

## INTRODUCTION

The main purpose of these architectural and landscape architectural guidelines is to outline the framework for the proposed Voliere development, located on the R44, adjacent to Welgevonden Estate in northern Stellenbosch. In general, guidelines are not intended to stifle or inhibit innovative design and creativity but to rather serve as an instrument to guide and maintain the external appearance and positioning of buildings and structures to create a harmonious development.

It is therefore prescribed that all new buildings and future alterations and additions must comply with these design guidelines. The conditions and guidelines as set out in this document are binding upon all residential properties in the development.

In respect of the interpretation of these guidelines and with regard to any aesthetic and design matters not covered in these guidelines, the decision of the Architect appointed for aesthetic control by The Homeowner's Association (HOA) of this Voliere, hereafter referred to as the Control Architect, will be final and binding.

The design framework also serve to create an awareness and commitment by future property owners, architects and builders regarding the promotion of sustainable development principles and in particular promoting sustainable architecture and construction ("Green Architecture").

### **NOTE:**

- 1. These guidelines will be subject to periodical revision as deemed necessary from time to time.***
- 2. In the event of difference of interpretation of these guidelines or conflict the decision of the Control Architect will be final and binding.***



Figure 1: Locality Plan

## 1. GENERAL URBAN DESIGN AND ARCHITECTURAL STATEMENT

Application is made in the Rezoning Application for the approval of an Architectural Design Guidelines.

These Architectural Guidelines addresses and illustrates the design rationale and philosophy, building form and structure applicable to the various components of the proposed development. The Architectural Guidelines therefore provides an overview of the principles applicable to all development components.

The Architectural Guidelines also responds to the findings and recommendations of the *Visual Impact Assessment* and the *Heritage Impact Assessment* that were undertaken as part of the EIA. As a result, the Guidelines complies with the principles of ‘critical regionalism’ as explained in the Rezoning Application and the Draft Inception Phase Report. The aim is to ensure the establishment of a high-quality urban environment with a unique atmosphere and *genius loci* (spirit of place).

As illustrated in Par 4 below a wide range of dwelling unit types were designed to match specific erven in accordance with the aims of creating a qualitative urban environment and the specific prescriptions of the zoning approval.

As illustrated below on the Master Plan (Fig 2), Site Development Plan (Fig 9) and Landscape Development Plan (Fig 43) provision is made for a range of dwelling types and opportunities, adequate open space, parking areas, street and squares, and a significant landscaped interface between Voliere and the Welgevonden Estate.

The urban design master plan is based upon the principles that provide historic urban places with their unique qualities and was designed to avoid the problems associated with modern settlements. The Master Plan shows how all the design considerations have been embodied in the physical structure of the new settlement. Each of the urban squares in the development is characterised by different types of residential units which give the square a particular and distinct character.

Higher-density residential portions articulate the main squares, linked with streetscapes that define and integrate it within the larger development. The principles of lateral enclosure, integrated bridging and edge continuity are used to define specific nodes and smaller public squares along the main streets.

### 1.1. CRITICAL REGIONALISM

A regionalist architectural approach has been adopted which celebrates what makes local architecture local and unique and it is valued more than what makes it typical and universal. “Regional architecture” is rooted in local climate, topography, building materials, building practices, architectural types, cultures and history”. (Kelbaugh, 1999: 64).

‘Critical regionalism’ recognises the quality and attributes of regional characteristics and builds upon the development of regional idiosyncrasies and variations and requires that the following five principles should guide planning and design, namely: Sense of Place, Sense of History, Sense of Craft, Sense of Nature and Sense of Limits.

#### 1.1.1. Sense of Place

Sense of place refers to the “degree to which a place can be clearly perceived and mentally differentiated and structured in time and space by its residents and the degree to which that mental structure connects with their values and concepts” (Lynch. Good City Form, 1984).

The following three design aspects should be considered pertaining to the promotion of the sense of place qualities for Voliere, namely:

- **Identity:** “the degree to which a person can recognise a place as being distinct from other places and having a character of its own”. The design should promote and strengthen the identity of the new development by incorporating.
- **Structure:** refers to how the parts of things fit together on both the landscape and building scale. Identity and structure allow people to recognise spatial pattern in a time setting. The physical structuring elements include paths, edges, nodes, landmarks, patterns of planting, building form etc.,
- **Legibility:** refers to the elements of buildings such as chimneys, walls, window types that one can “read” as belonging to a specific place with a specific identity.

### 1.1.2. Sense of History

The design vocabulary (architectural language or building style) found in historic places can be creatively transformed to express new technical and functional requirements and meanings. Historic lessons that can inform design can be traced back thousands of years, and to many cultures. The challenge is to ensure that the vocabulary employed is relevant to time, setting and function. The rich and rooted architectural history of the Cape region should be recognised in the design of the buildings in the Estate but innovative design solutions found to bridge the divide between the past and the present condition.

### 1.1.3. Sense of Craft

Achieving a high level of craftsmanship in all aspects of building infrastructure and interior is to be pursued. Where practically possible particular attention will be given to the employment and revival of traditional building methods as well as the use of sustainable traditional materials. This approach will help stimulate the involvement of skilled artisans in the development and can help to promote a renewed interest from young people in the craft of the building industry. Important social objectives can therefore be achieved by promoting awareness and giving practical effect to a return to craftsmanship.

### 1.1.4. Sense of Nature

Nature is a good model for design, as it holds the key to vitality and sustainability. Design should be informed by local climatic conditions such as sun, wind and rain and the need to reduce the environmental impact of buildings in the construction and operational phases.

### 1.1.5. Sense of Limits

Sense of Limits manifests itself on two levels. Firstly, there is a limit to growth. On the urban scale, the propensity to expand urban settlements over vast distances is indicative of these limits being exceeded. On the building design level “Sense of Limits” relate to the need to recognise scale and proportion. Secondly, Sense of Limits recognises that there is a limit to originality in design and that there is a need to create a new place that is in harmony with the past, but relevant to the present.

## 1.2. CREATING A SAFE ENVIRONMENT FOR PEDESTRIANS – THE WOONERF

The design of the streets and squares was also informed by the principles of the Dutch ‘**Woonerf**’ concept. In terms of the latter a high priority is given to the safety of pedestrians and cyclists and the creation of a pleasant and useful functional open space for the latter. Motorised vehicles are restricted to slow and very slow speed. This is regulated by both the design of hard and soft space of streets and squares as well as the impositions of rules. Streets would not be provided with the conventional barrier kerbs and separately defined by sidewalks. Vehicular routes, pavements / sidewalks and parking spaces on private property will be integrated.

The introduction of “Woonerf” principles has a number of aims:

- Changing the role and function of the street
- Traffic calming
- Increasing pedestrian safety

- Improve urban quality of life
- Reducing noise pollutions
- Improving the scope of activities in a neighbourhood through expanding usable open space
- Improving the aesthetic quality of the street through the introduction soft landscaping (trees etc.)

These internal streets of the estate are designed to promote the objectives of the “Woonerf” concept.

## **2. ARCHITECTURAL STYLE AND ELEMENTS**

The architectural style for Voliere is largely informed by the typology and rural character of historic settlements in the Cape Winelands and intertwined with elements found in the European villages and countryside.

This “village vernacular” has a characteristic typology which serves as basis in the design. Dwellings were historically built mainly semi-detached but free-standing buildings were also built as part of the urban fabric. Dwelling houses were served by a small yard or garden. Narrow passages predominantly served as alley ways separating dwellings and providing entrances to the back of buildings.

Consistent with contemporary design requirements, larger glazed areas can be incorporated into the design to create indoor/outdoor fusion. Care should however be taken that the glazed areas do not dilute the value of the typology and character of the architecture to the point where the spirit of a typical village street scene is lost. Bigger glazed areas must therefore be screened at least 2.0m behind a pergola or deep veranda and ideally be located at the back of dwellings.

Furthermore, from an aesthetic perspective, the design of each building should be considered in context of its impact or potential impact on adjoining buildings and in context of the whole.

Scale and proportion are crucial elements in the establishment of this type of architectural language, especially where contemporary elements are incorporated. Careful consideration should therefore be given to scale, proportions and the articulation of the building forms, their heights, dimensions, roofs, wall openings and detailing in order to achieve an attractive and cohesive architectural language for Voliere.

Focal features, landscape elements and low garden walls, in conjunction with indigenous planting and trees, will enhance and complement the character and promote a qualitative development known for its charm, beauty and ultimately its own unique “sense of place”.

It is believed that flexibility of interpretation is important to encourage variety within the constraints of these guidelines. Rather than be prescriptive, elements specifically excluded are clearly stated. Please note that the list of “Not allowed” is not exhaustive.





Figure 2: Voliere Master Plan in context of immediate environs



Figure 3: Aerial perspective of entrance courtyard enclosed by apartment buildings on 3 sides





Figure 4: Aerial perspective illustrating “village” character of Voliere



Figure 5: Aerial Perspective of typical courtyard and group housing units



### 3. PLANNING CONTROLS

#### 3.1. ZONING

- i) All residential erven are zoned “Conventional Residential with Consent for Group Housing” ito. Stellenbosch Municipality Zoning By-law (2019). This design framework must be read together with the conditions of approval for rezoning and subdivision imposed by Stellenbosch Municipality.
- ii) Notwithstanding the above zoning and subsequent development parameters this guideline document provides additional parameters as a framework for positive place-making.



Figure 6: Voliere - Rezoning and Subdivision Plan



3.2. SITE DEVELOPMENT PLAN



Figure 7: Voliere - Site Development Plan (SDP)



### 3.3. UNIT TYPES

The Voliere development makes provision for three main residential types namely:

- Apartments (three storeys).
- Group houses (two storeys).
- Courtyard Group houses (two storeys).

A number of dwelling types have been designed that would serve as prototypes for detail architectural design to be undertaken. The Dwelling Type Plan (Fig 10 below) illustrates the location of the various dwelling types on the proposed Subdivision Plan. As shown, it will be possible to (based on future market demand and consumer choice) allow for a limited number of different unit types to be constructed on a specific erf within the limits of the zoning and associated departures as applied for in the Rezoning Application.

