



ZIMBALI COASTAL RESORT LANDSCAPING PROTOCOL

REVISION – JULY 2017

1. PRESENTATION OF LANDSCAPING PLANS TO THE ZEMA OFFICE

1.1 The layout and format required by ZEMA of the Landscaping Plan submitted for approval is as follows:

Each plan presented (per property) must be folded (not rolled) and placed into a single, A4, punched, clear plastic pocket.

On the bottom, right-hand corner of the plan, (i.e. to appear on the front face of the folded plan as presented in its plastic cover) please ensure the following details are clearly provided:

Landscaper's Details:

- Company name.
- Contact person name (Landscaper).
- Telephone contact numbers (land and cell).
- Fax number.
- Email address.

Property Owner / Applicant & Architect Details:

- Lot Number, including Portion number and Unit number (if applicable) of plan being submitted.
- Full names of Property Owner/Member.
- Physical address of Property/Lot.
- The architect's details.
- Signature of Owner and Architect.
- Block for ZEMA authorisation signature.

1.2 The Landscaping Plan must contain and reflect the following details and information:

- (a) A proposed bill of quantities to reflect:
 - Expected m² of the garden.
 - Plant names.
 - Bag sizes anticipated to be used.
 - Number of each plant to be used.
 - Expected m² of lawn.
 - Compost and fertiliser quantities to be used.
- (b) **All Plans must show the list of the plants that are proposed for the site.**
- (c) **A Key/Legend to reference the positioning of where these plants are on the plan.**
- (d) **The Date that your plan was drawn up.**
- (e) Storm-water control and berms.
- (f) Contours of the site to be clearly illustrated on the plan.
- (g) Footprint and building lines must be shown on the plan.
- (h) Planting densities of trees, shrubs and ground cover per individual residential site. The minimum spec for plant quantities is as follows:
 - Trees: 1/20 m². Trees are planted when the space between buildings allows for the use of large trees.
 - Plugs: 17/m² on a slope greater than 20° and 12/m² on a slope less than 20°.
 - 1ℓ & 2ℓ bags: 8/m².
 - 4ℓ bags: 5/m².
 - Shrubs: 1/m²

- (i) Shrubs and trees are to be under-planted with groundcover to stabilise the sandy soils until the planting reaches maturity. Also remember to cater for future views from the property. It is pointless to plant a tree that will need to be pruned after five to ten years' growth. Rather use a shrub in such position.
- (j) Compost must be added to the poor Berea Red Sands at a rate of 50 mm/m². Delivery notes must be supplied at time of inspection.
- (k) Granular fertiliser (or equivalent) at the rate of 100 g of 2:3:2(22) + Zn/m², plus 200 g Dolomitic lime/m². This rate will be applied to the area to be planted as garden and the calculation in square metres of this area will be undertaken by the architect on the site plan, so that the landscape contractor can then order the required granular fertiliser, Dolomitic lime and compost for the site. Delivery notes are to be supplied at time of the inspection. ZEMA and good horticultural practice requires that this compost be turned into the soil to a depth of 300 mm, using a garden fork. It would also be advisable to add in fertiliser in the form of 2:3:2 (22) at the rate of 100 g/m² and Dolomitic lime at the rate of 200 g/m² and turn in all three soil enhancers at the same time to save having to do the task twice.
- (l) A 6-month mandatory post installation, garden maintenance period must be submitted in writing to the ZEMA office by the landscaping contractor.
- (m) At the time of inspection on site, and on completion of the installation, the landscaper must provide a copy of:
 - The drawing;
 - The current bill of quantities used for the actual installation;
 - Delivery notes for the compost, fertiliser quantities and lime delivered to the site (if delivery notes are not available, a copy of the receipts of purchase must be provided).
- (n) Over and above the owner's or landscaper's choice of plant material, ZEMA requires that the landscape contractor provides on plan, a list of at least 5 individual plant specimens out of 75 palatable plant species for feeding the fauna that will be planted in the garden for each residential site. PUD sites will require 75 palatable plant species to be planted over the whole development. These plants will be chosen from the Zimbali Coastal Resort Plant Species List provided to the landscape contractor by ZEMA (a copy of which is attached hereto). These plants can be used in both the garden-planting and the non-user servitude rehabilitation-planting.
- (o) Landscape contractors must understand that ZEMA will audit gardens on completion and that ZEMA will not sign off on the garden until any exotic plants used in the plantings are removed from such garden.

NOTES:

- Submission drawings will only be approved and released on condition that the landscaping plan has been submitted and approved.
- Only indigenous plants of South Africa may be used within Zimbali Coastal Resort.
- Gardens that do not comply with the above minimum specifications will not be approved and signed off by ZEMA.

2. POLICY FOR DRY-STACK WALLING

- (a) Foundation wall is not to go beyond Footprint line.
- (b) Each retaining wall may not exceed 2 m in height. If additional height is required, each wall thereafter must be set back at least 1 m in depth from the top of the below wall.
- (c) It is recommended that open-bottomed, dry-stack (Terraforce) walling be used in order to create a full column of soil.
- (d) 500 g of 2:3:2(22) (or equivalent) fertiliser per cubic metre of soil.
- (e) For every 3 units (wheelbarrows) of soil back-filled, a minimum of one unit (wheelbarrow) of compost must be added, i.e. at least one third must be compost.
- (f) Planting to soften hard lines must be done when garden is installed.
- (g) Plants to be used must be on the recommended plant list attached.
- (h) Planting must be done on these banks as soon as is practically possible. The rule of five must apply that each wall panel must be planted with a mixture of a minimum of 5 species of plants that are listed below.
- (i) SHADE AREAS – south or south-east-facing walls

<i>Anthericum saundersiae</i>	<i>Microsorium scolopendrium</i>
<i>Chlorophytum comosum</i>	<i>Nephrolepis biserrata</i>
<i>Chlorophytum bowkeri</i>	<i>Phaulopsis imbricate</i>
<i>Coleotrype natalensis</i>	<i>Plectranthus verticillatus</i>
<i>Dicliptera heterostegia</i>	<i>Plectranthus madagascariensis</i>
<i>Dietes iridioides</i>	<i>Pupalia atropurpurea</i>
<i>Dietes grandiflora</i>	<i>Stenochlaena tenuifolia.</i>

Aptenia cordifolia will do in shade but does lose vigour in about 6 to 12 months. Better in sun.

Shrubs, such as *Dracaena alectrifomis* and *Duvernoia adhatodoides* will work if you need a screen or physical barrier at the top of a bank.

Watering on these walls is recommended in the early establishment phase.

- (j) SUNNY AREAS – west or north-west facing walls

<i>Aeollanthus parvifolius</i>	<i>Delosperma tradescantioides</i>
<i>Agapanthus praecox</i>	<i>Delosperma rogersii</i>
<i>Asparagus densiflorus</i>	<i>Dyschoriste depressa</i>
<i>Bulbine natalensis</i>	<i>Justicia betonica</i>
<i>Aptenia cordifolia</i>	<i>Justicia flava</i>
<i>Asystasia gangetic</i>	<i>Peristrophe cernua</i>
<i>Barleria obtuse</i>	<i>Phaulopsis imbricate</i>
<i>Barleria obtusa x repens</i>	<i>Plectranthus spicatus</i>
<i>Barleria repens</i>	<i>Rhinacanthus gracilis</i>
<i>Carpobrotus dimidiata</i>	<i>Tulbaghia simmleri</i>
<i>Cyanotis speciose</i>	<i>Tulbaghia violacea.</i>

Shrubs that will work are:

Bauhinia tomentosa
Chrysanthemoides monilifera
Deinbollia oblongifolia
Ficus burtt-davyi
Plumbago auriculata
Tecoma capensis
Tetradenia riparia.

Watering on these walls is recommended in the early establishment phase.

(k) Angle of Repose:

- Maximum of 70° (preferred between 50° to 60° to give wider planting space).
- Where possible, rather use the natural slope with contour plantings to hold the soil.

