

November 2015

BOSCHENDAL VILLAGE DEVELOPMENT PROPOSAL
Erf no. 1674 portions 7 & 10, DWARS RIVER VALLEY, STELLENBOSCH

**BOSCHENDAL VILLAGE PROJECT: URBAN DESIGN FRAMEWORK,
WITH PRECINCT PLANS AND CONTROLS AND GUIDELINES**
FINAL DRAFT



Prepared for Boschendal Proprietary Ltd.



Urban Design Content Authored by
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Overview of Boschendal Strategy:

Over the past 15 years several development proposals have been generated for the Boschendal landholding, in various planning processes. This comprised extensive development proposals which saw significant portions of the farm being proposed for various extensive residential developments, a retirement village, equine and equestrian estate and affluer residential estate "villages". In 2012 new shareholders invested in the farm and reviewed these previous development proposals. The proposals which were at that stage being advertised for comment were withdrawn from the planning processes.

The new owners adopted a different approach to the landholding, which can be summarised shortly as follows:

The **first leg** of the investment strategy is placing the primary emphasis on the agricultural activities as the key driver of activity and income. Significant investment has been made to currently bring under way diversifying and expanding the agricultural activities on the estate including new orchards, and vegetables, and establishing livestock, chicken and game farming.

The **second leg** of the strategy is to focus on the tourism and hospitality industry which is inextricably linked with the preservation of the heritage resources on the property. This includes providing increased and improved tourism opportunities, tourism accommodation, a wider offering of golf and leisure activities which take into, and build on, the unique natural beauty and heritage assets of the farm.

The **third leg** of the investment strategy is to establish key development opportunities which will add long term value to the agricultural and tourism components identified above and which will transform degraded and derelict portions on the estate. To this end the consultant team was briefed to explore development opportunities within the ambit of the Municipality of Steilenbosch's Spatial Development Framework (SDF) and various policies.

For the new Boschendal shareholders it is important to promote sustainability, affluer practices, social upliftment and empowerment with long term preservation of major heritage assets to ensure a business which contributes to the Dwaarsriver Valley and the Western Cape economy. These principles are woven through the entire business approach.

The third leg of the investment strategy resulted in a team being briefed to prepare a new development proposal for a village which originates from the Municipality's Spatial Development Framework. The Steilenbosch Municipal Spatial Development Framework promotes a series of interconnected nodes which are located at points of highest accessibility. The SDF identifies the Grob Drakenstein node as a future development node which is located at the R45/R310 intersection. This is an important cross-roads and a highly accessible point located equidistant between Steilenbosch, Franschhoek and Paarl. It is a typical location for a village and it is the aim of Boschendal to develop a rural 'Cape village' with a distinct and authentic urban qualities.

Vision

"In essence, the character of the proposed development will be that of rural village, characterised by certain urban qualities, discreetly knitted into an agrarian landscape, whilst responding to the historical context of the area."

Philip Briel (project architect)

Due to the location of the proposal it is important that such a village is rooted in the Cape tradition of village-building. Traditionally Cape villages use a distinct grid layout and are varied as a result of topography and building typology. Importantly, in this setting, the heritage indicators play an important role in ensuring the development of an authentic Cape village and defining the extent and form of development, with emphases being placed on urban edge-making, some road, density, public access, vistas and views, and authentic walled architecture.

The team developed a methodology which is informed by heritage, environmental sustainability, planning, engineering services, traffic and socio-economic informants which guide and shape the proposal.

Principles which inform the design:

- This should not be a 'gated community', although security features are to be embedded and designed into the layout.
- There is a gradient of open accessible public plazas to private spaces where access is controlled.
- Buildings have an active interface with the street environment and reciprocally, the development will enhance and improve the immediate environment, which is a degraded site with an industrial activity which does not contribute to the area or the heritage character of the surrounding area. Human scale will be reinforced at the edges of public spaces and streets by the use of colonnades, verandas and pergolas where needed.
- Overlooking features like balconies, roof terraces and windows will be used as safe city mechanisms to ensure security through surveillance.
- Publically accessible areas are created which gives this village its unique character.
- Public activity will be located on a pedestrian orientated, walkable "high street".
- Community facilities (such as a crèche or other similar education facility) can develop over time and should be located along the "high street" situated with the police station to form a civic hub.
- Public transport drop off points will be located along the R310 at the civic hub.
- The village should be well-contained and as small and compact as possible.
- A variety of residential densities are provided which can serve a diverse community. To this end dwellings will vary form single dwelling free standing houses; row houses to entry level apartments which will be made available to key workers.
- The "high street" contains a variety of publicly orientated activities including shops, restaurants, offices, educational facilities, entry level housing, public parking and open space. A farmers' market which is located centrally on the "high street" will be the main activity space. The area closer to the R45 will display a civic character as the existing police station forms part of that precinct already.
- The buildings in the development will be predominantly of a horizontal character, unless specified differently in the urban design framework. Urban design framework, controls and guidelines will inform development proposals to ensure an appropriate architectural response and language in the village. It is however strongly resisted that houses all "look the same" and therefore various architects will be invited to design individual buildings within the village.
- New agricultural areas should be brought right up to the settlement edges. The town should respond to the predominant agricultural patterns, but must have strong spatial edge-definition in order to eliminate the possibility of future expansion or sprawl. The use of structural landscaping is paramount in achieving this principle, and edges of the village will be clearly defined through critical strategic structural planting.

Specialist reports:

This report is one of a suite of specialist reports which contain the development proposals for and assesses the development impact of the proposed Boschendal Village development. These reports are:

Base line reports:

- 1) **Heritage Indicators and Director** - prepared by Nicolas Baumann, Sarah Winter, Dave Dewar and Phil Law - dated April 2014. This report sets out the heritage indicators which informed the design process and which will serve as input for the Heritage Impact Assessment.
- 2) **Archaeological assessment of portions of Boschendal Estate** - prepared by ACO Associates cc - dated March 2015
- 3) **Botanical Survey** - undertaken by Nick Helm dated March 2015
- 4) **Planning Status Quo report** - Prepared by @Planning dated May 2015
- 5) **Bulk engineering services report** - prepared by ICE Group - dated January 2016
- 6) **Stormwater Management Plan** - prepared by ICE Group - dated January 2016
- 7) **Electrical Services report** - prepared by ICE Group - dated January 2016
- 8) **Freshwater ecosystems baselining report** - Prepared by The Freshwater Consulting Group dated April 2015
- 9) **Groundwater Use plan Boschendal_Groendrasfontein** - Prepared by V&PPro dated May 2015
- 10) **Visual Impact Assessment Baseline Study** - prepared by Quanton Lawson and Bernard Oberholzer dated April 2015

Reports outlining Proposals for various applications:

- 11) **Urban Design Framework, Controls and Architectural Guidelines** - prepared by Philip Briel Architects - dated January 2016. This report contains a series of plans which depict the development framework, controls and architectural guidelines. It finalised the development intent and will guide all future site development plans and building plans.
- 12) **Land Use Planning report for NEMA purposes** - prepared by @Planning dated January 2016. This report provides outline of the municipality's land use planning policies and the spatial development framework, describes the proposal, analyses all indicators and provides motivation for the development at the hand of the Western Cape Land Use Planning Act controls.

Impact assessment reports (these reports still have to be completed)

- 13) **Water Use License application report** - prepared by Total Impact -
- 14) **Traffic Impact assessment for the development of Boschendal estate** - Prepared by Gibb dated January 2016
- 15) **Assessment of Freshwater Ecosystems**
- 16) **Heritage Impact assessment report** prepared by Baumann, Winter, Dewar & Low dated February 2016
- 17) **Visual Impact Assessment report** included in Heritage Impact Assessment report of February 2016.
- 18) **Socio-economic Impact assessment report** prepared by Tony Barbour dated February 2016.
- 19) **Environmental Basic Assessment report** prepared by Doug Jeffrey Environmental Consultants dated March 2016.

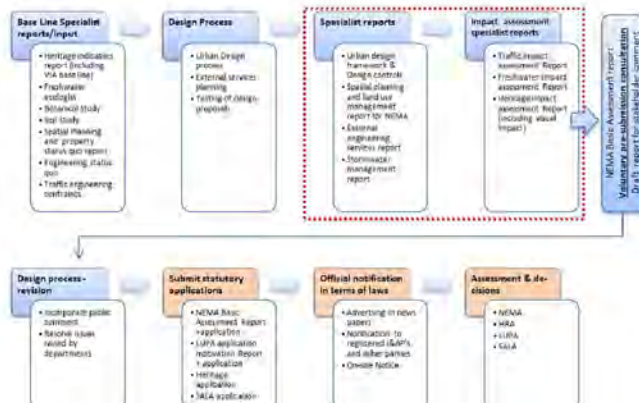


Figure: Illustration of process and specialist reports, red dotted box indicating where we are in the process



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CHAPTER 1 . INTRODUCTION TO THE PROJECT

1.1 PURPOSE OF THIS REPORT

The intent of the document is to establish a clear framework as a guide to the intended design and implementation of a village within the natural and cultural landscape at Boschendal and the surrounding context. The purpose of this report is to clearly communicate the design intent to those that will assess the design, those who will co-ordinate the procurement and detail development thereof, and those who will live in the village.

The Urban Design Framework report is to document the following:

- To set out the urban design and development intent for the village project;
- To provide sufficient development controls and parameters to ensure that future phased development will adhere to the heritage indicators and development intent approved by the authorities
- To ensure a quality development environment is created in years to come.

This report has been compiled with consideration of various specialist input as listed in the Project consultant section (Pg.01), the report has been informed on preceding reports from these specialists:

The Urban Design Framework report will inform the Environmental, Heritage and Planning applications and is in essence the formulation of the 'development proposal' at a conceptual and 'controls' level.

