



HOME OWNERS ASSOCIATION

PHASE 1 AND 2 ARCHITECTURAL GUIDELINES

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1. INTRODUCTION

The owner of the Zanddrift properties is ComDev Zanddrift (Pty) Ltd (hereafter referred to as Combined) who has a contractual agreement with Combined Developers (Pty) Ltd (Combined) and who is responsible for the planning, design, implementation and management of the Zanddrift project. Combined has appointed a team of professional consultants to prepare the required application and -implementation documentation and to provide the required supervision of the works.

This office was appointed to prepare a Sustainability Framework for Zanddrift. The latter is a document that demonstrates how the UN 2030 Agenda for Sustainable Development, and the UN Paris Agreement on Climate Change would be applied in practice in the spatial planning, design, implementation and management of Zanddrift. These UN resolutions have been endorsed by the South African Government and apply to all spheres of government. Accordingly, the Sustainability Framework is aligned with South Africa's statutory framework through the alignment with Drakenstein's Integrated Development Plan (IDP) and its Spatial Development Framework (MSDF).

Drakenstein Municipality approved the rezoning of Zanddrift Farm, (comprising Portions 852/1, 853/4 and 849 that is 44,4 ha in extent) from **Agriculture** to **Subdivisional Area** on 29 May 2018. Environmental Authorisation in terms of NEMA (Act 107 of 1998) was granted by the Western Cape Provincial Government on 16 August 2023 and approval was granted by the Department of Agriculture and Rural Development on 19 July 2021 for the subdivision of agricultural land (in terms of Act 70/1970).

For the Zanddrift project to be implemented, a detailed subdivision and rezoning application was submitted to Drakenstein Municipality for approval in terms of the **Subdivisional Area** zoning granted. This application was prepared and submitted to the authorities by Terraplan Town Planners of Tygerberg, Cape Town.

Approval was given that the Zanddrift development may be undertaken in phases. In terms of the conditions of approval, a Site Development Plan ("SDP") and Architectural and Landscape Architectural Guidelines ("Guidelines") must be submitted to the municipality for approval. Combined has appointed this office to prepare the required Site Development Plan (SDP) for Zanddrift as a whole and for Phase 1 and Phase 2.

This document is appended to the Zanddrift Lifestyle Estate Homeowners Association Constitution and the Master Property Owner's Association Constitution and Estate Rules.

National, provincial and local government legislation require that the rezoning, subdivision and development of land should be consistent with a Municipal Integrated Development Plan (IDP) and a Municipal Spatial Development Framework (MSDF).





Figure 2: Site Development Plan (Phases 1 and 2)

2. A SYSTEMS APPROACH

The Sustainability Framework is consistent with the principles of the 26 July commitments and the principles of the 18 September Guidelines that were also consistent with the Drakenstein IDP at the time. The 26 July 2019 report and the present document share the principles of a holistic systems approach upon which the Drakenstein 2017 - 2022 IDP was founded. In the latter regard, Combined is at one with the statement made in the Executive Summary of the Drakenstein IDP that **“It is important to point out that key uncertainties- typical of most complex systems- are highly interconnected and that addressing any issue in isolation is inadequate, and any disconnected solution will most certainly fail”**.

Systems should therefore be seen as nestled within systems¹. The biosphere of the Earth is a living system (the biosphere is the thin layer of the atmosphere approximately 20km above and 1km below sea level where all life occurs). This includes life in the soils of the Earth. Every plant, animal, human-being should be viewed as part of an integrated whole. Living systems include communities of organisations (such as villages, towns and cities).

Giving effect to the Sustainable Development System requires the system to be understood from the smallest to the largest scale, in context of all scales located in the biosphere. For practical purposes the preparation of the Sustainable Development System for Zanddrift commences at the scale of the individual erven (Scale 10 Figure 4) that has to be developed in accordance with the Zanddrift SDP and its concomitant Architectural and Landscape Architectural Guidelines.

The element of a system comprises both **Tangible** and **Intangible** characteristics. Tangible characteristics can be seen, touched and

physically measured. Intangible elements refer to characteristics such as honour, pride, culture, heritage, etc. From the perspective of the preparation of the SDP and its concomitant Guidelines, both the tangible and intangible elements of the Zanddrift Sustainable Development System have to be advanced in an integrated manner.

In the latter regard it would be fitting to refer to the preparation - design and integration of the Zanddrift SDP System as comprising two sub-systems: the **tangible** spatial and three-dimensional form and structure of Zanddrift and the **intangible** cultural and heritage characteristics that would advance the qualitative dimensions of Zanddrift.

The current Phase 1 and 2 SDP (Figure 2) read together with the Subdivision and Land Use Plan (Figure 1) illustrated above, demonstrates how the tangible elements of the SDP Design System have been designed, arranged and interconnected to form both a range of functional (tangible) outcomes and qualitative (intangible) outcomes of the Sustainable Development System. This is motivated and demonstrated in Sections II and III of this report.

The SDP Design also provides the context within which the preparation of Zanddrift's SDP and its Architectural and Landscape Architectural Guidelines should be viewed. The preparation of the SDP resonates with a systems approach, advocated in the Drakenstein IDP.

The purpose of this report therefore includes the obligation to motivate the conditions and criteria that must be implemented to promote the Sustainable Development System, both tangible and intangible. The Architectural and Landscape Architectural Guidelines demonstrate the means to do so.

¹ Pier Luigi Luisi. A Systems View of Life Oxford University Press.

3. OPTIMISATION OF THE SUSTAINABLE DEVELOPMENT SYSTEM

The principal objective of Combined is to enable the purposes of the Sustainable Development System to be optimally achieved in the development of Zanddrift. Accordingly, Combined as required by law and policy has aligned the planning and development of Zanddrift with the requirements of South Africa's Constitution and the UN 2030 Agenda for Sustainable Development, as also circumscribed by the 2021/26 Review of the Drakenstein IDP.

In this regard Combined endorses the 1987 United Nations definition of Sustainable Development as **“the kind of development that provides for the needs of the present without compromising the needs of future generations to provide for their own needs”**.

In the first NDP of South Africa of 2012 it was stated that “South Africa should showcase its excellence”. The Zanddrift project could most certainly contribute the latter objective and would advance the Mission of Drakenstein Municipality to be a “City of Excellence” as is contemplated in its IDP and SDF.

It is within the above context that Combined has adopted the planning, design and implementation process circumscribed by the UN 2030 Agenda, the Paris Agreement on Climate Change and UNESCO's MaB Programme. The planning, design, implementation and management of these international agreements have been aligned with Drakenstein Municipality's IDP and SDF (Figure 3 below).

The foundational purpose of the Zanddrift project is to make the UN 2030 Agenda explicit by giving effect to the Sustainable Development System illustrated by Figure 3 below in a holistic and integrated manner, in accordance with legislation and policy as illustrated by Figure 4.

The Sustainable Development System has to be achieved in a systemic multi-scalar manner, as is illustrated by Figure 4 below.



Figure 3: The Sustainable Development System

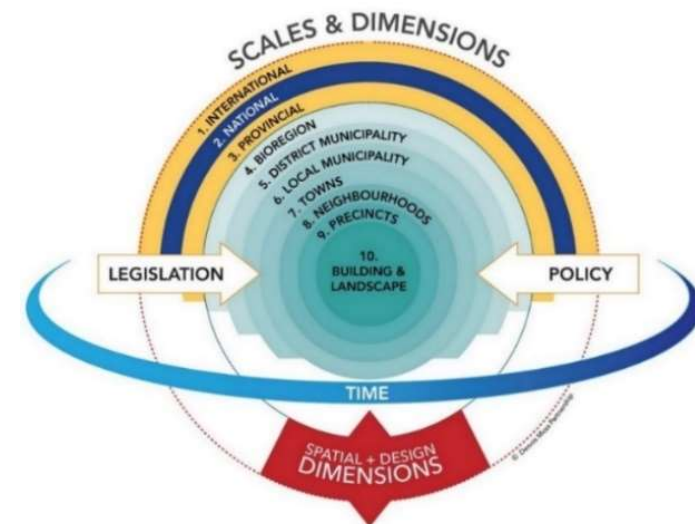


Figure 4: Multi-Scalar Approach

Combined recognises that Drakenstein Municipality is located in the Cape Winelands Biosphere Reserve, which was listed by UNESCO in 2007 as part of its Man and the Biosphere Reserve (MaB) Programme. Currently there are 741 Biosphere Reserves that form part of the World Network of Biosphere Reserves (WNBR). Zanddrift, being located in the Transition Area of the Biosphere Reserve, creates an opportunity to demonstrate how to make the 2030 Agenda and its SDGs explicit in terms of Drakenstein's IDP/SDF policies.

The Cape Winelands Biosphere Reserve “forms part of the Cape Floral Region Projected Areas which is a UNESCO World Heritage Site”. World Heritage Sites are cultural and/or natural sites considered to be of Outstanding Universal Value which have been inscribed on the World Heritage List by the World Heritage Committee. These places or buildings are thought to have special importance to everyone and represent unique, or the most significant or best examples of the World's cultural and/or natural heritage” (Drakenstein SDF Table 6.1 p 70).

This document was prepared in a manner that would result in a settlement form that would perform optimally in terms of sustainability criteria and settlement quality. With regard to the latter, the optimisation of opportunities to advance the heritage qualities of Paarl and the natural environment are of decisive importance. This is, for example, illustrated by the design of qualitative urban space as illustrated in this document.

The process of decision-making that would lead to an optimal Sustainable Development Systems outcome would require the applicable range of elements of the Sustainable Development System to be aligned and integrated in the decision-making process.

