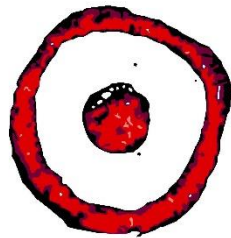


# KELDERHOF

## STREET VERGE LANDSCAPE GUIDELINES

MARCH 2021

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# Section One: General

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# 1 General

## 1.1 Foreword

Kelderhof Country Village intends to integrate community living with a country lifestyle. The 570 street verges vary in size and type - thereby requesting a coherent design language to create and coherent street verge character.

The residential building forms range from row houses to a variety of freestanding models – all reflecting contemporary Cape rural architecture. Typical homestead configurations include the Barn House, Courtyard House, and Cottage House.



To fit within the rural context, all street verge landscape current and future installation at Kelderhof Country Village should be planned to complement the character and should contribute to the 'look and feel' of the estate, with an emphasis on 'place-making' rather than 'decoration'.

## 1.2 Purpose of the street verge guidelines

This document outlines the responsibilities of each homeowner or occupier concerning the landscape and environmental quality of the street verges. The street verges form an integral part of the whole estate, contributing to the visual and aesthetic continuity of the entire public realm; thereby enhancing the Kelderhof Country Village 'sense of place'.

This document guides homeowners in making specific street verge design and maintenance decisions. It recommends appropriate types of 'hard' landscape (i.e., built) elements and 'soft' landscape (i.e., planted) elements.

## 1.3 What is the street verge area?

Street verges are typically narrow spaces of land that are within the streetscape that need to be safe for pedestrians, road users as well as visually attractive.

The street reserve is between the edge of a made roadway or constructed kerb and the property boundary wall. This area can include landscaping, made footpath or parking areas, driveways, trees, and a variety of traffic furniture (i.e., stop signs and signage).

## 1.4 Whose responsibility is the street verge?

The property owner or occupier is encouraged to take pride in the verge which abuts their property including the corner verge, to enhance the amenity and aesthetic value of their properties and the streetscape.

Street verge development, including acceptable materials and landscaping, is the responsibility of the owner or occupier. The owner or occupier needs to ensure that any verge treatment is completed, maintained, and repaired in accordance with the guidelines in this document. In the event of a change of land ownership, the responsibility for a developed/ undeveloped street verge passes onto the new owner or occupier.

An undeveloped verge is one where no verge treatment has ever been undertaken. Primarily, these verges are adjacent to vacant land. The estate undertakes a minimum standard of maintenance to alleviate hazards, generally mowing once annually and undertaking weed treatment as required.

The maintenance of a street verge may include the following:

- Pruning of trees and plants and mowing lawns.
- Replacing dead or old plants.
- Weed control.
- Watering.
- Irrigation reticulation repair and maintenance.
- Topping up, cleaning, and retaining mulch and gravel.
- Cleaning and repair of approved pavement/synthetic turf.

## 1.5 Do I need permission to develop and maintain my street verge?

When existing and newly developed street verges complies with this document, development and maintenance can be undertaken without written approval. When street verges do not comply with this document you must submit a written application and include a plan for assessment and approval.

# Section two: PRINCIPALS

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## 2 PRINCIPALS

### 2.1 General street verge principals

Developing, with soft and hard landscaping, a street verge contributes in many positive ways to your street verge including, providing a healthier environment for street trees, absorbing rainwater, and providing much needed habitat for small creatures like bees and butterflies. Plants also work as natural air conditioners when air moves through the moisture in the leaves. Collectively the more plants in an area; the cooler it can be which is particularly useful in summer.

The following principals will assist when developing your street verge:

- Promoting the use of indigenous water-wise plant species. Refer to item 2.2.1 in this document.
- Reflecting the rural character of the estate.
- Articulating an integrated system pathway, parking courts, street frontages.
- Shading, screening, and general micro-climate controlling along street verges.
- Street verges should not consist of less than 60 per cent of planting and permeable surface area. The remaining 40 per cent will consist of all crossovers, footpaths, driveways, and paving.
- To strengthen estate character; residents and homeowners are requested to plant trees as per the updated Street Tree Plan (Annexure A). Existing trees not conforming to the updated street tree plan can be replaced once they are at the end of their life.