Please note that this report will remain a Draft report until such time as the final BAR is completed.

1.2 LOCATION AND OUTLINE OF THE PROJECT

The Boschendal Estate occupies a substantial ± 1900 ha in the Dwaarsriver Valley, located approximately 14 km from Stellenbosch, 20 km from Franschhoek and 20 km from Paarl.

The Municipality of Stellenbosch, in their Spatial Development Framework (SDF approved May 2013) identified a series of development nodes. The 'Boschendal Village' builds upon the concept provided for in the Stellenbosch Spatial Development Framework of a village node at the intersection of the R45 and the R310. It is proposed that the village be located on a ± 28 ha portion of land owned by Boschendal Pty Ltd.

The core of the village will be a publicly orientated, walkable village, where scale, mix of land uses and design contribute to the quality of 'street'. The development will aim at providing the residents and visitors with an exceptional experience where the visual, historical and agricultural assets of the estate and surrounding areas are combined into a sustainable lifestyle experience.

1.3 SITE DEFINITION

The development area is defined as an approximately 28ha portion of land located inside the Groot Drakenstein Urban Edge as defined in the Stellenbosch SDF (refer to Figure 2 for outline of development site boundary). The land straddles the R310 and is in close proximity to the R45/R310 intersection. The development area is surrounded by a local police station, industrial zoned land, an office building, a disused railway line and agricultural activities.

1.4 METHOD EMPLOYED

A Development within a culturally sensitive landscape such as the Dwaars River Valley, requires attendance to procedural guidelines and process for interaction with Local Authorities and Provincial Government bodies for the approval of plans and projects. To address the need for a participatory planning process a progressive approach is followed for the identification, design, planning and construction of the proposed village development.

This approach will take the development through a logical series of design phases and would include:

- The overall village design concept plans
- Precinct plans for each superblock within the village
- Project plans for each superblock within the village
- Detailed building plans for the construction phase of each project.

This approach establish a flexible system whereby the planning and implementation of projects can be managed. It structures the application process to move through a hierarchy from the general to more detailed as the various stages of planning progress.

1.5 STRUCTURE OF THE DOCUMENT

The document lays out the argument for the development of the Boschendal Village and is structured as follows:

1. An introduction to the project, site, purpose of the report and approach.
2. Site analysis of natural systems and investigation into the historical cultural context of the site in order to formulate applicable informants that may guide a design approach that is relevant to the context.
3. The Design process that outlines key concepts and their realization into an applicable urban design discourse and intent. The design discourse also refers back to informants established during the site analysis stage.
4. Precinct plans interpret the design discourse on a more detail level to establish fixed controls as a guide for detail development stages of the project.
5. Architectural Controls are established in support of urban design concepts and to ensure the application is carried through to detail building design level.
6. A strategy for implementation of the project.

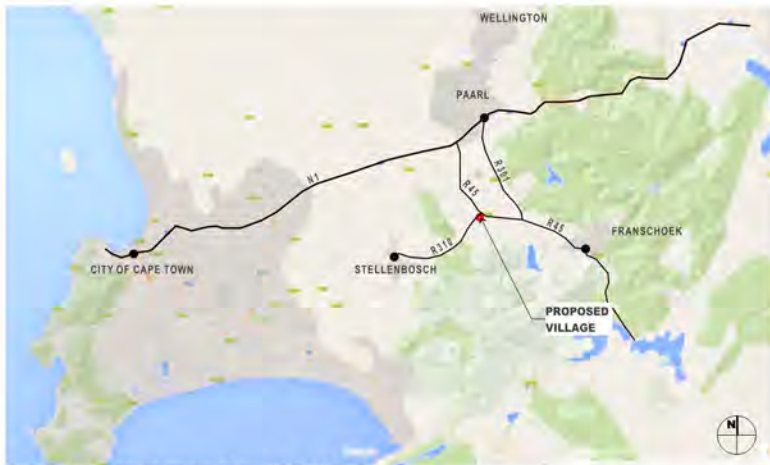


Fig. 1 Site Location : Metropolitan Context | Not to Scale

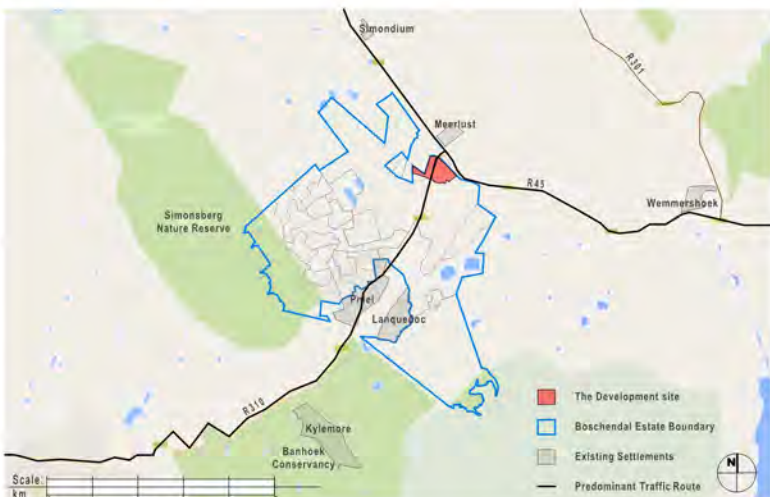


Fig. 2 Local Context of development area



Fig 3. Locality Plan : Location of proposed new village node within the Berg River Valley | Not to Scale



CHAPTER 2 . SITE ANALYSIS

2.1 STRUCTURAL SIGNIFICANCE OF THE LOCATION

The site is located in the heart of the Deans River Valley which includes Franschoek Valley, Groot Drakenstein, Simondium and the area northwards toward Paarl. This area form a part of the Cape Winelands, an area that has been identified as a grade 1 heritage resource by the South African Heritage Resources Agency (SAHRA). In addition it has also been proposed that this landscape be designated as a UNESCO World Heritage site. (2012: Baumann et al.)

The overall analysis of the landscape and the conceptual design of the village was guided by. The proposed Boschendal Village: Heritage Indicators and directives (2015: Baumann et al. pg 4)

The proposed Boschendal Village: Heritage Indicators and directives (2015: Baumann et al. pg 2) highlights two issues central to considerations pertaining to the proposed Boschendal village. The first revolves around the protection of Boschendal as a significant heritage resource. This point refers to all aspects contributing to the Genius Loci "spirit of place" and includes retaining the balance of the three landscapes of society, namely, Wilderness, Rural and Urban. In essence it necessitates a respect for the historic cultural landscape which includes preserving the dominance of the rural landscape. The following further considerations and contributing factors are listed and needs to be taken into account.

- Conserve elements of cultural significance;
- Patterns of planting should be used to reinforce spatial and design structure;
- There must be a pattern of planting to implement the high order landscape mitigation measures;
- A generic syntax of planting should be developed (e.g. wind breaks, higher order avenues, place-defining clusters, gateway planting). The clustering of species should be used in a place-making way;
- Formal planting should be used in a structurally significant way to define important structural elements (planting should not be used ubiquitously);
- Keep the village footprint small and compact;
- Respect the principle of horizontality found in the rural landscape;
- Frame inside-out views to the greatest degree possible;
- Respect the orthogonal geometries of the landscape in settlement layout;
- The circulation system should not be open-ended, inviting sprawl but cut-de-sacs should be minimized - there should always be the possibility of pedestrian access into the landscape;
- Minimize artificial gardens.

The second theme seeks to ensure that authenticity and the dominance of agriculture is retained in the existing historic cultural landscape, and appropriately reflected in a new settlement. A village is distinguished from typical examples of suburbia and security estates through its integration and interactions with the communities surrounding it. This integration results in a symbiotic relationship with its surroundings where the village draws civic and community activity that's essential to its sustained wellbeing, while also contributing to public good and building community trust. It is therefore essential to articulate the connection of the village into the surrounding community in order for it to grow authentically.

The report highlight the following themes arising through the legislation and policies applicable to the consideration of development in the area. These include:

- The importance of the area as a heritage resource;
- The need to retain the dominance of agriculture and wilderness;
- That sprawl must be controlled;
- That the area lies outside of the current urban edge, as defined in the WCSDF
- The need to achieve spatial and social integration

The report also notes important aspects of public good benefits that need to be considered and fit into the above noted themes, these include:

- Securing undeveloped agricultural land and wilderness as a way of protecting the character of the landscape and preventing urban sprawl
- Building on community trust and developing agricultural activities to the benefit of the surrounding communities. This would benefit community development that currently has no economic base, while also securing local food security in the future

In order to draft a design concept for the development, the above noted aspects was interpreted within the existing cultural landscape. These were then interpreted in terms of the existing natural landscape. The historic landscape as outlined by the heritage indicators, and applicable design factors that supports an approach to design in support of an authentic development.



Fig 4. Maintain the Dominance of Wilderness and working Agricultural Landscape



Fig 6. No development on Ridge-Lines, Steep Slopes

Fig 4-7. Central Considerations and principles Relating to Rural Authenticity (Baumann, et al. 2015)



Fig 8. In-Principle Approaches to Settlement Formation. The Negative (Baumann, et al. 2015)



Fig 5. Maintain and Enhance Agricultural Continuity

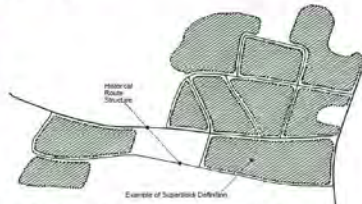


Fig 7. Respect the Architectural superblock

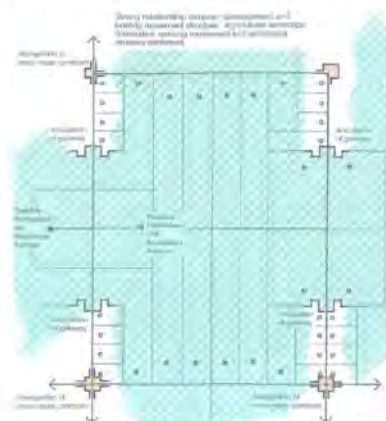


Fig 9. In-Principle Approaches to Settlement Formation. The Concept of the Agricultural Superblock (Baumann, et al. 2015)

2.2 NATURAL SYSTEMS (geology, topography, soils, climate, hydrology, flora, fauna, landscape character)

The proposed Boschendal Village: Heritage Indicators and directives (2015, Baumann et al. pg 5) notes the following indicators with regard to the natural landscape.