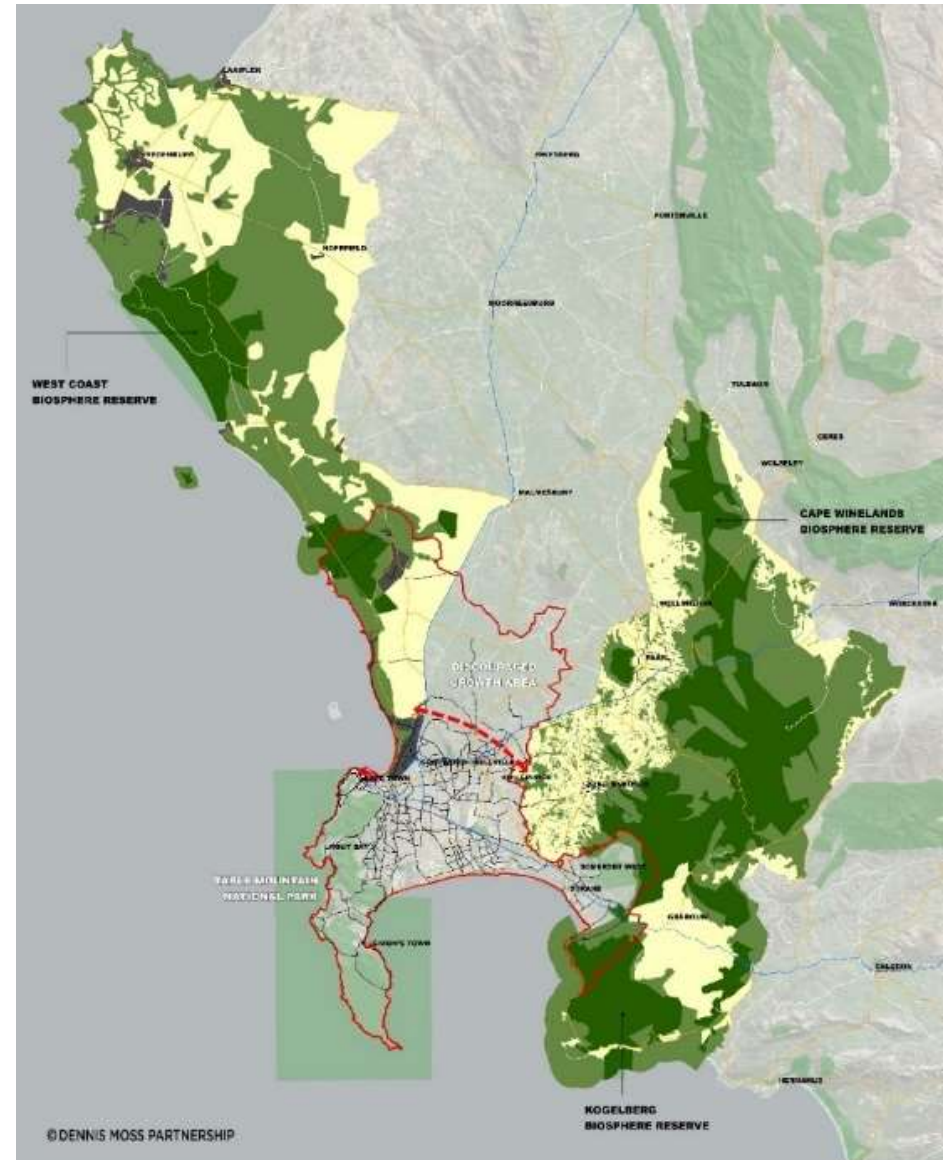


Figure 5: Biosphere Reserves of the south-western Cape

5. BEST PRACTICE THEORIES AND PRINCIPLES

On the settlement scale, the Normative Theory of Good City Form of Lynch² formed a key part of a suite of spatial planning and design theories and principles relating to the planning-design of the SDP and the preparation of the concomitant Architectural and Landscape Architectural Guidelines. The application of these principles served as key informants for the Zanddrift Urban Design Plans that enables the optimal outcome relating to urban form, both two- and three dimensionally.

In terms of Lynch's theory, the manner in which the considerations in Chapter 3 and 4 are to be achieved and measured will result in optimal **performance** for the system as a whole. This is illustrated by Figure 6 below.

In context of the dimension of the Architectural and Landscape Architectural Guidelines, the principles of **Critical Regionalism**³ (Lynch and Kelbaugh) served as the tenets for design decision-making in the preparation of the SDP and its concomitant Guidelines. Five tenets serve as fundamental informants for decision-making:

- Sense of Place
- Sense of History
- Sense of Craft
- Sense of Nature
- Sense of Limits

² Lynch, K., 1998. *The Image of the City*. 3rd Edition. MIT Press.



Figure 6: Performance Criteria

³ Kelbaugh, D. *Common Place: Towards Neighbourhood and Regional Design*. University of Washington Press, 1997.

6. CULTURE AND HERITAGE

A living culture that survives over the long-term becomes a heritage. The existing settlement in Zanddrift is a heritage site. The historic cultural landscapes of rural and historic Paarl are recognised as being of international significance by UNESCO, having been included in its MaB Programme. The natural systems that form the core of the Cape Winelands Biosphere Reserve are World Heritage sites.

The SDP and its concomitant planning and design guidelines have been prepared to promote and celebrate this. This requires an approach and a process that recognises that these functional and qualitative characteristics are sub-systems of the Drakenstein System that is, in itself, a sub-system of the Sustainable Development System. Humans build their world, and the SDP and Guideline documentation have been designed to enable the new owners of property in Phases 1 and 2 to become the builders of a new settlement that would have the inherent qualities to become part of the future heritage of Drakenstein.

7. SUSTAINABILITY FRAMEWORK

As mentioned above Combined is in the process of preparing a Sustainability Framework for Zanddrift that would demonstrate **what** has to be done to enable the sustainable development of Zanddrift and **how** this is to be achieved optimally to advance the Sustainable Development System.

The Sustainability Framework would serve as the principal development and management guideline for Zanddrift and would be principally informed by the Drakenstein IDP and SDF.

Both the SDP and the Guidelines should be viewed as general development parameters and not rules. The Architectural Guidelines allow great flexibility for property owners to give expression to their identity and the interpretation of their preferences.

For the latter to result in a harmonious development that would reflect the historic qualities of the Zanddrift settlement in a contemporary manner, specific rules would be mandatory. These relate to building form and structure (letter of the alphabet building footprints, wall plate height, roof gradients, materials and external colours, etc.).

Landscape architectural guidelines are more prescriptive. Whilst the qualitative components are flexible, the biophysical conditions and rules pertaining to botanical requirements are specifically specified. Matters that are regulated and for which prescriptive rules would apply relate to ecological standards and botanical specifications.

The current SDP, read together with the Zoning and Subdivision requirements, enables the optimisation of orientation and building design to respond optimally to biophysical criteria as well as the advancement of the quality of the settlement at all scales. The SDP also enables individual house design and the built environment to be enhanced by the design of qualitative private and urban space.

The current SDP Design, the zoning of Subdivision Plan and the Architectural Guidelines are all sub-systems nestled in the settlement system of Zanddrift that, in turn are nestled in larger systems of the Sustainable Development System. Zanddrift should be viewed as a living system that would have the potential to become self-organizing over time. It would, in the words of Kevin Lynch, create a “learning ecology” that will improve over time.

As motivated above, the preparation of an SDP, its Zoning and Subdivision Plan and its Architectural and Landscape Architectural Guidelines have to be aligned with the Drakenstein IDP and SDF. As motivated the latter statutory documents are constitutionally aligned with the South African NDP 2030 and its SDGs, the UN 2030 Agenda for Sustainable Development, and the Paris Agreement on Climate Change. Consistent with the latter, the IDP requires the systemic

alignment of Zanddrift development plans with the UN and South African Sustainable Development System. This is an immensely complex challenge that has to be simplified to be practically achievable.

8. THE ZANDDRIFT DECISION-MAKING MODEL

The purpose of the Zanddrift Sustainability Framework is to promote and give practical effect to the Sustainable Development System on all scales seen through the lens of the obligation and commitments of Combined and the responsibility to align its decisions with Drakenstein IDP and MSDF. This requires that decision-making should also be informed by the most optimal alignment with the UN 2030 Agenda SDGs and all relevant elements of the Sustainable Development System (Figure 3 above).

To do so in practice, Combined has adopted the methodology illustrated by Figure 7 below. The preparation of the SDP and the Architectural and Landscape Architectural Guidelines, as motivated in the Sustainability Framework of 14 September 2021, was informed by the Zanddrift Decision-Making Model (Figure 7 below).

Within context of Combined's commitments, a brief overview is provided of the rationale of the decision-making model illustrated by Figure 7 below that will serve as a first order guideline for the planning, design, implementation and management of the Zanddrift Sustainable Development System.

In essence this would be undertaken systemically by the implementation of the 17 SDG's of the 2030 Agenda SDGs through the Governance Sub-System upon which Zanddrift (Figure 7 below) Economic, Social, and Ecological System rests (Figure 3).

Decision-making pertaining to the preparation of the Zanddrift SDP incorporating Architectural and Landscape Architectural Guidelines,

have a material impact on the use and management of resources for the entire lifespan of Zanddrift settlement.

The rationale for spatial planning and design of an SDP and its concomitant guidelines should therefore be explained and motivated to enable government (Drakenstein Municipality) to assess Combined's compliance to the criteria and standards of the municipality. These are to be incorporated into the municipal conditions of approval pertaining to Zanddrift.

The decision-making model illustrated by Figure 7 below, served as the principal instrument of Combined that would guide decision-making pertaining to the Zanddrift project. In the above regard a synoptic motivation is provided pertaining to Figure 6, 7 and 8.

8.1. FIGURE 7

The circular form of the Decision-Making Model represents the earth and its surrounding biosphere.

The Sustainable Development System (Figure 3 above) sits at the heart of the Decision-Making Model (green icon) and all decisions are informed by systems thinking and best practice are illustrated by the Model below (Figure 7).