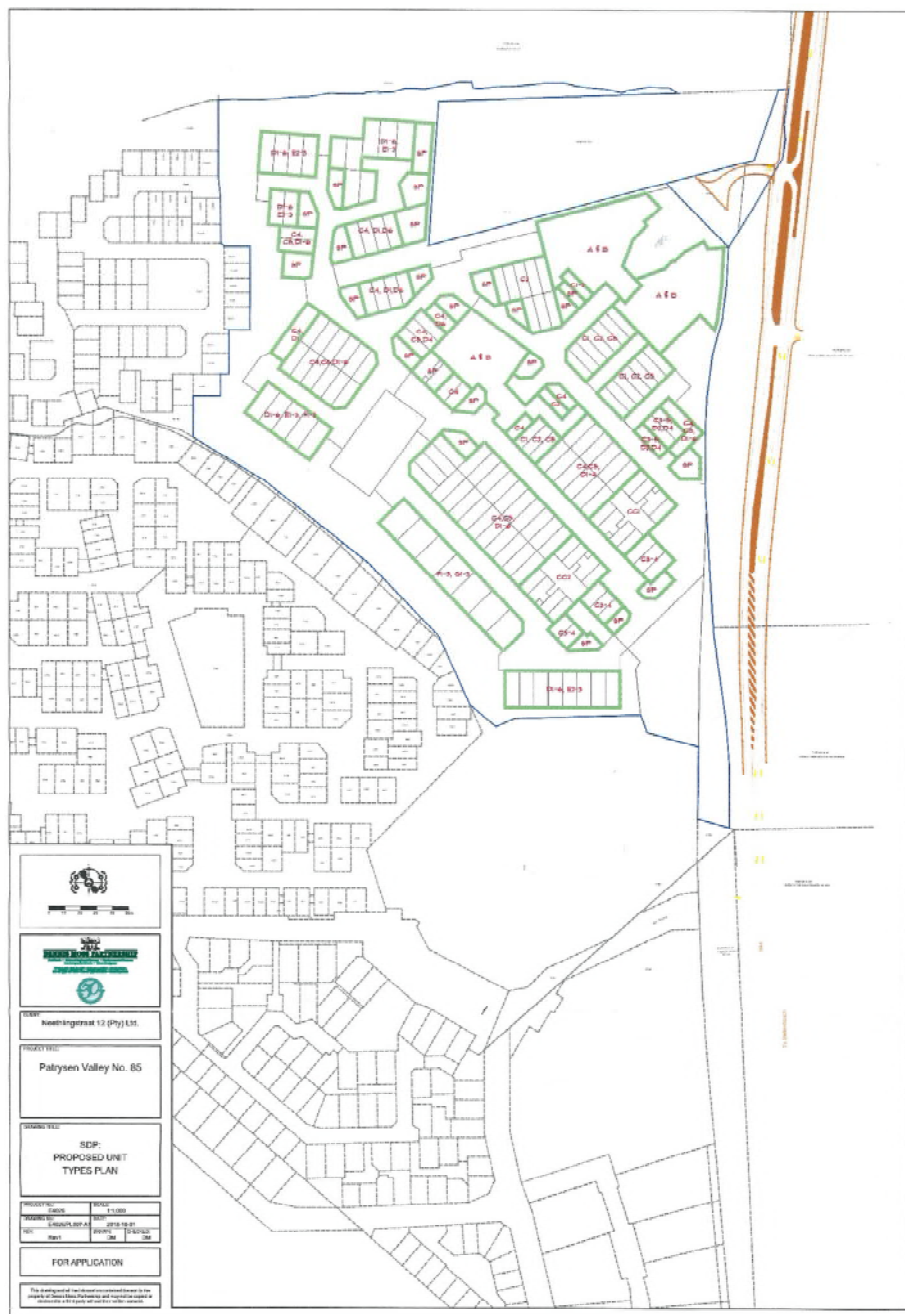


Figure 8: Proposed Unit Types Plan

### 3.3.1. APARTMENTS

The apartment buildings are located on portions 1-3 on the north-eastern part of the site closer to the R44 main road and some distance from the existing residential dwellings in Welgevonden.

To provide accent points and quality composition, lofts are strategically placed to create a pleasant skyline.

The architectural character of the apartment buildings will be in keeping with the single residential component of the development and will use the same details, colour schemes and material for their construction.

- No long corridors or walkways.
- Architectural language and colours similar to group housing.
- Parking provided to the rear with an integrated landscaping component.
- Buildings face towards the street.
- Create pleasant entrance.
- All apartments shall have one window with a shutter to the same specification as required for single residential homes.

Even though the expansion of the apartment buildings is limited to the sectional title scheme, the SDP, Zoning and the Architectural Guidelines stipulated in this document is similarly applicable to the apartment complexes.

All apartment buildings designs will be subject to a design review by the Developer and their Controlling Architect.



### 3.3.2. TYPICAL GROUP HOUSING UNITS

The group housing erven range in size from  $\pm 170\text{m}^2$ -  $\pm 280\text{m}^2$ .

The provision of double-garages, which generally have a negative impact on the aesthetics of the streetscape, have been limited. In most cases a single garage with an additional covered carport are preferred. All units are provided with these two parking bays. The single garage design creates the opportunity to construct an additional room above the garage or carport that enhances the streetscape and provides valuable additional accommodation.

Type G units are the largest units and are located on erven which are over  $350\text{m}^2$  directly opposite the largest residential erven in Olyf Street in Welgevonden.