The following Verge garden design tips will assist when developing your street verge:

- Plan your garden on paper as a sketched plan so that you know what plants to acquire.
- You can include an edge or divider between components of your verge garden. This is especially needed where mulch or gravel is used. The edge also needs to ensure that the verge garden remains contained.
- Choose plants suited to the site's environmental conditions – group plants with similar water/ fertiliser/ shade/and sun requirements.
- Mass plant the same species for increased effect as well as ease of maintenance. A simple scheme of two or three species on a verge can be an extremely attractive option.
- Consider the various forms of the plants – to aid sightlines, place groundcovers adjacent to footpaths and/ or the two-metre access edge along the verge, and low shrubs and strappy/grassy plants elsewhere.
- Consider plant form and colour and tie these in with your property's materials and the remainder of your garden.
- Consider 'lawn alternatives' – mass plant low growing groundcovers of one or two species to create an alternative 'green carpet' to the verge.
- Consider plant growth height when planning the verge garden. Some plants will need to be pruned on a regular basis to maintain the height limitations.
- Consider the street verge adjacent to yours and across the road and tie in with them by using the same or similar type of material.
- Consider using gravel, mulching and other permeable material in combination with your plant design.

The following are samples of street verge options that will assist you when planning or maintain your street verge.



### 2.1.1 Typical street verge layout without footpath.

This typical layout can be found in areas where there are no sidewalks installed, typically associated with the Barn, Cottage and Courtyard style houses, and where the owners have no desire to install a sidewalk on the street verge soon. The following areas need to be considered when planning or maintaining this street verge.



Description of areas indicated:

- Hard landscape areas that cannot be more than 40% of the total street verge area:
  - A – The driveway into the property. This should be installed and maintenance as per latest estate guidelines. The driveways could not exceed the approved width.
  - C – Additional hard landscape areas, walkways, artificial lawn, and parking areas.
- Soft landscape areas that cannot be less than 60% of the total street verge area:
  - B – Lawn, groundcover, mulching, or shrubs. To ensure sightlines, the plant species chosen must not exceed 600mm in height, however a 1000mm strip of hedge in front of the boundary wall should be planted. The height of this hedge should not be higher than the boundary wall. If plants grow higher, they need to be maintained by pruning/ clipping them to the said height.
  - D – A minimum 1000mm offset must be maintained between the centre of the trunk and all street trees and hard landscaping areas.
  - E – Where there is no footpath to the verge, lawn, groundcover, or shrubs should be planted. To ensure sightlines, the plant species chosen must not exceed 400mm in height



## 2.1.2 Typical street verge layout with footpath.

This typical layout can be found in areas where there are sidewalks installed, typically associated with the Barn, Cottage and Courtyard style houses, or where the owners have a desire to install a sidewalk on the street verge soon. The following areas need to be considered when planning or maintaining this street verge.



Description of areas indicated:

- Hard landscape areas that cannot be more than 40% of the total street verge area:
  - A – The driveway into the property. This should be installed and maintenance as per latest estate guidelines. The driveways could not exceed the approved width.
  - C – Additional hard landscape areas, walkways, artificial lawn, and parking areas.
  - E – Where there is a footpath to the verge. The footpath should be accessible to all pedestrians and should be adjoining the street kerb. If the footpath is made from permeable material the footpath will not be part of the Hard Landscape calculations.
- Soft landscape areas that cannot be less than 60% of the total street verge area:
  - B – Lawn, groundcover, mulching, or shrubs. To ensure sightlines, the plant species chosen must not exceed 600mm in height, however a 1000mm strip of hedge in front of the boundary wall should be planted. The height of this hedge should not be higher than the boundary wall. If plants grow higher, they need to be maintained by pruning/ clipping them to the said height.
  - D – A minimum 1000mm offset must be maintained between the centre of the trunk and all street trees and hard landscaping areas.



