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DRAKENSTEIN MUNICIPALITY



TREE MANAGEMENT POLICY

APRIL 2009

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1. PURPOSE

The purpose of this policy is to ensure uniformity regarding tree management within Drakenstein.

Currently there is no policy regarding the management of street trees within Drakenstein. This results that ad hoc decisions are taken and that there is no uniform set of standards that apply.

Drakenstein is blessed with an abundance of street trees which enhance the urban environment. Trees moderate noise pollution, dust and other airborne pollutants. They provide shelter and food for wildlife. The aesthetic value of trees is very important. It is necessary to protect and manage these valuable assets and their habitat in order to protect the health, safety and welfare of the residents of Drakenstein.

2. SCOPE

It is predicted that urban greening will steadily rise up the political agenda in the City of Cape Town as politicians attempt to find ways to address two sets of issues: general urban deterioration and the urban environmental crisis. At the moment these issues are not priority on the political agenda - other basic needs are paramount. As these basic needs are addressed, urban greening will become more of a priority.

Various tree species have different growth characteristics i.e. shape, growth rate, size when full grown, wind and drought resistance, vigorous and aggressive root systems, deciduous or evergreen, flower and / or fruit bearing, etc. these characteristics must be kept in mind when tree species are selected for planting in residential areas and it is therefore necessary that species lists are prepared for different areas according to local weather and other conditions. It is necessary to compile a tree policy to address and give guidelines regarding our street trees.

There is a lack of awareness regarding the benefits to beautify areas. Programs to promote tree planting in such areas in such areas must be introduced.

3. UNDERLYING PRINCIPLES / INFLUENCING FACTORS

3.1 Legislation

Local authorities have no power to pass legislation to protect trees on private properties and representation would have to be made to Central Government to pass such legislation. The Council may nevertheless stipulate as a condition of approval when applications for rezoning or subdivision are received, that a landscape plan (*including tree planting and care of existing trees*) be included with ant development plan. This will exclude properties for single residential use.

The following legislation governs this Tree Policy:

3.1.1 The Constitution of the Republic of South Africa, 1996 Chapter 2: Bill of Rights

Everyone has the right:

a. To an environment that is not harmful to their health or well being;

and

b. To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -

- i) prevent pollution and ecological degradation;
- ii) promote conservation; and
- iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

3.1.2 Water Services Act, 1997 (Act No 108 of 1997)

One of the main objectives of this Act is the promotion effective water resource management and conservation. It is therefor important to promote the planning of indigenous and other drought tolerant plants to ensure the optimum use of our limited water resources.

3.1.3 Environmental Conservation Act, 1989 (Act No 73 of 1989)

Section 21 in Part V of this act, provision is made whereby the minister may identify activities which may have a detrimental effect on the environment. Tree planting may be identified as such an activity that may not be undertaken in a particular area.

3.1.4 Forest Act 1998 (Act No 84 of 1998)

This Act makes provision under section 5 of the Forest Act 72 of 1968 in force by section 89 (4) of Act 122 of 1984 for the declaration of a particular tree or group of trees belonging to a to a particular species on any land, to be protected. Maintenance of protected trees on public land is also subject to the necessary approval from the Minister of Water Affairs and Forestry prior to implementation.

3.1.5 Conservation of Agricultural Resource Act, 1983 (Act No 43 of 1983)

Under section 29 regulations were made in which certain plants were categorized as:

- | | |
|------------|--|
| Category 1 | - Plants declared as weeds - may not occur on any land. |
| Category 2 | - Plants declared as invaders - may be cultivated and planted under controlled circumstances. |
| Category 3 | - Plants declared as invaders - plants already in existence at the time of commencement of these regulations may be retained but may not be propagated or planted. |

3.1.6 National Environmental Management Act, 1998 (Act No 107 of 1998)

Section 2 of this Act sets out principles that needs to be considered prior to tree planting projects. This includes the avoidance of the disturbance of ecosystems and loss of biological diversity, and that people and their needs must be placed at the forefront of Environmental Managements' concern.

Section 24. The potential impact of any activities on the environment, the socio-economic conditions and the cultural heritage, must be considered, investigated and assessed prior to implementation.

3.1.7 Land Use Planning Ordinance (No 15) of 1985

In terms of this Ordinance, Section 108 of the zoning scheme specifically protects trees and hedges in declared conservation (heritage) areas.

4. POLICY STATEMENT

The greening of Drakenstein through sound tree management (Arboriculture) practices.