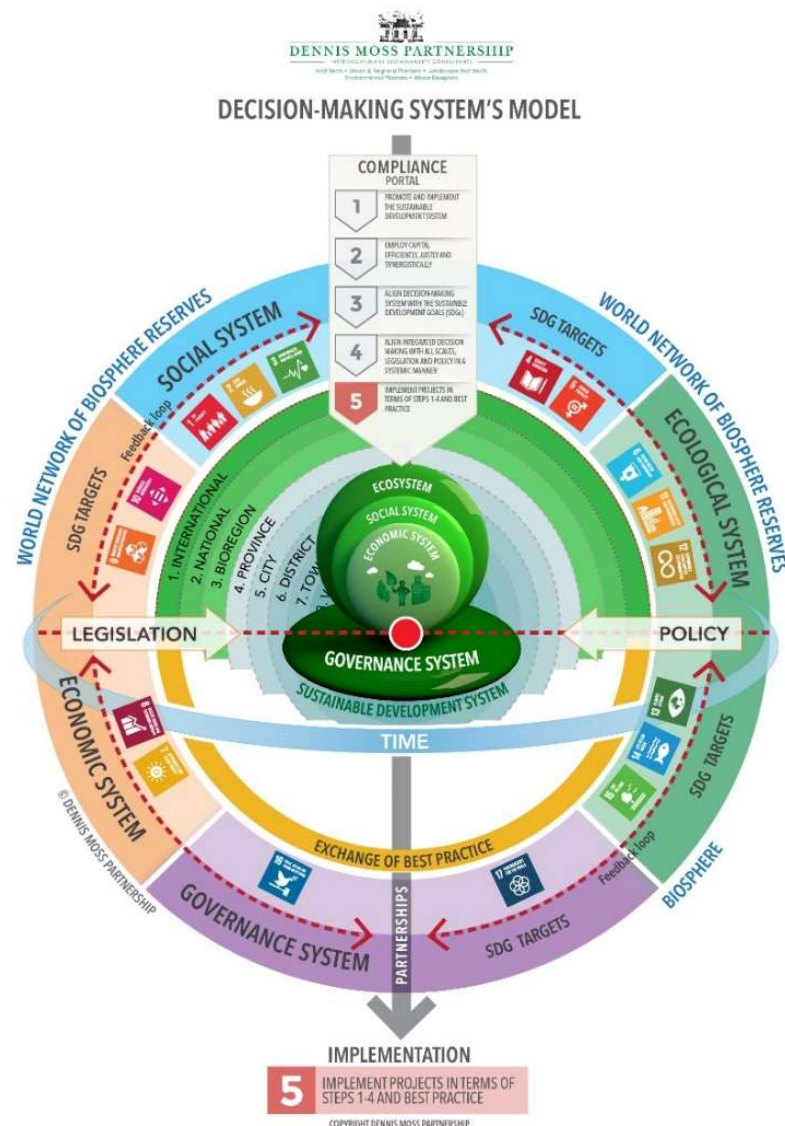


Figure 7: Decision-Making Model adopted for Zanddrift

8.2. THE COMPLIANCE PORTAL

The fundamental purpose of the Sustainable Development System is “Transforming the World: 2030 Agenda for Sustainable Development” by the implementation of the UN 17 SDGs in alignment with the Drakenstein IDP and MSDF.



Figure 8: The 17 SDGs of the UN 2030 Agenda (The Global Goals)

In accordance with international best practice the SDGs should be aligned with the four sub-systems of the Sustainable Development System (Figure 3), to enable optimal integration across all ten scales from the international to the local scale.

Combined and the future HOA would do so from the perspective of aligning its decision-making with the IDP and the MSDF through the Governance Sub-System. This would be undertaken as is contemplated by The UN 2030 Agenda **SDG 16 (Governance)**.

The latter would be made explicit in the spirit of partnership as is contemplated by **SDG 17 (Partnerships)**. SDG 17 is considered the principal **means of implementation of the SDGs** - the principal enabler.

In the Decision-Making Model it is demonstrated that sustainable development is to be achieved by the implementation of **five imperatives (steps)**. These five steps are considered as principal normative imperatives located on the Partnership axis (the Compliance Portal – Figure 8 below). SDGs 16 and 17 are represented by the north-south axis and the east-west axis on the diagram illustrated by Figure 7.

SDG 17 (Partnerships) are therefore, in terms of the Decision-Making model illustrated by Figure 8 principally informed by the five imperatives that is referred to as the “Compliance Portal”.

Step 1 requires the recognition that the implementation of the Sustainable Development System is foundational to the Zanddrift project.

Step 2 addresses the efficient and just employment of capital. Differentiation is made between four forms of capital: *Monetary, Environmental, Infrastructural, Social and Human Capital*.

Step 3 requires all 17 SDGs to be aligned in decision-making informed by Step and Step 2 enabled by SDG 16 and 17.

Step 4 refers to the multi-scalar approach

Step 5 refers to the implementation of projects.



Figure 9: The Compliance Portal

9. ARCHITECTURAL GUIDELINES

9.1. INTRODUCTION

The Architectural and Landscape Architectural Guidelines (the Guidelines) should be viewed as a sub-system of the Zanddrift Sustainable Development System. The **purpose** of the Guidelines is to inform decision-making of how the built- and landscape environment should be designed and implemented to optimise the Sustainable Development System, and by extension the SDP. Accordingly, it is to be recognised that there is a synergistic relationship between the preparation of SDP/Zoning and Subdivision designs and the preparation of the Guidelines documentation. This would be demonstrated in the Zanddrift Sustainability Framework to be submitted to the Drakenstein Municipality.

This synergistic relationship would be clarified through the decision-making process, having regard for the field of **elements** of the Sustainable Development System illustrated by Figure 3 above and the process of decision-making illustrated by Figures 7 and 8 above (The Zanddrift Decision-Making model).

This would be made explicit by the Architectural and Landscape Architectural Guidelines. The Architectural Guidelines demonstrated in this chapter should be taken into consideration by the architects responsible for the design of individual houses. The control architects would take the consistency with these principles into consideration in the assessment of building plans.

These principles informed the preparation of the Guidelines for Phase 1 (excluding erven no. 99-108) that were included in the submission made to Drakenstein Municipality and the Department of Agriculture and Rural Development (as referred to under Chapter 1 above).

These principles also informed the preparation of the Architectural and Landscape Architectural Guidelines demonstrated in the present document.

The Essence of the Guidelines for Phase 1 and 2 are considered a sub-system of the Sustainable Development System and its purpose should be to:

- be as flexible as practically possible to allow for participation of landowners.
- clearly resonate with the cultural and heritage character of the Cape Winelands that would, in turn be informed by the five tenets of Critical Regionalism to advance a:
 - Sense of Place
 - Sense of History
 - Sense of Crafts
 - Sense of Nature
 - Sense of Limits
- advance the built heritage of historic Paarl and promote the appropriate design of buildings and the landscape.
- create a unique "spirit of place" through the fusion of the rural- and urban built form and landscape character.
- be practically achieved by a built and urban landscape that would imbue contemporary design that resonated to the spirit of the time in which the settlement was built.
- enable the built form of the rural tradition of the Winelands to dominate.

A rule that will apply in this regard is that the footprints of buildings should be governed by the application of the “Letter of the Alphabet Typology”. This refers to the traditional rural Winelands buildings comprising a ground-floor shaped by the letters H, L, U, T and I. Building footprints can be combined in various ways as required.

In this regard, the specific requirements are that:

- The letter of the alphabet building components must join at right angles.
- The letter of the alphabet floor plans are defined as the “core buildings”, which may not exceed an external width of 6.6m.
- Floor extensions would be allowed by adding abutments of a maximum width of 4.5m.
- A combination of single storey, lofts and double storey core buildings are allowed on each property, subject to the following wall plate heights :
 - Single storey 3.6m **minimum**
 - Double storey 5.8m **maximum**
- Double pitched roofs of 35° – 40° are mandatory.
- 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 included in this document.
- To facilitate the contemporary character in Zanddrift, 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 Paarl Rural character.
- White or off-white exterior colours and grey (iron corrugated) roofs are mandatory.
- Metal roof sheeting (Klip-Lok, or Victorian S-profile) is mandatory.
- Exterior wall colour: predominantly white, with shades of grey for focal elements such as clip-on abutments or chimneys.
- It is to be noted that Heritage Western Cape has imposed conditions relating to the existing buildings and the landscape in the “Heritage Precinct” of Phase 1 (Refer SDP). In these guidelines this “precinct” is recognised as a heritage precinct applicable to both existing and future houses. Additional guidelines relating to architectural design in this precinct is to be adhered to. It is the responsibility of the architects appointed for houses in this precinct to obtain all required approvals from Drakenstein Municipality – Department of Spatial Planning, Heritage and GIS (as delegated by Heritage Western Cape).

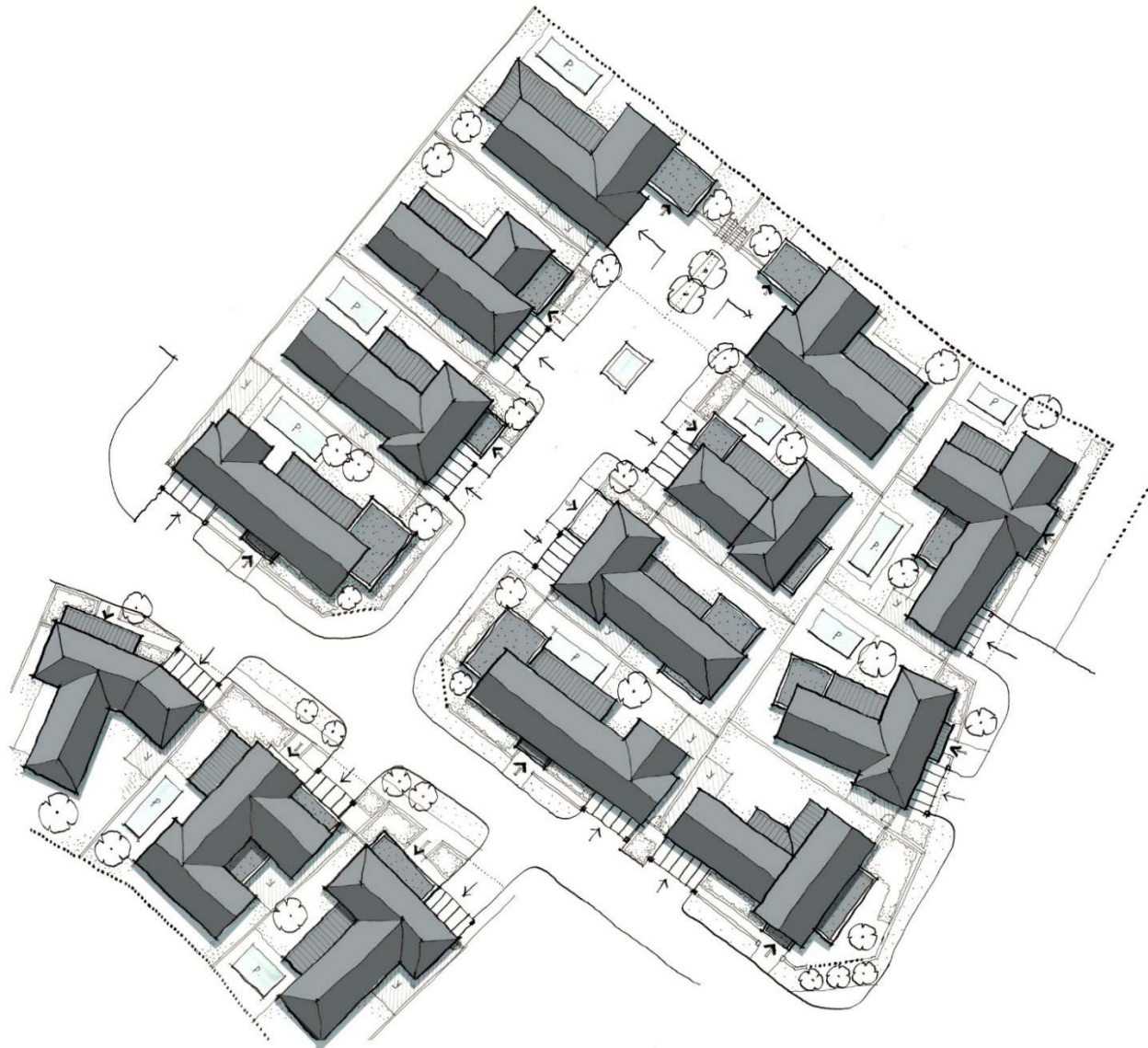


Figure 10: Sketch plan illustrating figure ground relationship of typical buildings in a cul-de-sac.