Figure 9: Typical Street scene indicating character of Voliere





Figure 10: Typical Street scene indicating character of Voliere



Figure 11: Typical Street scene indicating character of Voliere





Figure 12: Street Elevation of typical group houses

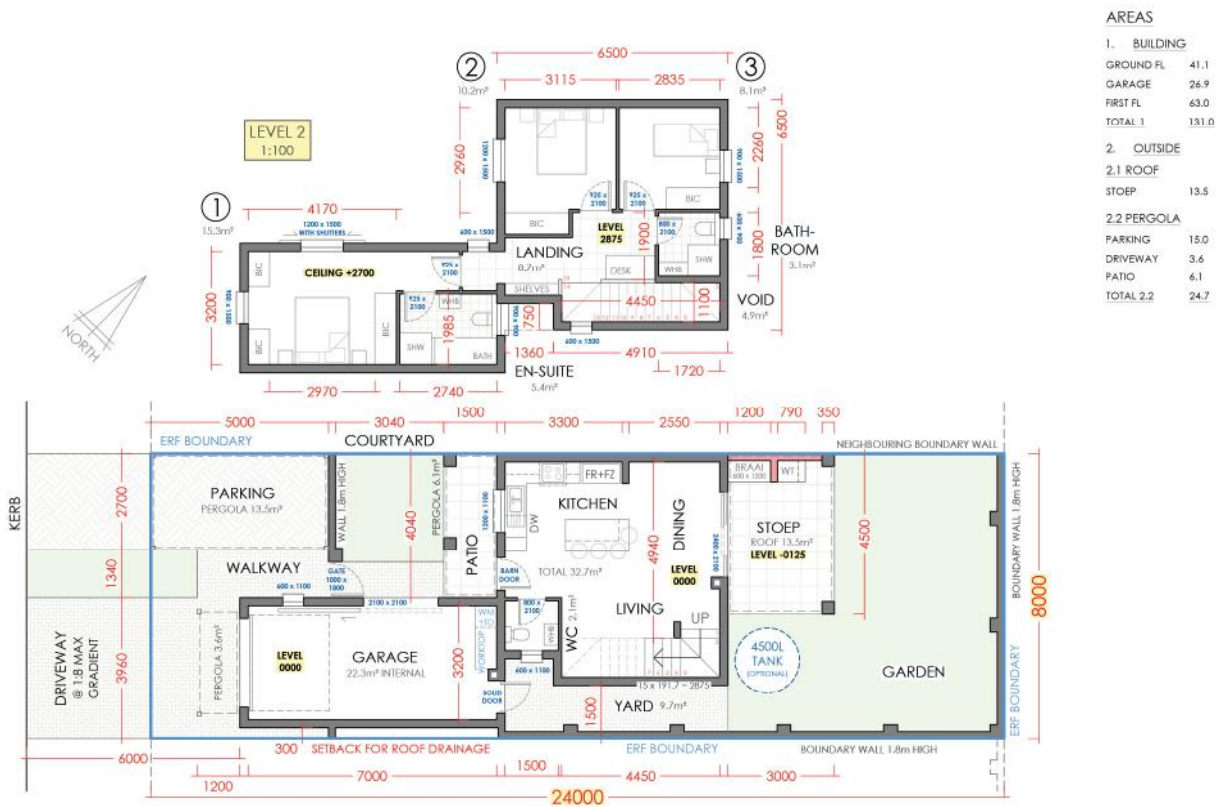


Figure 13: Floorplan of Typical Group Housing Dwelling



Figure 14: Floorplan of Typical Group Housing Dwelling

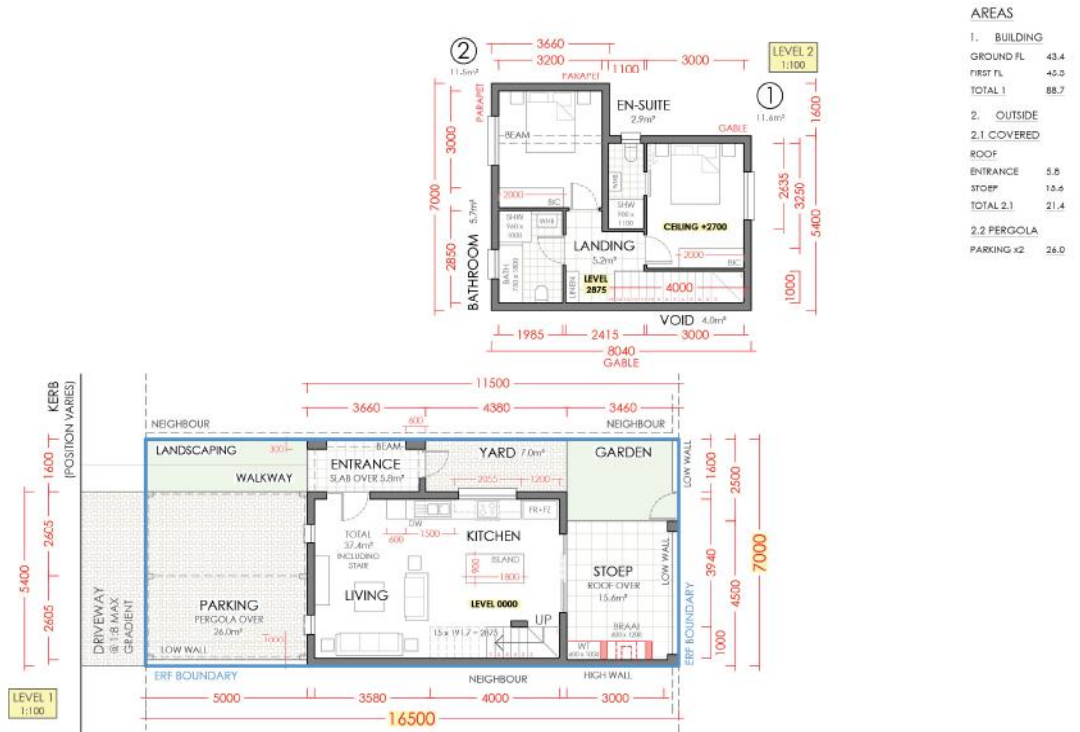


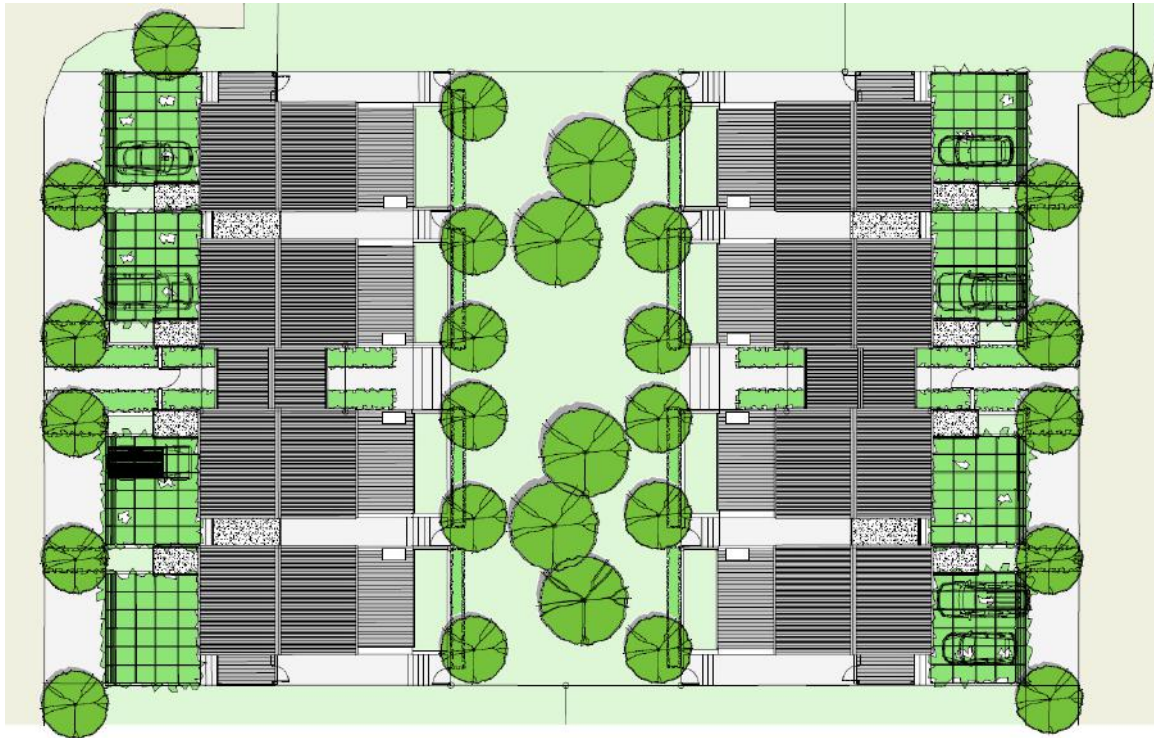
Figure 15: Floorplan of Typical Group Housing Dwelling



**3.3.3. TYPICAL COURTYARD UNITS**

The Type CC units (Courtyard Units) consist of a cluster of 8 units (4 units facing onto separate streets). These units are generally located on erven with a street frontage of 7.5 m or less.

Figures 28-35 below illustrate the design of a typical courtyard townhouse unit complex. In this configuration a qualitative internal courtyard space is created which is accessible by vehicular or pedestrian traffic through a coachman’s entrance (promoting the principle of integrated bridging).



**Figure 16: Courtyard Units –Site Plan**



**Figure 17: Courtyard Units – Street Elevation**

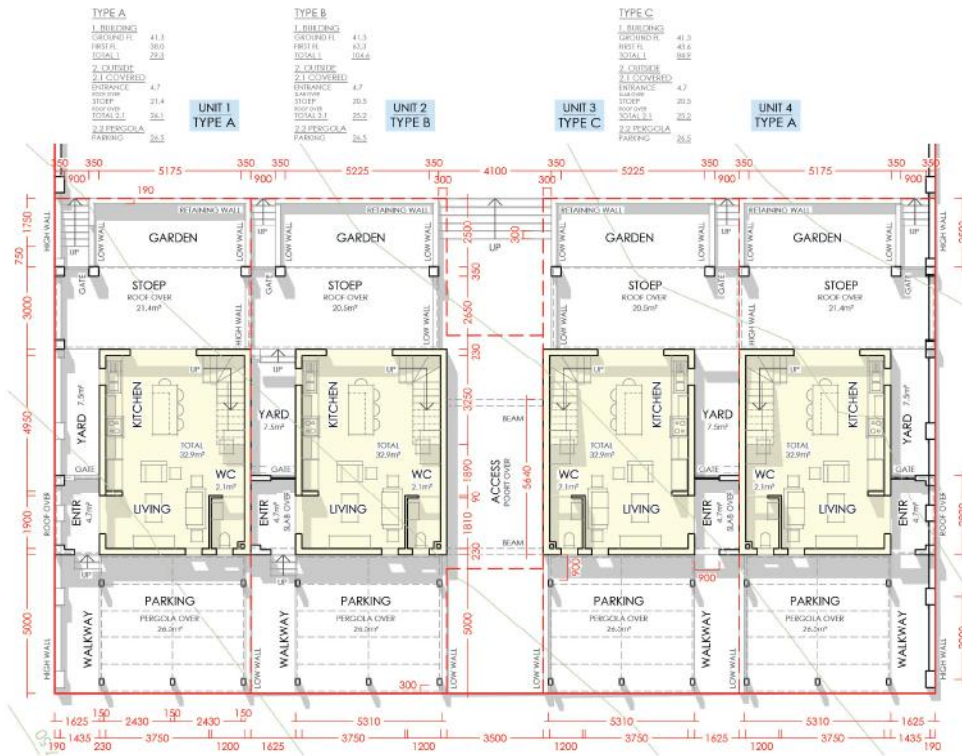


Figure 18: Courtyard Units - Ground Floor Plan

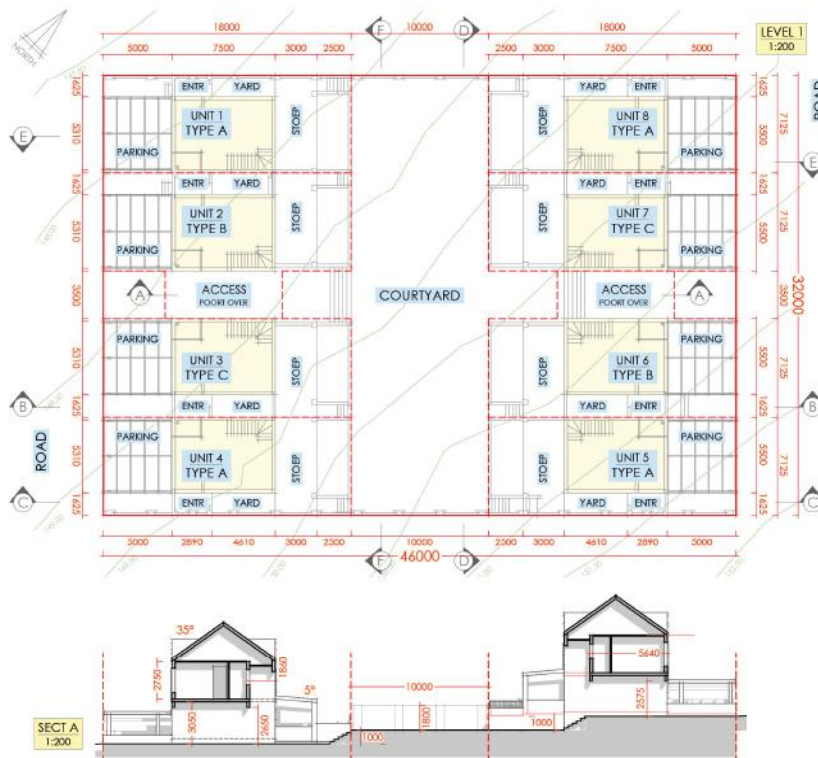


Figure 19: Courtyard Units - Ground Floor Plan



#### 4. SPECIFIC ASPECTS

##### 4.1. BUILDING FORM

The Typology is the study and theory of architectural type. The traditional Cape “letter of the alphabet” building form should be applied to the residential buildings.

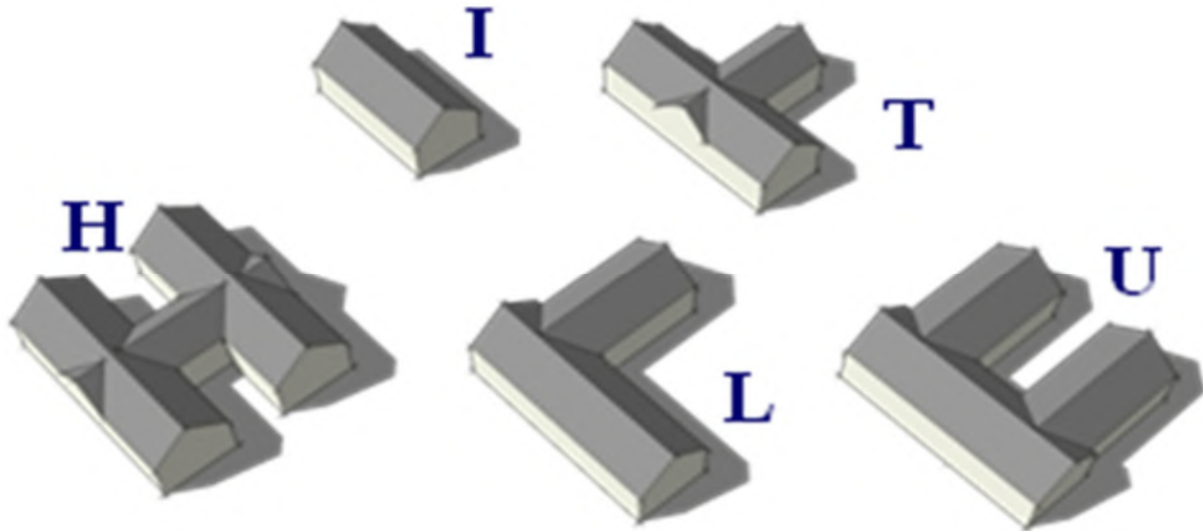


Figure 20: Illustration of the traditional letter of the alphabet building form.

##### 4.2. SIZE OF DWELLING

All buildings to be built to the dimensions prescribed in this document. Only one residential dwelling (core building) per erf permitted. The minimum size of the core building, inclusive of the garage and roofed verandas/stoeps that must be built is 100m<sup>2</sup>. This area excludes the area allowed for a free-standing building that may be built. In addition to the core building, one free-standing building per erf with foot print no larger than 42m<sup>2</sup> may be built. Free-standing buildings are clearly defined in this document and its use are restricted to single storey garage/s or carports on ground floor with/without a habitable space on first floor.

Two parking spaces per erf must be provided. Garages may not be altered and/or amended into habitable accommodation on ground floor. One built garage must be provided on the property. Parking for visitors in front of the garage must be provided (a carport does not constitute a built garage).

##### 4.2.1. CORE BUILDING, ABUTMENTS & FREE-STANDING BUILDINGS

- i) For the purposes of these guidelines, the main building structure is referred to as the **core building**. A core building may be built with or without abutments. The core building footprint must conform to the traditional ‘letter of the alphabet’ building form. In this particular typology, the footprint of the core building resembles the letters I, T, L, H and U or variations thereof.
- ii) In order to create larger floor plans than what the prescribed dimensions for a core building allow (refer Building Dimensions below), the plan of the core building may be extended by adding **abutments** built to the dimensions prescribed in this document.
- iii) A **free-standing building** is defined as a structure built away from the core building and it is prescribed that such structure always be linked to the core building with either a pergola and/or mono-pitched flat roof link.