(l) Mixed Materials:

- ZEMA recommends that architects/builders only use one type of walling material.
- Gabions may be used, with dry-stack walling under special conditions.
- We encourage natural angles of repose, and discourage flat, wide, terraced entertainment areas.
- The change between the flat area and the sloping area should be done in such a way that these areas blend and merge together without causing any soil erosion problems due to storm-water.
- Eliminate retaining (to avoid requests for hand-rails and fences).

3. RE-ESTABLISHING PLANT MATERIAL ON EXPOSED BANKS AND VERGES

Zimbali Coastal Resort is situated on a sandy wind-blown dune. Residents and developers must understand that to remove vegetation during any phase of construction is going to have a cost implication when it comes to re-vegetating these exposed areas.

In most cases, the natural vegetation will colonise the disturbed area, but to speed up this process, it is advisable to replant with plants that occur on site. Firstly, to keep the site looking the same after the construction as it did before development and, secondly, using naturally occurring species of plants ensures that insects and other forms of life that depend on these plants still have their host or food plants available to them once the wave of development has passed over the area. It was, after all, the forested atmosphere that enticed you to purchase your plot here in the first place.

Zimbali has a huge variety of naturally occurring groundcovers. These plants provide food and shelter for browsing species of antelope like the Bushbuck and Blue Duiker. As the Estate becomes more developed, the large natural spaces used for feeding will diminish, forcing these animals to browse along road verges and residents' gardens.

The attached Plant Species List provides a whole range of plants suited to the many differing "individual plot" conditions that can be found in Zimbali Coastal Resort.

The problematic places are steep banks and shady areas. A few pointers to assist you are:

- (a) Seek professional help and ask the Zimbali management team for guidance.
- (b) The rule of thumb is to establish a plant cover as soon as possible.
- (c) Add a good quantity of good quality compost to the soil before planting. About 1 cubic metre of compost per 10 square metres of soil is a good rule of thumb.

- (d) Do not remove all the dead or decaying leaves. Use these to mulch the soil and help retain much-needed moisture. Also, in the leaves are all the micro fauna and flora that will re-colonise the disturbed soil.
- (e) When it is too shady for plant growth, use the natural leaf litter that accumulates on the forest floor as mulch. The earthworms, pill millipedes and local Bush Squeaker frogs will form queues to live on your property.
- (f) Keep the newly-planted plants well-watered until they have produced new growth.
- (g) Remember that the best time for planting and establishing plants is from late August through to about mid-March. This doesn't mean to say that you cannot plant outside of this period. However, late March to mid-August is generally the driest period and plants will not grow as vigorously as they do in the summer months.
- (h) One plant that will give you rapid growth and cover is the Creeping Foxglove (*Asystasia gangetica*). It can take full sun and shade.
- (i) The best lawn grass for the area is Berea Grass (*Dactyloctenium australe*), which prefers sun, but will tolerate partial shade, as long as it is not for high traffic and not in full shade.
- (j) Remember that plants growing in shade cannot take trampling, so use two creeping species for groundcover on banks, such as *Dicliptera heterostegia* and *Droguetia iners*.

4. FENCING FOR BUSHBUCK

Bushbuck are found in fairly high densities at Zimbali. These browsers tend to target newly-planted gardens to feed. This causes a bit of heartache with contractors and residents when their gardens are browsed by the antelope. To help protect newly-planted gardens, ZEMA has authorised the use of the Stafix Electric Fencing System, which consists of an energiser that is operated on two torch batteries, with the polywire, stakes and insulators. The system protects a garden from browsing Bushbuck until plants are established. This system, known as the AM20, including batteries and a 200m roll of green poly-wire, costs approximately R1,500.00. It works well for the first 3 to 6 months, once the plants are established. The wire can then be removed once plants have grown large enough to withstand browsing without dying.

It is recommended that two strands of this poly-wire be used as a protection. The wire should ideally be 400 mm and 700 mm in height from the ground to prevent animals from stepping over the fence.

Equipment is obtainable from Ndlovu Fencing (STAFIX AGENT), Unit One 7 Suffert St, Pinetown. Tel: +27 (0)31 702-6351, or email: ndlovu@stafix.co.za

5. PRUNING POLICY

The forest environment is a very sensitive habitat. "Coastal Forest" is an endangered biodiversity resource in terms of Section 52 of the National Environment Management Biodiversity Act (Act 10 of 2004). One of the founding philosophies of Zimbali Coastal Resort is its pristine environment and unique coastal forest, which add value to the Estate.

The matter of pruning has arisen in recent years due, particularly, to the significant increase in the construction of new homes in the forest. If this programme is not introduced, the forest canopy will potentially encroach into properties and exceed beyond the height of houses,

which could lead to structural damage and the disastrous consequence of disgruntled residents taking the law into their own hands to the detriment of the forest.

ZEMA would therefore like to guide and assist residents and the various commercial entities within the Estate to manage and maintain the vegetation in an appropriate and controlled manner without impacting on the forest ecosystem.

Following consultation with the Department of Agriculture, Forestry and Fisheries (DAFF), this policy and procedure will allow ZEMA and its members to work harmoniously to keep a good eco-balance in compliance with DAFF's requirements, and will assist in accommodating the needs of property owners wherever possible.

The objective of this policy is therefore for ZEMA to prevent inappropriate removal of woody vegetation by advising the member with regard to pruning and ensuring that it is controlled and carried out appropriately and in accordance with the Act.

5.1 Policy Conditions

5.1.1 The ZEMA Board-approved Pruning Guidelines are set and implemented by ZEMA management strictly under the jurisdiction and discretion of the ZEMA Environmental Management Committee (EMC).

5.1.2 Initial clearing of a site must be done by an approved landscape contractor under the supervision of ZEMA to ensure conformity with the ZEMA Landscaping Guidelines and to ensure that the 'feel' of the forest in general is maintained. The cost of this target pruning exercise will be for the property owner's account. A pruning request must be made with the ZEMA Operations & Environmental department once building plans have been approved. No pruning will be allowed until the building plans have been approved by the ZEMA ARC.

5.1.3 Target pruning for routine maintenance of the building is encouraged and should be done regularly to prevent damage to infrastructure. Target pruning for maintenance requires pruning approval and will be at the sole discretion of ZEMA and guided by the EMC.

5.1.4 Pruning approval for the sole purpose of a view is not guaranteed. However, ZEMA acknowledges the need for members to be able to enjoy the beautiful vistas Zimbali has to offer. Pruning to regain a view that originally existed but was lost due to a failure to prune, will be favourably considered. Pruning for views will be assessed on a case-by-case basis and will be dependent on the site-specific conditions. The following criteria will be used to determine whether approval can be issued, as well as the extent of pruning that can be done:

- (a) Plant species that are conducive to pruning, such as *Brachylaena Discolor*, *Sapium Integerrimum*, *Grewia Occidentalis*, *Trema Orientalis*, etc. will be considered for pruning to an agreed height, for example, the balustrade level on the first floor of the building.
- (b) Mature forest trees, where it is requested to have the crown severely pruned or "topped", will not be considered.
- (c) Shaping of mature trees, such as controlled crown lifting and removal of a minimal number of branches to encourage the growth in such a way that views can be achieved by looking "through" the tree/s will be considered as far as is reasonably practical.
- (d) Pruning for views may have an impact on the privacy desires of other members. The privacy of other members is a factor which should be taken into account by ZEMA or the EMC in the exercise of the discretion by ZEMA or the EMC in the decision to permit or not to permit said pruning.
- (e) Pruning that impacts negatively on the forest ecosystem integrity will not be permitted.

- (f) All residents of Zimbali Coastal Resort, as well as the EMC, must be conscious of the impact on neighbours and surrounding homes of the planting of trees or other vegetation that may or will have an adverse effect on the structure or view of a neighbour or surrounding property.

5.2 Department of Agriculture Forestry & Fisheries (DAFF) Permit Requirements

Pruning requests that trigger permit requirements in terms of the National Forests Act, 1998 (Act No. 84 of 1998) will necessitate the member applying directly to DAFF for such permit. ZEMA can assist the property owner in such event in terms of the channels and contact details of the authorities concerned.