Figure 11: Typical courtyard (cul-de-sac) providing a “woonerf” environment which is safe for pedestrians



Figure 12: Zanddrift Paarl Contemporary: Rural Vernacular to the left and the right of the image with Paarl Heritage in the centre



Figure 13: The role of the Cape wall (foreground) in establishing edge continuity, enclosure and a sense of place



Figure 14: Typical residential building facing the street



Figure 15: Typical residential building facing the “woonerf” courtyard



Figure 16: Typical residential building illustrating relationship of private space to the street



Figure 17: Typical large house illustrating letter of the alphabet building form (U-shape building)



Figure 18: Typical stoep of larger house illustrating indoor-outdoor fusion



Figure 19: Typical stoep of medium size house illustrating indoor-outdoor fusion



Figure 20: Typical stoep of smaller house illustrating indoor-outdoor fusion

9.2. BUILDING FORM

9.2.1. CORE BUILDINGS

- (i) Building form shall consist of the main building structure, which is expressed as a core building which must conform to the “letter of the alphabet” building form of the traditional Cape vernacular.
- (ii) Rectangular sections of the core buildings must be built perpendicular to each other.
- (iii) Only one core building per erf will be permitted.

9.2.2. ABUTMENTS

- (i) Abutments are rectangular, single storey extensions to core buildings. The dimensions of these are illustrated below.

9.2.3. BUILDING DIMENSIONS (WIDTH, HEIGHT)

- (i) Prescribed widths and corresponding heights apply to building typologies and sub-types as illustrated by Figure 21.
- (ii) Architect to comply with specific building parameters as stipulated in Drakenstein Zoning Scheme By-Law.

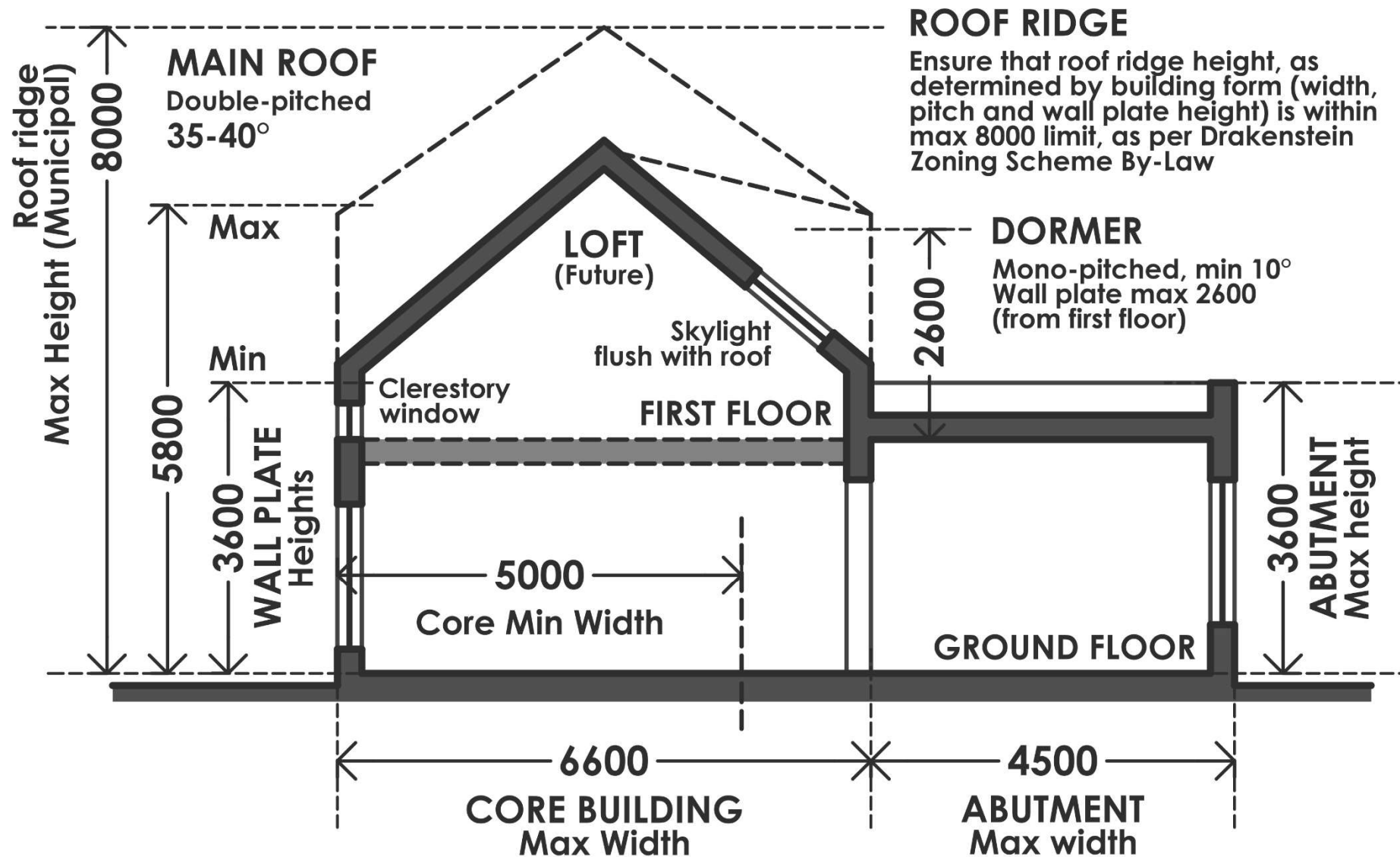


Figure 21: Building dimensions (Graphic Illustration)

9.2.4. CORE BUILDING ROOFS

- (i) The same roofing **material** used on Core buildings must be used for all double pitched and lean-to roofs or abutments on a property.
- (ii) Two types of roofing **profiles** are allowed:
 - **Corrugated** ("Victorian" S-profile) or concealed-fix **Klip-Lok** ("Diamondek" or "Brownbuilt" or similar approved). Square fluted ("IBR" or "Widek") sheeting profile will not be permitted. Colour: 'Chromadek' Dark Dolphin or 'Colourbond' Volcanic Grey.
 - Mazista slate roof or similar approved – Colour: Dark grey.
- (iii) The core building must have symmetrical double pitched roofs of 35° to 40°.
- (iv) Max roof overhang (gable or eaves) of 500mm.
- (v) Max roof height to Drakenstein Zoning Scheme (Section 27 and 127) is 8m.

9.2.5. DORMERS

Dormers increase headroom, light and natural ventilation in lofts. They are therefore an effective and attractive way to maximise space without affecting a building's footprint. A successful dormer should not overwhelm the main roof but rather obey the hierarchy of primary main roof and secondary dormer. In form and proportion, it must be expressed as a subordinate element.

- (i) "Shed" dormers, a dormer with a single sloping roof, may be used for single and loft type buildings.
- (ii) The dormer's spring line (the point at which its roof connects with the main roof) can be aligned with the primary roof ridge, or below it.
- (iii) The dormer's plate height (the top of its opening) is limited to 2.4m above the height of the first floor.
- (iv) The dormer's cill (the bottom of its opening) may not be higher than the wall plate height of the primary roof.
- (v) The side walls of dormer must be set back at least 1.5m from the end of the primary roof (the gable).
- (vi) The front of dormers must be flush with the external wall of the building.
- (vii) Dormers may be used on the façade on the private side of the house or facing a neighbouring erf. Dormers may not face a Street or a Close.
- (viii) "Doghouse" (gabled) dormers and hipped dormers are not permitted.

9.2.6. ABUTMENT ROOFS

- (i) Roofs over abutments must be concrete if these are to serve as balconies, Flat roofs with waterproofing on screeds to fall, protected with crushed stone chips. Mono-pitch (lean-to) metal roofs such as "Diamondek" or "Brownbuilt Klip Lok" or equally approved concealed or visible are allowed. Metal roof sheeting (with a pitch of 3° to 5°) must match the core building roofs in colour and material.

- (ii) Abutments with concrete roofs may be utilised as balconies for first floors.
- (iii) Metal or concrete flat roofs must be hidden behind a horizontal parapet wall on three sides to conceal the roof. Contemporary design principles that deviate from these criteria should be motivated as may be required. The gutter must face away from the public view.

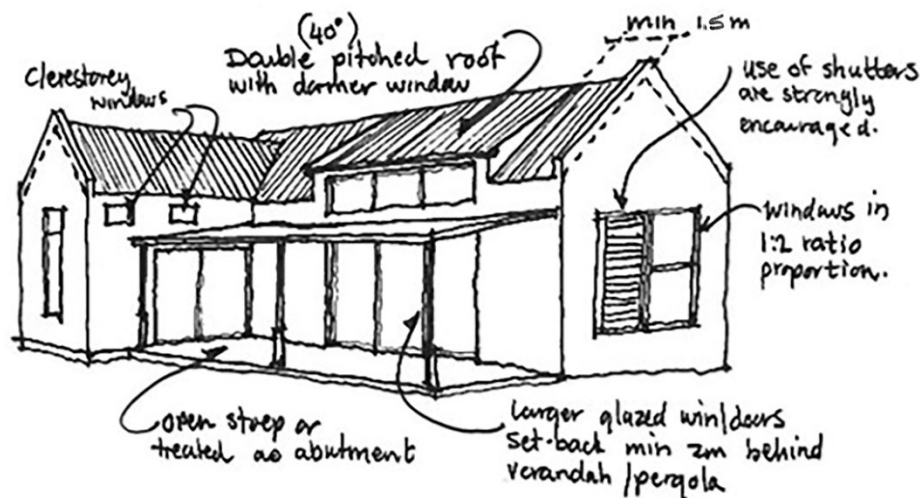


Figure 22: Typical roof

9.2.7. ROOFS OVER PATIOS (STOEPS/VERANDAS)

- (i) Roofs over patios can be concrete, concealed behind a horizontal parapet wall, or mono-pitch metal roofs (lean-to roof of 5° -10°) that match the core building roof in material and colour.
- (ii) Where the verge of roofs to abutments and patios are exposed, they must have a minimum gradient of 15°.