### 2.1.3 Typical corner street verge layout with footpath.

This typical layout can be found in at street corners. This layout is typically associated with the Barn, Cottage and Courtyard style houses. The following areas need to be considered when planning or maintaining this street verge.

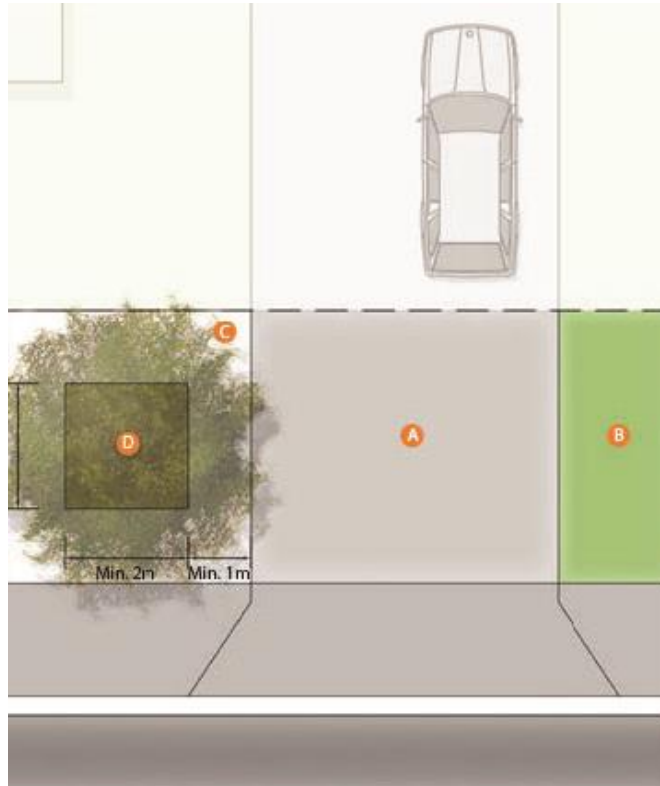


Description of areas indicated:

- Hard landscape areas that cannot be more than 40% of the total street verge area:
  - A – The driveway into the property. This should be installed and maintenance as per latest estate guidelines. The driveways could not exceed the approved width.
  - C – Additional hard landscape areas, walkways, artificial lawn, and parking areas.
  - E – Where there is a footpath to the verge. The footpath should be accessible to all pedestrians and should be adjoining the street kerb. If the footpath is made from permeable material the footpath will not be part of the Hard Landscape calculations.
- Soft landscape areas that cannot be less than 60% of the total street verge area:
  - B – Lawn, groundcover, mulching, or shrubs. To ensure sightlines, the plant species chosen must not exceed 600mm in height, however a 1000mm strip of hedge in front of the boundary wall should be planted. The height of this hedge should not be higher than the boundary wall. If plants grow higher, they need to be maintained by pruning/ clipping them to the said height.
  - D – A minimum 1000mm offset must be maintained between the centre of the trunk and all street trees and hard landscaping areas.
  - F – To ensure sightlines trees cannot be planted within the truncation/ clear zone. Planting of lawn, groundcovers and shrubs are acceptable. Species chosen must not exceed 600mm in height. If plants grow higher, they need to be maintained by pruning/ clipping them to the said height.

### 2.1.4 Typical street verge with little space for soft landscaping

This typical layout can be found at row houses and other properties with little space for soft landscaping. The following areas need to be considered when planning or maintaining this street verge



Description of areas indicated:

- Hard landscape areas:
  - A – The driveway into the property. This should be installed and maintenance as per latest estate guidelines. The driveways could not exceed the approved width.
  - C – Additional hard landscape areas, walkways, artificial lawn, and parking areas.
- Soft landscape areas that cannot be less than 60% of the total street verge area:
  - B – Lawn, groundcover, mulching, or shrubs. To ensure sightlines, the plant species chosen must not exceed 600mm in height, however a 1000mm strip of hedge in front of the boundary wall should be planted. The height of this hedge should not be higher than the boundary wall. If plants grow higher, they need to be maintained by pruning/ clipping them to the said height.
  - D – A minimum 1000mm offset must be maintained between the centre of the trunk and all street trees and hard landscaping areas. Between all trees suitable soft landscaping should be planted.