ZEMA has engaged with the DAFF and the following agreement reached:

- (a) ZEMA will authorise pruning where legal permits are not required under the exemptions of the National Forests Act.
- (b) ZEMA will collate all the required data concerning all pruning authorised by ZEMA during the year and submit an annual report each and every December to DAFF detailing the pruning that had occurred in that year and the species pruned.
- (c) Regular communication will be kept with the Department and random visits by its authorised personnel will be encouraged to ensure conformity.

5.3 Pruning Request Protocol & Procedure

- 5.3.1** The property owner, or his authorised representative contacts the ZEMA office and requests a pruning inspection.
- 5.3.2** The ZEMA Operations team attend to the request on site to inspect the property and determine the extent to which the requested pruning is permissible.
- 5.3.3** ZEMA will record all details of the agreed and authorised pruning operation and issue a copy of such authorisation to the property owner.
- 5.3.4** The property owner is entitled to use an accredited landscaper of their choice to undertake the pruning. However, the landscaper concerned must be present at the pruning inspection so that he is fully aware of the scope and specific requirements.
- 5.3.5** Where the applicant for pruning is not the registered property owner (member) of the property, such as a long-term tenant, agent, property manager, etc., written permission and confirmation must be obtained from the property owner and forwarded to the ZEMA Operations department together with the pruning request. Without such written authorisation of the property owner, ZEMA will not entertain or issue any pruning request.
- 5.3.6** Once authorised pruning has taken place, a digital photo will be taken of the target pruning area for views and the size of opening achieved. This will be filed in the property owner's file to ensure no further unauthorised pruning takes place.
- 5.3.7** Any unauthorised pruning over and above that permitted by ZEMA will be considered a breach of the ZEMA rules and a penalty will be levied against the property owner (member) concerned.

5.3.8 Target pruning requests by property owners will usually be allowed in the cadastral boundary of their property. The ZEMA General Manager or the EMC may exercise their discretion on whether pruning is also necessary in areas other than within the said cadastral boundaries, such as for the purpose of regaining a view that existed, but which has become lost through lack of pruning or through injudicious planting by a neighbour or surrounding property.

5.3.9 The extent of individual target-pruning exercises will be at the sole discretion of the ZEMA and the EMC.

5.4 Tree Removal Request Protocol & Procedure

5.4.1 Neither pruning nor removal of trees may be for the purpose of creating a view that never existed or that does not occur naturally as normal incidence of the situation of the property in question.

5.4.2 If a property owner/body corporate makes a request to ZEMA for the removal of a tree, approval for such removal is at the discretion of ZEMA or the EMC after consultation by ZEMA/the EMC with all affected and potentially affected neighbouring property owners. If no resolution is reached between the affected parties, ZEMA refers the applicant property owner to Article 20.12 of the ZEMA Memorandum of Incorporation regarding "Determination of Disputes".

5.4.3 The DAFF standard for off-setting the loss of a tree is 3 for 1, i.e. three new trees must be planted for each single tree removed. ZEMA's objective is to maintain balance by continuing to ensure that replacement trees are planted in forest areas where there is a need to bolster the forest biodiversity, or where canopy trees have fallen and created gaps in the canopy.

5.4.4 The property owner/body corporate and ZEMA will ensure that, to maintain this balance, the following is applied for the removal of a tree:

- (a) If the property owner/body corporate does not wish to have the replacement trees planted on their own property, the location of where replacement trees are planted will be at ZEMA's discretion;
- (b) The property owner/body corporate will purchase the replacement trees at their cost prior to the removal of any tree;
- (c) The species of replacement trees to be planted will be determined in consultation with ZEMA who will provide the property owner/body corporate with a Priority Tree Species list to select from.

5.4.5 It is also noted that ZEMA may at any time, after careful assessment and in accordance with environmental regulations, request a property owner to prune or remove any tree on his property which poses a threat to infrastructure, buildings or services.

5.5 Non-Compliance

5.5.1 Should the owner conduct target pruning without adhering to the conditions set out in this policy, he will be issued with a fine in accordance with the ZEMA fines schedule.

5.5.2 Should the owner be found to have contravened the conditions of the National Forests Act, he will be reported to DAFF and could face prosecution in terms of the law.

6. GARDEN MAINTENANCE POLICY & RULES

- 6.1 Only indigenous plants of South Africa may be introduced into the garden.
- 6.2 The conventional garden landscape may not extend beyond the building footprint line, unless otherwise agreed with ZEMA in writing. The portion outside the building footprint line, but within the cadastral boundary of the property, may only be planted as a wild garden for the wildlife on the Estate.
- 6.3 Introduction of alien plant material is strictly prohibited. If alien plant material is identified in the garden, ZEMA will issue a 30-day written notice to the member to remove and replace such alien plants with ZEMA-approved plant material.
- 6.4 No plant material may be harvested from outside the property boundary for introduction into the garden.
- 6.5 All building rubble may strictly not be covered over with topsoil and must be removed from the site and dumped at a registered municipal or private solid waste tip site. Any breach of this protocol will result in ZEMA issuing a 30-day notice to the member to rectify and make good.
- 6.6 Garden waste, such as leaves and grass clippings, may be used as mulch. However, stockpiling of such waste is strictly prohibited. All large waste must be removed from the site immediately, unless it can be chipped and spread over the garden, either by the member, or by their appointed landscaper.
- 6.7 Gardens are to be maintained to an acceptable standard. Should a garden be neglected and become an eyesore, ZEMA will issue a 30-day written notice to rectify and make good.
- 6.8 Weeds in driveways are to be maintained at all times. Should sufficient weeding not be maintained, ZEMA will issue a 30-day written notice to rectify and make good.
- 6.9 Storm-water control within the property boundary remains the responsibility of the member, and existing measures to control run-off must be maintained. Failure to maintain storm-water control will result in ZEMA issuing a 30-day written notice to the member to rectify.

PLEASE NOTE: Transgression by the member of any of the above landscaping and gardening maintenance protocols and/or failure to rectify the issue within the 30-day notice period, will result in a fine being imposed upon the offending member and/or result in ZEMA conducting any necessary repairs to make good, which costs will be levied directly to the member on his levy account.

7. FINES FOR NON-COMPLIANCE OF LANDSCAPING PROTOCOLS

- 7.1 ***Failure to obtain pruning approval prior to any pruning/cutting:***
R5,000 plus cost of rehabilitation, unless rehabilitation is undertaken by the member within the 30-day notice period.
- 7.2 ***Failure to obtain pruning approval prior to any pruning/cutting:***
R5,000 plus cost of rehabilitation, unless rehabilitation is undertaken by the member within the 30-day notice period.
- 7.3 ***Severe or excessive case of illegal pruning/cutting (penalty for protected species):***
R1,000 to R10,000 per branch, plus costs of rehabilitation, unless rehabilitation is undertaken by the member within the 30-day notice period. The maximum R10,000 per branch penalty will be applicable for the illegal pruning of any protected species.

- 7.4 Extending the conventional garden beyond the building line without permission:**
R1,000 plus costs of rehabilitation, unless rehabilitation is undertaken by the member within the 30-day notice period.
- 7.5 Failure to remove alien plants after the 30-day notice period:**
R100 per plant, plus the cost of removal and rehabilitation, unless removal and rehabilitation is undertaken by the member within the 30-day notice period.
- 7.6 Illegal harvesting of plant material:**
R100 per plant, plus the cost of rehabilitation, unless rehabilitation is undertaken by the member within the 30-day notice period.
- 7.7 Failure to clean up building rubble within the 30-day notice period:**
R500 per load, plus associated costs for dumping.
- 7.8 Unauthorised dumping of garden waste:**
R500 plus cost of clean-up.
- 7.9 Unmaintained garden:**
R100 per day after the 30-day notice period has expired, until the problem is resolved by the member.
- 7.10 Unmaintained driveway:**
R500 after the 30-day notice period, plus cost of clean-up.
- 7.11 Poor or insufficient storm-water control:**
R1,000 plus cost of repairs and rehabilitation to affected areas, unless repairs and rehabilitation is undertaken by the member within the 30-day notice period.