- No development on ridge-lines
- No development on land steeper than 9 degrees
- No development on elevated exposed slopes, i.e. above the 320m contour line
- No building on soil classified as good agricultural soils or embedded moderate soils
- No development in areas prone to flooding, wetlands, or within 100 year floodplain
- No development within riverine corridors
- No development in areas of high biodiversity value of fauna and flora
- Protect and promote rare or endangered indigenous species or habitats of fauna and flora and maintain established migration patterns.
- Clear invasive vegetation

As illustrated in the included figure, very few of the broader natural landscape indicators impact the chosen site.

- The majority of the site falls on an area identified with having medium potential soils.
- The eastern edge of the site borders an area identified with having high potential soils.
- A portion of the site on the East boundary encroaches within the 100 year flood line.

FRESHWATER ECOSYSTEMS

The freshwater ecosystems affected by the proposed Boschendal Village development include three hill slope steep wetlands and one depression (on site) and the Dwaars River (adjacent to site, but affected by services). The wetlands were found to be fairly heavily impacted by the surrounding agricultural activities, roads and the railway line. The wetlands are all of moderate ecological importance and sensitivity and could provide functional (both in terms of biodiversity and ecological processes, primarily related to infiltration of water) value to the development, if conserved in an ecological corridor. (Snaddon, K. 2015)

In order to reduce the impacts associated with the development layout:

- To provide some protection from the impacts of the development it is recommended that a 10m setback buffer be allowed around wetlands 2, 3 and 4, and a 30 m buffer around wetland 1.
- Allow for an ecological corridor to connect all of the wetlands, and then preferably with a connection to the Dwaars River and its floodplain.
- Roads and services should preferably not cross over the wetlands.

The main impacts associated with the operational phase relate to increased water use in the area, and the reduced water quality and increased water quantity that comes with the generation of on-site storm water. In order to reduce these impacts, the following actions are recommended (Snaddon, K. 2015):

- Water demand management must be implemented within the development.
- Water supply infrastructure should be located to avoid sensitive areas.
- Effort should be made to minimise the hardening of surfaces.
- Storm water should be allowed to flow along unlined channels before discharge into either natural or created wetland areas.
- The wetland running along the railway line can be used for storm water detention. This will allow some infiltration of water into the ground, so reducing the quantity of runoff and improving the quality.
- Parking areas should be constructed of permeable materials to allow for infiltration of water.
- As a principle, hardened areas should be associated (where possible) with vegetated filter strips, bio-wales, and / or bio-retention systems, all of which are designed to reduce the quantity of runoff leaving a hardened surface and entering the storm water system.

BOTANICAL CONSTRAINTS

A Botanical survey found no botanical constraints to the development. It was also found that the wetlands did not support any plant species of any conservation significance. (Heime, N.2015)

SOIL CONDITIONS

The soil report prepared for Boschendal confirmed the composition of most soils on the site as not being conducive to Agriculture. Areas identified where "Talus" soil shows better potential for planting was identified along the East edge of the site. On the South West corner, and straddling the R 310 road (Schooms, H. 2015)

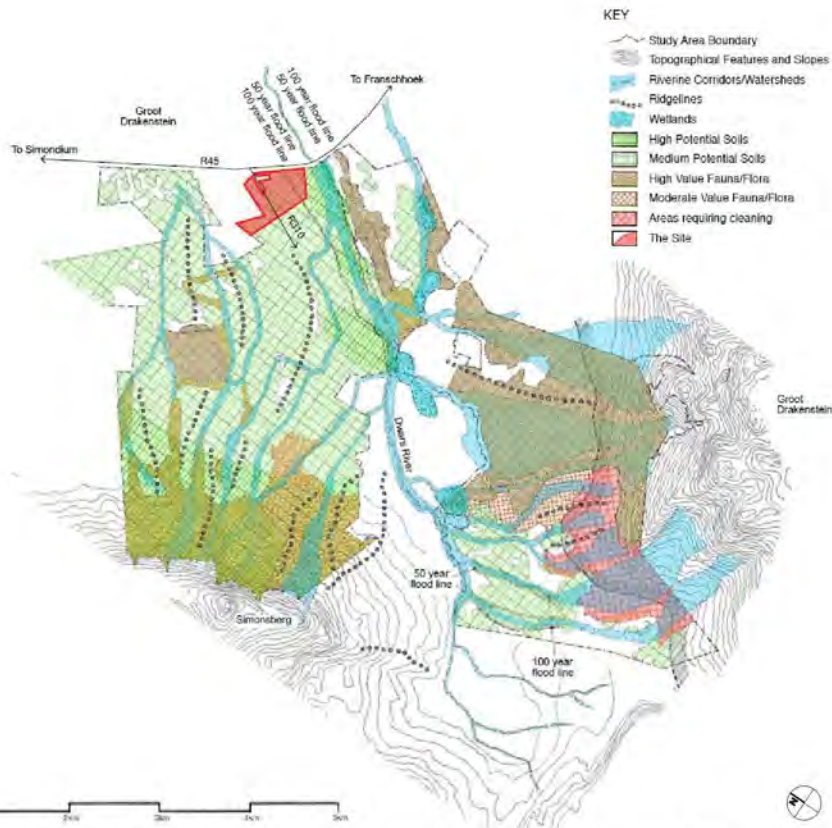


Fig 10. The Groot Drakenstein-Simondium Valley: Composite Constraints and Informants Related to the Natural Environment. (Baumann, et al. 2015)

NATURAL SYSTEMS cont.

The site straddles the R310 in close proximity to the intersection between the R45 and R 310. On the West edge the site borders Industrial land and Rhodes Food Group factories. On the North edge the site borders a disused railway line which run parallel to the R45. The Dwars River edge the site on the East. The remainder of Boschendal Farm borders the site on the South. The site has a very strong relationship with the R310 scenic route and together with the South and East edges is considered to be the most sensitive areas of the site when viewed in terms of historic cultural preservation of the Boschendal farm and Scenic route views.

The site has a gentle slope with its highest point on the south-west slope, and its lowest point on the North East corner of the site. Within these contours some existing water furrows and ditches carry water across the site. These accumulate in wetland areas scattered along the East edge of the site.

The edge of the R310 is planted with an established avenue of trees. The North East corner of the site abutting Rhodes food group has some established Jacaranda trees. The east edge of the site is home to an existing pear orchard and established row of Blue gum Trees.

The site offer some spectacular views of the surrounding Houtmet-Holland and Simonsberg Mountain ranges toward the South East and South West. From the village these views also form the backdrop to the existing Boschendal werf. The views from Boschendal Werf is however more sacrosanct and the village design needs to have minimal impact on view cones from the Boschendal manor house and werf.

The area of site has been identified as most appropriate due to the potential its location offer in terms of access and service to the greater community, as well as its limited agricultural potential.

DRAWING LEGEND

-  Existing electrical line
-  Existing telephone line
-  Existing furrows & ditches
-  Direction of fall across site
-  Hedge
-  Mature Trees
-  Jacaranda Forest
-  Wetland
-  Floodline 1:50
-  Floodline 1:100
-  Scenic route view cone
-  View cone toward village
-  Sight Line



Fig. 11 Landscape Character | Scale 1:4500 @A3

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2.3. HERITAGE INDICATORS

The specialist baseline study: *Proposed Boschendal Village: HERITAGE INDICATORS & DIRECTIVES:* (Baumann, Winter, Dewar, Louw, 2015) provides a detailed analysis of the proposed site with regards to constraints, informants, directives and heritage indicators. As this document is regarded as the most important guide in terms of delivering best practise urban-design, in a highly sensitive environment, it is included in summarised format and referred to extensively. This document was fundamental in shaping and informing the final design outcomes. The influence will be evident as the urban design geometry unfolds in the ensuing chapters.

All indicators, as are outlined below, must be adhered to in respect of the location and design of the new village at Boschendal.

As a method of informing the planning and design of the proposed village to preserve the historic cultural landscape, the heritage indicators and directives (Baumann et al, 2015, pg 15) include the following points in reference to significant visual indicators to be considered:

1. The broader cultural landscape context should be respected.
2. Within this context, the concept and dimensions of the rural corridors along the R45 and R310 should be respected.
3. The scenic route parameters, in conjunction with the view cones associated with the Boschendal homestead and setting as well as the broader cultural landscape informants, must be respected.
4. The northern edge of the village should be set back from the R45, to acknowledge the scenic nature of the R45.
5. The southern-most edge of the village should be no closer than 300 meters from the Boschendal homestead welf wall, in order to celebrate its setting and its agricultural context.
6. Agricultural activity associated with the Boschendal setting should be brought hard against the edges of the village, to reinforce the agricultural context of the welf and homestead.
7. Planting mitigation measures (e.g. avenues, windbreaks) should be used to 'edge' the village, clarify its domain and contribute to the cultural landscape expression.
8. The settlement pods should be anchored by strategically located elements creating a gateway, a sense of arrival, the effect of pause way and traffic calming. These should be consistent with the measures implemented at Priesel, extending the design language as a family of elements in the broader valley. The preference is for small traffic circles responding to the hierarchy of routes, the design of which should acknowledge the rural context and character. The speed limit within this zone should not exceed 60km per hour.
9. The intersection between the R45 and the R310 should be marked by a traffic circle.
10. The southern entrance of the R310 into the village should also be announced. The preference is for a small traffic circle.
11. Access into the village should respect the transportation requirements of the Provincial Roads Engineer.
12. The southern and eastern edges of the village should be buffered by 'tread-lightly' zones in order to protect long views from the homestead and from the scenic routes.