## 2.2 Waterwise.

### 2.2.1 What is a waterwise garden.

Being wise with your water does not necessarily mean giving it up altogether (though we passionately believe that is a goal worth striving for!), but rather using it at the right time, in the right place, and thinking about how much water you really need to use.

Plant at the right time of year – give the plants a chance to establish with the winter rains. Plant appropriate species – there are many thousands of plants which will thrive on low-water or no-water regimes. But most importantly: reconsider your lawn.

Water-wise wording: Brief definitions

- Drought-resistant — An all-encompassing term traditionally used to describe plant adaptations in response to drought stress, including drought escape, drought avoidance, and drought tolerance.
- Drought-tolerant — A term used to describe plants that can survive short-term drought because of various adaptations, including wilting and other responses that may affect aesthetics.
- Water-wise — A term used to describe a water- and plant-management practice that emphasizes using plants that have lower supplemental water needs and grouping plants by water needs to encourage more efficient water use.
- Xeric — A term derived from xeros, the Greek word meaning dry, used to describe arid habitats and plants that evolved in extremely arid climates. True xeric plants function normally in “drought” conditions. Established plants may suffer if given supplemental water.

Finally, a waterwise gardening does not mean to replace plant with paving or artificial lawn, it rather means to cut down on water wastage, while preserving the beauty of a garden and the natural plant diversity of an area. In a waterwise garden you will find plants save water.

### 2.2.2 Is gravel and artificial lawn eco-friendly?

Lawn is considered as a high maintenance high water usage plant, and there is a trend to replace lawn with gravel or artificial lawn that requires less water and maintenance.

Artificial lawn might indeed be greener, at least in colour, its environmental impacts are difficult to gloss over, as artificial lawn is far from an eco-friendly alternative to natural landscapes.

- Artificial lawn blocks access to the soil beneath for burrowing insects and the ground above for soil dwellers. It provides food for absolutely no living creature.
- Artificial lawn climate benefits. When manufacturing it the plastic emits carbon and uses fossil fuels.
- The common practice of replacing soil with sand to provide a more stable bed for the artificial lawn also releases even more CO<sub>2</sub> stored in the earth
- Artificial lawn does not work as natural air conditioners as it does not move moisture through the leaves.
- And what happens to artificial lawn when it reaches the end of its life in 10-20 years?

Gravel seems safe and natural and importantly these days, allows water to drain through it, but only Eco-friendly, if locally and sustainably sourced. Gravel can be advantages if used as a tool to enhance the garden, and not just to cover the soil. Instead of just using gravel as a cover medium rather create a gravel garden

The following to be considered when creating a gravel garden:

- This type of garden concept is characterized by gravel mulch, but may also include trees, shrubs, ground covers, flowers, larger rocks, and differently textured hardscape details.
- Gravel should be used as an alternative to mulching below plants, as the gravel protect the moisture in the soil.
- Gravel needs to be topped up regularly.

- You need to weed out the more invasive intruders for the first few years until the plants fill out and start spreading around the gravel areas.
- Gravel areas need to be raked on a frequent basis.
- The edges of the gravel garden need to be treated with the appropriate hard edge to avoid and gravel falling into the street of adjacent areas.

# Section three: Street conditions

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### 3 Street conditions

#### 3.1 Soft landscaping

Soft landscaping elements are, by and large, decorative additions to an outdoor space. Or, more simply, the greenery that makes them so pleasant to relax in. When the term soft landscaping is used it is often describing elements such as trees, shrubs, turf, mulch, gravel, and other permeable material.