8. GUIDELINES FOR HOW TO MAINTAIN GARDENS

8.1 Overview of Gardening & Landscaping Protocol

The Landscaping Guidelines are written to remind members and their maintenance contractors of the need to enhance habitat value by planting local groundcovers and shrubs that feed and shelter wildlife, especially bushbuck, within the gardens of Zimbali Coastal Resort.

Members, their landscapers and gardening contractors, as well as ZEMA's own gardening and landscaping service providers, are all encouraged to make use of ZEMA's professional Environmental Team to obtain the necessary advice regarding which plants are best suited to the particular site conditions.

ZEMA would also like to encourage members to use appropriately-sized or -scaled plants, so that tall trees in small spaces do not block the views of the ocean, or start to encroach on neighbours' roofs within about 10 years from the planting date. Rather use productive shrubs that will give privacy, cover and shelter for both humans and wildlife, whilst still avoiding unnecessary work and expense being incurred later due to regular or excessive pruning being required.

Zimbali Coastal Resort has positioned itself to use the local coastal vegetation as its landscaping theme, for the following two primary reasons:

- (a) To enable the natural inhabitants of the coastal forest, such as bushbuck, to sustain themselves in the remnant patches of cover remaining after development. Bushbuck has been selected as the primary inhabitant for this example because it is the largest and most visible browsing species within the Estate.
- (b) To make the human habitat as attractive to humans as it is, or should be, for the local wildlife. In this regard, Zimbali has in a sense achieved its goal, as landscapers and owners often complain that their garden plants have been browsed and, in some instances, "over"-browsed. This is a good indication that the bushbuck and other browsers "approve".

It is preferable to use "bushbuck fodder" plants and other wildlife productive plants used by other forms of wildlife, including human residents. Zimbali is in reality a large nature reserve and the new, western sections of the Estate will also, as the new plantings develop and mature, begin to contribute to the conservation efforts of the whole Estate.

On the new western precincts of the Estate, there are less open space reservations than were present on the eastern side. It is therefore important that members who reside on the western side of the Estate recognise that they need to plant up their whole property with fodder and wildlife plants, not just in their footprint area. This is critical due to there being substantially less surface area left available for natural systems to function.

ZEMA encourages members and their service providers to redirect the maintenance efforts in their gardens to a level that allows wildlife to have the best habitat that humans can provide without impinging unnecessarily on the human habitat.

In terms of the sale agreement signed when purchasing a piece of Zimbali paradise, you will have no doubt fallen in love with the concept of living within a forest environment. The aesthetic purpose of the forest is secondary to the main purpose of providing fodder to the original inhabitants of the area. Once the human element started moving in, this served a further purpose of providing the natural screening and privacy that members demand. This planting is often neglected until the home is completed and the member realises he is fully exposed to his neighbor. Remember that plants need time to establish themselves.

To this end, ZEMA appeals to members not to rake the fallen leaves from the planted sections of garden beds. It is not necessary to rake the soul out of the soil. The leaf "litter" is the compost that gets drawn into the soil by woodlice, earthworms and termites that then allow the soil fungi and bacteria to break down the leaves into the basic elements, thus providing the essential nutrients the plants need to grow. This vegetation in turn feeds and shelters the various animals on the Estate.

It is only necessary to "sweep" or "rake" sealed surfaces, such as pathways, decks and driveways. Leaves swept up and gathered from these areas should then be scattered onto the surface of the soil under shrubs and trees on your property. The added leaf layer acts like blotting paper to prevent water run-off and consequential soil erosion. This is especially noticeable on steeper sites on the Estate.

In fact, this layer of leaves is your natural compost heap. So, instead of piling the leaves in a conventional heap, or worse still, placing the leaves into black plastic bags for removal to a municipal landfill site, this organic matter stays on your property and becomes nutrients for the plants and soil.

ZEMA has a wood-chipping operation at the Estate’s Holy Hill reserve, where suitable trimmings of branches are chipped. These chips, along with leaves swept up from paths, are returned to the verges within the Estate. Even the leaves blown by the motorised blowers are blown back into the undergrowth along the road verges. Substantial costs are saved on an annual basis through this natural composting process as it reduces the amount of commercially-produced pine-bark-based compost that ZEMA has to purchase.

These wood-chips, along with soil berms on the steeper sites, also help with the natural storm-water control on the various private and public sites. The berms physically slow the water, and the organic matter in the form of chips, helps to loosen the soil and allows for a faster infiltration of run-off water into the sandy soils. This surface storm-water control system has been in operation throughout Zimbali from inception.

An invisible advantage to all this leaf litter and wood chippings is that the soil fungi that are essential for healthy forest plant growth are able to live and absorb, as well as to release nutrients into the soil, to be more readily available to the plants via their roots. These chippings are therefore natural inoculums for the soil, especially in new gardens that are being installed on the depauperate soils of the abandoned cane-fields.

Finally, with the added fungal activity, there are more termites and other subsurface organisms that feed on the small invertebrates in the soil and leaf litter. A good example of this is the very localised – and increasingly rare – Giant Legless Lizard.

8.2 Compost and Fertiliser Recommendations for All Gardens (Especially New Gardens)

The combination of compost mixed with wood chippings and granular fertiliser (or equivalent) on the Berea Red soils of Zimbali is a must.

The recommended rate of application for Zimbali soil is 50 mm to 100 mm deep layer of compost and mulch must be dug to a depth of 300 mm into the soil by forking this organic material into the soil. Before one starts to fork this material into the soil, scatter granular fertiliser (or equivalent) and Dolomitic lime over the soil at a rate of:

- 100 g/m² of 2:3:2(22)
- 200 g/m² of Dolomitic Lime

For optimal plant growth in gardens with high sunlight areas, fertiliser and compost should be added at least twice a year, being early spring around August, and then again in midsummer, during December. It is essential that this process is then continued for at least the first three growing seasons after planting. The application rate is 30 g/m² of 2:3:2(22).

For lawn areas, the application rate suggested is 30 g/m² of 2:3:2(22) in August and December, but it would be necessary to continue this process for the life of the lawn.

During the winter months, gardens should be left to rest and no fertilising or excessive watering is required.

If leaves are left in place, it is not necessary to disturb the soil by digging it over, as the digging damages the surface roots of your plants and also weakens the plants due to fine surface-feeding roots being damaged.

Only dig the soil to remove weeds. Many of the so-called “weeds” in these natural plantings are actually local plants that are food plants for the various types of wildlife.

Shrubs are planted at intervals of 1/m² per plant, as a minimum specification on any site.

Trees should be planted where the space between buildings allows for the use of large trees.

Do not plant trees over services like sewer lines, water, telephone or electricity mains cables, stay away from soak-pits and do not plant trees under the eaves of buildings.

As far as the density of plants/m² is concerned, ZEMA requires that groundcovers be planted as previously advised in these guidelines and protocols.

The number of plants to be used per unit area is a **minimum** standard.

In South Africa, domestic garden plantings generally tend to use a simple planting palette that has very little soul due to the use of the same 10 to 20 species. No one is actually using anything different and the uniformity becomes boring. Many of the plants being brought into Zimbabwe are exotic and are providing little or no benefit to the local wildlife. This is primarily due to members not wanting our natural animal species, e.g. bushbuck, to browse their gardens. This practice causes a "knock-on" effect due to more homes being built and habitat then decreasing, which then forces the same number of antelope to feed on less plant material. With less palatable species being planted, the browsing wildlife have less choice, which then results in the animals rapidly reducing the vegetation to the point where the animals have to be continuously removed to reduce the population density.