Other general urban design, landscaping and architectural guidelines include the following: (Baumann et al 2015, pg 32)

Building Heights:

- Generally restrict buildings to 2 storeys to minimise visual intrusion above tree canopies. 3-storey buildings could be strategically used in commercial areas to emphasize focal points.
- 1-storey buildings should be used in visually sensitive areas (such as those immediately visible from the Boschendal homestead or R310 Route).

Open Space and Landscaping:

- The village open spaces should ideally be laid out as a continuous system of both hard and soft spaces to ensure functional continuity and visual legibility, as opposed to a patchwork of fragmented spaces.
- The community open spaces and general landscaping should be designed in sympathy with the strongly orthogonal cultural / agricultural landscape and welf-type layout typical in the Wierlands. Excessively gardenesque-type landscaping should be avoided.
- The services of a professional landscape architect should be employed at an early stage of the project to ensure appropriate external design.

Roads and Parking:

- Roads should also be laid out in sympathy with the orthogonal pattern of the farmlands, tree belts and irrigation canals.
- Curvilinear or diagonal road layouts should be avoided.
- Parking areas fronting onto the scenic routes should be avoided, and parking preferably screened with buildings, walls, berms and/or trees. Parking should ideally be organised into small parking courts of about 20 cars to avoid visually bland and climatically exposed parking lots.
- Excessive use of asphalt and barrier kerbs should be avoided to retain the rural character of the area. Roads and parking should ideally have dirt surfaces or grassed edges. Parking areas could have gravel to minimise runoff and the need for storm water structures. Landscaped detention ponds with litter and silt traps could be used.

Lighting and Signage:

- Outdoor lighting should generally be discrete to maintain the rural ambience of the area. Low level bollard type lights and reflectors could be used to minimise light spillage.
- Advertising signage, banners and flags should be avoided, particularly along the scenic routes. The use of low-level signs, or listing signs to walls, helps to minimise visual clutter.

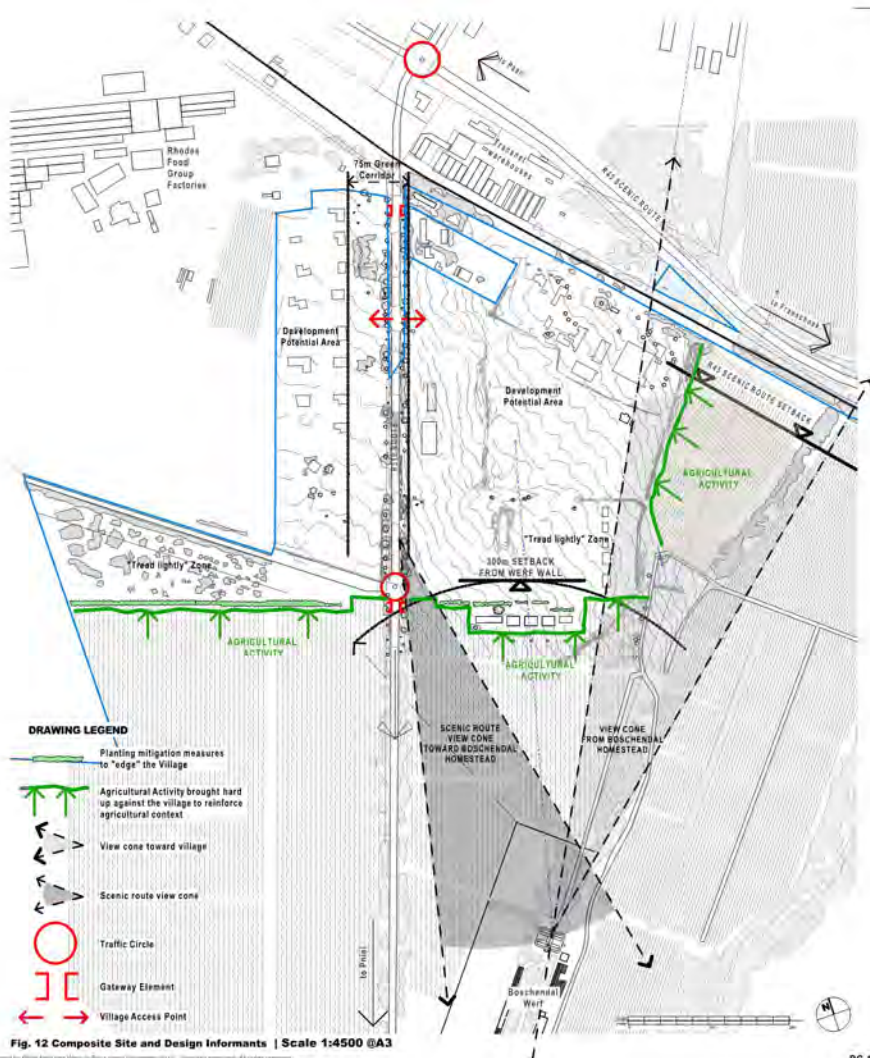


Fig. 12 Composite Site and Design Informants | Scale 1:4500 @A3

Environmental management:

- An environmental management plan (EMP) should be prepared to ensure that visual mitigation measures are implemented and damage to environmental and heritage resources minimised, particularly during the construction period.

2.4. CURRENT BUILT FORM

Existing structures should be reinforced and integrated into the proposed village where it is appropriate to do so. The heritage indicators and directives (Baumann et al, 2015) list the following points that need to be taken into consideration:

- Integrate new development with existing settlement and route structure
- Do not repeat or reinforce interventions of the past which are at variance with the historical settlement structure.
- Wherever possible, make use of existing bulk infrastructure
- Ensure that new building development is of a high quality design, craftsmanship and landscaping, appropriate to the significance of the site and its setting
- Continue the tradition of commissioning pre-eminent architects, urban designers and landscape architects to reflect the significance of the site
- Where possible, reinforce existing facilities
- Protect and enhance planting patterns and trees of stature

Existing agricultural buildings are scattered around the edges of the site. These include an existing, Saw-mill, canning factory, manager's houses and farm workers cottages. Existing buildings on site were found to hold no significant conservation value.

Two existing civic amenities form part of the development potential to benefit of the community and wider population. These include a police station and clinic. The latter is run by Boschendal farms.

2.5. HISTORIC INVESTMENT IN BULK INFRASTRUCTURE

The heritage indicators and directives (Baumann et al, 2015, pg4) conceptualise an approach to regional settlement formation. It argued that authenticity of the settlement is reinforced when each new development land parcel contribute to an emerging and strengthening system. The result is holistic integrated settlements that lean synergistically on one another to form a community.

The Heritage indicators and directives lists the following context specific village and sub-regional indicators: (Baumann et al, 2015, pg21)

Context Specific Village Indicators:

1. Planning and design responses should respect and work with the following:
 - existing elements of the cultural landscape
 - the existing water network
 - the historical movement network, which should be retained to the greatest degree possible
 - the recycling of buildings and structures wherever appropriate
2. The R310 should run through the village within an extensively planted green corridor, some 75 meters wide (from the western building facade to the edge of the agricultural hedge on the east), creating the visual impression of a linear park with a tree avenue.
3. The movement network should tie in with the sub-regional system of movement.
4. The movement network should be highly permeable.
5. A hierarchical public space network should overlap and correspond to the movement network, knitting together the elements of public significance
6. There should be a clear density gradient in response to the movement hierarchy and to sight-lines and visual indicators. The village should be wrapped on two sides by 'tread lightly' zones.
7. Planting mitigation measures (eg. avenues, windbreaks) should be used to 'finish off' the southern edge of the village, while at the same time consolidating the extent of the northern edge of the agricultural setting of the Boschendal homestead and werf precinct. Orthogonal geometries should be employed to give expression to the cultural landscape of the Winelands of the Cape.

2.6. INTERPRETATION OF COMPOSITE CONSTRAINTS AND INFORMANTS IN TERMS OF DEVELOPMENT POTENTIAL

An interpretation of the Heritage indicators and Directives produce different categories of land potential:

- Restricted development' or areas where development should be restricted.
- 'Tread Lightly' Zones or areas where development is possible while retaining dominance of the agricultural landscape.
- 'Development potential areas' or land parcels which could be considered for development.

On a more detailed level, the outcome includes the designated 'green buffer' zone as a constraint to protect the R310 scenic route and view cones toward the Boschendal Manor House.