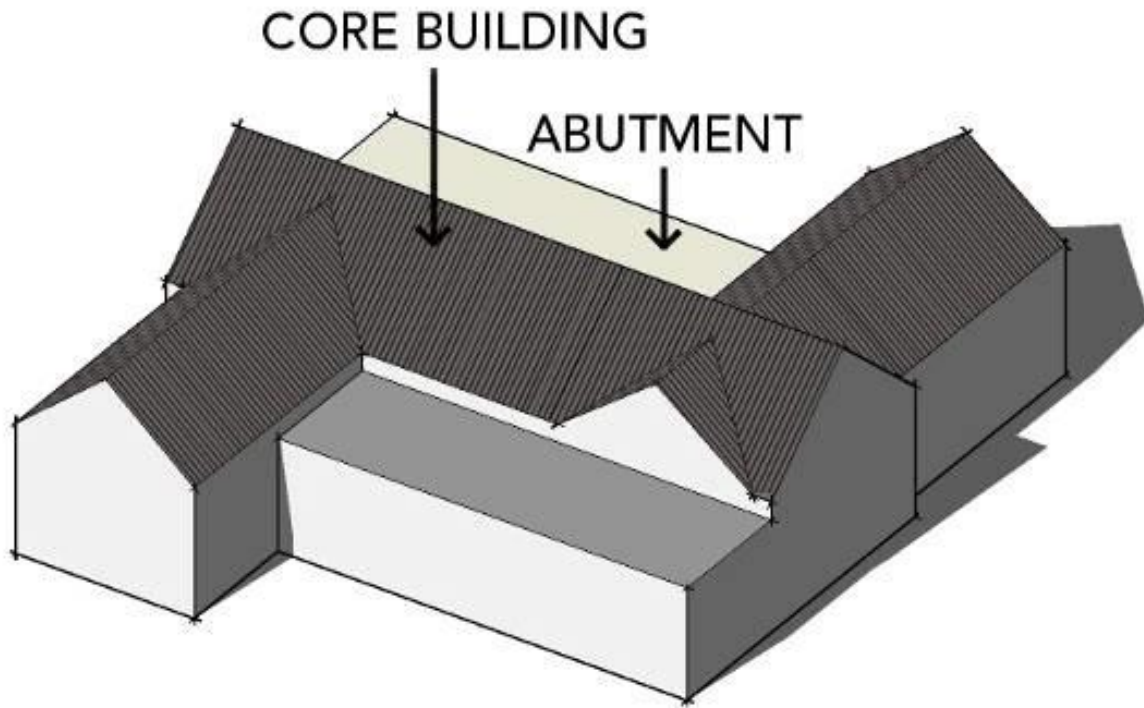


Figure 21: Extensions to the letter of the alphabet core building form through the use of abutments



Figure 22: Typical corner unit





Figure 23: Typical Double Storey Core Building with double garage.



Figure 24: Typical Double Storey Core Building, abutments and free-standing carport



Figure 25: Typical Double Storey Core Building with single storey abutment.



Figure 26: Typical Double Storey Core Building with double storey abutment.

### 4.3. BUILDING LINES

For the purposes of these guidelines, the following building line conditions are defined:

- i) A perimeter building line is defined as the building line around the perimeter of the group housing site and such building lines are prescribed by the Zoning Scheme By-Law.
- ii) An internal building line is defined as a building line within the group housing site.

A minimum side building line of 1m will be maintained on one side of all erven.



- iii) A street building line within the group housing site is defined as the boundary onto which a garage door face.  
  
A minimum street building line of 500mm must be maintained to allow for a pergola above the garage door.
- iv) Swimming Pools: The building line for pools are 1.0m from any given erf boundary.

#### 4.4. BUILDING DIMENSIONS

Building heights are restricted as prescribed below and **may not exceed 2 storeys in total (unless allowed for in terms of the Rezoning approval)**.

##### 4.4.1. BUILDING HEIGHTS

- i) **Core Buildings** - The prescribed maximum wall plate height above base level (TOC) is 6.0m.
- ii) **Core Buildings** - The prescribed maximum height from base level (TOC) to top of roof (apex of roof) is 9.0m.
- iii) **Abutments** - The maximum height of an abutment to a double storey or single storey dwelling may not exceed 3.5m measured from the base level (TOC) to the top of the parapet wall.
- iv) **Free-standing Buildings** – The maximum height of a single storey free-standing building may not exceed the maximum height prescribed for an abutment and for a double storey free-standing building (garage with habitable space above) the maximum wall plate height is prescribed not be built higher than 4.8m.

##### 4.4.2. BUILDING WIDTHS

- i) **Core buildings** - The prescribed maximum width of any core building may not exceed 8.0m and the minimum width is 4.5m.
- ii) **Abutments** - The maximum width of any abutment to a core building may not exceed 4.7m. All street facing abutments must be set back by a minimum of 230mm from the edge of the core building. All other abutments must have a 100mm (w) x 50mm(D) recess between the core building and the abutment if built in the same plane.
- iii) **Free-standing Buildings** – The maximum width is restricted to that of a double garage and may not be built wider than 6.540m (270 cavity wall + 6.0m internal dim. + 270 cavity wall).



**Figure 27: Illustration of the building heights associated with a typical double storey building**

## 4.5. ROOFS

### 4.5.1. Roofs over Core Buildings

- i) It is prescribed that the same roofing material be used for all roofs on the core building.
- ii) The roof over the core building is prescribed to be a double pitched roof with prescribed minimum roof pitch of 35 degrees and the roof form must resemble the letter of the alphabet I, T, L, H, U or variations thereof. However, an exception to this rule will be allowed for double storey buildings, where a small portion of the plan on first floor may be covered with a mono-pitch flat roof to reinforce the letter of the alphabet I, T, L, H, U roof form over the core building as illustrated in this document. These flat roof sections may be constructed in concrete or built as a mono-pitched metal flat roof at fixed roof pitch of 3 degrees or less and must under all circumstances be concealed behind a horizontal parapet wall built up and around the flat roof as required to hide the flat roof from street view.
- iii) Roof overhangs at gables and eaves, to be no more than 100mm, including the fascia or bargeboard.

### 4.5.2. Roofs over Abutments

- i) Roofs over abutments must match the core building in colour and material.
- ii) Abutments on the ground floor can also have flat roofs in concrete or mono-pitched metal roof sheeting (3 degrees or less) and must be built with horizontal parapet walls all round to conceal the roof. One side may be open if it is not visible from street view. Roofing material must match the core building roof in colour.

### 4.5.3. Roofs over Free-standing Buildings

- i) It is prescribed that the roof over a free-standing building must always match the roof over the core building in material and colour.



- ii) Roofs over freestanding buildings may be a double pitched and the roof pitch is same as prescribed for the core building OR a mono-pitched flat roof at a fixed roof pitch of 3 degrees or less hidden from view behind a horizontal parapet wall. Roofing material must match the core building roof in colour.

#### **4.5.4. Roofs over verandas**

- i) Roofs over verandas must match roofing specification prescribed for single storey abutments.

### **4.6. BUILDING MATERIALS AND EXTERIOR COLOURS**

For the Development to form a cohesive 'whole' in terms of character and 'look', building materials and colour specifications are prescribed and must under all instances be complied with. All new structures to be painted or existing structures to be repainted/refurnished must comply with the prescribed colour scheme outlined below.

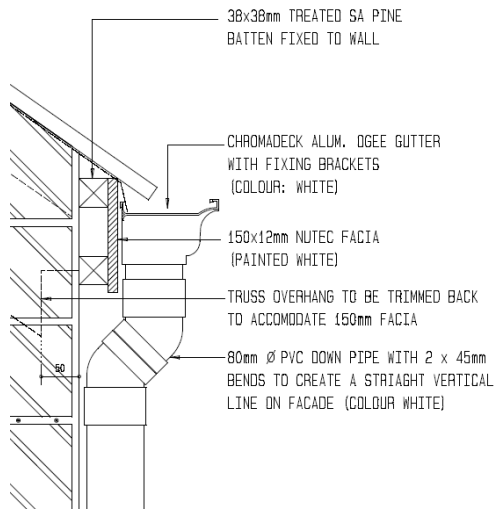
NOTE – Where alternative manufacturer/s for colours specified in this document are selected, it is prescribed that the colour must match the prescribed colour exactly and that colour samples/swatches of the original & matching alternative must be submitted to the Control Architect for prior aesthetic approval before application/installation on site.

#### **4.6.1. Roofs**

- i) Metal roof sheeting prescribed to be 'Victorian S' for double pitched roofs or a 'Klip Lok' profile roof sheet such as "Diamondek" or "Brownbuilt" or similar approved concealed fix metal roof sheet for mono pitched flat roofs.
- ii) Double pitched roofs are prescribed to be built at an angle of 35 degrees with roof sheeting to protrude over the end wall.
- iii) Flat roofs may be concrete with torch-on fusion waterproofing, painted with protective silver paint and covered with 19mmØ brown stone OR a mono-pitch metal roof in the 'Klip-Lok' profile at an angle of 3 degrees or less. Flat roofs must always be hidden behind a built horizontal parapet wall, around all open sides of the roof in order not to be visible from street view. However, consideration will be given to have one side of the roof only open, where the gutter is located, in cases where the open side is not visible from street view.
- iv) No parapet walls may cut into the fascia, gutter or roof plane of any core building or abutment.
- v) No pitched dormer windows will be allowed.
- vi) All roof windows shall be in the same plane of the roof.
- vii) Colours – 'Colourbond' Volcanic Grey OR 'Colourbond' Shale Grey.

#### **4.6.2. Fibre-Cement Facias**

- i) Fascia's and barge boards to be (225 or 150) x 15mm "Everite Nutec" medium density fibre cement board with plain finish, butt jointed & painted with high quality acrylic paint.
- ii) All roof eaves and bargeboards will be constructed strictly as per shadow line detail image provided.
- iii) Colour – white.



**Figure 28: Illustration of roof eaves detail.**

**Not Allowed:**

- *Victorian or any profiled fibre-cement fascias.*
- *Any other profile roof sheeting than the prescribed roof sheeting is not allowed;*
- *Shade cloth on the main dwelling or any of the outbuildings, carports or freestanding buildings is not allowed;*
- *Perspex and fiberglass sheeting may not be used;*
- *Pergolas may not be covered with shade cloth.*

**4.6.3. Rainwater Gutters and Downpipes**

- i) Pre-painted seamless ‘Watertite’ Aluminium or similar approved, extruded gutter in domestic ‘ogee’ profile – fitted in full continuous lengths. Colour – WHITE to match aluminium doors and windows.
- ii) Down Pipes – White uPVC round down pipes with appropriate fittings, fixings and spouts OR pre-painted seamless ‘Watertite’ Aluminium or similar, extruded round or square downpipe matching the gutters.
- iii) Downpipes will be mounted in a single straight vertical line from gutter to ground.

**Not Allowed:**

- *Fibre-cement gutters and down pipes.*
- *Chains*



**4.7. EXTERIOR WALLS**

- i) All Walls and Masonry Columns to be finished with a smooth wood floated OR textured plaster:
- ii) Plastered & painted with ONLY the following colour used.

**Table 1: Voliere Colour Palette - Exterior Wall Paint**

<i>PRESCRIBED WALL COLOURS SELECTED FROM 'EARTHCOTE TRADITIONAL REMIXED FLAT PAINT CATALOGUE'. except where shown otherwise</i>	
<b>COLOUR</b>	<b>CODE</b>
ARNISTON WHITE	13

- iii) Plumbing pipes are to be suitably concealed within walls or ducts. No plumbing pipes may be visible from any street.