##### 3.1.1 Trees

- Each individual erf must accommodate at least one tree along its street edge. This tree, planted on pavements, where possible, i.e., where pavements are 2m or wider. This is to facilitate the “country lane” feeling of the Estate. Where pavements are narrower than 2m, trees are to be planted within the site boundaries.
- The position of the tree is dependent on the extent of street frontage, underground services, and driveways.
- Plant the correct tree species, size and spacing as per the revised landscape plan - to create a continuous streetscape.
- Place trees to give maximum protection from wind.

##### 3.1.2 Planting

- Homeowners are required to landscape the sidewalk / road reserve areas immediately in front of their properties.
- Homeowners are responsible for the irrigation maintenance of all landscaping directly in front of their properties (between the boundary wall and kerb).
- Plant roadsides, sidewalks or embankments with trees shrubs and groundcovers indicated in the recommended plant list.
- Size and type should be largely determined by street orientation (north/south); continuity of street edge character (refer to the Street Tree Plan).
- Deciduous trees on north facing streets are encouraged as they allow greater sunlight penetration in winter (when they lose their leaves).

##### 3.1.3 Stones and gravel

Refer to item 2.2.2.

##### 3.1.4 Irrigation

- Irrigation systems should be inconspicuous and efficient.
- Greywater recycling systems are encouraged for irrigation purposes.
- Rainwater collection tanks are encouraged for irrigation purposes.
- Standpipe or pup-up irrigation systems are encouraged for more efficient water usage.
- Time irrigation to avoid wasteful evaporation: do not irrigate during the hottest time of the day; rather irrigate during the early hours of the morning.





## 3.2 Hard landscaping

Hard components of the landscape- the large pieces of hard material make up the bulk of the “bones” of landscape materials- the rock, the stone, the masonry. These are typically referred to the hardscape materials. Essential in creating a sense of space and tying in the garden and landscape to the rest of the outside world and to the look and feel of the home, the hardscape is an essential and an important part of landscaping.

### 3.2.1 External build elements

- Use boundary walls to create a coherent streetscape: therefore, treat all boundary walls with similar details, colours, textures, copings, and heights.
- Low ‘werf walls’ (with a max height of 1m) are encouraged to define the edges of entranceways and erf boundaries on the street edge.
- Only use 1.8m high walls for screening of service areas, drying yards and swimming pools. These 1.8m high walls must be set back (minimum 2m) from the street edge.
- Street edge walls are to be low werf walls – 600mm to 1000mm, buttressed and articulated where necessary for stability

### 3.2.2 Retaining walls, steps, and ramps

- Use low retaining walls (maximum 1.2 m height) to accommodate level changes.
- No single retaining wall shall exceed 1.2 m height.
- Use a series of terraced retaining walls to support level changes more than 1.2 m.
- Each terrace level should be at least 1.0 m wide.
- Stone-faced, stone-clad, or dry-packed stone walls (using natural stone) are encouraged, however plastered and painted walls (suitably waterproofed) are permissible.
- Organic / free form and terraforce retaining walls are not permitted. Use only simple rectilinear (square and rectangular) forms to create terraces.
- All steps and ramps are subject to the existing paved materials palette used for roadways and sidewalks (exposed aggregate concrete pavers, laterite gravel, cobbles, clay brick).
- Colours may vary within a reasonable range.

### 3.2.3 Signage

- Use Helvetica font for signage and numbering (see text sample above).
- Attach signage and numbering to external walls of each house wherever possible.
- Wall-mounted signage is preferred; thus pole-mounted signage prohibited.
- Ensure that signage visible, but unobtrusive - to avoid visual clutter.
- All signage requires Homeowners Association and Design Review Committee approval prior to installation.
- Use either wall-mounted or pole-mounted wooden rectangular letterboxes of maximum size 400 x 400 x 150 mm.