9.2.8. FIBRE-CEMENT FACIAS; BARGEBOARDS; EAVES OVERHANGS AND SOFFITS

- (i) Fascias and bargeboards to be 225/150mm x 12mm "Everite Nutec" or approved equal medium density fibre cement board with plain finish, butt jointed. Colour: painted with high quality acrylic paint to match the roof colour.
- (ii) Eaves soffits to be closed between rafters with "Everite Nutec" or approved equal medium density fibre cement board. Colour: painted with a high-quality acrylic paint, colour white.
- (iii) Eave closures to be painted white.

9.2.9. MONO-PITCH ROOFS

- (i) Roofs with a pitch of 3-5 degrees: **Concealed fix** ("Diamondex" or "Brownbuilt" or similar approved) should be enclosed all round behind a horizontal parapet wall in order not to be visible from view, except in the case of stoep/veranda roofs (refer 11.2.2 and 11.2.3). Deviation may be allowed if convincingly motivated.
- (ii) Roofs with a pitch between 5 and 10 degrees (for stoep/patio overhangs): **Corrugated** ("Victorian") or **concealed fix** ("Diamondex" or "Brownbuilt" or similar approved). Colour – 'Chromadek' Dark Dolphin or 'Colourbond' Volcanic Grey (refer 11.2.3).

9.3. RAINWATER GOODS

- (iii) Rainwater Gutters – Visible Pre-painted seamless 'Watertite' Aluminium or similar approved, extruded gutter in domestic 'ogee' profile. Colour – Charcoal to match the roof.

(iv) Down Pipes - uPVC round down pipes with appropriate fittings and fixings painted to match colour of the wall OR pre-painted seamless 'Watertite' Aluminium or similar, extruded round or square downpipe/s - colour to match the wall.

(v) Hopper heads - Pre-painted seamless 'Watertite' Aluminium or similar approved, standard hopper head, painted to match the wall.

9.4. WINDOWSILLS AND PLASTER BANDS

(i) Windowsills can be plastered with a smooth wood trowel finish and painted to match the wall OR be exposed whitewashed red brick

(ii) Plaster bands must be used sparingly – exposed, white-washed red brick can be used around openings.

(iii) A longer band or recess below windows are allowed to lengthen the vertical proportion of a window.

(iv) Thickened walls for building plinths may be used. These can be plastered and painted (to match wall) or whitewashed red brick. Sample to be approved.

(v) Whitewashed exposed red brick may also be used for smaller elements on the façade.

(vi) Plumbing and AC pipes are to be suitably concealed within walls or ducts where possible, and when exposed to the exterior, painted to match the colour of the exterior walls.

9.5. WINDOWS, DOORS AND SHUTTERS

9.5.1. WINDOWS AND DOORS

(i) Windows should generally be:

- Taller on the ground floor, than on the first floor;
- Kept on the same head height throughout the same storey;
- Higher windows can be installed in double volume spaces or stairwells.
- Of the same width in vertical succession, lined up above each other.

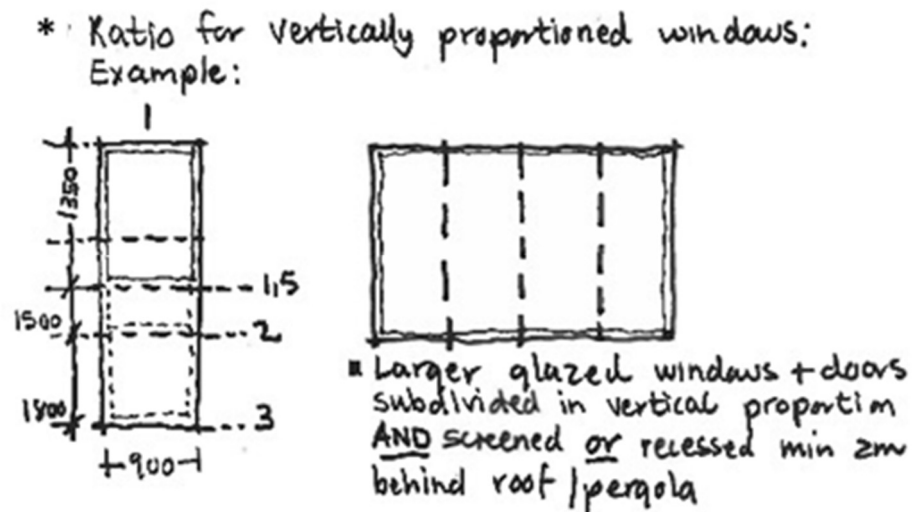
It is emphasised that windows in double story loft houses may only be provided in end gables facing a street or private open spaces. Loft windows may be installed below the wall plate line.

(ii) All aluminium or UPVC windows and doors (SABS Approved) to be epoxy powder coated MATT Dark Traffic Grey (code VP 7156) to match the roof OR MATT White (code ANP 1101). Only one of the two accent colours may be used in any one building.

(iii) All windows and doors to be vertically proportioned. Smaller horizontal and corner windows will be allowed on merit.

(iv) Larger doors and windows (where width exceeds height) are allowed but should be screened by a roof, pergola or installed working shutter.

(v) Front doors may be in aluminium or wood. Door & door frame must be of the same material. Doors may be solid or have glazing.



**Figure 23: Clerestory and ventilator windows, Roof windows position,
Ratio for vertically proportioned windows**

9.5.2. SHUTTERS

- (i) Shutters may be internal or external mounted, folding or sliding and louvre or solid.
- (ii) Shutters may be powder coated aluminium (charcoal colour) or varnished timber slats in galvanised iron frame.
- (iii) The surface finish and colour of the shutters must match that of the window frame over which they close.
- (iv) Only working shutters are allowed.

9.5.3. CLERESTORY AND VENTILATOR WINDOWS

- (i) Ventilator windows may be used under the eaves.

9.5.4. GABLES AND GABLE WINDOWS

- (i) The gable end walls of the letter of the alphabet type buildings create opportunities for the use of gable windows. These windows should preferably be rectangular.
- (ii) Upper windows in gables should preferably not exceed 1250 mm in width.

9.6. GARAGES AND CARPORTS

9.6.1. GARAGES IN GENERAL

- (i) Single garage doors may not be wider than 3.0m.
 - (ii) Where a double garage is built, it may comprise of two separate garage doors with a column that matches the material and colour of the doors or 1 double garage door of 4.8m wide.
 - (iii) Garage doors must always be set back at least 5.0m from the street boundary. This is to create an additional parking space in front of the garage. Pergolas above garage doors are encouraged.
 - (iv) NOTE- Garages may not be altered and changed into accommodation or living spaces.
- #### 9.7. PATIOS
- (i) A patio (a roofless, paved outdoor area adjoining a house) may be covered with a pergola with evenly spaced rafters.

9.8. SERVICES

- (i) Television aerials and satellite dishes must be fitted below the main building eaves line. Satellite dishes must be white composite or approved equivalent.
- (ii) Sewer and vent pipes must be concealed in vertical ducting within the wall plane of the building.
- (iii) All telephone and electrical cable reticulation on the property must be underground. No overhead masts or wires are permitted.

9.8.1. AIR-CONDITIONING CONDENSER UNITS

- i) Air-conditioning condenser units must preferably be installed inside service yards, screened from view and not be visible from the street.
- ii) If a condenser unit of an air-conditioner is placed on a flat roof, it must be entirely screened by surrounding brickwork or similar. The brickwork must extend a minimum of 200mm above the condenser unit and may not be higher than the underside of the fascia.
- iii) No part of an air-conditioning unit should be visible from the outside of the erf as viewed from natural ground level.
- iv) All pipework must be concealed in the wall and no exposed conduits are allowed.

9.8.2. SOLAR PV AND WATER HEATING PANELS

- i) Solar PV and Solar Water Heating panels are allowed on any roof in order to maximise energy efficiency. Panels and frames must match the roof colour (charcoal).
- ii) The "Spaghetti" type swimming pool Solar Panels are only permitted on flat roofs behind parapets and not visible from outside the erf.
- iii) Placement and design of solar panels to be authorised by the Zanddrift HOA Building Control.

9.9. COLOUR AND TEXTURES

- i) Houses should be painted predominantly white. Shades of grey are allowed for focal elements such as clip-on abutments and chimneys. Whitewashed red brick and stone also allowed.

9.10. BOUNDARY WALLS AND FENCES**9.10.1. COMMON BOUNDARIES (SIDE OR REAR BOUNDARY)**

- (i) Two adjoining residential erven may share a solid wall with a maximum height of 1.8m, plastered and painted smooth on all sides.
- (ii) A solid wall may also serve to link the building to the side boundary to create edge continuity – a garden gate may be placed in this wall for access to the rear of the property. These walls must step to follow the slope of the site where applicable.