**4.8. WINDOWS, DOORS, SHUTTERS AND PLASTER BANDS**

**4.8.1. Windows and Doors**

- i) All windows, doors and shutters to be Aluminium & epoxy powder coated in one of the following colours:
  - *Gloss Snow White (LA057P)*
- ii) All windows and doors to be vertically proportioned.
- iii) Doors and window openings should generally resonate with traditional vertical dimensions of the Cape Winelands building tradition with due regard to balance this with the principle to promote contemporary design. The illustrations of the Paarl Heritage contemporary designs are illustrated in this document.
- iv) To facilitate the contemporary character in Voliere the use of large glass panes may be incorporated in the traditional built form in a modern manner. The overall objective would develop a new settlement with a distinct contemporary character.

**4.8.1.1. HW Meranti Front Door and Frame**

- i) Front doors shall be of timber with timber or aluminium frames. Simple vertical or horizontal patterns are encouraged.
- ii) Colour – painted white or with Plascon Gunpowder E28-6.
- iii) It may also be varnished with 2 coats of 'Bleached Coconut' clear varnish from Midas or similar matching.

**4.8.1.2. Window Glazing**

- i) To comply with the National Building Regulations (NBR); SANS 10400-XA; SANS 204 and AAMSA specifications.

#### 4.8.1.3. Safety Glazing to Windows and Doors

- i) To comply with the National Building Regulations (NBR); SANS 10400-XA; SANS 204 and AAMSA specifications.

#### 4.8.1.4. Shutters:

- i) Aluminium powder coated (WHITE) shutters. Only working shutters allowed.
- ii) Shutters must be externally mounted, sliding with horizontal louvre pattern.
- iii) Shutters may have fixed or variable louvers.
- iv) Each street elevation must have at least one window with a shutter/shutters with a minimum dimension of 1500mm(h) x 1400mm(w).
- v) Shutter widths must be in harmony with the windows they cover.
- vi) Colour: White

#### 4.8.1.5. Plaster Bands and Windowsills

- i) Simple plaster bands around windows and doors are allowed, no wider than 150mm. Painted to match the exterior wall colour.
- ii) All windowsills to be finished with smooth wood floated plaster and painted to match the exterior wall colour.

#### **Not Allowed:**

- *Steel framed windows and doors;*
- *Small cottage pane windows;*
- *'Winblok' or other concrete framed elements and*
- *False permanently fixed shutters.*

#### 4.8.2. GARAGES AND CARPORTS

- i) Garage doors must be of a single door width. The door must be sectional overhead or tilt-up type with a simple horizontal pattern.
- ii) Aluminium powder coated (white) to match the aluminium windows and doors and shutters.
- iii) The use of pergolas in front of garages are compulsory. Colour : White
- iv) For positioning garages/carports on corner erven, it is important to consider the location of the erf in context of the Masterplan for the Development and NOT to position the garage/carport on the main visual axis or as focal point at the end of a street. Garages should preferentially be set back from the street & the garage doors ideally be positioned to face the street not being on the major access route. Should the garage be designed as a focal building with for example feature garage doors this rule can be re-considered at the discretion of the Control Architect in context of the design submitted for aesthetic consideration.

- v) The first 500mm of the street facing edge of a carport may not be covered to facilitate a creeper to provide a greened edge to the pergola.

**Not Allowed:**

- *Prefabricated garages;*
- *Steel or aluminium louvered carports and*
- *Shade cloth covering on carports.*

#### 4.8.3. PAVING

- i) All **paving** for driveways, walk ways and yards will be 100 x 100mm dry cast cobbles in charcoal colour to match the existing roads laid in simple square pattern at right angles to the road.
- ii) Plant openings must be provided to allow for sufficient greenery and creepers/vines to carports and pergolas above garage doors to reduce the visual impact of hard landscaped surfaces.
- iii) Each homeowner must provide one 110mm Ø HDPE sleeve below their driveway complete with draw wires. The sleeve must be situated 300mm outside the erf boundary and extend 300mm beyond the edge of the driveway surface. Where the sleeve needs to be situated in a different position for any reason the HOA are to be advised and the alternate position confirmed in writing to the HOA.

**Not Allowed:**

- *No patterns.*
- *No colour tone variations.*

#### 4.8.4. BALCONIES

- i) Balconies must form an integral part of the design and any visible sides of slabs on elevation, must be plastered and painted to match the wall surface to which they attach.
- ii) The following two balcony types are permitted :

##### 4.8.4.1. Type A

- i) The slab may protrude a maximum of 200mm past the exterior face of the building. The width of such balcony may not exceed 2000mm. This is a typical 'Juliet' type balcony.
- ii) A handrail may be fixed onto the side or top of the slab. The doors giving access to the balcony can only open inwards. Colour of handrailing to match the colour of the windows.

##### 4.8.4.2. Type B

- i) This type of balcony can only be formed if it is on top of the concrete roof of the building below.
- ii) A handrail may be fixed onto the side or top of the said parapet around the concrete roof. The doors giving access to this balcony can open inwards or outwards. Colour of handrailing to match the colour of the windows.
- iii) Balconies are not allowed to be closer than 1.5m from the common boundary.



#### 4.8.5. BALUSTRADES

Handrails must always conform to the National Building Regulations (NBR). In addition, the following conditions apply:

- i) The height to the top of all handrails, including those mounted on brickwork, may not exceed a maximum of 1100mm above the floor finish of the adjoining slab unless required by the NBR.
- ii) Balusters may be positioned vertically or horizontally.
- iii) Round mild steel rods, flat metal support and 50mmØ top tubes to balustrades are allowed. All external metalwork to be galvanized & painted to match the colour of the windows.
- iv) Additional ranges and purpose-made balustrades will be subject to the approval of the Control Architect.
- v) **WHITE painted balusters with Stainless Steel 50mm diameter (SS) handrail will be permitted.**

**Not Allowed:**

- *Any form of solid sheet panelling, including glass*
- *'Yacht type' handrail details, stainless steel cabling or similar*

#### 4.8.6. PATIOS AND VERANDAS

- i) Stoeps may be covered with a roof (then called a veranda) or a pergola (then called a patio) with evenly spaced rafters as illustrated or left uncovered. Vines or other suitable creepers are encouraged to be grown to cover pergolas.
- ii) Roofs over verandas must have a roof covering as described in paragraph 5.3.1 above. It must be enclosed on all remaining 3 sides with a horizontal parapet wall not higher than 3.5m from the veranda's floor finish to the top of the parapet wall.
- iii) Verandas may be enclosed on the sides with louvred or glazed aluminium screens/doors (colour to match the shutters) or frameless glass folding stacking doors. No other material will be allowed. All will be subject to the approval of the Control Architect.

#### 4.8.7. PATIO/VERANDA COLUMNS AND PERGOLAS

The following column structures are allowed for patios and verandas:

- i) Plastered masonry column of 340 x 340mm plastered and painted to match the colour of the house.
- ii) Square metal posts of size 150 x 150mm may be used. Post to be painted white or clad in aluminium.
- iii) Hardwood timber post detail with double timber posts (PAR size 32 x 144 minimum) spaced by 32mm may be used. Post to be painted white.
- iv) Square UPVC (white) posts of size 150 x 150mm may be used.

#### 4.8.8. CHIMNEYS

- i) All chimneys must comply with and be in strict accordance with the dimensions as prescribed in the National Building Regulations (NBR).

- ii) Built masonry chimneys are preferred.
- iii) Masonry chimneys must be plastered and painted to match the colour of the adjoining wall. The only exception to this rule will be in the case of internal combustion stoves or similar approved energy efficient heating devices where such chimney pipes are less than 250mm in diameter. Said chimney pipes will be permitted to protrude above a built masonry chimney base OR may protrude through and above the roof in accordance with the dimensions as prescribed in the NBR. The chimney pipes MUST in all cases be manufactured from stainless steel. In the case where chimney pipes exceed 250mm in diameter the built masonry chimney rule applies, i.e. a built masonry chimney, plastered and painted as stipulated above MUST be built. Fixed metal chimney cowls in matching stainless-steel material must complete the installation – no ‘bird-like’ or rotating cowls allowed.
- iv) All chimney installations to be submitted to the Control Architect for aesthetic approval.

#### **4.9. BOUNDARY WALLS AND PALISADES**

##### **4.9.1. BOUNDARY WALL DEFINITIONS**

For the purposes of these guidelines, the following **INTERNAL** boundary wall conditions applicable to all are defined for the Development. The prescriptions of Stellenbosch Municipality By-law relating to Boundary Walls will also apply.

###### **4.9.1.1. Common Boundary (Side and Rear Boundaries)**

- i) Any single boundary, which separates two adjoining residential erven – must be a solid wall with a maximum height of 1.8m, plastered and painted smooth on all sides and painted in colour ‘Arniston White’ as per Earthcote traditional Remixed Flat Paint Catalogue.
- ii) Common boundary walls may not be erected closer than 3.5m from the street boundary
- iii) This type of wall may also be used to link the building to the side boundary to create edge continuity on the street frontage.
- iv) It is prescribed that the shared side boundary forming part of the street domain, i.e. walling on the side boundaries on the street side of the dwelling must also be kept low at a maximum height of 1.2m to allow visual interaction with the street in order to enhance the quality and character of the development.

###### **4.9.1.2. Street Boundary Walls**

- i) On the internal street boundary side, it is prescribed, that where walling is required, only low garden walls restricted to a maximum height of 1.2m may be built.
- ii) Where an erf is situated on a corner, the Control Architect will at their discretion, determine the street boundary. The other boundary will be defined as the rear or side boundary, or where required, a street boundary whichever applicable.

##### **4.9.2. GENERAL CONDITIONS IN RESPECT OF THE DESIGN OF BOUNDARY WALLS**

Any walls not built on an actual boundary line, but which fulfil the function of a boundary wall in relation to a boundary or dwelling, will be deemed to be a boundary wall for the purposes of this document and as determined by the Control Architect.

- i) Boundary walls and built masonry columns may incorporate saddle copings projecting no more than 20mm on either side of the wall.

- ii) All boundary walls and columns to comply with Part K of the National Building Regulations. Where walls incorporate masonry columns, such columns must be square and protrude no more than 100mm from the face of the solid wall section.
- iii) Boundary walls must be simple and may not incorporate any recessed or raised panels, or any other form of embellishment.
- iv) Any reference to the maximum height of a wall shall be taken as a measurement to the top of any coping forming part of the wall, measured from the ground level on the inside of the property concerned. The adjoining columns may be slightly higher.
- v) All boundary walls, boundary fencing and fencing around pools must be designed and built to comply with the National Building Regulations (NBR). Specific conditions apply to pool fencing, refer applicable NBR for detail.
- vi) A service yard may be incorporated as part of a boundary wall and may only be constructed to a height of 1.8m to effectively screen any items contained in the service yard from view.