### 3.2.4 Paving and Pedestrian paths

- Plant shade trees along pedestrian paths wherever possible.
- Paving layouts should be designed using consistent materials and patterns to achieve a unique identity for the Kelderhof Estate.
- Use a single material to define edges so that there is continuity between different surface areas.
- Subtle variations in colour and texture can provide character, richness, and a sense of scale to the estate.
- Generous pedestrian linkages along wide treed streets will help to create a rural character.
- Conform all paving materials to the approved list provided below, creating a coherent overall character of the estate.
- Driveway paving must be consistent with roadways.
- Do not use any plain grey concrete slabs or circular concrete slabs.
- Use crushed stone with an aggregate size of between 13 – 19mm as an alternative to hard paving.

- Use loose-packed bricks wherever possible to allow for natural penetration of water.
- Listed below are acceptable paving options:
  - Clay brick, Exposed aggregate in-situ paving and unit pavers.
  - Natural stone or slate.
  - Crushed stone on sub-base.
  - Steppingstones.
  - Submit all proposed paving materials, colours, and bonding pattern designs to the Design Review Committee for approval prior to ordering and installing.
  - **Sleepers or wooden steps may not be used**

### 3.2.5 Garden elements

- Choose garden elements (such as garden furniture, pots, benches, birdbaths, fountains, railings etc) to enhance the character of street verge and submit all proposals to the Architectural Review Committee for approval.
- All freestanding elements require Homeowners Association and Design Review Committee approval prior to installation.
- All outdoor furniture visible from the road should have a common language of design, size, and height.
- To avoid visual clutter (too many elements competing for attention) be selective and strategic with the placement of garden elements.

### 3.2.6 Edging

Permitted as a component of a permissible street verge garden.

- Edgings and dividers on verges or between verges, only to the extent required to provide sufficient division, provided they are:
  - Flush with the verge surface, footpath, and the top of the kerb; and
  - At least 1000mm from a street tree; and
  - Constructed of flush concrete kerbing (not raised extruded kerbing), a minimum thickness of 100mm, or bricks or trafficable pavers, which are securely fixed, for example laid on concrete.

### 3.2.7 Synthetic lawn

Refer to item 2.2.2, All synthetic lawn requires Homeowners Association and Design Review Committee approval prior to installation.

- Street verge aesthetic will be considered as part of each assessment.
- Verges should not consist of more than 40 per cent of hardstand area. Due to the hardstand nature of the compacted subbase required for synthetic lawn, the total area of synthetic lawn + all hardstand (including crossovers, footpaths, driveways, and paving) should not cover more than 40 per cent of the street verge.
- The exception is for verges of less than 1m wide, not including the width of footpath; and isolated remnant portions of verge less than 4m<sup>2</sup>; where it is not practical to maintain a natural lawn or garden.
- A minimum of 1000mm, depending on the tree species and size\*, is required between the trunk of a street tree and the installation of synthetic lawn.

### 3.2.8 Borders and low garden fencing

Permitted as a component of a street verge garden, however, requires Homeowners Association and Design Review Committee approval prior to installation.

- Street verge aesthetic will be considered as part of each assessment.
- Borders and low garden fencing up to 300mm high are allowed.
- Organic / free form and terraforce blocks are not permitted. Use only simple rectilinear (square and rectangular) forms to create terraces.
- **Dry-packed stone borders and low garden walls (using natural stone) are encouraged**
- **Wooden, plastic or metal borders and low garden fencing are not allowed.**

### 3.2.9 General

- No vibacrete, razor wire, wire mesh, barbed-wire or spikes permitted.
- No concrete retaining blocks, such as 'Terraforce' or artificial rock permitted.
- No sleepers, wooden ornaments or wooden edges are allowed.
- No metal fencing are allowed in the street verge.
- Dust bins, washing lines and storage areas must not be visible from the street verge.
- No protruding radio/TV aerials or satellite TV dishes must be visible from the street verge.



# Section four: STREET VERGE CONSTRUCTION

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## 4 Street verge planting (in front of individual erven)

### 4.1 Planting preparation

#### 4.1.1 General planting preparation

- Mix 1 part compost to 3 parts in-situ soil (recommended).
- For all areas to be planted test the soil for any deficiencies.
- Should any deficiencies occur, use only organic fertilizers to improve soil quality.
- Apply mulch (wood chip layer, gravel or equivalent) 50mm thick to the soil surface after planting. This helps to reduce water evaporation, moderate soil temperatures, smother weed growth and provide additional nutrients.
- Replace and top up mulch as and when needed.