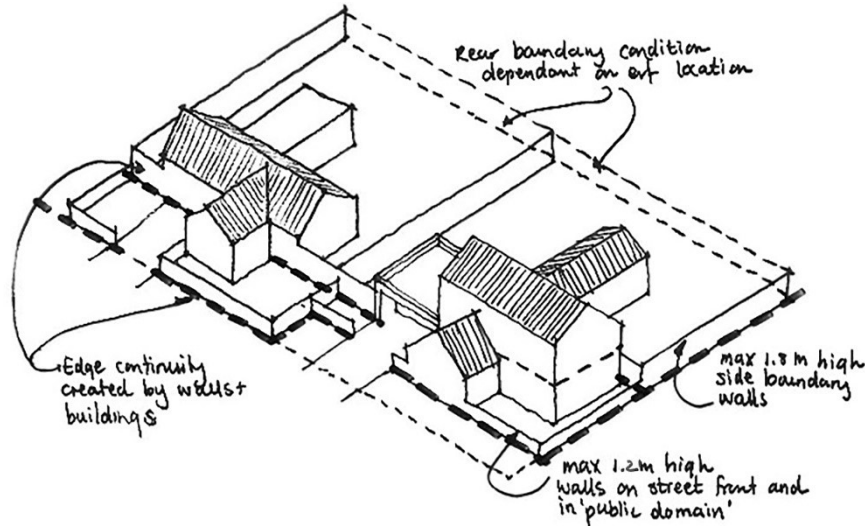


Figure 24: Examples of Boundary Walls

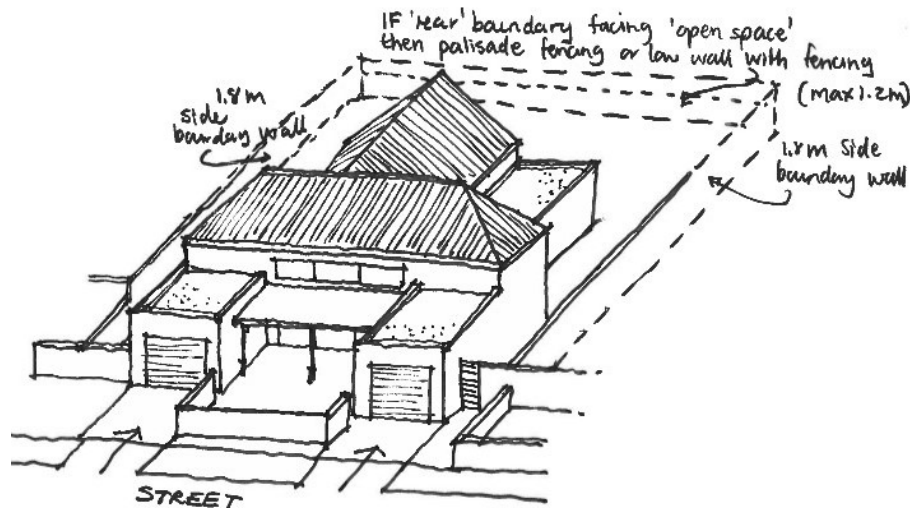


Figure 25: Examples of Boundary conditions facing an Open Space.

- (i) Where erf boundaries border open spaces, a palisade fence or low walls are limited to 1.2m measured from the natural ground level, subject to site conditions and the possible need for retaining structures.
- (ii) For the rest of the erven in the interior of the development, the rear boundary wall will be maximum 1.8m, providing for possible retaining structures where needed.

9.10.2. STREET & OPEN SPACE BOUNDARIES

- (i) Boundaries facing the street or private open spaces must have low walls (maximum height 1.2m).
- (ii) These walls are mandatory - to accommodate level changes and service areas, and to facilitate edge continuity with adjacent properties.

9.10.3. GENERAL CONDITIONS IN RESPECT OF THE DESIGN OF BOUNDARY WALLS

- (i) Any wall not built on an actual boundary line, but which fulfils 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.
- (ii) The top edge of all boundary walls shall be rounded. These may be shaped with rounded copings.
- (iii) Where rounded saddle copings are provided these may not project more than 20mm on either side of the wall .
- (iv) Where walls incorporate masonry columns (spaced at max. 2.5 – 3.0m centres as advised by a Structural Engineer), such columns should be square and may protrude no more than

20mm from the face of the solid wall section. According to building regulations applicable to boundary walls.

- (v) All boundary walls to be plastered & painted in 'Plascon Inspired Colour Range', colour Stone Wash – code Y2-D2-2. (to be confirmed)
- (vi) Boundary walls must be simple and may not incorporate any recessed or raised panels, or any other form of embellishment.
- (vii) Any reference to the maximum height of a wall shall be taken as a measurement from the immediate ground level.
- (viii) 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.
- (ix) A service yard may be incorporated as part of a boundary wall and must be constructed to a height of 1.8m if visible from the street.
- (x) **NOTE: Each property owner should ensure that adequate emergency escape routes exist for surface stormwater runoff to exit the property.

9.11. BUILDING PLATFORM

- (i) The height of ground fill at any point on the site is generally limited to 1.2m, measured from the original natural ground level at that particular point of the site.
- (ii) The part of the building that is at the highest part should therefore not cut deeper into the site than 1.2m, measured from

the original natural ground level at that particular point of the site.

- (iii) This general principle may be exceeded if a satisfactory motivation for deviation is submitted.
- (iv) Plinths may not exceed 1.2m in height subject to par (i) and (ii) above apply as the guidelines as par (i) and (ii) shall apply. Should such a plinth form part of a basement, windows conforming to the dimensions limiting clerestory windows.
- (v) In the case of a basement structure, access is only permitted from inside the house unless such an access is hidden from view from outside the erf by a screen wall.
- (vi) Basements are allowed. These are defined as that portion of a building where the finished floor level is at least 2.0m below, or the ceiling of which is at most 1.0m above, a level halfway between the highest and lowest natural levels of the building platform in the vicinity. Basements can only be used for non-habitable spaces. Basement ceiling height is limited to 2.1m above the basement floor.
- (vii) All retaining structures must be solidly built walls plastered and painted or natural stone with a maximum of 1.2m height and may include terraced structures.

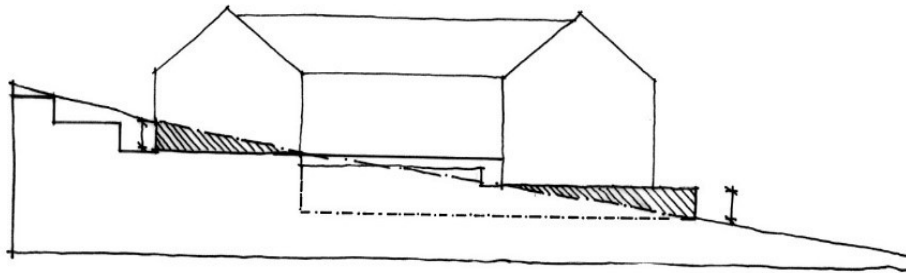


Figure 26: Section illustrating building with stepped ground floor level and possible basement

9.12. MISCELLANEOUS

- i) Washing lines must be contained in a service yard and may not be visible from the street. Refer 11.10 (xi).
- ii) Chimneys: Masonry chimneys, plastered, painted or brick bagged with cement wash are permitted.
- a) The following general guidelines are provided for the design of masonry chimneys:
 - b) The highest point of the chimney must be a maximum of 1.0m above the ridgeline of the roof, according to the National Building Regulations.
 - c) In case of internal combustion stoves or similar heating devices,
 - chimney pipes less than 275mm in diameter and not protruding more than 1.0m above the roof finish, are permitted. These pipes have to be stainless steel with matching wind cowls.

9.13. EXTERNAL LIGHTS

- i) Lights on walls at the front door, garage or entrances form a welcoming guide for visitors and play both a functional and aesthetic role. Lantern-type lights such as: "Ledbury Lamps", "Canterbury Classic Bracket", "Blenheim", "Stratford Pendant" or "Canterbury Longford" or similar, would be allowed.
- ii) No spotlights are allowed.

9.14. PRIVACY AND NOISE

- i) Houses should be designed to ensure that the privacy of neighbouring houses are respected.
- ii) Measures are required to regulate and reduce noise levels through technical and design interventions:
 - An effective way of reducing noise disturbance is to ensure that outdoor entertaining/living spaces of neighbours are not located directly alongside each other. The use of the letter of the alphabet typology for footprints of houses would play a positive role in this regard.
 - In instances where outdoor living spaces are close to the boundary line of the erf, additional noise-screening devices should be used, such as planters, hedging, and pergolas.

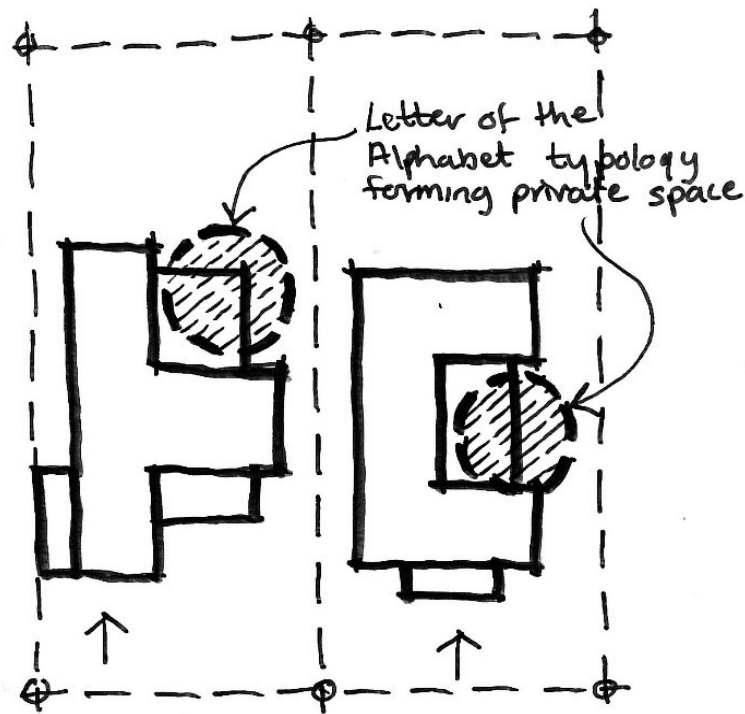


Figure 27: Privacy and private space.

9.15. BRAAI AREAS

Private living areas of the adjoining neighbours have to be considered in selecting the locality of braai areas. Braai structures built over the building line are not permitted.

9.16. TIMBER DECKING

The use of timber decking for patios is allowed. These may be built over the building line up to the erf boundary. Roofs over such decks must fall within the building lines as prescribed.

9.17. LINKING ELEMENTS

There are several ways to achieving edge continuity by linking the facades of buildings along the street edge:

- Archways, (sometimes closed with stable-like doors or coachman's entrances).
- High walls, potentially up to wall plate height of a single storey, may be permitted with consent of the two adjoining neighbours and the Control Architect along the building facades with or without gate openings and doors.

10. LANDSCAPE ARCHITECTURAL GUIDELINES

The landscaping of all Private Open Space within Zanddrift will be incorporated into the Site Development Plan and the approved Landscape Development Plan of Zanddrift.

10.1. INTRODUCTION AND OVERVIEW

Soft Landscaping primarily refers to the landscaped and the natural environment. The quality, style and planting form of landscaping elements will contribute to the sense of place of the site, and reinforce the existing landscape identity of the region. The character of the estate's landscape is a rich blend of elements derived from the Winelands' natural areas, the geometric agricultural pattern of the immediate environs, and its residential and the public spaces. Private landowners would be required to use indigenous and endemic plants extensively in their gardens.

Hard Landscaping refers to built structures and hard surface areas.