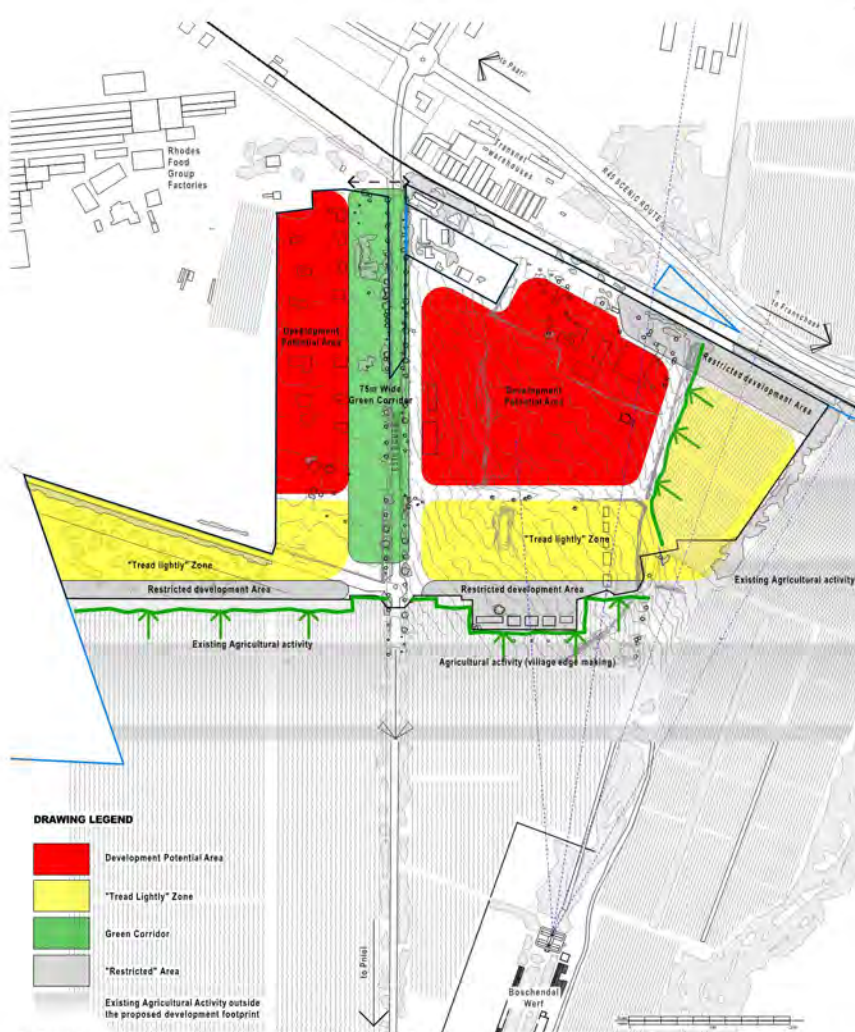


Fig. 13 Interpreting the Site and Design Informants | Scale 1:4500 @A3

2.7. DESIGN FACTORS TO CONSIDER

During the introduction to this chapter, it was argued that authentically retaining the dominance of agriculture in the existing historic cultural landscape is achieved through appropriate integration into the existing landscape and community. The outcome is establishing a settlement with authentic village qualities that detract from typical examples of suburbia and security estates. In preceding pages, the document focus on how integration is achieved on a structural level. It is however also important to discern design qualities that contribute to the creation of an authentic village.

The heritage indicators and directives (Baumann et al. 2015, pg18) list the following generic village qualities, organizational principles and indicators that need to be considered. The principles are first considered on broad levels of village and generic principles, before refining to street level and generic architectural controls.

1. Achieve qualities of rural village, not suburbia:

- A significant amount of the village should be open to public access: a gated development is not allowed;
- The village should be seen as a social entity, organized around a social heart: public spaces (for example, the village green) are central to this;
- More publicly-orientated buildings should abut higher order spaces, helping to define the space (they should not occur in the space);
- Bring the rural and wilderness areas surrounding the villages into the daily life of the village through view-lines and vistas focused on prominent natural features;
- Use both organic and straight-line geometries in the layouts, when straight lines are used, they should be used for structural reasons (for example, important axial alignments);
- Frame views
- Achieve qualities of 'street' (a multi-functional space accommodates a number of modes of movement as well as other activities) as opposed to 'road' (a conduit for motor cars);
- To this end, buildings facing onto streets should be brought to the front of the plot and 'build-to' lines should be defined to make the street in terms of important streets. This system also promotes primarily green 'hollow-blocks';
- No rears of buildings should front onto any form of public space;
- Use rural elements (for example, grachts or swales to manage storm-water, low walls, hedges, tree canopies), not urban elements such as kerbs or walls;

2. Achieve both unity and diversity in the built form. The main instrument of unification should be the use of a common space syntax, albeit in different forms. The common space syntax should include the following features:

- A continuous 'main street' which structures the village. A system of much smaller streets should 'network' off this;
- A water network: storm water run-off should occur on the surface in a system of grachts;
- A spatial focus (e.g. the village green) which is the primary social space of the village. The more publicly-orientated buildings should abut, and help make, this space.
- Strategically positioned non-residential uses reinforcing the hierarchy of publicness;
- A system of axial alignments, vistas and focal elements;
- A pattern of sub-division reinforcing active street boundaries and preventing 'dead-edges' from fronting onto the public domain and promoting the concept of the 'hollow' blocks;
- A gradation of height reinforcing the hierarchy of publicness and gateway spaces;
- A system of 'Cape' rural building typologies and associated structures and elements: Process is also central to achieving complexity and diversity. As a general principle, no one designer should design more than two buildings in close proximity to each other;
- A system of building types which distinguishes between gateway and mid-block pinching buildings, street liners, corner buildings and pavilion buildings. The structural types should reinforce the structural layout of the village;
- A system of structural planting reflecting 'Capeness' and 'ruralness';
- Process is also central in achieving complexity and diversity. As a general principle, no one designer should design more than four buildings in close proximity to each other

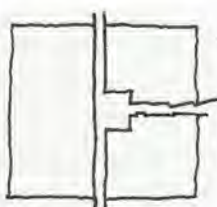


Fig 14. Open to public Access

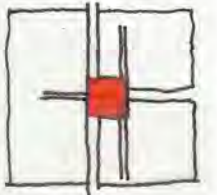


Fig 16. Organized around a social heart.

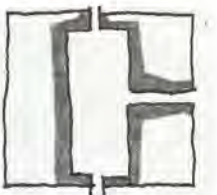


Fig 18. Public orientated buildings to define space

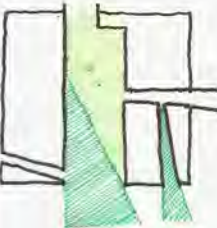


Fig 19. Scenic vistas bring nature into the village

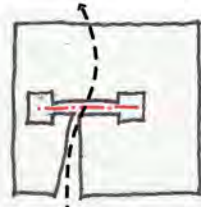


Fig 15. Use both organic and straight line geometries. Use straight line geometries for important axial alignments

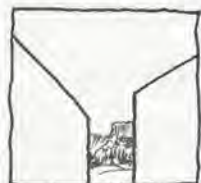


Fig 17. Frame views



Fig 20. Achieve qualities of 'Street'

- Accommodate various modes of movement;
- Buildings brought to the front edge of plots create a strong street edge, while allowing garden space at the back.
- No rears of buildings should face the streets

2.7.1 GENERIC STRUCTURAL INDICATORS (Baumann et al. 2015, Pg19)

2.7.1.1. Factors that should inform the Movement Network:

- It is necessary to establish a clear village movement network, minimizing excessive repetition and sameness;
- The village should be pedestrian and NMT dominant, while still accommodating vehicles;
- Qualities of 'street' (multi-functional linear spaces which also accommodate movement) as opposed to 'road' (a single purpose conduit for cars) should be captured throughout the development;
- The village should be anchored by a mixed-use high street.

2.7.1.2. Factors that should inform the approach to Public Space:

- It is necessary to establish a clear spatial hierarchy;
- The village should be anchored by a village square which is integrated with the high street;
- Primary gateways into the village should be spatially anchored;
- All buildings should be used to define and make public space. The architecture should primarily take the form of background buildings.

2.7.1.3. Public institution/community facilities should occur in exposed (highly accessible) locations.

2.7.1.4. In response to height:

- Height policy should respond to access, with the highest density at the most accessible place;
- No building should exceed walk-up forms (3 storeys) in the dense areas. There is a maximum height of 2 storeys in the more embedded, private areas and 1 storey
- No building should exceed a single storey in the 'tread lightly' zone.

2.7.2 GENERIC STREET ORGANIZATIONAL INDICATORS

- The street hierarchy should be clear and legible, with the dominance of the Main Street apparent;
- Blocks should be relatively small to promote permeability;
- Scaling elements such as stoops and pergolas can be used as moderating devices in house-street relationships. Height can also be used to protect privacy.
- Minor streets should have a narrow street surface (in the order of 5 meters with a two meter walk-way to allow easy turning into driveways);
- There must be a clear threshold or transition of publicness to privacy, scaling elements such as stoops and pergolas can be used as moderating devices in house-street relationships. Height can be used to protect privacy;
- There should be no kerbs. Storm-water run-off should occur on the surface and channels should be used as place making elements.



Fig 21. Surface run storm water (Lei-voor, Grachts, or Swales)



Fig 23. Tradition of Werfs



Fig 22. Use low walls and structural planting (hedges or trees) to define space, not walls or kerbs.



Fig 24. Surface run storm water (Lei-voor, Grachts, or Swales)

Fig 14-20 Qualities of a Rural Village

CHAPTER 3 . DESIGN

3.1. DEVELOPMENT AND DESIGN ETHOS:

THE ETHOS OF SUSTAINABLE URBAN DEVELOPMENT

3.1.1 Why develop at all?

Properly developed is regarded as an important contributor to economic growth, but more importantly as a provider of basic infrastructure. Responsible, sustainable development, executed by the private sector, can be regarded as an important means of supplying building stock for an ever increasing population.

With this in mind, municipalities designate certain areas and nodes as part of the urban edge. This creates opportunities for the private sector to develop these areas. The node at the intersection of the R45 and R310 is one such area, earmarked by the Stellenbosch Municipality as suitable for further development and improvement.

Some of the land in the area under of the land discussion is owned by Boschendal Estates. The character and location under discussion is viewed by its owners as:

- A partially degraded brown field of little agricultural value.
- Partially built up and surrounded by existing urban development, encompassing housing, factories, offices and civic amenities.
- Hemmed in by major rural mobility routes and a railway track. The municipality in turn regards the area as:
- An urban node which is part of an already developed intersection strategically located between three major rural towns and typical of a general settlement pattern scattered around various intersections in the wine lands.
- An eyesore in what is regarded as an important scenic route.
- A problematic intersection requiring intervention in terms of traffic safety and flow.