9. Terms & Conditions / Validity & Amendments to Landscaping Guidelines & Protocols

- 9.1** Upon the sale/purchase of the property, a Landscaping & Environmental Control check will be conducted prior to the transfer of the property and any non-compliance or transgression of these Landscaping Guidelines & Protocols will result in the ZEMA authority withholding the environmental clearance for the purpose of the transfer of the property.
- 9.2** Upon the sale/purchase of the property, once this Landscaping Guidelines & Protocols document, including addendums (i.e. Plant List), has been issued by ZEMA to the new member/purchaser as part of the Sale Agreement, the new member/purchaser will be responsible from the date of transfer for ensuring that all guidelines and protocols are adhered to.
- 9.3** This Landscaping Guidelines & Protocols document and any applicable annexures or addendums (i.e. Plant List) are subject to amendment by ZEMA at any time without notice.
- 9.4** Should any amendments be effected upon revision, ZEMA will circulate a copy to all members via email. However, the onus is on the member to ensure that they are updated with a copy of this document and any annexures, and ZEMA is not responsible should a member not be in receipt of any revisions or amendments to this document. Members, or their landscapers, are therefore welcome to request a copy of this document from the ZEMA Operations department at any time during office hours.



ZIMBALI COASTAL RESORT PLANT SPECIES LIST FOR LANDSCAPERS

Any plant indicated by **F** after its description is a species that is suitable for shady conditions.

Revised by Geoff Nichols – Nov 2013

PLANT NAMES	DESCRIPTION	
TREES		
ACACIA KARROO	<i>Pioneer tree full sun yellow pompom flowers great browsing plant for Bushbuck & Duiker</i>	
ACACIA KRAUSSIANA	<i>Creeper full sun catkins of cream flowers hedge plan great browsing plant for Bushbuck & Duiker</i>	
ACACIA ROBUSTA	<i>Large tree full sun white pompom flowers rounded shape great browsing for Bushbuck & Duiker</i>	
ACACIA SIEBERIANA VAR. WOODII	<i>Large full sun flaking bark white pompoms flat, great browsing plant for Bushbuck & Duiker</i>	
ACOKANTHERA OBLONGIFOLIA	<i>Shrub sun or shade white scented flowers red fruits poisonous milky sap</i>	
ALOE BARBARAE	<i>Tree aloe, orange flowers in winter, good form plant sun and wind.</i>	
ANTIDESMA VENOSUM	<i>Sun need more than one for fruits good for birds slow, great browsing plant for Bushbuck & Duiker</i>	
APODYTES DIMIDIATA	<i>Fast tree pioneer sun red/black fruits good birds, great browsing plant for Bushbuck & Duiker</i>	
BAPHIA RACEMOSA	<i>Slow shade & shelter white pea flowers scented multi-stemmed</i>	F
BERSAMA LUCENS	<i>Medium sized tree red fruits feed animals and birds</i>	
BRACHYLAENA DISCOLOR	<i>Dune and forest pioneer use as a screening plant, great browsing plant for Bushbuck & Duiker</i>	
BRIDELIA MICRANTHA	<i>Fast pioneer tree sun and damp good for birds, great browsing plant for Bushbuck & Duiker</i>	
CANTHIUM INERME	<i>Fast straggly form birds shelter belt tree, great browsing plant for Bushbuck & Duiker</i>	
CAPPARIS TOMENTOSA	<i>Creeper sun scented flowers fruits for birds butterflies</i>	F
CHAETACME ARISTATA	<i>Large multi-stemmed tree shelter and fruit for wildlife thorny stems, great browsing plant for Bushbuck & Duiker</i>	F
CHIONANTHUS PEGLERAE	<i>Large tree, fruits for everything sun sheltered for best results, great browsing plant for Bushbuck & Duiker</i>	
COMBRETUM KRAUSSII	<i>Forest tree multi-stemmed large</i>	
COMMIPHORA HARVEYI	<i>Large tree sun dry areas shape and bark texture</i>	
CORDIA CAFFRA	<i>Tree in dune forest deciduous texture bark good for birds</i>	
CROTON SYLVATICUS	<i>Large tree deciduous good for everything sun, great browsing plant for Bushbuck & Duiker</i>	
CRYPTOCARYA LATIFOLIA	<i>Large tree riverine edge damp areas large fruits for mammals and hornbills sun sheltered</i>	
CRYPTOCARYA WOODII	<i>Multi-stemmed medium tree glossy green leaves birds</i>	F
CUSSONIA NICHOLSONII	<i>Small multi-stemmed form plant sun or shade fruits for</i>	
CUSSONIA SPICATA	<i>Larger form tree good for birds sun</i>	
DALBERGIA OBOVATA	<i>Scrambling shrub great browsing plant for Bushbuck & Duiker</i>	
DEINBOLLIA OBLONGIFOLIA	<i>Shrub multi-stemmed good for everything fruits sun, great browsing plant for Bushbuck & Duiker</i>	
DIOSPYROS NATALENSIS	<i>Slow tree in sheltered areas sun or shade birds mammals</i>	F
DIOSPYROS VILLOSA	<i>Creeper foliage effect sun or shade</i>	

PLANT NAMES	DESCRIPTION	
<i>DOMBEYA BURGESSIAE</i>	Shrub with white or pink flowers in late winter full sun	
<i>DOMBEYA TILIACEA</i>	Shrub white flowers sun for best results	
<i>DOVYALIS LONGISPINA</i>	Tree sun will take some wind birds fruit thorny hedge, great browsing plant for Bushbuck & Duiker	
<i>DOVYALIS RHAMNOIDES</i>	Shrub multi-stemmed fruits for birds thorny sun	
<i>DRYPETES NATALENSIS</i>	Slow tree in shelter more than one needed fruits for male and female	F
<i>EKEBERGIA CAPENSIS</i>	Large forest tree good fruits for birds and mammals, great browsing plant for Bushbuck & Duiker	
<i>ENGLEROPHYTUM NATALENSE</i>	Forest understorey shrub shade fruit for everything, great browsing plant for Bushbuck & Duiker	F
<i>ERYTHRINA LYSISTEMON</i>	Medium tree sun flowers for birds texture, flowers browsed by Bushbuck & Duiker	
<i>ERYTHROXYLUM EMARGINATUM</i>	Small tree for sheltered sun fruits for birds	
<i>EUCLEA NATALENSIS</i>	Large tree birds sun some wind slow, fruits browsed by Bushbuck and Duiker.	
<i>EUPHORBIA INGENS</i>	Large form plant coastal forest milky latex seed good for birds	
<i>FICUS BURTT-DAVYI</i>	Scrambling form sun and in wind fruits for birds	
<i>FICUS LUTEA</i>	Large tree flat-topped good for birds and mammals	
<i>FICUS NATALENSIS</i>	Large tree in sun for birds and mammals	
<i>FICUS POLITA</i>	Large tree for birds & mammals, sun texture trunk	
<i>FICUS SUR</i>	Large tree damp areas fruit for birds & mammals sun or shade	
<i>GYMNOSPORIA ARENICOLA</i> or <i>G. BUXIFOLIA</i>	Hedge thorny shrub in dunes fruits for everything, great browsing plant for Bushbuck & Duiker	
<i>HYPHAENE CORIACEA</i>	Large palm slow plant more than one texture blue green multi-stemmed fan leaves	
<i>KRAUSSIA FLORIBUNDA</i>	Shrub full sun fruits for everything, fruit for mammals	
<i>LAGYNIAS LASIANTHA</i>	Shrub in sheltered areas sun fruits for everything	
<i>MANILKARA DISCOLOR</i>	Large tree fruits for everything great tree	
<i>MAYTENUS PEDUNCULARIS</i>	Large tree sheltered sun fruits for birds	
<i>MAYTENUS PROCUMBENS</i>	Dune shrub sun rapid growth takes wind	
<i>MIMUSOPS CAFFRA</i>	Large tree windy areas fruits for birds and mammals	
<i>OCHNA NATALITIA</i>	Medium tree slow yellow flowers sheltered areas	F
<i>PITTIOSPORUM VIRIDIFLORUM</i>	Pioneer tree sun or wind fruits for birds	
<i>PROTORHUS LONGIFOLIA</i>	Large tree pioneer sun fruits for everything	
<i>PSYCHOTRIA CAPENSIS</i>	Shrub in shade but takes sun berries for birds and mammals red when ripe	F
<i>PSYDRAX OBOVATA</i>	Pioneer tree sun and wind good for birds and mammals	
<i>RAWSONIA LUCIDA</i>	Tree in shade and shelter slow fruits good for everything	F
<i>SEARSIA CHIRINDENSIS</i>	Pioneer tree sun and exposed birds untidy look best in clumps	
<i>SEARSIA NEBULOSA</i>	Dune scrambler best in sun birds for seeds	
<i>SCLEROCARYA BIRREA</i>	Large tree deciduous sun fruit for everything takes wind	
<i>SCUTIA MYRTINA</i>	Scrambler hedge sun thorny birds for fruit	
<i>SIDEROXYLON INERME</i>	Sun slow tree for windy areas fruit for birds	
<i>SPIROSTACHYS AFRICANA</i>	Tree large for dry areas full sun	
<i>STRELITZIA NICOLAI</i>	Sun large shrubby like multi-stemmed good for birds	
<i>STRYCHNOS GERRARDII</i>	Large tree sun sheltered area fruits for mammals	
<i>STRYCHNOS SPINOSA</i>	Medium tree for exposed areas sun ornamental	
<i>TABERNAEMONTANA VENTRICOSA</i>	Shade loving sheltered good for birds scented white flowers	F
<i>TECLEA GERRARDII</i>	Dune medium tree slow sun or shade fruit for birds	
<i>TREMA ORIENTALIS</i>	Pioneer tree in sun sheltered position good for birds	