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. For example, avenues are to be planted to create formal axes that would frame views and provide direction within a dominated and informal and organic landscape.

The Cape Winelands has a Mediterranean climate within a winter rainfall area that has cool, wet winters and warm, windy, dry summers. In landscape design, consideration should be given to local climatic conditions such as: capturing breezes or minimising the extent of mowed lawns areas to limit maintenance cost and to reduce water usage.

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 minimising the use of dark coloured hard surfaces.

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.

The HOA to ensure that the storm water attenuation facility retains its design capacity as approved by Drakenstein Municipality (Engineering Services).



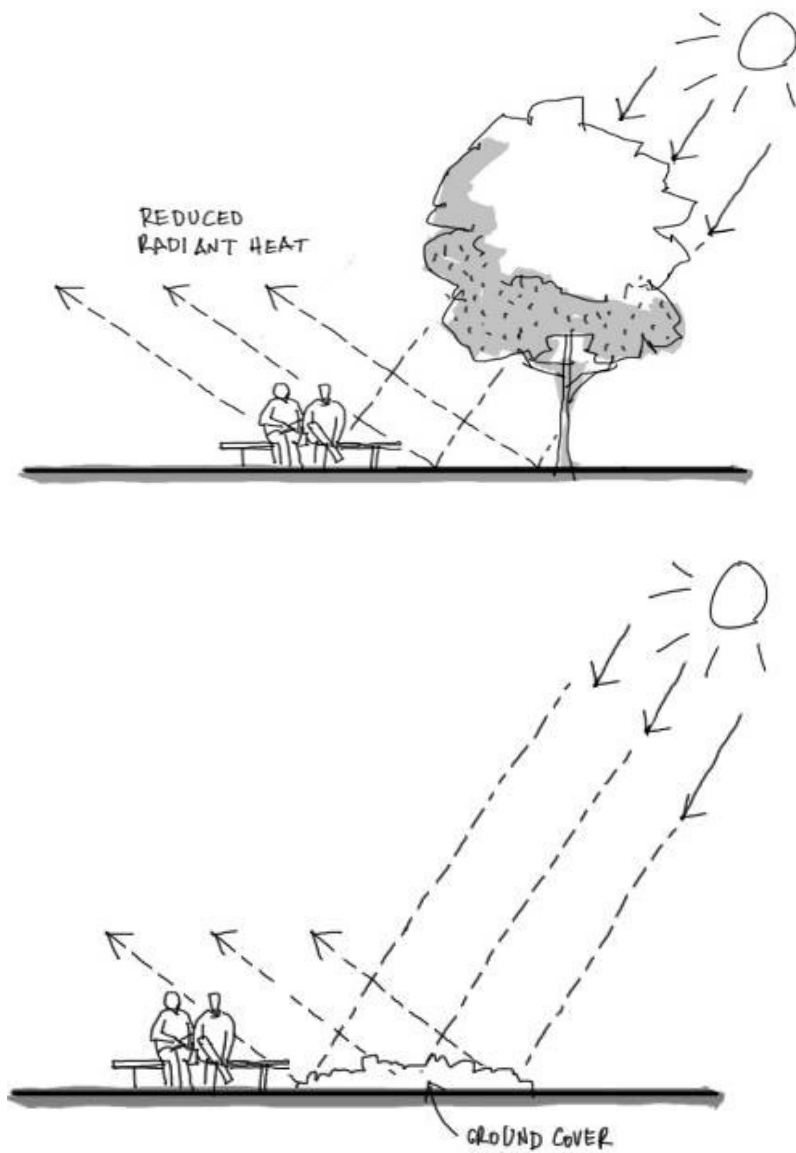


Figure 29: Ground covers reduce glare and heat from the sun

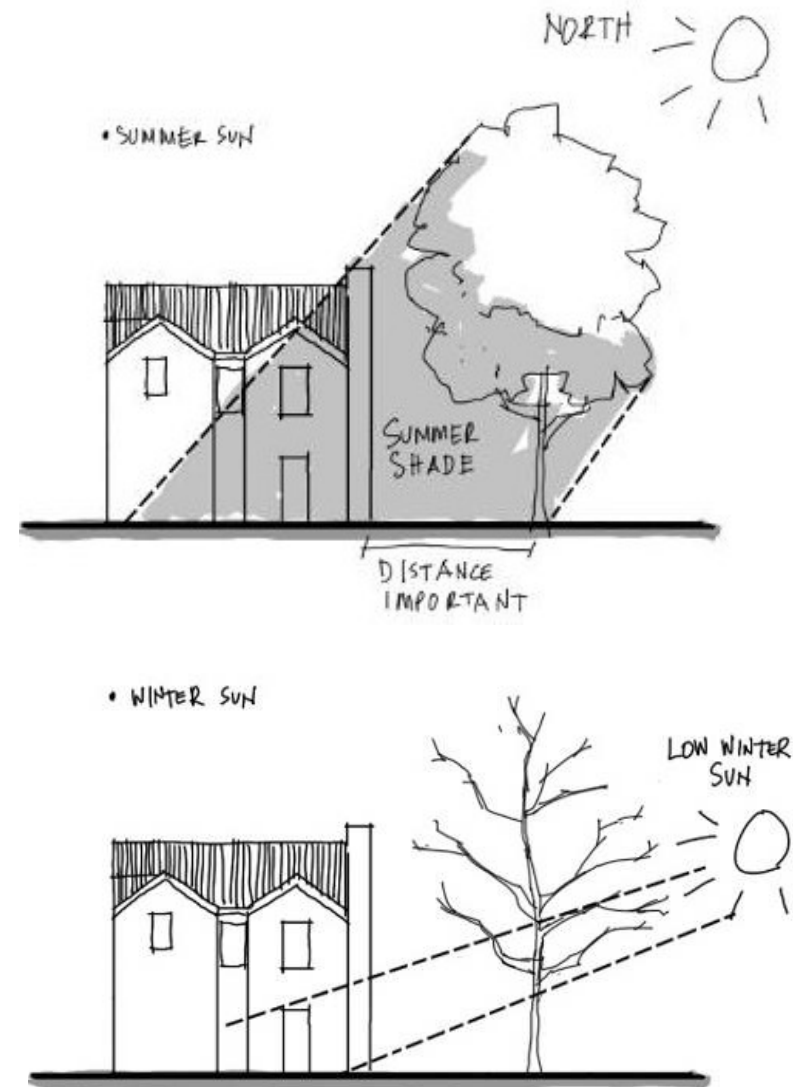


Figure 30: Plant deciduous trees on the northern side of houses to warm the house in the winter months and provide shade in the summer

10.2. PLANTING**(i) Trees**

- Indigenous trees are recommended as they are more suitable to our climatic conditions.
- Plant trees strategically to protect the views towards the mountain.
- Trees to be planted along the R301 road to create a densely planted edge to screen the development from view.
- No palms or conifers may be planted.
- The trees listed on the latest Alien and Invasive Regulation (2020) and Alien and Invasive List (2020), must be removed and managed as per the National Biodiversity Act, (2004).

(ii) Communal Areas

- Soft landscaping must be designed to give identity to a specific area and enhance the quality and functions of such places.
- Species that are typical of the historical and cultural landscape 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 emphasise and give character to squares, spaces between nodes, as well as

accentuating focal points, axes and perspectives in a manner integrated with private gardens.

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

(iii) Edible plants

- The establishment of vegetable and herb gardens are encouraged.
- Fruit trees e.g. Olive, Lemon, can be planted for aesthetic and productive purposes, as these would enhance the rural character of the area and complement the existing trees on site. This will also encourage bird and insect life on the site.

(iv) 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 south-easter wind.
- The use of aromatic plants in certain areas would create a pleasant environment. The use of colour is an effective technique to enhance atmosphere and is encouraged.
- Plants to be grouped together for their sun/water requirements.
- All plants brought to the site must be disease and pest free.

- The homeowners should take great care that visual privacy is achieved and maintained to the maximum degree practically possible. Hedging and trellises can for example be used to create privacy.



Figure 31: Fynbos and other indigenous plant species are suitable in Cape Winelands climatic conditions

TREE SPECIES

<i>Acacia Karoo</i> (Sweet Thorn)	<i>Ilex mitis</i> (Cape Holly)
<i>Anastrabe integerrima</i> (Pambati Tree)	<i>Nuxia floribunda</i> (Forest Elder)
<i>Apodytes dimidiata</i> (White Pear)	<i>Olinia ventosa</i> (Coast Olive)
<i>Brabejum stellatifolium</i> (Wild Almond)	<i>Olea orymbos</i> (Wild Olive)
	<i>Pittosporum viridiflorum</i> (Cheesewood)
<i>Buddleja saligna</i> (False Olive)	<i>Quercus nigra</i> (Water Oak)
	<i>Quercus cerris</i> (Turkey Oak)

<i>Calodendrum capense</i> (Cape Chestnut)	<i>Rapanea melanophloeos</i> (Cape Beech)
<i>Canthium inerme</i> (Turkey-verry)	<i>Searsia pendulina</i> (White karree)
<i>Cassine peragua</i> (Bastard saffron-wood)	<i>Salix 40orymbose</i> (Safsaf Willow)
<i>Curtissia dentata</i> (Assegaa Tree)	<i>Syzigium quinense</i> (Waterberry)
<i>Dodonea angustifolia</i> (Sand olive)	<i>Tarchonanthus camphoratus</i> (Camphor Bush)
<i>Ekebergia capensis</i> (Cape Ash)	<i>Virgillia oroboides</i> (Blossom Tree)
<i>Halleria lucida</i> (Tree Fuchsia, Notsung)	
<i>Kiggelaria africana</i> (Wild Peach)	

SHRUBS & GROUNDCOVERS

<i>Aloe arborescens</i> 'Krantz Aloe'	<i>Helichrysum patulum</i> 'Kooigoed'
<i>Aloe ciliaris</i> 'Climbing Aloe'	<i>Helichrysum teretifolium</i>
<i>Aristea capitata</i> 'Blousuurknol'	<i>Hymenolepis parviflora</i> 'Coulter-bush'
<i>Aristea ecklonii</i> 'Blue Stars'	
<i>Aristida junciformis</i> 'Gongoni Grass'	<i>Juncus effesus</i> 'Common Rush'
<i>Asparagus virgatus</i> 'Broom Asparagus'	<i>Juncus krausii</i> 'Dune Slack Rush'
<i>Athanasia trifurcate</i> 'Klaaslowbos'	<i>Kniphofia sarmentosa</i> 'Torch Lily'
<i>Berzelia lanuginose</i> 'Vleiknopbos'	<i>Kniphofia</i> spp. 'Red Hot Poker'
<i>Bulbine frutescens</i> 'Geelkatstert'	<i>Lampranthus amoenus</i> 'Darling Vygie'
<i>Carex 40orymbo</i>	<i>Lampranthus</i> spp. 'Vygie'
	<i>Melinis nerviglumis</i> 'Bristle-leaved Red Top Grass'