5. POLICY OBJECTIVES AND BENEFITS

1. To manage the street trees in Drakenstein on a simple, but sufficient way to order to secure our street trees for the generations to come.
2. To regulate the protection, planting and removal of street trees in Drakenstein.
3. Encourage the proper protection and maintenance of all existing trees.
4. Promote the prevention of removal of trees on private land.
5. Establish a Tree Evaluation Formula for the loss of existing trees.
6. To maintain a set standard for the managing of street trees in Drakenstein.
7. To promote the planting of indigenous and other drought resistant plants.
8. To promote tourism by beautifying scenic routes and thoroughfares to and in the city by the planting of trees.
9. To promote investment by upgrading / improving the aesthetics of the city's industrial areas by tree planting.
10. To ensure an integrated city wide approach regarding planting, maintenance and removal of trees, according to sound arboricultural practices.
11. To contribute to crime prevention by introducing tree maintenance programs in order to control vegetative overgrowth on public land and parks.
12. To ensure an integrated approach regarding planning of new suburbs and housing projects.
13. To promote the planting of trees through the active involvement of Parks Section in the annual Arbor Week programs.
14. To promote greening and maximize tree planting in Drakenstein. This is to ensure urban greening which has evolved from Miller's (1988) definition of urban forestry to mean:

“An integrated, city-wide approach to the planting, care and management of all

vegetation in a city to secure multiple environmental and social benefits for urban dwellers.”

These benefits include the following:

- 14.1 Material benefits
 - a. Food and fruit
 - b. Medicine
- 14.2 Environmental benefits
 - a. Climate amelioration
 - b. Flood control
 - c. Erosion control
 - d. Air pollution control
 - e. Energy conservation
 - f. Noise pollution
 - g. Land reclamation
 - h. Wildlife and bio-adversity
- 14.3 Amenity benefits
 - a. Recreation
 - b. Aesthetics
 - c. Education
 - d. Health and well-being
 - e. Cultural and religious rituals
- 14.4 Economical benefit
 - a. Tourism
 - b. Property Value Edition.
 - c. Asset building.

14.5 Financial Resources

Public demand for tree planting in residential areas differs from area to area and whilst tree planting should be encouraged and promoted, Council will only be able to provide and plant trees within its financial ability.

14.6 Implementation Framework

To ensure the proper implementation of the Tree Policy , Head of Department of Social Services: is to develop operational guidelines and procedures for all aspects addressed in the policy. An implementation

framework is needed to ensure aspects such as the referral of development applications are in fact followed.

14.7 Monitoring and measurement considerations

These must be in place to ensure that the Policy is being implemented in the prescribed manner and that it is achieving the desired goal. Head of Department of Social Services is to report yearly to council on the progress made in this regard.

6. IMPLEMENTATION

6.1 Tree Planting

Parks sections plants trees on public land either at the initiative of it's own staff or at the request of residents and business community. The planting of trees in the towns must be promoted by the implementation of sustained planting programs with community participation.

Preference is given to the planting of indigenous trees depending on local conditions. This does not exclude the use of exotic species provided that they are non-invasive and are more suited to local conditions.

Species selected is of utmost importance in order to eliminate problems associate with the growth characteristics of certain tree species, for example damage resulting from aggressive roots systems and excessive height that might obstruct the view.

The Directorate of Social Services will determine the number of trees to be planted annually to link up with the RDP.

- a. Categories of planting are:
 - i) New plantings watered and cared for by Parks Section (includes internally planned as well as requests).
 - ii) Replacement of existing trees (blankings).
- b. Way leaves

Once the site has been inspected, way leaves of other relevant functionaries have been obtained and it has been established that the tree planting is possible, the selection of a tree species will be influenced by the following factors:

- i) Existing species present and are they successful?
- ii) The presence / absence of overhead and underground services.
- iii) Width of pavement.
- iv) Growth characteristics of tree species that could cause danger to people or property.

6.1.1 General Guidelines

- 6.1.1.1 Trees are planted on sidewalks in liaison with other services department.

Applications for individual tree planting on sidewalks must be in writing and addressed to the Directorate of Social Services with the applicable delegation of power. In the event of the applicant not being able to read and/or write, provision must be made for such applications to be presented verbally at the local or regional office/depot.

Residents requesting individual tree planting must undertake to water the tree until it becomes established.