It is thus evident, in terms of the existing physical character and defects of the site, that both the municipality and current land owners have an obligation to intervene and improve the area to the benefit of all.

Also, it is undeniable that financial benefit is a motivating factor in developing the node further. Boschendal Estate has embarked on an investment and restoration programme amounting to R300 000 000, in respect of both its agricultural and heritage assets. It is reasonable to expect that some of that investment needs to be recovered and made available for the protection, management and improvement of the assets under its control.

The economic benefits of this development could thus be foreseen as a major boost, not only for the protection of Boschendal as an asset of national importance, but also in terms of its ability to deliver on public good.

The important question is not why to develop, but how to develop responsibly.

3.1.2 Responsible Development

The development model resulting in gated, suburban, housing estates on green-field sites is widely regarded as undesirable in terms of good practice. Irreversible damage caused to the authentic character of the wine lands, as an agrarian landscape by such development is evident to the observer. It is the intention of Boschendal, to avoid this type of model by delivering on what is expected to constitute a new benchmark in sustainable development and excellent place making in the wine lands area of the Cape.

In pursuing a philosophy of sustainable development, Boschendal adheres to three important principles: social, economic and environmental sustainability.

3.1.3 Social sustainability

The main attributes of social sustainability are manifested by:

- provision of public good
- promotion of social cohesion and diversity in communities
- delivering healthy living environments.

Boschendal Village (BV), is delivering on public good by strengthening and supplementing the existing civic amenities that already exist in the proposed development node. The existing clinic will be updated to provide improved service, not only to the inhabitants of BV but also to those in surrounding areas. A pre-school will be provided on site, open to the BV inhabitants as well as to the wider community. The informal trading activities, which already exist next to the R310, will be supported by the provision of shelter and accessibility. Most importantly, the impetus being provided by the development will have a major impact on the improvement of traffic and pedestrian safety through the upgrading and rationalising of the existing T-junction, as well as the provision of dedicated bus and taxi stops.

Furthermore, the creation of a new high street, parallel to the R310 and completely accessible to the public, will provide a vibrant and consolidated business and retail node, available to all. This will provide job opportunities as well as amenities and work places closer to home. The interface between the residents of BV, visiting tourists and the local population will be strengthened through the provision of such an open civic trading zone. It is the antithesis of the general model of insulated gated developments.

Apart from providing much needed housing stock, the preferred model of delivering multiple dwelling types will inevitably foster a more diverse community by allowing for a wide price range, and whereby facilitating access to entry level as well as high-end buyers. The result is anticipated to be an inter-generational and income demographic that promotes social vibrancy.

The developers intend to go a step further by actively subsidising housing on a rental housing scheme, for essential key services personnel in the community. Essential key services personnel are defined in general terms as people who provide key services, either directly or indirectly to the public. This includes teachers, nurses and other health workers and police, but extends to social workers, bus and ambulance drivers and a great variety of other workers, not all in the public sector. In considering proposals to help essential key services personnel to meet their housing needs the developers will take the following factors into account -

- the extent to which essential key services personnel need to live near their work because of factors such as on-social work patterns.
- the needs and preferences of essential key services personnel
- the extent to which essential key services personnel can afford housing
- the extent to which essential key services personnel are associated with Boschendal

It is believed that the insertion of these members of society into a neighbourhood, which might normally be financially out of reach, will foster the creation of an inclusive and diverse community.

The association and generous access to Boschendal farm afforded to residents of BV will further instil a sense of civic pride and social cohesion. The abundance of open space, opportunities for physical activity and the availability of locally produced food is expected to contribute significantly to the general well-being of the BV community.

3.1.4 Economic sustainability

The main facets of economic sustainability are to be found in:

- support for the local economy
- the creation of local jobs
- forging symbiotic economic systems

The consolidation and expansion of a mixed use economic and tourist hub should provide job opportunities for the local population as a result of revenue inflows. The symbiotic relationship between Boschendal farm and BV will generate a mix of commercial offerings which should underpin sustainable business development in the future.

The purchasing power embedded within the Boschendal Village community, coupled with direct access to the welfer amenities should have a positive effect on Boschendal Farm's financial viability and in so doing help secure a valuable natural heritage asset. As a potential consumer of Boschendal produce, the BV community will support the agricultural viability of the farm. Fostering home industry initiatives which add value to raw produce is a priority for Boschendal, and this initiative will benefit from the various outlets and markets provided by BV residents.

The inevitable gentrification of Boschendal Village, improving on what is currently a dormant and unresolved zone, should also spur the landowners of neglected properties in the vicinity to emulate the example, thereby promoting economic growth and an increase in property values which in turn should unlock further economic activity. The provision of jobs and support to local suppliers during the construction of BV will be substantial. Boschendal has embarked on a skills development programme and the construction of BV would provide a much needed additional vehicle to help realise this initiative.

3.1.5 Environmental sustainability

The main facets of environmental sustainability are:

- reducing CO2 emissions
- avoiding greenfield development
- promoting density and reducing sprawl
- reducing waste

The creation of a mixed use, dense development will inevitably lead to a reduction in motor vehicle use as unnecessary work and shopping trips will be avoided. Also the minimization of the development footprint will reduce the roll out of energy hungry infrastructure. The compulsory inclusion of PV and solar installations will further reduce BV's carbon footprint and the potential in terms of harnessing the combined critical mass of BV and BV, in respect of bio-digesters is significant. It is not impossible to foresee a near closed loop and off-grid energy system, with most electricity obtained from this combined resource. A brownfield site within an existing urban node, and yet with no existing agricultural activity or bio-diversity issues, lends itself well to development as it avoids the problems associated with isolated greenfield developments in sensitive ecological or agricultural zones.

On site sewerage disposal, waste re-cycling and re-use, as well as a local water supply will further ensure BV's environmental sustainability as renewable sources and waste minimization controls will be firmly embedded. This will reduce the burden on municipal suppliers and the environment.

3.1.6 What does the physical form of sustainable development look like?

Within the context of a rural village, Boschendal Village embraces the quality of urbanism rather than that of sub-urbanity. It is applied at the full range of scales from a single building to an entire community, without losing its village character.

Walkability

- Most amenities within a 10-minute walk.
- Pedestrian dominant and friendly street design (buildings close to street, porches, windows & doors; tree-lined streets; on street parking; hidden parking lots; garages in rear lane; narrow, slow speed streets)

Connectivity

- Interconnected street grid network disperses traffic & eases walking
- A hierarchy of narrow streets, avenues and alleys
- High quality pedestrian network and public realm makes walking pleasurable

Mixed-Use & Diversity

- A mix of shops, offices, apartments, and homes. Mixed-use within neighbourhoods, within blocks, and within buildings
- Diversity of people - of ages, income levels, cultures, and races

Mixed Housing

- A range of types, sizes and prices in close proximity

Quality Architecture & Urban Design

- Emphasis on human comfort and the creation of a sense of place; special placement of civic amenities within community; human scale architecture rooted within the local vernacular, contemporary in style rather than pastiche.

Traditional Neighbourhood Structures

- Hierarchy of public spaces with a discernible centre and edge
- Public space at centre
- Importance of quality public realm; public open space designed as civic art
- Containing a range of uses and densities within a 10-minute walk
- Increased Density
- More buildings, residences, shops, and services closer together for ease of walking, to enable a more efficient use of services and resources, and to create a more convenient, enjoyable place to live.

Sustainability

- Minimal environmental impact of development and its operations
- Eco-friendly technologies, respect for ecology and the value of natural systems
- Energy efficiency and less use of finite fuels
- More local production
- More walking, less driving

Quality of Life

- Taken together these factors engender a high quality of life and create places that enrich, uplift, and inspire the human spirit.

3.2. CONCEPT AND OVERALL URBAN DESIGN PRINCIPLES

'In essence, the character of the proposed development will be that of rural village, characterised by certain urban qualities, discreetly knitted into an agrarian landscape, whilst responding to the historical context of the area.'

- Publically accessible, diverse and vibrant
- Varied in building typology, size and cost
- Mixed use
- Quality public space
- Compact and dense
- Interconnected and permeable
- Walkable
- Responsive to the genius loci
- Quality architecture and urban design
- Safe and secure
- Environmentally, socially and economically sustainable

The village should be well-contained and as small and compact as possible, and new agricultural areas should be brought right up to the settlement edges. The town should respond to the predominant agricultural patterns, but must have strong spatial edge-definition in order to eliminate the possibility of future expansion or sprawl. The use of structural landscaping is paramount in achieving this principle.

In spite of the fact that the village will be located on a busy tourist route and straddle a major rural road, access will be limited. In order to provide accessibility, vibrancy and interconnectedness the village will be developed along a new high street, parallel to the R310. This high street will intersect the main axis into the village at an open public space consisting of a vibrant, farmers market square. This square will not only form the heart of the development but will also serve as the commercial node for the wider community.

The high street will contain various shops, galleries, offices, restaurants, educational facilities, a crèche, entry level housing and open public space for relaxation. The area closer to the R45 will display a civic character as the existing police station and clinic forms part of that precinct already. The educational facility and public transport drop off and collection points will also be located in that vicinity.

The main axis leading from the market square, will traverse an elongated public open space, formalised by a lane of trees and a low-voor and continuing down the gentle slope towards the quieter residential neighbourhoods where it will terminate in a generous community werf. This werf will serve as a flexible outdoor space and will set up an architectural conversation with the existing historical werf at the Boschendal manor house. These two werfs are connected by means of a meandering lower order cycle and pedestrian pathway. It will also serve as a focal point for public gatherings and occasions and will serve as a gateway from the village to the farm. The werf will be home to a health centre and other public amenities.