#### 4.1.2 Lawn planting preparation

- Rake prepared area to desired contours and levels.
- Moisten surface of the topsoil mix with a fine-spray hosepipe.
- Lay the grass sods on top, or plant grass plugs, or seed.
- Compress lightly to even out grass sods.
- Water well with a fine-spray hosepipe.

#### 4.1.3 Shrub and groundcover planting preparation

- Excavate hole in topsoil mix.
- Remove the plant from its container, maintaining the potting soil around its roots.
- Dust the plant's root-ball with bone meal.
- Place plant in hole, top of root-ball to be level with finished ground level.
- Backfill and lightly compress topsoil mix.
- Spread 50mm layer of mulch on top.
- Water well with hosepipe directly after planting.

#### 4.1.4 Tree planting preparation

- Remove the tree from its container.
- Dust tree root-ball with bonemeal.
- Dig tree hole – generally 1m deep and 1m wide (wider and deeper for bigger trees).
- Place tree in hole, with the top of root ball level with finished ground level.
- Continue backfilling topsoil mix in layers around the root ball to stabilize.
- Compress the topsoil mix well and spread a 50mm layer of mulch on top.
- Irrigate thoroughly with hosepipe directly after planting.
- Brace all newly planted trees in position with upright stakes. Fasten the tree to the stake with ties and adjust regularly (as the tree grows) to prevent stem damage.

#### 4.1.5 Mulching preparation

- Organic mulch (mulch from plants such as bark mulch) should be installed to all street verge gardens to a minimum depth of 75mm.
- Mulched street verges may be left unplanted or planted with a street verge garden.
- Use large particle mulch heavy enough to remain in place and not drift onto footpaths and roads. It must not contain sharp or otherwise dangerous material.
- Do not use mulch containing peat as it retains moisture on the surface of the soil, encouraging shallow root development and increasing reliance on irrigation.

- Use seasoned mulch. Do not use 'green' mulch that has too recently been produced, as it causes draw down of nutrients which adversely affects plants, and it often has undesirable seeds that may germinate.
- The finished level should be no higher than the surrounding top of kerb and footpath heights. This may require some soil removal in preparation for your garden.
- Replace and top up mulch as and when needed.

#### **4.1.6 Stone and gravel preparation**

Stone and gravel can be used as part of a gravel garden:

- Gravel to be installed to a depth of 75mm, with a permeable membrane underneath.
- Gravel to be between 9dia mm and 19dia mm and must be obtained from a local quarry or supplier.
- Gravel can not be installed more than 50% of the entire allowed street verge garden area.
- Gravel to be raked regularly and should be topped up as and when needed.

# Section five: MAINTENANCE OF STREET VERGE

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## 5 Maintenance of the street reserve (in front of individual erven)

### 5.1 Trees

- The owner or occupant undertakes to care, prune, and maintain the street verge tree.

### 5.2 Pruning of trees and shrubs

- Limit the degree of pruning to the minimum necessary to remove dead or injured branches, and to maintain good form and height for shade trees.
- Remove no more than (maximum) 1/3 of the wood by thinning or shortening of branches. Pruning should be done carefully to preserve the natural character and growth form of the tree.
- Tree pruning tools must be properly sterilized, and all cuts must be clean and flush, leaving no stubs.
- Cut and branches to be removed just below the collar (the prominent 'swelling' on the underside of the branch), but do not cut into the collar. This would cause die-back into the trunk which could allow insect or pathogen infestations.
- Trees naturally heal themselves after pruning by producing wound-response wood. Do not apply any wound sealing products, as these may in fact seal infections into the tree. There is less chance of damage to the pruned tree (or shrub) if left to its own natural healing process.