- 6.1.1.2 Individual and replacement planting will be carried out when requested and required.
- 6.1.1.3 Trees are to be planted allowing unabsorbed pedestrian flow.
- 6.1.1.4 No trees to be planted where prohibited by services, gas, electricity, Telkom lines, etc.
- 6.1.1.5 No planting to be undertaken which would impair visibility or create a traffic hazard.
- 6.1.1.6 No planting of trees should be considered:
 - a. close to driveway or road intersection where it is likely to impair

sight lines of motorists, cyclists or pedestrians;

- b. where it will obstruct sight lines to traffic signs, signals or direction signs;
- c. where pedestrian paths will be obstructed in such a way to cause people to walk in the street, or which makes passage by wheelchairs or push carts difficult.

- 6.1.1.7 To prevent root damage to underground services, or hardened surfaces, walls control systems may be introduced to redirect roots from the protected areas.
- 6.1.1.8 No planting to be undertaken that will interfere with any electrical stay supports. Existing street lights/lighting to be taken into consideration whilst planting is undertaken to ensure public safety.
- 6.1.1.9 No private planting on Council owned land permitted without prior consultation with the relevant Parks Manager with the applicable delegation of power in the Social Services Directorate.
- 6.1.1.10 Planting distance between the tree will depend on the species selected and services encountered.
- 6.1.1.11 Existing trees identified to be unsuitable due to various problems, may be removed and replanted with suitable species. The replacement trees must be the same size as the one removed.
- 6.1.1.12 On pavements not wide enough to accommodate trees, consideration of a tree donation for adjacent private gardens will be given.
- 6.1.1.13 On requests from schools and Community Greening Projects, trees may be donated depending on stock available in the municipal nursery.
- 6.1.1.14 The regulations under section 29 of the Conservation of Agricultural Resources Act 1983 (Act No 43 of 1983) will be adhered to, i.e. Plants declared as weeds may not at all be

planted, while others that have been declared as invaders, must be controlled.

- 6.1.1.15 Trees with poisonous fruits and leaves or fruit that stains should not be planted.
- 6.1.1.16 The Parks Section will plant sidewalks with street trees in accordance with its tree planting program during the months of August, September and October.
- 6.1.1.17 The Parks Section will strive to the target of 1000 trees per annum, depending on resources available.
- 6.1.1.18 Individual and replacement trees planting will be carried out upon written application by residence by the Directorate: Social Services.
- 6.1.1.19 Residence requesting individual tree planting must undertake to water the trees until it becomes established (normally three years).
- 6.1.1.20 Trees will only be planted if they do not obstruct the pedestrian walk.
- 6.1.1.21 No private tree planting on Council property is permitted without prior consent of the Town Engineer and if the Head of Parks and Recreation determine the type to ensure uniformity.
- 6.1.1.22 Planting distance between trees will depend on the species selected and existing services.
- 6.1.1.23 Choice of tree species is at the discretion of the Head of Parks and Recreation. (See appendix 1 for recommended species for Drakenstein) and will be restricted to varieties known to be suited to the local conditions and that will enhance the beauty and variety of the landscape of Drakenstein.
- 6.1.1.24 New trees will not be planted under the following conditions:
 - a. If they interfere with existing services i.e. electricity, street lights, waterlines, sewage.
 - b. Within 10 metres of an intersection.
 - c. Within 3 metres of an existing driveway.
 - d. If the sidewalk is less than 2.5 metres wide
 - e. If the tree is a noxious weed or by the nature of its root

- system, form, fruit, etc. is deemed to be undesirable.
- f. If the pavement is not stabilized.
 - g. If there is any overhead wires. (If the wires is high enough, a suitable tree may be planted.
 - h. If there is already a tree on the property that will interfere at a later stage.
- 6.1.1.25 When deciding on if new trees must be planted, other trees close by for example on river plots will be taken in consideration.
- 6.1.1.26 Trees planted on a pavement by a member of the public, shall become property of the Council.

6.2 Pruning of trees

Pruning will be undertaken if:

6.2.1 Safety

- 1.1 Trees are causing an obstruction for pedestrians, traffic, street lights, roads and traffic signs, overhead power lines, etc.
- 1.2 Trees which are diseased or vandalized.
- 1.3 Trees which have been planted too close to one another or to existing buildings such that the tree cannot develop naturally.
- 1.4 Roots will be pruned if it causes a safety hazard for pedestrians, occupants, damaging walls, buildings and curbs.

6.2.2 Legal

- 2.1 A tree on the property line will be considered to be on Council property if 50% or more is on Council property.
- 2.2 A tree may be pruned if in the opinion of the Head of Parks and Recreation such a tree is dangerous, because the type is suitable in an urban environment, it has become very old and diseased, the nature or shallowness of the soil in which it is rooted is unsatisfactory for its height and weight (Local Government Ordinance 17 of 1939 and any subsequent amendments).