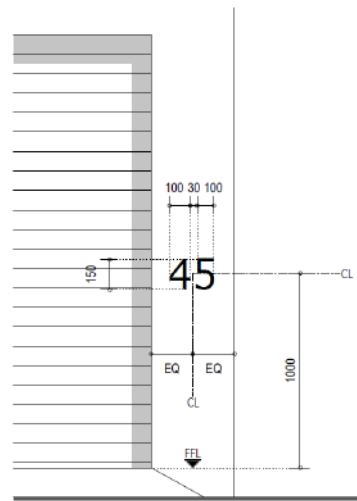
**Not Allowed:**

- *No prefabricated walling systems or similar allowed;*
- *No Face brick, natural stone wall or stone cladding;*
- *No sheet material and*
- *Barbed wire on walls is not permitted.*
- *No electrified fencing allowed.*

#### **4.10. MISCELLANEOUS AND GENERAL**

- iv) The location of all **television aerials or satellite dishes** should be considered carefully. The final position, size and location of all satellite dishes and television aerials are subject to approval by the HOA. Satellite dishes must be white composite or approved equivalent as approved by the HOA.
- v) All **telephone and electrical cable reticulation** on the property must be underground. No overhead masts or wires are permitted.
- vi) All **gas cylinders, refuse bins, compost piles and clothes lines** must be screened within service/drying yards in order not to be visible from the neighbouring properties, or the street.
- vii) **House numbers** may not be larger than 150mm high and 100mm wide. The preferred lettering style is Verdana Bold and the colour is light grey (LLP035P as by Interpon). All lettering and numbering to conform to the approved design for the project. All lettering and numbering to be placed horizontally and in line mounted 1m above ground level on the front of the garage pillar closest to the front door. The location of all house numbers and **letter boxes** are subject to final approval by the HOA.





**Figure 29: Illustration of house number.**

- viii) All **exterior lighting** should be sensitively positioned and not directed in such a way that it may have a negative impact on the immediate surroundings or potentially in view or hazardous to adjoining properties, residents or passing traffic. Exterior lighting should shine down. It is recommended that all exterior lights be energy saving fittings. Security lights may not cast direct light outside the erf upon which they are situated and must be activated by movement sensors. All exterior light fittings to dwellings to be approved by the HOA. Colour for exterior light fittings is white to match the windows.
- ix) The aesthetic approval of all **burglar bars and security gates** are subject to the approval of the HOA prior to installation. Any burglar bars and security gates **MUST** under all circumstances be fixed on the interior of the dwelling and burglar bars may only be the clear view transparent type burglar bars. Security gates are only permissible if mounted internally behind a solid door and may not be visible from the exterior of the building.
 

**Not Allowed:**

  - Any alternative type of burglar bar or security gate than specified above; and
  - No burglar bars or security gates fitted on the exterior face of any buildings allowed.
- x) **Heat pump or solar panel thermal systems** - are required. Heat Pumps must be installed inside service yards or a purpose-built enclosure and be fixed as low to ground as possible in order not to be visible from street view. Solar panels must be fitted and installed according to specialist requirements and specs. No solar hot water storage tanks, fitted on the roof of the house, are allowed.
- xi) **Swimming Pools:** No ‘Porta Pools’ or similar equivalent pool types or pool structures built above ground level will be permitted. The location/position of the pool, pump and filter must be shown on plan in relation to the erf and dwelling and a drawing complete with all relevant detail submitted for aesthetic approval to the HOA prior to construction. Where pool covers are installed, the colour must be approved by the HOA. Note, final approval vests in the Local Authority. Fencing around Pools must comply with the National Building Regulations.
- xii) **Air-conditioning condenser units** must be installed inside service yards & fixed as low to the ground as possible in order not to be visible from the street view. These units must always be screened by

an aesthetic approved hardwood timber lattice or louvre screen, installed a minimum of 500mm or at alternative distance recommended by AC manufacturer away from the condenser unit, ducts, grilles and heat pumps, etc. to ensure that such installations are suitably concealed and not visible/exposed on the exterior façade of the building and also not be visible from the front of the building or street side. All pipework must be concealed in the wall and no exposed conduits are allowed. Air conditioning & heat pump condenser units must be located in the least visually intrusive position available (i.e. on side walls and hidden in service yards) and always be installed as low to ground level as practically possible. Units may not be installed higher than 1200mm above ground level. Proposed positions must be submitted to the HOA for aesthetic approval prior to installation. Units outside service yards must be entirely screened from visibility with an aluminium or UPVC screen (white).

**Not Allowed:**

- *No window mounted air-conditioning units are allowed.*

- xiii) **No sewer, vent and water pipes** may be visible from the street and are not allowed above one meter from ground level. Stub vent stack systems to be used. All piping to be painted to match the adjoining wall colour onto which the pipe is fixed.
- xiv) The installation of **rainwater storage tanks and rainwater harvesting systems** to be positioned not to be visible from any street view and must be painted to match the exterior wall colour of the house. The position, colour & size of all rainwater tanks to be submitted to the HOA for aesthetic approval prior to installation.
- xv) No **garden/tool sheds** should be visible from the street. **Wendy houses or temporary structures** will not be allowed.
- xvi) No **dog kennels** and covered facilities for **caravans, boats or trailers** may be visible from the street. Dog kennels, caravans & boats must be stored out of sight.
- xvii) All **water meters** and **electrical meters** will be as specified by the HOA.
- xviii) All **solar PV** panel must have black frames and lay-outs must be submitted to the HOA for approval.
- xix) Internal **window/door blinds & curtains** must have white or light grey backing when viewed from outside.

**LANDSCAPING**

The landscaping of all Private Open Space within Voliere will be determined by the approved Site Development Plan and the approved Landscape Development Plan (Refer Fig 43 below).



Figure 30: Landscape Master Plan



#### 4.11. INTRODUCTION

Soft spaces are those dominated by the natural environment and plants. The quality and style of the soft landscaping will contribute to the sense of place of the site and reinforce the existing landscape identity of the region. The planting form will enhance the landscape qualities valued in the region. The character of the estate's landscape is a rich blend of elements derived from the Winelands' natural areas, the geometric agriculture pattern of the immediate environs, the residential and the public spaces.

In addition, harmonious balance is to be promoted in the landscape. This occurs where there are more or less equally spaced hard and soft elements incorporated into the landscape design. Parks and parking are to be given an informal setting and new tree avenues are to be planted to create axes that would frame views and provide direction.

The Cape Winelands has a Mediterranean climate and is described as a winter rainfall area with cool, wet winters and warm, windy, dry summers. Take note of local climactic conditions such as: capturing breezes or minimising the extent of mowed lawns areas for long term maintenance cost and it will reduce water usage. Optimise storm water run-off by effectively managing it with the topography.

The local Cape Floral Kingdom, one of only 6 floristic Kingdoms in the world is unique with an extremely high rate of endemic and diverse plants species.

Soft landscaping and planting of trees can also reduce glare in the landscape by deflecting the sun's rays, thereby cooling the environment down as well as minimizing the use of dark coloured hard surfaces.

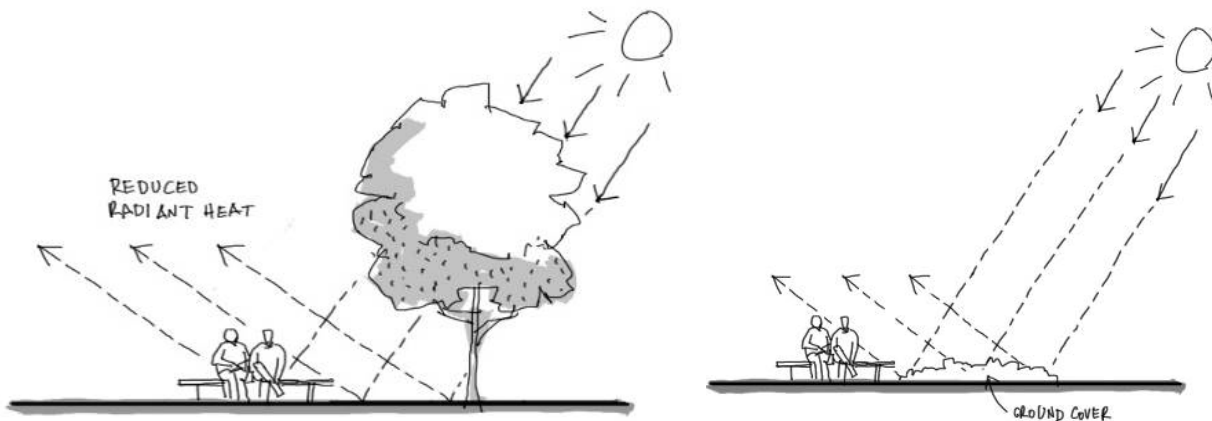
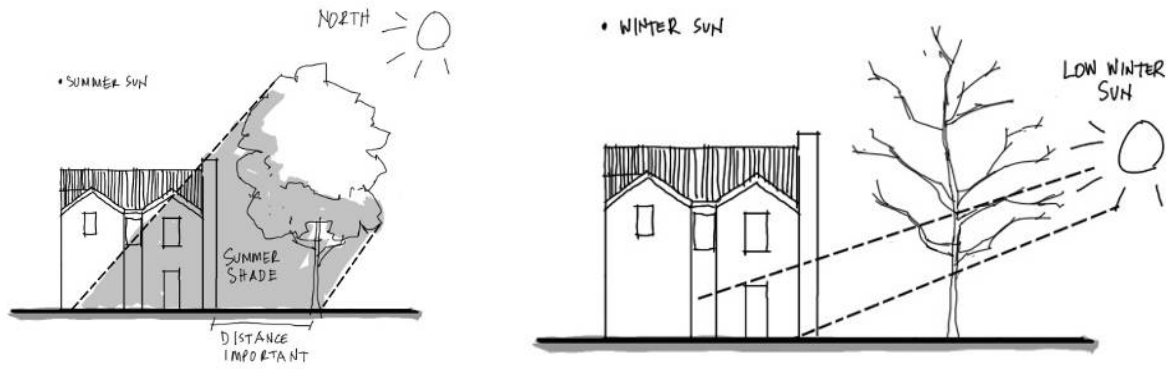


Figure 31: Ground covers reduce glare and heat from the sun

Seasonal variation in deciduous foliage – mainly trees - will change the sense of enclosure through the year, while evergreen plants will have a stronger year-round spatial definition.



**Figure 32: Plant deciduous trees on the northern side of houses to warm the house in the winter months and provide shade in the summer**

#### 4.11.1. Planting

##### (i) Trees

- Indigenous trees are recommended as they are more suitable to our climatic conditions. The existing indigenous trees will be retained or can be transplanted to an alternative position on site if necessary.
- Plant trees strategically to protect the views towards the mountain.
- Trees to be planted along the R44 road to create a densely planted edge to screen the development from view.
- No Palm or conifers may be planted.
- All new trees to be staked with 2x 75-100mm tanalith poles and crossed braced.

##### (ii) Alien and Invader Trees

- The trees listed on the latest Alien and Invasive Regulation, 2014 and Alien and Invasive List, 2014, must be removed and managed as per the NEM: Biodiversity Act, 2004

##### (iii) Communal Areas

- Soft landscaping will be designed to give identity to a specific area and enhance the quality and roles of specific places.
- Plant species that are typical of the historical and cultural character of the area will be planted, e.g oak trees, olive trees etc.
- All plant species must be drought and wind resistant, water-wise and non-invasive.
- The use of indigenous plants will receive preference and be used in a combination of ways to emphasize and give character to squares, spaces between nodes, as well as, accentuating focal points, axes and perspectives.
- Natural transition will be achieved through the gradual, ascending or descending arrangement of different elements with varying textures, forms, colours, or sizes.

- Fynbos will be reintroduced where possible in appropriate spaces on the site to enhance a natural 'green system'.