Leading off the main axis are diverse neighbourhoods consisting of various types of homes, ranging from narrow row houses to generous free standing homes. The predominant typology will be that of perimeter building blocks with courtyard parking. It will allow for pleasant, walkable streetscapes and squares, devoid of blind walls and garages.

The streets will be lined with corner buildings, gateway buildings and landmark buildings in appropriate locations, as well as infill buildings. These buildings will be predominately of a horizontal character, unless specified differently in specific areas. The predominant geometry will be that of wall architecture with horizontally proportioned apertures, built to line.

Human scale will be reinforced at the edges of public spaces and streets by the use of colonnades, verandas and pergolas where needed. Overlooking features like balconies, roof terraces and windows will be enforced as safe city mechanisms to ensure surveillance. Most public spaces and roads will be pedestrian-dominated; parking will be dispersed as well as consolidated in various ways. Formalised, structural planting will further reinforce the idea of horizontality, linearity and simplicity.

The village will provide civic amenities to a broad range of surrounding communities, both within and outside the village extents. This principle is important in terms of the authenticity of place. Gated and security complexes, no matter how architecturally well-designed or well-laid out, can never amount to villages, as they lack a public and civic realm. It has already been established that gated complexes are an anathema within the Cape Winelands Cultural Landscape, essentially creating "black holes" within the agricultural continuum. Higher-order villages depend on their relationship with surrounding movement routes for broad exposure in order to attract higher-order civic and commercial activities. This relationship is symbolic and must be carefully articulated.

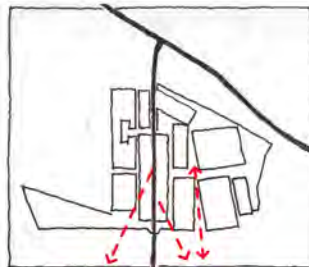


Fig 25 The village geometry acknowledge the historic farmstead and exploit Key views that connect the village with the surrounding Historic cultural landscape.

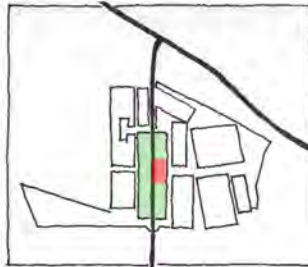


Fig 28 The Village is designed around a Heart consisting of a village green and a vibrant commercial node

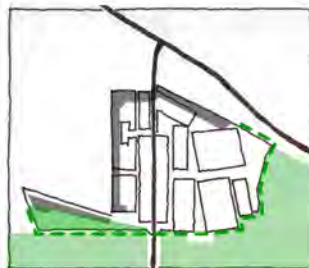


Fig 26 Strong special edge definition in response to the surrounding context prevent future expansion or sprawl. On the South, East and North East edges, edgemarking responds to wilderness, the scenic route and Agricultural landscape of the farm On the North and West edges, edgemarking responds to existing development and industrial landscape

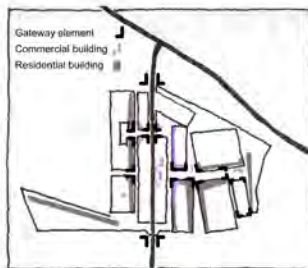


Fig 29 Edgemarking on public facing areas through the use of gateways, building 'pinch points' and strong street edge definition.

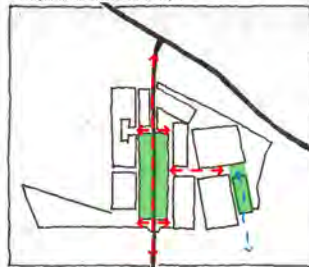


Fig 27 The main axis connects the Market square with the community werf, two key areas that ties the village to the scenic route and historic farmstead

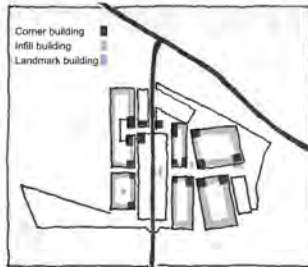


Fig 30 Building types enforce spatial definition and place making.

3.3. URBAN DESIGN DISCOURSE AND INTENT

This section outlines the application of key design principles in response to the heritage indicators and controls established during chapter 2 of this report.

3.3.1 URBAN DESIGN GEOMETRY

Grid, axial alignments, vistas and focal points.

A clear and legible street grid is established in order to maximise permeability. Visual connections along axis ensure legibility and orientation at all times. The grid is slightly twisted to align the lower slopes with the existing contours and to allow the community werf at the end of the main axis to be mostly flat. The twisted grid has the added benefit of opening up a funnel-like view cone in line with the minor house according to the heritage indicator conditions. A further benefit of the twisted grid is that it alleviates monotony in terms of the geometry as the various intersections demand varied architectural solutions.

The main axis across the R310 down the central avenue delivers order and hierarchical legibility, and ties the two precincts straddling the R310 together. The formalisation of the main axis also reinforces the importance of the market building and square as a landmark and a focal point. The same goes for the werf at the end of the main axis, as its connection to the main axis reinforces its importance as a public space. A secondary axis running, from west to east across the main central axis ties the neighbourhoods together, visually and physically. The axis terminates in various neighbourhood squares.



Fig. 30.1 Axial focal point Stellenbosch (Arisal, 2012)



Fig. 30.2 Example of small town grid layout (Google Maps, 2015)

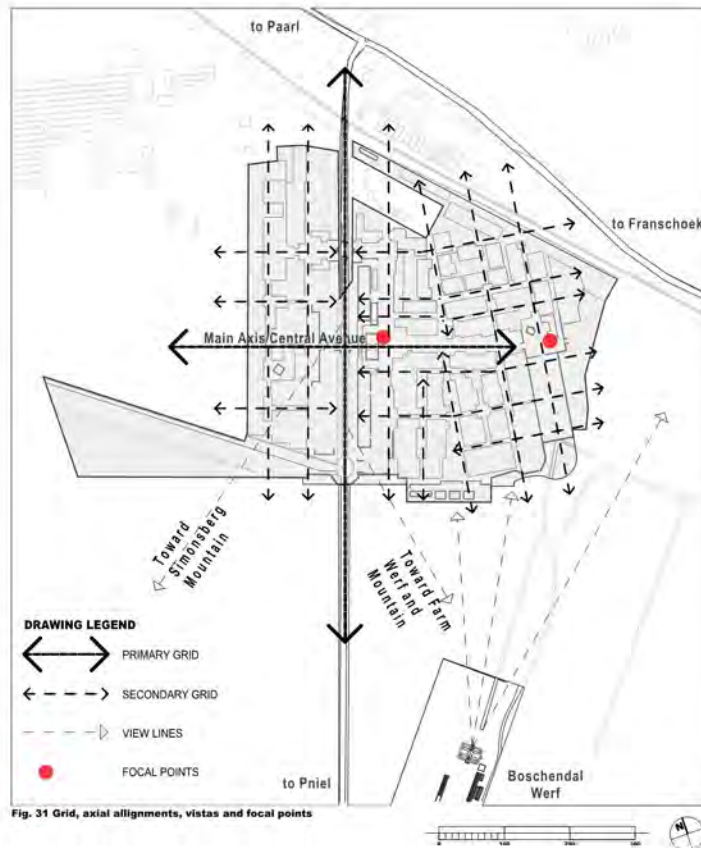


Fig. 31 Grid, axial alignments, vistas and focal points

3.3.3. ACCESS AND ROUTE INTEGRATION

The site gains access from the R210, which traverses the site. Due to the classification of this road as a mobility route, access off it is limited. Preliminary traffic assessments suggest the creation of a **traffic circle** at the intersection of the western boundary and the R210 as an **access point midway** between the new traffic circle and the existing T-junction of the R210 and R45. Both of these access points provide the opportunity for creating gateways and forecourts, announcing the transition from the rural landscape to village.

An additional traffic circle is to be provided at the T-junction of the existing green minor road S230 and the R210. This road has the potential to be connected back to the R45 which could absorb traffic which otherwise would have been directed towards the existing T-junction of the R210 and R45. This could be useful especially in light of the fact that a new entrance to the Rhodes Food Group facility complex, will be proposed off this road.

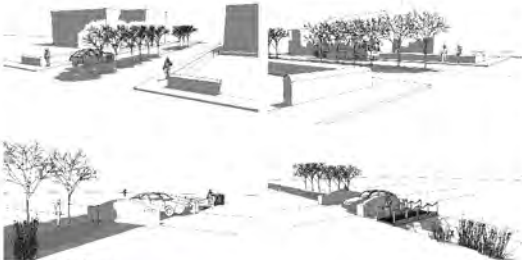


Fig. 32 Indicative gateways



Fig. 33 Gateway at Pniel (Briel, 2015)

As the R210 is a well-used pedestrian route zone, and as it will evolve into an urban (village) zone due to development on both sides, a **pedestrian crossing** is proposed at the junction with the new market square and central axis. It is foreseen that educational and commercial activity and new jobs on offer in the new high-street might increase foot and bicycle traffic towards the development node, particularly from Pniel. It is thus important to provide a safe pedestrian crossing and design for a pedestrian crossing to allow for a safe **drop off zones** for taxis and buses. This section of the road already has a 60km/h speed limit.

The two new intersection points along the R210 are spatially treated as gateway points that employ the design language of low wall walls, absence of curbing and continuity of materiality seen at the main gateway node of Pniel. Aside from around the main intersection, all new developments are located more than 60m from the R210. Blue enclosures are located adjacent to the site ground in the northwestern section of the village.










Fig. 34 Culvert crossing and footbridge (Briel, 2015)



Fig. 35 Access

DRAWING LEGEND

-  EXISTING PUBLIC ROADS
-  HIGH STREET: private road with 24 hour public access
-  THE CENTRAL AVENUE: private roads with day time public access.
-  NEIGHBOURHOOD STREET: private roads controlled access
-  PEDESTRIAN CROSSING
-  PROPOSED NEW TRAFFIC CIRCLE
-  PROPOSED NEW INTERSECTION

3.3.2. a. Street hierarchy.