PLANT NAMES	DESCRIPTION	
TRICALYSIA SONDERANA	Pioneer dune shrub sun fruit for birds	
TRICHILIA DREGEANA	Forest tree sheltered full sun birds and mammals	
TRICHILIA EMETICA	Large tree for birds and mammals sun	
TRIMERIA GRANDIFOLIA	Small to medium sized tree in sheltered areas in sun food for birds and insects	
TURRAEA FLORIBUNDA	Medium tree for sheltered sun flowers and fruit for birds	
UVARIA CAFFRA	Scrambler in dunes for birds sheltered semi shade	F
VANGUERIA CHARTACEA subsp. RANDII	Shrub for sheltered places in forest good	F
VANGUERIA INFAUSTA	Shrub full sun especially Village C Golf course	
XYLOTHECA KRAUSSIANA	Medium tree slowish for everything white flowers	
ZANTHOXYLUM CAPENSE	Medium tree for sun or shade texture trunk birds	
ZIZIPHUS MUCRONATA	Large forest tree for birds & mammals good trunk thorny	
SHRUBS		
ACOKANTHERA OPPOSITIFOLIA	Shrub for dunes sun for birds and mammals scented white flowers	
ACOKANTHERA OBLONGIFOLIA	Shrub for dunes sun for birds and mammals	
ALOE ARBORESCENS	Hedges orange flowers in Winter takes wind	
ALOE PLURIDENS	Shade loving will grow in sun orange flowers in Winter	F
ALOE THRASKII	Upright species single stems dune endemic to our coast orange flowers in Winter full sun takes wind	
BAUHINIA TOMENTOSA	Shrub sun good screen yellow flowers hedge plan	
CARISSA MACROCARPA	Dune shrub scented white flowers red fruits for birds hedging thorny	
CARISSA BISPINOSA	Shrub in forest sheltered shade white scented flowers red small fruit slow hedge thorny	F
CATUNAREGAM SPINOSA	Multi-stemmed hedge good for mammals thorny sun	
CHRYSANTHEMOIDES MONILIFERA	Shrub yellow flowers wind resistant good pioneer plant in dunes use this when all else fails full sun good for everything	
CLAUSENA ANISATA	Shrub to small tree multi-stemmed fruits for everything	
CODDIA RUDIS	Shrub multi-stemmed weeping habit good for birds sun	
DIOSPYROS LYCIOIDES	Shrub in sun good for everything takes wind	
DRACAENA ALETRIFORMIS	Form plant for shaded areas strap leaves nesting site for robins scented flowers	F
EHRETIA RIGIDA	Sun good for birds blue flowers weeping habit	
ERYTHRINA HUMEANA	Shrub red flowers in summer form plant	
FICUS CAPREIFOLIA	Sun stream edges multi-stemmed good for birds	
GREWIA OCCIDENTALIS	Scrambler for everything mauve star flowers	
GREWIA CAFFRA	Dune scrambler angular stems sun best yellow flowers	
PAVETTA LANCEOLATA	Shrub sun multi-stemmed white flowers	
PAVETTA REVOLUTA	Dune shrub sun multi-stemmed white flowers	
PEDDIEA AFRICANA	Dune shrub shade and sun yellow flowers evening scented	F
PLECTRANTHUS ECKLONII	Shade loving shrub mauve flowers Autumn	F
ROTHECA MYRICOIDES	Blue flowered spring multi-stemmed sun	
TECOMA CAPENSIS	Scrambler full sun with orange flowers in winter, attracts insects, birds and mammals	
VANGUERIA INFAUSTA	Sun shrub to small tree fruits for mammals	
GROUNDCOVERS		
ANEILEMA AEQUINOCTIALE	Yellow flowered "Wandering Jew" sun sheltered areas great browsing plant for Bushbuck & Duiker	F

PLANT NAMES	DESCRIPTION	
ARISTEA ECKLONII	Blue flowered iris sun 40cm	
ARISTEA WOODII	Blue flowered sun 40cm similar to above both like damp spots	
ASCLEPIAS PHYSOCARPA	Puff balls milkweed full sun insects pioneer plant	
ASYSTASIA GANGETICA	Creeping white flowered sun or shade good for insects great browsing plant for Bushbuck & Duiker	F
ASPARAGUS DENSIFLORUS	Dune groundcover red berries sun	
ASPARAGUS FALCATUS	Dune creeper robust red berries barrier plant	F
ASPARAGUS PLUMOSUS	Fine leaved scrambler fruit for birds leaves for nest lining	F
BARLERIA GUEINZII	Pale blue flowered creeping drier areas full sun great browsing plant for Bushbuck & Duiker	
BARLERIA OBTUSA	Dune creeping blue flowers best in sun takes wind great browsing plant for Bushbuck & Duiker	
CHLOROPHYTUM COMOSUM	Shade loving tufted white flowers 60cm	F
CLIVIA GARDENII	Grow in shade tubular orange flowers in Winter	F
CLIVIA MINIATA	Shade orange trumpet flowers in Spring	F
COLEOTRYPE NATALENSIS	Blue flowered "Wandering Jew" upright form in shade	F
CRINUM MACOWANII	Large bulb lily pink flowers in spring deciduous	
CRINUM MOOREI	Shade and sheltered pink flowers in Summer deciduous	F
CROCOSMIA AUREA	Bulb in shade or sun orange flowers in Winter deciduous	F
DICLIPTERA CLINOPODIA	Scrambling herb for damp areas in shade or sun fodder for antelope and butterflies mauve flowers in winter	F
DICLIPTERA HETEROSTEGIA	Herb for shade or sun excellent fodder for antelope and butterflies	F
DIETES GRANDIFLORA	Shade or sun iris fibrous roots white flowers in Spring	F
DIETES FLAVIDA	Shade or sun blue/green foliage pale yellow flowers in Spring	F
DIETES IRIDIOIDES	White flowered shade smaller flowers in Spring	F
DRIMIOPSIS MACULATA	Green flowers small bulb in shade best sheltered	F
DRACAENA ALETRIFORMIS	Form plant for shade and shelter fruits for birds	F
DROGUETIA INERS	Shade loving groundcover food for antelope and butterflies low growing	F
DYSCHORISTE DEPRESSA	Low growing tough groundcover, butterfly larval food great browsing plant for Bushbuck & Duiker	
EUCOMIS AUTUMNALIS	Bulb pineapple-like flower yellow/green in Summer damp areas sun deciduous	
EULOPHIA SPECIOSA	Ground orchid yellow flowers in Spring sun	
FREESIA LAXA	Pink flowers in Spring small 30cm	F
GAZANIA RIGENS	Dune full sun silver leaves yellow flowers wind	
GLADIOLUS DALENII	Bulb orange flowers in Spring or Autumn 2 forms sun	
GLORIOSA SUPERBA	Creeping stems deciduous Flame lily sun deciduous	
HAEMANTHUS ALBIFLOS	Bulbous plant in shade white flowers in Autumn	F
HELICHRYSUM PLUMOSUM	Dune scrambler sun yellow flowers silver underside to leaves	
HIBISCUS CALYPHYLLUS	Forest edge herb yellow flowers dark centre full sun	
HYPOESTES ARISTATA	Forest edge in sun winter flower mauve to white fodder for antelope and butterflies	
HYPOESTES FORSKAOLI	Scrambling herb in sun or shade white flowers in winter fodder for antelope and insects	
HYPOXIS HEMEROCALLIDEA	Bulb yellow flowers in Summer full sun	
IPOMOEA PES-CAPRAE	Dune species creeper mauve flowers full sun	
ISOGLOSSA WOODII	Dune understory plant, shade, good bee nectar plant, great browsing plant for Bushbuck & Duiker	
JUSTICIA BETONICA	Dune wind tolerant sun-loving herb white flowers on stems good for insects	
JUSTICIA CAMPYLOSTEMON	Greeny/yellow flowers shade and sheltered shrubby	F
JUSTICIA FLAVA	Perennial yellow flowered butterfly plant, sun, great browsing plant for Bushbuck & Duiker	