**(iv) Edible plants**

- Vegetable and herb gardens can be created within the limitation of the EMS, established in private garden and common areas common spaces to create a sense of community.
- Fruit trees e.g. Olive, Lemon, can be planted for aesthetic and productive purposes enhance the rural character of the area and to complement the existing trees on site. This will also encourage bird and insect life on the site.

**(v) Noise/Visual impact of the R44**

- The key impact of the development is its potential visual intrusion, in particular as it relates to the aesthetic quality of the site from the perspective of surrounding properties.
- Intense landscaping along the boundary between the erven and the R44 is recommended in order to reduce noise and block off traffic from view. This will greatly enhance the aesthetic quality of the site.

**(vi) Private Gardens & Sidewalks**

- Orientation of the internal spaces relative to the sun, wind and shade is vital, the positioning of the deciduous trees on the north and evergreen trees to the south and west for winter sun and summer shade are important.
- Courtyard or semi-courtyards of houses can create atmosphere, privacy and protection from the southeaster wind.
- Private spaces must be designed, in both a formal or informal manner and will complement the landscaping of the surrounding open spaces.
- The use of aromatic plants in certain areas can create a pleasant living environment. The use of colour is an effective technique to enhance atmosphere will receive special attention in the project. While the same or similar hard landscape elements would be used in several different locations in the settlement, the use of different colour combinations changes the mood and character of a particular area significantly and achieves variety and diversity. The structures will be plastered and painted as per the architectural colour pallet.
- The homeowner is responsible to landscape with irrigation his sidewalk/s adjacent to his property. The developer will provide 2x 100 litre trees (species to conform with the landscape design guidelines). Trees to be planted as part of the sidewalk planting.
- Limit lawn areas to reduce water usage and maintenance cost. Plant indigenous lawn species e.g. Buffalo or Kweek
- Plants to be grouped together for their sun/water requirements.
- All plants brought to the site must be disease and pest free.
- The homeowners will, in applying the guidelines take great care that visual privacy is achieved to the maximum degree practically possible. Hedging and trellises can be used to create privacy.





**Figure 33: Fynbos and other indigenous plant species are suitable in Cape Winelands climatic conditions**

- Any level difference between flowerbeds and lawn/hard surfaces greater than 150mm is to be retained by means of a plastered and painted low cape wall up to a maximum height of 1200mm. It is however advisable to rather create a gentle slope when the level difference is less than 300mm.
- All kiosks are to be screened by means of planting or a combination of timber trellis with climbers. All trellis panels must be constructed of treated timber. The timber is to be stained to match the pergolas or be constructed of meranti timber.
- Palm trees and any large leaved species with a tropical character will not be allowed. Although existing trees of this character may be retained if they contribute to the landscape.
- No lawn on sidewalk areas is allowed.

**(vii) Plant species list of public open areas – recommended for private gardens**

**TREE SPECIES**

*Acacia Karoo (Sweet Thorn)*

*Ilex mitis (Cape Holly)*

*Anastrabe integerrima (Pambati Tree)*

*Nuxia floribunda (Forest Elder)*

*Apodytes dimidiata (White Pear)*

*Olinia ventosa (Coast Olive)*

*Brabejum stellatifolium (Wild Almond)*

*Olea orymbos (Wild Olive)*

*Buddleja saligna (False Olive)*

*Pittosporum viridiflorum (Cheesewood)*

*Calodendrum capense (Cape Chestnut)*

*Quercus nigra (Water Oak)*

*Canthium inerme (Turkey-verry)*

*Quercus cerris (Turkey Oak)*

*Cassine peragua (Bastard saffron-wood)*

*Rapanea melanophloeos (Cape Beech)*

*Curtissia dentata (Assegai Tree)*

*Searsia pendulina (White karree)*

*Dodonea angustifolia* (Sand olive)*Ekebergia capensis* (Cape Ash)*Halleria lucida* (Tree Fuchsia, Notsung)*Kiggelaria africana* (Wild Peach)*Salix 38orymbose* (Safsaf Willow)*Syzigium quinense* (Waterberry)*Tarchonanthus camphoratus* (Camphor Bush)*Virgillia oroboides* (Blossom Tree)**SHRUBS & GROUNDCOVERS***Aloe arborescens* 'Krantz Aloe'*Aloe ciliaris* 'Climbing Aloe'*Aristea capitate* 'Blousuurknol'*Aristea ecklonii* 'Blue Stars'*Aristida junciformis* 'Gongoni Grass'*Asparagus virgatus* 'Broom Asparagus'*Athanasia trifurcate* 'Klaaslowbos'*Berzelia lanuginose* 'Vleiknopbos'*Bulbine frutescens* 'Geelkatstert'*Carex 38orymbo**Carpha glomerata* 'Vleibiesie'*Chasmanthus floribunda* 'Yellow Cobra Lily'*Chrysanthemoides incana* 'Bietou'*Cliffortia odorata* 'Wildewingerd'*Cliffortia strobilifera* 'Bog Rice Bush'*Cotyledon 38orymbose38* 'Pig's Ear'*Crassula multicava* 'Fairy Crassula'*Crassula 38orymbose38* 'Uguwe'*Cyperus prolifer* 'Miniature Papyrus'*Cyperus textillis* 'Basket Grass'*Elegia tectorum* 'Fishhoek' 'Cape Thatching Reed'*Elytropappus rhinocerotis* 'Renosterbos'*Eragrostis capensis* 'Heart-seed Love Grass'*Eragrostis curvula* 'Weeping Love Grass'*Eriocephalus africanus* 'Wild Rosemary'*Euphorbia mauritanica* 'Geel Melkbos'*Felicia filifolia* 'Fine-leaved Felicia'*Ficinia nodosa**Gomphostigma virgatum* 'River Star'*Helichrysum patulum* 'Kooigoed'*Helichrysum teretifolium**Hymenolepis parviflora* 'Coulter-bush'*Juncus effesus* 'Common Rush'*Juncus krausii* 'Dune Slack Rush'*Kniphofia sarmentosa* 'Torch Lily'*Kniphofia spp.* 'Red Hot Poker'*Lampranthus amoenus* 'Darling Vygie'*Lampranthus spp.* 'Vygie'*Melinis nerviglumis* 'Bristle-leaved Red Top Grass'*Merxmullera cincta**Ornithogalum thyrsoides* 'Chincherinchee'*Orphium frutescens* 'Sea-rose'*Pelargonium tomentosum* 'Pennyroyal Pelargonium'*Pennisetum macrourum* 'African Feather Grass'*Plecostachys serpyllifolia* 'Cobweb Bush'*Psoralea pinnata* 'Fountain Bush'*Rumorhra adiantiformis* 'Leatherleaf Fern'*Salvia chamelaeagnea* 'Rough Blue Sage'*Selago 38orymbose* 'Bitterblombos'*Searsia angustifolia* 'Willow Karee'*Searsia crenata* 'Dune Crow-berry'*Searsia glauca* 'Blue Kunibush'*Searsia lucida* 'Glossy Crow-berry'*Searsia undulate* 'Kunibush'*Stoebe plumose* 'Slangbos'*Thamnochortus insignis* 'Thatching Reed'*Virgilia oroboides* 'Keurboom'*Wachendorfia thrysiflora* 'Bloodroot'

*Helichrysum cymosum* 'Gold Carpet'

*Watsonia pilansii* 'Summer Watsonia'

*Helichrysum pandurifolium*

*Watsonia* spp. 'Watsonia'

#### 4.11.2. IRRIGATION

- Indigenous plant species, recommended for all the gardens, do not need a lot of water once established.
- To help prevent unnecessary water loss, a layer of mulch over the planted area can be applied. The mulch layer will also suppressing weed growth.
- Organic matter which arises after pruning or cutting can be used for mulch.
- Private garden irrigation systems must be designed to be energy-efficient and water-efficient.
- Drip irrigation can be used in small, localized areas such as trees in paving or narrow planting flowerbeds.
- In larger areas, where sprayers will be necessary to ensure the area is watered adequately: wind velocity will need to be taken into account i.e. the heights and distances, sprayers will need to cover; in order to reduce excessive water use or loss.
- Plants in the landscape will be selected for their drought-resistant qualities and are to be separated into hydro-zones; where the plants use the same amount of water.
- Stellenbosch Municipality's water restriction rules are applicable on the use of potable water by Property Owners for irrigation of their private garden as well for the communal areas.
- It is best practice to irrigate before 10h00 or after 16h00.
- Grey water is to be harvested, if possible, for irrigation purposes on all private erven.
- Owners may not connect their private irrigation systems into the Estate's irrigation system.
- Where irrigation in the public space is affected by the addition of pathways or new driveways, the owner must notify the HOA in order for them to arrange to move the irrigation so that it waters the landscaped areas correctly.
- Should irrigation systems be installed, owners must design them in such a way that they do not cause staining to any walls.
- Irrigation systems must be properly designed and utilised in a way that will maximize the efficient use of water. Water saving components and irrigation products should be as water-wise as possible.
- All irrigation pipes will be installed a minimum of 400mm below final ground level – surface lines are not permitted.
- All driplines are to be concealed under a layer of bark chips or other approved mulches.
- Irrigation systems should be used to assist plant establishment and then only used during exceptionally dry spells.
- All new trees to be provided with a drip ring.

## 5. PROMOTING SUSTAINABLE DESIGN

Sustainable development has long term sustainability as the ultimate goal. The philosophy supported is that “every bit counts” and that unless the sustainable development process is managed and measured, success rates will be low, or worse, the principles would fail.

In the Basic Impact Assessment (*ito* NEMA, Act 107 of 1998) and the application for Rezoning, Subdivision and (*ito* LUPO, Ord 15 of 1985) commitments have been made to promote the contribution of Voliere to addressing climate change during both the construction phase and the operational phase. As stipulated below, the primary responsibility for the continued implementation and management of these commitments will rest with the private homeowners and the HOA during the operational phase.

Various rating tools are available in South Africa (Green Building Council’s Green Star Rating Tools and EDGE for homes rating tools) which could be used to assess the degree to which the project and individual homes promote the principles of environmentally friendly design, construction and operation.

To promote sustainable development in practice architects and property owners are encouraged to promote best practice principles in the design and construction of buildings and the landscape.

The following objectives are to be pursued:

- The use of cleaner energy: strive to improve reliance on renewable energy sources such as solar power and wind energy.
- The use of sustainable building materials and systems with low embodied energy.
- Reduction of the energy required to maintain finishes and materials – e.g. repainting, replacing etc.
- Reduction of the amount of energy that is used in building systems for heating, cooling, lighting and other electrical systems.
- Increase the energy that can be generated through renewable energy systems such as Solar PV.

### 5.1. PROMOTING ENERGY EFFICIENCY

The following measures have been identified which will be implemented in order to reduce energy consumption, promote the efficient use of energy and promote appropriate alternative renewable energy sources.