### 5.3 Access and sightlines

- To maintain access and sightlines to footpaths and roads, all plants and tree branches encroaching from street verge gardens need to be regularly trimmed as per prescribed heights.

### 5.4 Chemical and fertilizers

- To minimise over fertilising, fertilisers should only be applied when symptoms of nutrient deficiency occur, such as yellowing. Indigenous plants require less fertiliser as they are adapted to our soils.
- Fertilise in spring or autumn, as summer fertilising increases water use, and fertiliser applied during winter may be washed into stormwater drains or leached into groundwater.
- Weed, pest and disease control should be dealt with using physical non-toxic means, rather than relying solely upon chemical control.
- Only chemicals such as herbicides or pesticides approved for use in the domestic nursery may be used.
- Caution should be applied during application, with manufacturer's directions followed. Targeted application is required, with a preference for wiping, brushing or handheld spraying.
- The following are a guide to fertilizing:
  - Mid-September - apply 2:3:2(22)+Zn at 250g/m<sup>2</sup>
  - Mid-November - apply 3:1:5(SR) at 200g/m<sup>2</sup>
  - Mid-January - apply LAN at 200g/m<sup>2</sup>
  - Mid-March - apply 2:3:2(22)+Zn at 250g/m<sup>2</sup>

### 5.5 Weeding

Removal of weeds by means of hand or mechanical equipment, or other similar approved method (3 x applications per annum):

- September
- December
- February

### 5.6 Mulching

- Bark chips or wood mulch shall be applied as and when required.
- Mulch to be shredded selected wood or bark chips varying in size from 25mm to 50mm in length, from coniferous trees or other approved source.
- Stores move and spreading of the material in a minimum of 75mm thick layers.
- Top up mulching should be applied annually.



## 5.7 Stones and gravel

- Remove all leaves and organic matter once every two weeks.
- Remove all weeds once a month.
- Even out gravel once a month.
- Top up gravel should be applied annually.

## 5.8 Irrigation maintenance

The irrigation system should be checked and maintenance every two months:

- Identify the positions of all pop-ups in the system and trim grass or other foliage from around them so they may pop up and retract freely and so that there is minimal interference with the spray pattern. Remove the interior mechanism from a sample of sprinklers and check that the strainers at the base are not blocked.
- Check and adjust the installed heights of pop-up sprinklers so that the highest part of the sprinkler in the retracted position is at least 20mm below the soil level.
- Check that there is no leakage from the pop-up seals. Check for low head drainage and fit check valves or replace sprinklers, which are leaking because of this.
- Lift and re-install or replace any sprinkler riser pipes that have been bent or otherwise displaced from an upright position.
- Add extension to sprinkler riser pipes where sprinklers are becoming overgrown by foliage.
- Check and adjust the flow controls on control valves so that all sprinklers work at the specified operating pressure.
- Check and adjust sprinkler and sprayers arcs to minimise overspray onto non-irrigated areas.
- Look out for any excessively wet areas which may indicate leaks in the pipe network.
- Check that all solenoid control valves open and close automatically according to the programme on the respective irrigation controller and that they are free of stones or other solid matter which might prevent full closure.
- Check all irrigation controllers are in full working condition and fitted with viable backup batteries.
- Operating the system automatically by means of the controller, zone by zone, to verify that the controller is in full working condition and that all valves are fully opening and closing electrically. Identify the cause of valve failures and repair or replace faulty control wires, controllers or valves.
- Check for run-off caused by high precipitation rates, steep slopes, or heavy soils. Set the irrigation schedule accordingly to minimise this.
- During other maintenance work, observe the state of the plant material in relation to soil moisture status and make necessary adjustments to irrigation schedules.
- The drip irrigation needs to be flushed twice annually.

# Section five: PLANT LIST

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## 6 Recommended street verge plant list

### 6.1 Plant list

Please refer to the latest street verge plant list available of the website.

Note: This list serves as a guideline. Other indigenous species, especially that are endemic to the Western Cape, (though not listed here), may also be used.