PLANT NAMES	DESCRIPTION	
JUSTICIA PETIOLARIS	Perennial blue flowers butterfly nectar, shade, great browsing plant for Bushbuck & Duiker	
JUSTICIA PROTRACTA	Herb clumping habit full sun white flowers good for insects browsing plant for Bushbuck & Duiker	
KALANCHOE ROTUNDIFOLIA	Orange flowered succulent semi-shade	
KNIPHOFIA ROOPERI	Orange flowers in winter in damp areas full sun	
KNIPHOFIA PAUCIFLORA	Yellow flowers in summer full sun low growing	
KNIPHOFIA TYSONII	Large winter flowering full sun damp areas	
LAPORTEA PEDUNCULARIS	Scrambling herb groundcover for shady areas or semi-shade insect and antelope fodder	F
LEONOTIS DUBIA	Orange flowers late in winter semi-shade	
LEONOTIS INTERMEDIA	Orange flowers later in winter full sun broad leaves	
LEONOTIS LEONURUS	Orange flowers middle winter full sun narrow leaves	
LIPPIA JAVANICA	Sun pioneer small flowers good for insects 1metre	
MICROSORIUM SCOLOPENDRIUM	Fern creeping dune species best in semi- shade	F
NEMESIA DENTICULATA	Pink flowers in damp spots full sun excellent for insects	
OSTEOSPERMUM FRUTICOSUM	Dune creeping daisy white flowers pioneer	
PERISTROPHE CERNUA	Dune creeper mauve flowers winter, good for insects, great browsing plant for Bushbuck & Duiker	
PHAULOPSIS IMBRICATA	Scrambling herb for shade and sun white flowers great browsing plant for Bushbuck & Duiker	F
PLECTRANTHUS ZULUENSIS	Scrambling herb shade sheltered	F
PLECTRANTHUS STRIGOSUS	Shade loving in dune slacks white flowers	F
PLECTRANTHUS VERTICILLATUS	Creeping low shade or semi-shade white flowers in Autumn	F
PUPALIA LAPPACEA	Scrambling herb with burrs food for browsers	
RHINACANTHUS GRACILIS	Scrambling herb nectar and bushbuck fodder shade or sun	F
RUMOHRA ADIANTHIFORMIS	Creeping fern in shade	F
SCABIOSA COLUMBARIA	Pink flowers in Spring grassland species edge planting	
SCADOXUS MEMBRANACEUS	Bulb shade late summer flowering dune understory	F
SCADOXUS PUNICEUS	Bulb edge species semi-shade orange flowers in Spring	F
TULBAGHIA SIMMLERI WAS T. FRAGRANS	Bulb sun mauve flowers bedding plant	
TUBAGHIA VIOLACEA	Bulb with mauve flowers scented full sun broad leaves bedding plant	
VERNONIA NATALENSIS	Daisy in full sun silver leaves purple flowers insects	
ZANTEDESCHIA AETHIOPICA	Sun or shade in damp spots white flowers	
CYCADS		
ENCEPHALARTOS NATALENSIS	Large cycad with stem dark green leaves semi-shade	
ENCEPHALARTOS VILLOSUS	Stemless large arching leaves shade	F
STANGERIA ERIOPUS	Shade or sun fern-like leaves	F
LAWN GRASSES		
DACTYLOCTENIUM AUSTRALE	Semi-shade sun	
STENOTAPHRUM SECUNDATUM	Coarse grass takes full sun and windy conditions	

PLANT NAMES	DESCRIPTION	
FOREST UNDERSTOREY GRASSES All these grasses attract forest seed-eating birds like Grey Waxbills and Green Twinspots.		
<i>DIGITARIA DIVERSINERVIS</i>	<i>Forest grass forms lawns cannot be walked on shade loving</i>	F
<i>OPLISMENUS HIRTELLUS</i>	<i>Same as above</i>	F
<i>PSEUDECHINOLAENA POLYSTACHYA</i>	<i>Dwarf species pale green in shade</i>	F
<i>SETARIA MEGAPHYLLA</i>	<i>Sun or shade loving forest grass tall flower spikes good for birds</i>	F
MARSH AND AQUATIC PLANTS All the species listed below must be grown in full sun for best results. Those that are submerged aquatics are indicated by an "A" after their names.		
<i>ASPILIA NATALENSIS</i>	<i>Scandent scrambler full sun yellow daisy</i>	
<i>CENTELLA ASIATICA</i>	<i>Scandent herb sun or shade</i>	
<i>COIX LACRYMA-JOBI</i>	<i>Large grass with attractive seeds Job's Tears</i>	
<i>COTULA NIGELLIFOLIA.</i>	<i>pond edge species blue green leaves yellow button daisy flowers</i>	
<i>CRASSOCEPHALUM PICRIDIFOLIUM</i>	<i>Scandent herb in wetlands with button-shaped canary yellow flowers</i>	
<i>CYPERUS ARTICULATUS</i>	<i>Wand sedge up to 1 metre tall</i>	
<i>CYPERUS IMMENSUS</i>	<i>Large sedge</i>	
<i>CYPERUS LATIFOLIUS</i>	<i>Large sedge</i>	
<i>CYPERUS PROLIFER</i>	<i>Dwarf sedge looks like a miniature Papyrus</i>	
<i>CYPERUS SEXANGULARIS</i>	<i>Medium sedge</i>	
<i>CYPERUS TEXTILIS</i>	<i>Medium sedge will take some shade</i>	
<i>DISSOTIS CANESCENS</i>	<i>Wild tibouchina full sun smaller purple flowers to next plant</i>	
<i>DISSOTIS PRINCEPS</i>	<i>Wild tibouchina full sun larger leaves and flowers</i>	
<i>GUNNERA PERPENZA</i>	<i>Scandent large round leaves texture plant</i>	
<i>HYDROCOTYLE BONARIENSIS</i>	<i>Creeping herb</i>	
<i>JUNCUS KRAUSSII</i>	<i>Spiky matting rush form plant full sun</i>	
<i>ISOLEPIS PROLIFERA</i>	<i>Pioneer sedge for damp edges forms a neat mat of foliage</i>	
<i>KNIPHOFIA ROOPERI</i>	<i>Full sun large yellow flowers with orange in winter</i>	
<i>KNIPHOFIA TYSONII</i>	<i>Full sun large red hot poker</i>	
<i>LAPORTEA PEDUNCULARIS</i>	<i>Stinging nettle for damp areas sun or shade</i>	
<i>LOBELIA ANCEPS</i>	<i>Low growing herb with blue flowers attractive groundcover</i>	
<i>LUDWIGIA OCTOVALVIS</i>	<i>Shrub sun yellow flowers</i>	
<i>LUDWIGIA ADSCENDENS</i>	<i>Floating edge plant yellow flowers</i>	
<i>NEPHROLEPIS BISERRATA</i>	<i>giant sword fern for shady areas</i>	
<i>NESAEA RADICANS</i>	<i>Herb purple fine flowers sun can take some shade</i>	
<i>NYMPHAEA NOUCHALI</i>	A blue water lily good for birds food and frogs	A
<i>NYMPHOIDES INDICA</i>	A smaller yellow flowered lily type frogs and birds	A