6.2.3 General

- 3.1 If the branches are overhanging the house.
- 3.2 If branches is an obstruction for vehicles (if it is not an aesthetical destruction of the tree form)
- 3.3 If pruning will expand the life span of the tree.
- 3.4 If diseases occur on certain parts of the tree.
- 3.5 If its berries cause a hazard to clothes, vehicles, etc.

Trees will **not** be pruned if:

- 1. The tree drops its leaves, flowers, seeds or pods in a garden.
- 2. Sunlight is limited by the tree.
- 3. It is too high according to the complaintive.
- 4. Obstructing views.

6.2.4 Methods and system of Pruning

- 4.1 Removal of basal branches, diseased or dead growth.
- 4.2 Raising of lower branches to promote pedestrian movement.
- 4.3 Pruning of roadside branches to accommodate traffic.
- 4.4 Removal of branches obstructing road and traffic signs, street lights, etc.
- 4.5 Pruning of branches of trees growing on private property that may be encroaching upon Council property.
- 4.6 Shaping of trees to accommodate overhead power lines.
- 4.7 Root pruning where roots are causing damage to sidewalks or road surfaces.
- 4.8 Reduction of height of trees will be undertaken if the option of the Head of Parks and Recreation the tree has become a danger.

6.3 Removal of Trees

No tree will be removed from Council property unless it is:

- 1. More than 75% dead or dying.
- 2. Diseased beyond recovery.
- 3. Causes a traffic hazard and pruning would not alleviate the problem.
- 4. Causes an electrical hazard and pruning would not alleviate the problem.
- 5. Causes damage to water-, sewage pipes and boreholes.

6. Necessary to accommodate road widening provided no alternative route is available.
7. A proclaimed noxious weed (Conservation of Agricultural Resources Act of 1983)
8. Trees may be removed to provide vehicle access to private property on condition that the homeowner pays the cost of the tree and that no alternative entrance is available (see tree evaluation policy).
9. A tree may be removed if in the opinion of the Head of Parks and Recreation such a tree is dangerous, because the type is unsuitable in an urban environment, it has become very old or diseased, the nature or shallowness of the soil in which it is rooted is unsatisfactory for its height and weight (Local Government Ordinance 17 of 1939 and any subsequent amendments).
10. Existing trees on Council property will be preserved to the extent that it is possible or feasible. If a tree has to be removed it will be replaced wherever possible.
11. Trees planted by residents that are considered to be unsuitable for the area or which interfere with any municipal or other services will be removed by the Council after notifying the resident concerned in writing. The Council reserves the right to charge for the removal of such tree at market related prices (see tree evaluation policy).
12. *Acacia mearnsii* (Black Wattle), *Acacia dealbata* (Silver Wattle) and *Acacia decurrens* (Green Wattle) will be removed where they occur on Council property and may become invasive.
13. Gum trees will be removed where they occur on Council property if in the opinion of the Head of Parks and Recreation the tree is likely to shed branches, become dangerous or become a nuisance.

6.4 Inspection of trees

Parks Section relies on the vigilance of the general public and officials throughout the municipality to report on the condition of any potentially hazardous trees within residential areas and along major routes.

Trees declared as a protected species in terms of Forest Act 1984 (Act No 122 of 1984), may not be pruned or removed without the permission from the Minister of Water Affairs and Forestry.

In order to prevent unnecessary damage to trees during construction work, other functionaries and utility companies should obtain a way leave from Parks Section prior to construction work when such work is to be carried

out in the close vicinity of trees.

Pruning or removal of all trees on municipal property will be done by Parks Section or its agents. Requests for pruning should be directed to Parks.

Pruning and removal of trees on private property or state owned land where these trees interfere with overhead or underground services is not the responsibility of Parks Section.

Trees removed on request of home owners or businesses for vehicle access are subject to the presentation of approved building plans. When a applicant request removal of a tree or trees for access purposes he/she will be liable for the cost of the removal as well as for the aesthetic costs as determined according to the formula in 6.2.2.2. (b) below.

6.5 Damage to Council - Owned Trees

- a. When damage to Council - owned trees is observed, the local horticultural personnel must decide whether to take action against the responsible party. Usually this will be to claim damages which might result in a criminal charge being laid.
- b. the following formula can be used as a guideline to ascertain the value of a tree. Seven factors are taken into account when calculating the aesthetic value of a tree, with each evaluation factor having four possible values. The appointed value of each factor is multiplied by the other and the accumulative product is multiplied by the inflation rate to provide overall established monetary value of the tree, i.e. factor a x b x c x d x e x f x g = total x 6 = R total. This formula is based on the British Tree Council formula, that is worldwide excepted by authorities.