#### 5.1.1. PASSIVE SOLAR DESIGN

The correct design of urban space and related buildings through the application of Passive Solar Design principles will contribute significantly to reducing energy use (specifically energy required for heating and cooling a building). Passive solar design is based on the following 6 principles i.e:

- i) Building orientation
- ii) Thermal massing
- iii) Shading
- iv) Ventilation



- v) Insulation
- vi) Landscape design

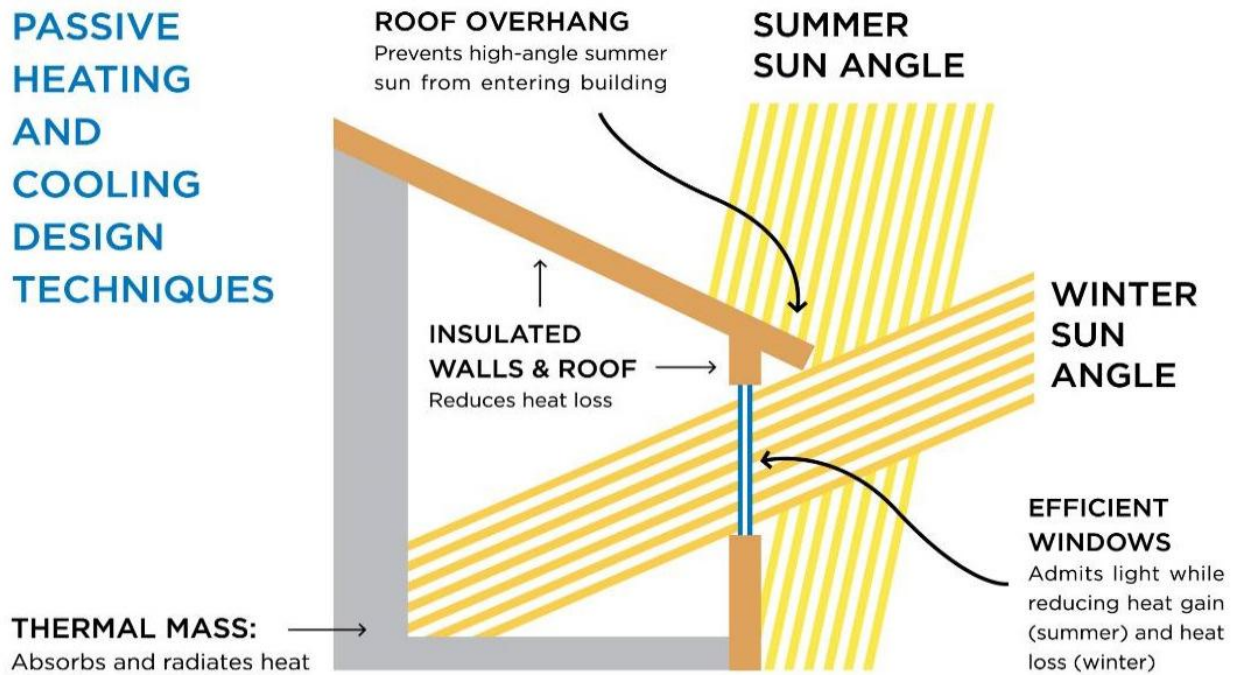


Figure 34: Basic principles of Passive Solar Design.

Buildings should be designed to collect, store and radiate heat inside the building to maintain higher night-time temperatures in winter while in summer excessive internal heating of the building is avoided.

### 5.1.2. PROMOTING ENERGY EFFICIENCY

The use of energy efficient electrical and associated appliances in all buildings will be promoted. A range of possible measures include the following:

- i) Installation of a Building Management System which controls all energy related appliances, lighting, heating and cooling which could contribute to promoting energy savings.
- ii) Installation of low energy lighting in and around buildings and public spaces.
- iii) Installation of evaporative coolers (a device which cools air through the evaporation of water). Evaporative coolers have significantly lower installation and operational costs than a conventional air-conditioning system.
- iv) Use of skylights to reduce demand for artificial interior lighting.

### 5.1.3. RENEWABLE ENERGY GENERATION

The installation of a Grid-Tied Renewable energy system will be encouraged for all houses.

Grid-Tie renewable energy refers to the direct grid or utility Feed-In of instantaneous generated power through different sources such as wind (Wind Turbines) or sun (Photovoltaic Panels), which enables direct savings on electricity usage for the commercial sector which has the potential to contribute significantly towards the reduction of conventional energy sources. The technology allows for the renewable energy generated to be used locally, thereby reducing the demand on external energy sources.

## 5.2. WATER USE EFFICIENCY

It is recognised that it has become critically important that the efficient and appropriate use of scarce potable and non-potable water resources should be promoted and that alternative methods of water capturing, and management be investigated. Water use will be addressed by managing water for private use (buildings and activities on private erven) and common use (private open space and associated amenities) by the HOA.

The sustainable use of water requires that:

- i) Potable and non-potable water use, in general is reduced.
- ii) Water is used responsibly for a specific application.
- iii) Water is used efficiently at all times.
- iv) Alternative water sources are used to their full potential.

### 5.2.1. MANDATORY WATER SAVING MEASURES

In order to promote responsible private domestic and common water use it is recognised that the use of potable municipal water for exterior purposes should be supplemented.

The following measures would be taken:

- (a) Irrigation management: The following measures will be implemented:
  - i) Plants in the landscape will be selected for their drought-resistant qualities and are to be separated into hydro-zones; where plants use the same amount of water.
  - ii) The use of organic mulch is encouraged to minimize water loss due to evaporation.
  - iii) The irrigation system will be designed to be energy-efficient and water-efficient.
  - iv) Drip irrigation will be used in small, localized areas such as trees in paving or narrow plating flowerbeds. In larger areas, where sprayers will be necessary to ensure the area is water adequately; wind velocity will need to be taken into account in order to reduce excessive water use or loss.
  - v) Weather stations will be installed to monitor seasonal fluctuations in rain fall so that the irrigation program can be adjusted accordingly.
  - vi) The use of wireless rain sensors to regulate the irrigation system on a daily basis would be mandatory. Watering times will be regulated so that the irrigation system does not run during the hottest time of the day.
- (b) Water use regulations: The following measures will be implemented:
  - i) Water Use Guidelines and Restrictions shall be determined and managed by the HOA.
  - ii) The guidance with regard to drought tolerant water-wise plants shall be adhered to.
- (c) Internal water use: The following measures will be implemented:
  - i) The installation of water efficient fittings (e.g. dual-flush toilets, low flow showers, aerated taps) will be specified throughout all buildings.

- ii) The use of water efficient appliances will be promoted.

## **6. BUILDING PLAN APPROVAL PROCEDURE**

### **6.1. HOA AESTHETIC APPROVAL**

All building plans, alterations and additions are subject to aesthetic and colour scheme approval PRIOR to Local Authority submission. The procedure is outlined below:

- i) For aesthetic evaluation, a colour copy (in .pdf) of all the building plans must be submitted to the HOA by the owner of the property or his Architect prior to Local Authority submission.
- ii) Following that, if the drawings are aesthetically approved to comply with the guidelines three they will be stamped by the office of the Control Architect before the plans are returned to the owner. Only stamped drawings will be accepted by the Local Authority.
- iii) A non-refundable scrutiny fee (amount to be determined by the HOA) will be payable BEFORE any plans can be accepted for aesthetic plan approval.
- iv) Size of drawings are limited to A1 and A2 format. The Owner and Architect's names must be clearly recorded in the title block with the relevant Erf number, title of plan (e.g. floor plans, elevations, etc.), date, scale of drawing and north point on each drawing. NOTE - All plans must be signed by the Owner or his responsible Architect.
- v) The architectural character of all new building/s will be considered in relation to that of the Development guidelines and any other factors that the Control Architect/s at its entire discretion, may deem necessary at the time of aesthetic approval.
- vi) Notwithstanding the fact that the building plans may comply with all Regulations and By-Laws of the Local Authority, the aesthetic approval or rejection of such plans, shall be at the sole discretion of the Control Architect/s and the approval thereof, shall not unreasonably be withheld.
- vii) Nothing in this document or any regulations herewith, will be construed as permitting the contravention of the Conditions of Title to any Erf or any Zoning, By-Laws or Regulations of the Local Authority.

#### **6.1.1. OUTLINE OF INFORMATION REQUIRED ON BUILDING PLANS TO BE SUBMITTED FOR AESTHETIC APPROVAL AS PER SUBMISSION CHECK LIST**

- i) Site plan at scale 1:500 with cadastral information (i.e. Erf number, north point, boundaries, contours indicated at 1000 or 500mm intervals, building lines & setbacks, building areas, coverage, etc.); Erf numbers of adjoining properties; location of all structures on site; the driveway (designated vehicle access); hard/soft landscaping (where required); retaining structures; boundary walls and gates; building services, e.g. storm water reticulation, drainage etc.
- ii) Detail breakdown of construction areas tabulated in covered and open building area per floor. All area measurements in m<sup>2</sup>.
- iii) Total site area, permissible coverage and actual coverage expressed as a percentage of the total site area.
- iv) Height measured from the ground floor top of concrete (TOC) to first floor TOC and from ground floor TOC to wall plate height, to be indicated on drawings. Height from ground floor TOC to apex of roof also needs to be indicated on elevations and sections.

- v) All floor plans (including roof plan), elevations and a minimum of two sections through the dwelling and site at scale 1:100. One of these sections must be a long section through the Erf, clearly indicating the bulk earthworks and cut and fill, if any.
- vi) Plan, elevations and sections through boundary walls, fences, gates and retaining structures at min. scale 1:100 and chimney, handrails, timber decks, boundary wall or fence details at a larger scale, e.g. 1:50 or 1:25, where applicable to illustrate detail. All to be complete with specifications and finishes.
- vii) Complete door, window and shutter schedule showing dimensions, material description, manufacturer and finish at scale 1:100. Window and door positions to be identified and cross referenced on building plan and elevation.
- viii) Schedule of external finishes and colour specification.

#### **6.1.2. DEVIATIONS FROM AESTHETICALLY APPROVED BUILDING PLANS**

- i) It is the responsibility of the Homeowner; Developer and Homeowner's Association to ensure that any deviations from aesthetically approved building plans is re-submitted to the Control Architect/s for scrutiny PRIOR to implementation on site. All such applications MUST be in writing and NO telephonic correspondence will be accepted in this regard. The costs for rectification of any exterior elements, colours, materials and alterations not complying with the guidelines and implemented on site without prior written approval from the Control Architect/s will be for the account of the respective Homeowner.

#### **6.1.3. GENERAL CONTROL CONDITIONS – FUTURE ALTERATIONS AND ADDITIONS**

- i) It is prescribed that all future alterations and additions comply with this document and are designed to complement and fit into the development design framework, architectural style, material use and colour scheme.
- ii) Building plans must be prepared in accordance with the procedures as set out in these guidelines for evaluation and aesthetic approval by the Control Architect (a professional Architect appointed by the Home Owner's Association to specifically assist them with this task) PRIOR to Local Authority submission.
- iii) The architectural character of all alterations and additions will be considered in relation to that of the development guidelines and any other factors that the Control Architect at its entire discretion may deem necessary at the time of aesthetic approval.
- iv) The design and submission of any alteration and additions to any dwellings and structures in the Development may only be undertaken by professional Architects registered with the South African Council for the Architectural Profession.
- v) All building plans to comply with the Local Authority and National Building Regulations and any other applicable legislation and by-laws.



**6.2. LOCAL AUTHORITY SUBMISSION**

- i) Only after aesthetic approval has been obtained, in writing, may the building plans be submitted to the Local Authority for municipal approval.

**NOTE - The final approval of all building plans ultimately vests in the Local Authority.**

**7. REVISIONS TO GUIDELINES**

DATE	DESCRIPTION
2024-08-14	Rev 04
2024-10-01	Rev 05