<i>Carpha glomerata</i> 'Vleibiesie'	<i>Merxmuellera cincta</i>	<i>Euphorbia mauritanica</i> 'Geel Melkbos'	<i>Thamnochortus insignus</i> 'Thatching Reed'
<i>Chasmanthus floribunda</i> 'Yellow Cobra Lily'	<i>Ornithogalum thyrsoides</i> 'Chincherinchee'	<i>Felicia filifolia</i> 'Fine-leaved Felicia'	<i>Virgilia oroboides</i> 'Keurboom'
<i>Chrysanthemoides incana</i> 'Bietou'	<i>Orphium frutescens</i> 'Sea-rose'	<i>Ficinia nodosa</i>	<i>Wachendorfia thrysiflora</i>
<i>Cliffortia odorata</i> 'Wildewingerd'	<i>Pelargonium tomentosum</i>	<i>Gomphostigma virgatum</i> 'River Star'	<i>Watsonia pilansii</i> 'Summer Watsonia'
<i>Cliffortia strobilifera</i> 'Bog Rice Bush'	<i>Pennisetum macrourum</i> 'African Feather Grass'	<i>Helichrysum cymosum</i> 'Gold Carpet'	<i>Watsonia</i> spp. 'Watsonia'
<i>Cotyledon orymbosa</i> 'Pig's Ear'	<i>Plecostachys serpyllifolia</i>	<i>Helichrysum pandurifolium</i>	
<i>Crassula multicava</i> 'Fairly Crassula'	<i>Psoralea pinnata</i> 'Fountain Bush'		
<i>Crassula orymbosa</i> 'Uguwe'	<i>Rumohra adiantiformis</i>		
<i>Cyperus prolifer</i> 'Miniature Papyrus'	<i>Salvia chamelaeagnea</i> 'Rough Blue Sage'		
<i>Cyperus textillis</i> 'Basket Grass'	<i>Selago orymbosa</i> 'Bitterblombos'		
<i>Elegia tectorum</i> 'Fishhoek' 'Cape Thatching Reed'	<i>Searsia angustifolia</i> 'Willow Karee'		
<i>Elytropappus rhinocerotis</i> 'Renosterbos'	<i>Searsia crenata</i> 'Dune Crow-berry'		
<i>Eragrostis capensis</i> 'Heart-seed Love Grass'	<i>Searsia glauca</i> 'Blue Kunibush'		
<i>Eragrostis curvula</i> 'Weeping Love Grass'	<i>Searsia lucida</i> 'Glossy Crow-berry'		
<i>Eriocephalus africanus</i> 'Wild Rosemary'	<i>Searsia undulate</i> 'Kunibush'		
	<i>Stoebe plumosa</i> 'Slangbos'		

10.3. IRRIGATION

- Indigenous plant species, recommended for all 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 suppress 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, localised 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.
- It is best practice to irrigate before 10h00 or after 16h00.
- 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 maximise 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.

11. SUSTAINABLE DESIGN PRINCIPLES

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, and the principles would fail.

In the Basic Impact Assessment (*to* NEMA, Act 107 of 1998) and the conditions for zoning and subdivision in terms of municipal by laws as briefly described 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.

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 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.

To achieve the sustainable development objectives an Environmental Management Plan is to be prepared.

11.1. 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.

11.1.1. 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 buildings). 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

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.

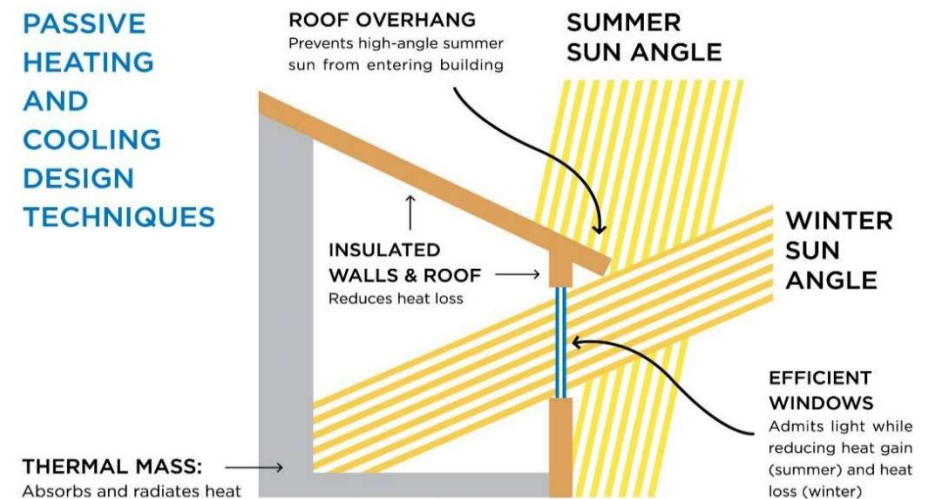


Figure 32: Basic principles of Passive Solar Design.

11.1.2. ENERGY EFFICIENT APPLIANCES

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

- i) Installation of low energy lighting in and around buildings and public spaces.
- ii) Installation of a Building Management System which controls all energy related appliances, lighting, heating and cooling which could contribute to promoting energy savings.

11.1.3. RENEWABLE ENERGY GENERATION

The installation of grid-tied Solar Photovoltaic Systems renewable energy system with battery backup is encouraged on 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.

Special arrangements have been made by Combined to facilitate the generation of solar energy on the scale of Zanddrift as a whole. These are addressed in the Constitution of the Homeowners' Association.

Solar panels should be installed in a square or rectangular configuration on the roof.

The solar PV system should be designed and installed to allow for the future installation of a battery system in a designated area within the house.

Air-sourced heat pump and/or conventional solar water heating systems may be installed as additional water heating systems.

Due to aesthetic considerations only 'split-system' SHW systems with a geyser located inside the building roof space will be allowed. SHW panels would be placed flush on the outside of roofs.

Installation of Solar PV systems to be undertaken by a certified professional (registered with Drakenstein Municipality).

11.2. 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 must 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.

All members of the HOA shall comply with the conditions of the Drakenstein Water Services By-Law including any water restrictions that may be imposed by the Municipality from time to time.

No member is allowed to sink a borehole or well on private property.

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.

11.2.1. 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) 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.
- (b) The use of organic mulch is encouraged to minimize water loss due to evaporation.

- (c) The irrigation system will be designed to be energy-efficient and water-efficient.
- (d) Drip irrigation will be used in small, localised areas such as trees in paving or narrow plating flowerbeds. In larger areas, where sprayers will be necessary to ensure the area is adequately watered; wind velocity will need to be considered in order to reduce excessive water use or loss.
- (e) The use of wireless rain sensors to regulate the irrigation system on a daily basis is encouraged. Watering times will be regulated so that the irrigation system does not run during the hottest time of the day.
- (f) Water Use Guidelines and Restrictions shall be determined and managed by the HOA.
- (g) The guidance with regard to drought tolerant water-wise plants shall be adhered to.
- (h) The installation of water efficient fittings (e.g. dual-flush toilets, low flow showers, aerated taps) will be specified throughout all buildings.
- (i) The use of water efficient appliances will be promoted.
- (j) The use of rainwater harvesting tanks, installed to catch rainwater from buildings' roofs, is prescribed. Only vertical round tanks may be used. Colour to be "Stormy Sky" charcoal, as per "JoJo Tanks" or similar approved. Tank placement, colour, design and screening must be indicated on the building plans and submitted to the HOA for aesthetic approval prior to any installation taking place. Tanks should preferably be positioned at the back of dwellings and where possible inside service yards, in order not to be visible from street view. Where it is not possible to position

tanks inside service yards, it is mandatory to screen such tanks with s-profile pre-painted metal roof sheets in colour charcoal, to match roof colour, or similar approved painted screens to match the walls, that can be planted.

12. PLANNING CONTROLS

- (i) The parameters of the Drakenstein Zoning Scheme By-Law (2018) are applicable to Phases 1 and 2 of Zanddrift.
- (ii) This Architectural and Landscape Architectural Framework must be read together with the conditions imposed by Drakenstein Municipality into the rezoning and subdivision plans.

12.1. ZONING

- (iii) All residential erven in Phases 1 and 2 are zoned as Conventional Housing Zone (Dwelling House).

12.2. FLOOR AREA OF DWELLING

- (i) Only one residential dwelling per erf is permitted.
- (ii) A minimum floor area of 150m² is prescribed for a core building, inclusive of garages and outbuildings, and excluding covered patios.

12.3. COVERAGE

- (i) Maximum coverage - 60% (Erven larger than 251 m²)

12.4. BUILDING LINES

- (i) Building lines for Zanddrift Phase 1 and 2 are determined by the 2018 Drakenstein Zoning Scheme By-Law (Section 127).

13. BUILDING PLAN APPROVAL PROCEDURE

13.1. 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, one (1) colour electronic copy 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) When aesthetic approval is obtained the plans will be stamped accordingly & said plans may then be submitted to the Local Authority, along with a confirmation letter from the HOA.
- 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) 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.
- v) 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.
- vi) 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.

13.2. OUTLINE OF INFORMATION REQUIRED ON BUILDING PLANS TO BE SUBMITTED FOR AESTHETIC APPROVAL

- i) Site plan at scale 1:500 with cadastral information (i.e. Erf number, north point, boundaries, contours indicated at 0.5m or 1.0m 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 m².
- 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.
 - ix) Swimming pool overflow to the nearest sewer catchpit must be indicated on building plans.

13.3. 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.

13.4. 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 Homeowner'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.

13.5. LOCAL AUTHORITY SUBMISSION

Only after aesthetic approval has been obtained, in writing, may the building plans be submitted to Drakenstein Municipality for approval.

- i) The final approval of all building plans ultimately vests with Drakenstein Municipality.

13.6. REVISIONS TO GUIDELINES

- i) These guidelines will be subject to periodical revision as deemed necessary from time to time.

- ii) In the event of difference of interpretation of these guidelines or conflict, the decision of the Control Architect will be final and binding.

Date	Description
22 August 2025	Revision 1: Various amendments based on Drakenstein Municipality inputs.