Factors		Evaluation Factor Score			
		1	2	3	4
a	Size of tree - girth, height, width and trunk size	small 0-4 meters	medium 4-8 meters	large 8-16 meters	very large 16 meters+
b	Useful life expectancy	10-20 yrs	20-40 yrs	40-100 yrs	100 yrs+
c	Importance of position in landscape (location and function, cultural & historical value)	little	some	considerable	great
d	Presence of other trees, surrounds and aesthetics	many 10 or more	some 4-10	few 1-4	none
e	Relation to the setting, location, foliage, cover and aesthetics.	Barely suitable	Fairly suitable	Very suitable	Especially suitable
f	Form, shape, size, height, weight and look of tree	poor	fair	good	very good
g	Special factors - botanical value of species, growth rate, flowers, indigenous or exotic, evergreen, or deciduous,	none	one	two	three+

- c. the objective of this tree evaluation system is:
- i) to provide a disciplined and objective way of examining a tree by means of fixed criteria to assess its value merit in its environmental context. Such a method has wide application and affects management considerations, e.g. removal and planting.
 - ii) to provide arboriculture and other with a system for assessing a value when trees are accidentally mutilated, destroyed or requested to be removed.
 - iii) to provide planners with a means of including trees in their estimates with the same precision, objectivity and consistency that they apply to other aspects of landscape and engineering works.
- d. No tree located on public or Council land is to be removed unless it presents a threat to human life or property, or if the

tree has died. Exceptions being:

- i) trees classified as “declared weeds” in terms of the Conservation of Agriculture Resources Act, 1983 (Act 43 of 1983),
- ii) trees that are diseased beyond recovery,
- iii) trees causing a traffic, electrical or health hazard,
- iv) trees that interfere with essential services where no other suitable alternatives can be found,
- v) in accordance with a Council resolution,
- vi) on request of adjacent property owners for vehicle access, subject to the presentation of approved building plans, where no other alternative could be found . The applicant will be held liable for the cost of removal as well as for the aesthetic loss to the environment. The cost to be based upon the formula process for valuing a tree as set out in paragraph 6.2.2.2.
- vii) trees that was damaged during vehicle accidents.

6.6 Removal of Trees in Road Reserves

- i) All felling of trees will be carried out by Parks Section or its agents. The level to which a tree will be cut is however occasionally a subject for the dispute. Traditionally trees are cut leaving a stump proud in the ground where this could be done without hazard to the public or where the stump did not interfere with proposed road works.
- ii) To provide planners towards the additional protection of the environment.
- iii) To make the public aware of the value of the trees.

6.7 Trees on Private Property

6.7.1 Protection of Trees on Private Property

Apart from “protected trees” as declared under the Forest Act (Act No 122 of 1984), the only other instance where Council is able to protect trees on private property is when application are made to rezone private land, or where departures are requested in connection with planning conditions.

Parks Section decides on the retention of conservation-worthy trees. The most important criteria revolve around the impact the tree makes on landscape, species, size, health and vitality of the tree(s) and proposed site levels and prevailing wind conditions.

Officials of Parks Section assist with the conservation of trees protected in term of the Forest Act (Act 122 of 1984) by altering the Western Cape Nature Conservation Board to the impending destruction of trees specified by the Act.

6.7.2 Protection of Public From Privately Owned Trees

Generally the council does not have jurisdiction over trees planted on private property unless they threaten the safety of road users and/or the community at large. Should a tree(s) interfere with essential services a notice can be served in terms of the Municipality Ordinance 20 of 1974 compelling the owner to attend to the offending tree.

7. Recommended Street Trees for Drakenstein Municipality

Albizia adantifolia
Brabejum stellatifolium
Caodendron capensis
Cerotonia siliqua
Combretum kraussii
Erythrina caffra
Erythrina lysistemon
Grewilia robusta
Harpephyllum caffrum
Phoenix
Podocarpus species
Quercus species
Raufovia caffra
Rhus viminalis
Rhus lancea
Schotia brachypetala
Trichelia emitica
Nuxia floribunda
Platanus acerifolia
Ekerbergia capensis
Celtis africana
Betula alba
Olea europia
Syzygium cordatum
Acacia species
Cocus
Kiggelaria africana
Acer species
Tristiana ovata
Jacaranda mimosifolia
Cinamonum camphora
Koelreuteria paniculata
Wisteria frutescens
Sinus molle
Custanea species
Rapanea melanophloeos
Bauhinia species
Liquidamber styraciflua
Euginia species