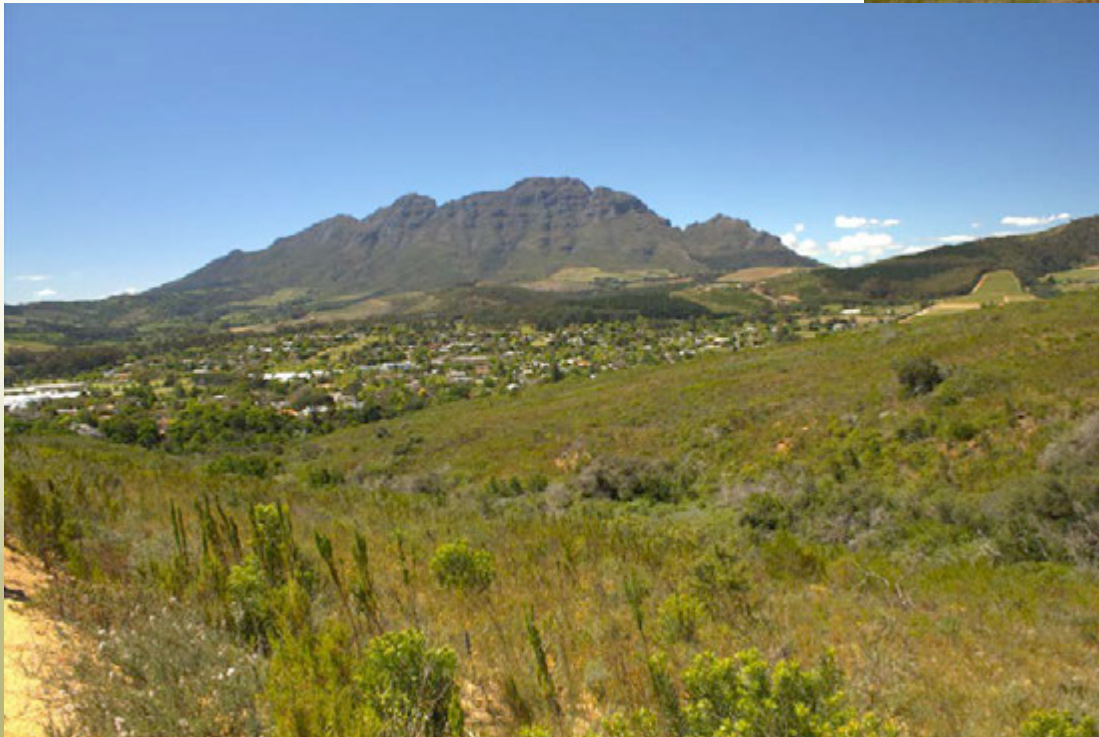


And no connection



Urban Forestry

Importance of natural vegetation – the struggle for survival and re-connecting.



Forest Breathing



Geographic Tree Inventory Management System

What Is GTIMS?

GTIMS is a Geographic Tree Inventory Management System, designed to give custodians of trees a tool with which to understand, manage, plan, and budget, the efficient maintenance and expansion of the arboricultural asset under their control.



Geographic Tree Inventory Management System

GTIMS Elements

- Inventory Attributes
- Static High Resolution Imagery
- Inventory Data File
- Data Selection Based on Attribute Priority
- Data Statistics
- Interactive GTIMS Map
 - Query Function
 - Create Job Cards
 - Maintain Budget and Work Completed



Geographic Tree Inventory Management System

Inventory Attributes (Typical)

- Biological Name
- Common Name
- Age Class
- Height Class
- DBH
- Tree Condition
- Tree Significance
- Tree Structure
- Suggested Next Inspection
- Risk Probability
- Risk Consequence
- Risk Target Size
- Total Risk
- Work to be Done
- Estimated Cost of Work to be Done



Geographic Tree Inventory Management System

High Resolution Static Images



Geographic Tree Inventory Management System

Data Selection based on Attribute Priority

Risk 9													
Area 1	289	Quercus Robur	English oak	Crown Restoration					3	2850	High	Branches	9
Area 1	290	Quercus Robur	English oak	Crown Restoration					1	950	High	Branches	9
Area 1	294	Pinus pinea	Stone pine	Crown Cleaning	Crown Thinning	Hazard Reduction			3	2850	High	Branches	9
Area 1	295	Quercus Robur	English oak	Tree Felling					2	1900	High	Branches	Stem 9
Area 1	296	Quercus Robur	English oak	Crown Cleaning	Crown Thinning				2	1900	Medium	Branches	9
Area 1	301	Populus canescens	Grey poplar	Crown Cleaning	Crown Thinning	Balance And Shape			1	950	High	Branches	Stem 9
Area 1	302	Populus canescens	Grey poplar	Crown Cleaning	Crown Thinning	Balance And Shape			1	950	High	Branches	Stem 9
Area 1	310	Populus canescens	Grey poplar	Crown Cleaning	Crown Thinning	Balance And Shape			1	950	High	Branches	9
Area 1	311	Populus canescens	Grey poplar	Crown Cleaning	Crown Thinning	Balance And Shape			1	950	High	Branches	9
Area 1	312	Quercus Robur	English oak	Crown Cleaning	Crown Thinning	Crown Restoration			4	3800	High	Branches	9
Area 1	313	Quercus Robur	English oak	Crown Restoration					2	1900	High	Branches	9
Area 1	316	Pinus pinea	Stone pine	Crown Cleaning	Crown Thinning				2	1900	Medium	Branches	9
Area 1	339	Populus canescens	Grey poplar	Crown Cleaning	Crown Thinning				2	1900	High	Branches	9
Area 1	341	Quercus nigra	Water oak	Crown Cleaning	Crown Thinning				1	950	Low	Branches	9
Area 1	885	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	889	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	894	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	895	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	906	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	908	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	911	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	Scaffold Branches 9
Area 1	919	Quercus Robur	English oak	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape	Crown Restoration	2	1900	High	Branches	9
Area 1	921	Quercus Robur	English oak	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		2	1900	High	Branches	9
Area 1	922	Quercus Robur	English oak	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape	Crown Restoration	3	2850	High	Branches	Stem 9
Area 1	931	Quercus Robur	English oak	Crown Cleaning	Crown Thinning	Balance And Shape			2	1900	High	Branches	9
Area 1	964	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	969	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	981	Populus Alba	White poplar	Crown Cleaning	Crown Thinning	Hazard Reduction	Balance And Shape		1	950	High	Branches	9
Area 1	985	Quercus Robur	English oak	Hazard Reduction	Crown Restoration				3	2850	High	Branches	9
Area 1	994	Erythrina caffra	Coral tree	Crown Cleaning	Crown Thinning				1	950	High	Branches	Stem 9
Area 1	996	Populus deltoides	Match poplar	Crown Cleaning	Crown Thinning				2	1900	High	Branches	9
Area 1	997	Populus deltoides	Match poplar	Crown Cleaning	Crown Thinning				2	1900	High	Stem	9
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Attribute = Trees with a “Total Risk” of 9



Geographic Tree Inventory Management System

GTIMS Current Applications

- Management of 400 trees or more
- Reporting on specific groups of trees. (ie. Historical or Cultural trees.)
- Arborist reporting in preparation for planning urban and perri-urban development permission
- GTIMS can be integrated with other Geographical Information Systems (GIS)





There is nothing in the human endeavor which comes close to the contribution, elegance, and efficiency, of a resilient robust urban forest.