PLANT NAMES	DESCRIPTION	
<i>PERSICARIA SENEGALENSIS</i>	Silver or green foliage plant for edges of ponds excellent bird food	
<i>POTAMOGETON CRISPUS</i>	A brown waterweed good for birds food	A
<i>POTAMOGETON SCHWEINFURTHII</i>	A larger leafed waterweed	A
<i>POTAMOGETON THUNBERGII</i>	A medium water weed birds	A
<i>PYCNOSTACHYS RETICULATA</i>	Mint family pinkish flowers birds shrub of about 2metres	
<i>PYCNOSTACHYS URTICIFOLIA</i>	Mint family blue flowers full sun for edges of wetlands 2-3metres tall	
<i>RANUNCULUS MULTIFIDUS</i>	Yellow buttercup full sun birds	
<i>SCHOENOPLECTUS LITTORALIS OR S. SCIRPOIDES</i>	This wand sedge is a sculptural joy. Large up to 3 metres tall but worth it for ponds and their edges.	
<i>STENOCHLAENA TENUIFOLIA</i>	Robust creeping swamp forest fern for full sun or shade.	
<i>ZANTEDESCHIA AETHIOPICA</i>	Sun or shade in damp spots white flowers	
CREEPERS		
<i>ADENIA GUMMIFERA</i>	Green stemmed robust passion fruit family	
<i>CISSUS FRAGILIS</i>	Grape family delicate creeper sun	
<i>COCCINEA PALMATA</i>	Cucumber red fruits attractive to birds	
<i>COMBRETUM BRACTEOSUM</i>	Red flowered creeper robust	
<i>CYNANCHUM NATALITIUM</i>	Milkweed family good for insects	
<i>CYNANCHUM OBOVATUM</i>	More dune loving small green flowers good for insects	
<i>CYPHOSTEMMA FLAVIFLORUM</i>	Dune bush species common at Zimbali	
<i>CYPHOSTEMMA HYPOLEUCUM</i>	Wild grape double barrelled stem quick growing	
<i>EMBELIA RUMINATA</i>	Creeper with edible fruits for monkeys and other animals	
<i>JASMINUM MULTIPARTITUM</i>	Dry sun loving wild jasmine white scented flowers	
<i>JASMINUM STREPTOPUS</i>	Forest loving jasmine white flowers	
<i>LAGENARIA SPHAERICA</i>	Large gem squash-like fruits large white flowers cucumber	
<i>MOMORDICA BALSAMINA</i>	Cucumber orange fruits good for birds and monkeys	
<i>MONDIA WHITEI</i>	Creeper in damp areas maroon flowers milky sap	
<i>RHOICISSUS DIGITATA</i>	Wild grape robust creeper good for birds	
<i>RHOICISSUS RHOMBOIDEA</i>	As above	
<i>RHOICISSUS TOMENTOSA</i>	As above most robust of the wild grapes	F
<i>SCUTIA MYRTINA</i>	Thorny scrambler great browsing plant for Bushbuck & Duiker	
<i>SENECIO BRACHYPODUS</i>	Semi-succulent yellow flowers in winter good for insects	F
<i>SENECIO DELTOIDEUS</i>	Robust creeper small nectar rich flowers yellow and scented	
<i>SENECIO MACROGLOSSUS</i>	Semi-succulent sun forest edge large pale yellow flower	
<i>SENECIO TAMOIDES</i>	Canary creeper yellow flowers in winter quick grower	
<i>URERA TRINERVIS</i>	Stinging nettle creeper for sun or shade good butterfly food plant. Will partially "stick" to a rough wall.	
<i>TINOSPORIA CAFFRA</i>	Succulent creeper in forests orange fruits good for everything	F
<i>VERNONIA CHRYSANTHA</i>	Daisy creeper with heads of creamy yellow flowers in winter.	
<i>VERNONIA ANGULIFOLIA</i>	Daisy creeper with heads of pinky mauve flowers in winter	
<i>ZEHNERIA PARVIFOLIA</i>	Annual cucumber small purple fruits heaven for birds	

PLANT NAMES	DESCRIPTION	
PLANTS SUITABLE FOR DUNE PLANTING AND OTHER EXPOSED LOCALITIES IN ZIMBALI		
<i>ACOKANTHERA OBLONGIFOLIA</i>	<i>Shrub for dunes sun for birds and mammals</i>	
<i>ALOE THRASKII</i>	<i>Upright species single stems dune endemic to our coast orange flowers in Winter full sun takes wind</i>	
<i>ASPARAGUS DENSIFLORUS</i>	<i>Dune groundcover red berries sun</i>	
<i>BARLERIA OBTUSA</i>	<i>Creeping dune blue flowers best in sun takes wind</i>	
<i>BRACHYLAENA DISCOLOR</i>	<i>Fast screen windbreak multi-stemmed falls about</i>	
<i>CARISSA MACROCARPA</i>	<i>Dune shrub scented white flowers red fruits for birds hedging thorny</i>	
<i>CHRYSANTHEMOIDES MONILIFERA</i>	<i>Shrub yellow flowers wind resistant god pioneer plant in dunes use this when all else fails full sun good for everything</i>	
<i>CYNANCHUM OBOVATUM</i>	<i>More dune loving small green flowers good for insects</i>	
<i>CYPHOSTEMMA FLAVIFLORUM</i>	<i>Dune bush species common at Zimbali</i>	
<i>FICUS BURTT-DAVYI</i>	<i>Scrambling form sun and in wind fruits for birds</i>	
<i>GAZANIA RIGENS</i>	<i>Full sun silver leaves yellow flowers wind</i>	
<i>HELICHRYSUM PLUMOSUM</i>	<i>Scrambler sun yellow flowers silver underside to leaves</i>	
<i>IPOMOEA BRASILIENSIS</i>	<i>Creepers mauve flowers dune species full sun</i>	
<i>JUSTICIA BETONICA</i>	<i>Herb white flowers on stems sun-loving good for insects</i>	
<i>MAYTENUS NEMOROSA = GYMNOSPORA</i>	<i>Hedge thorny shrub in dunes fruits for everything</i>	
<i>ARENICOLA</i>		
<i>MAYTENUS PROCUMBENS</i>	<i>Dune shrub sun rapid growth takes wind</i>	
<i>MIMUSOPS CAFFRA</i>	<i>Large tree windy areas fruits for birds and mammals</i>	
<i>OSTEOSPERMUM FRUTICOSUM</i>	<i>Creeping dune daisy white flowers pioneer-</i>	
<i>PERISTROPHE CERNUA</i>	<i>Dune creeping mauve flowers in Winter good for insect</i>	
<i>PAVETTA REVOLUTA</i>	<i>Dune shrub sun multi-stemmed white flowers</i>	
<i>PSYDRAX OBOVATA</i>	<i>Pioneer tree sun and wind good for birds and mammals</i>	
<i>RHOICISSUS DIGITATA</i>	<i>Wild grape robust creeper good for birds</i>	
<i>RHOICISSUS RHOMBOIDEA</i>	<i>As above</i>	
<i>RHOICISSUS TOMENTOSA</i>	<i>As above most robust</i>	F
<i>SEARSIA NEBULOSA</i>	<i>Dune scrambler best in sun birds for seeds</i>	
<i>SETARIA MEGAPHYLLA</i>	<i>Sun loving forest grass tall flower spikes good for birds</i>	F
<i>STRELITZIA NICOLAI</i>	<i>Sun large shrubby like multi-stemmed good for birds</i>	