All streets in the village will have the official designation of "private roads" however some of these streets will have a high degree of public accessibility. The stretch of street parallel to the R310 and in between the two intersection points along the R310 comprises the main "high street" of the new village, and is activated on both sides by market/commercial buildings, and spaces in existing shed buildings, formal retail spaces, and flexible parking areas. A series of secondary "gateway nodes" and "pinch points" define gateways into the more residential parts of the new village that all lead off from these main, "public" streets. Some of these streets are publically accessible during business hours and would be manned by a guard after-hours, while others are located within the residential "super-blocks" and would require remote control or invited access by the residents living there. A service lane is established between the mixed use and commercial buildings and the residential areas in order to accommodate delivery vehicles, parking ramps and refuse removal without imposing on the village streets. These lanes are one-way and controlled with gateways at either end.



Fig. 36 Dorp Street, Stellenbosch (Briell, 2015)

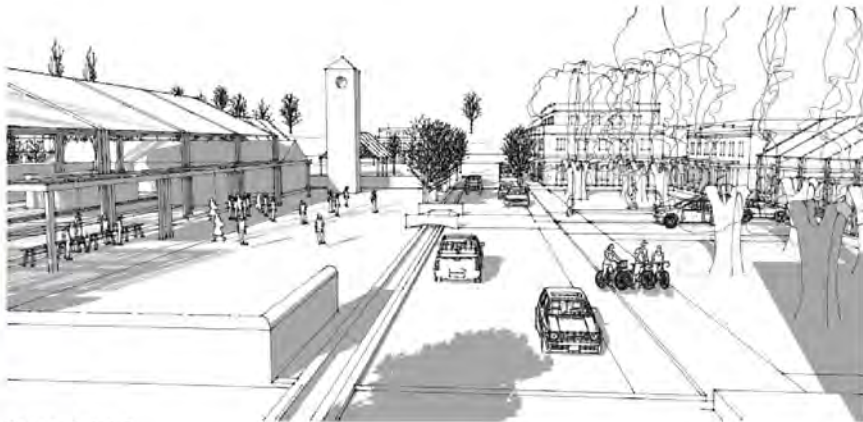


Fig. 37 The high street

3.3.2.b. The High street: Fig 37 Curb parking can be an important element of high street design, as it offers convenience as well as creating a buffer for activity on the sidewalk and adjoining properties. The high street will be regarded as a well-used thoroughfare and should contain pedestrian-oriented edges, blending together two seemingly incompatible characteristics into a highly mobile, yet walkable thoroughfare. The inclusion of on-street parking, bicycle travel, and wide landscaped pedestrian areas will complement the mixed-use character of the high street. The main square should be of a different surface material to enforce NMT dominance in that area as it is perceived as a busy, lively public space, blurring the lines between NMT and motorised dominance. The road surface to be no wider than 7metres.



Fig. 38 Neighbourhood streets



Fig. 40 Typical indicative neighbourhood street

3.3.2.c. The Central avenue: The central avenue on the main axis should allow for the inclusion of on-street parking, bicycle travel, and wide landscaped pedestrian walkways abutting a lei-voor will promote the central avenue as a longitudinal open public space rather than a thoroughfare. Multiple street liner buildings will open up onto the central axis and are therefore important to protect pedestrian dominance in this area. The road surface to be no wider than 6 metres and speed limits should be 45km/hr.

3.3.2.d. Neighbourhood streets: The side streets are generally one or two narrow lanes only, and serve predominantly local traffic and access to abutting property. Streets will feed into courtyards or mews, which will be mostly where cars will be parked in residential neighbourhoods. The streets will also lead into the various underground parking basements associated with high density apartment buildings. The narrowness and relative quietness of some of the streets will automatically lead to pedestrian dominance. The road surface to be no wider than 5 metres. Speed limits should be very low (25km/hr).

3.3.2.e. Pedestrian lanes and footpaths: A system of pedestrian lanes, leading onto public open spaces are distributed across the site and not always demarcated, but could simply be open routes between buildings. This particularly applies amongst high density apartment buildings. The foot paths are more informal by design, of a meandering character and prevalent where the village flows out onto the farm. Lanes and footpath should be no wider than 2 metres.



Fig. 39 Example of pedestrian zones amongst townhouses (Briell, 2015)



3.3.2.f. Street design: The qualities of street, as opposed to road, should be promoted through bringing buildings forward to the street edge, having buildings face onto the street edge and positively address it by means of slopes, and through using rural elements such as lei-waller stools, low walls, treed avenues and hedges, rather than concrete kerbs, to manage storm water and define the thresholds between streets and pavements. The width of streets should establish a clear hierarchy, with more minor streets and lanes being much narrower and possibly of more textured surfacing in order to promote slower driving speeds.

The street section through the main residential avenue within the village illustrates the multi-functional use of the linear space of the street to accommodate treed avenues, lei-waller stools, cycle lanes and linear open green spaces. The buildings directly about the street edge, with visually accessible front gardens and stoeps creating privacy thresholds. The heights employed for the buildings help to define the street space, and are design to be proportional to its width in order to provide a comfortable sense of enclosure, that then heightens the sense of "framed view" when intersecting streets afford glimpses towards the Boschendal werf and its surrounding agricultural landscape. Roads will be finished in textured, robust finishes with minimal concrete curbs and edges. Curbs will be subtle and or non-existent. Traffic speed reduction will be promoted through the application of a variation in finishes and the hierarchy of roads and streets will be reflected in the type of material used. The use of larmac will be minimised and preferably not applied at all. The use of lei-voors and planting will be utilised as barriers to no-go zones.



Fig. 44 Werf parking - High Constantia (Briel, 2015)



Fig. 45 Werf parking - Groot Constantia (Briel, 2015)



Fig. 46 Werf Parking: Constantia civic centre (Briel, 2015)

3.3.2.g. Design factors that influence target speed:

The following design factors contribute to speed reduction and should be incorporated into street designs as appropriate in urban areas:

- Using narrower travel lanes;
- Using physical measures to narrow the roadway;
- Using on-street parking to create side friction;
- Eliminating super elevation;
- Eliminating shoulders, except for bicycle lanes;
- Using smaller curb radii;
- Eliminating channelized right-turn lanes;
- Using paving materials with texture (See fig 41-43);
- Properly using speed limit, warning, and advisory signs and devices.

3.3.2.h. Parking: Parking can be divided into four categories:

- on-street parking for the public
- off street parking for the public
- on street private parking for residents
- off street private parking for residents

The use of parking werfs, edged by low walls and hedges is allocated where en-masse parking is required, for instance in the vicinity of the market squares, the northern precinct gateway as well as the southern werf. Some of the bigger mixed-use complexes will contain basement parking as well as surface parking in discreet locations.

Parking within the residential neighbourhoods for residents will be off street in all instances, located within garages, leading off secondary streets or mews or squares. Visitors parking will be provided within the street reserves in allocated zones. The higher density residential areas will include basement parking for residents and visitors although some surface parking will be allocated for visitors too.

3.3.2.i. Ramp entrance dimensions and articulation:

Ramp entrances and exits should be located in separate locations and should be single lanes only. This allows for a reduction in the gap of the opening, thus reducing the distance across for pedestrians as well as mitigating the visual impact. Entrances and exits should be treated as doorways into buildings and not as holes in the ground.



Fig. 41 Mews parking - Groot Constantia (Briel, 2015)



Fig. 42 Example of road surface with local stone (Briel, 2015)



Fig. 43 Example of exposed aggregate, brick and local stone as road surfaces at Boschendal (Briel, 2015)



Fig. 47 Parking behind wall werfs

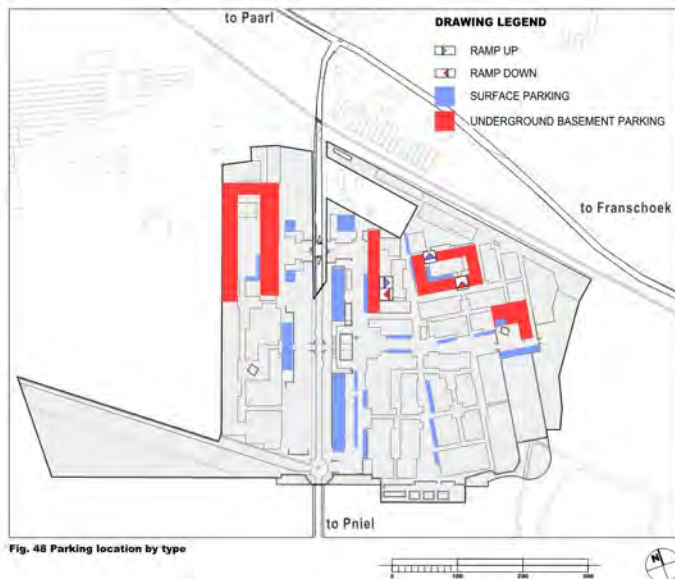


Fig. 48 Parking location by type

3.4. GATEWAYS AND THRESHOLDS

3.4.a) Along public roads.

The village is made up of major gateways and gateway spaces along the R310, a secondary gateway space and gateway (the village square) along the "high street", and a series of "pinch point" gateways leading off from the central avenue, which provide a degree of controlled access, both through management and visual markers/thresholds, into the main residential areas and the farmland beyond. The utilisation of the wall, as a tool for formalising the landscape provides the opportunity for creating gateways combined with the use of culvert barriers and bridges as thresholds. It is proposed that these elements are used before reaching the R310, as indicated, to announce the transition from rural to urban and to deliver design continuation from Priel as these same elements had successfully been used there.



Fig. 49 Indicative gateway elements

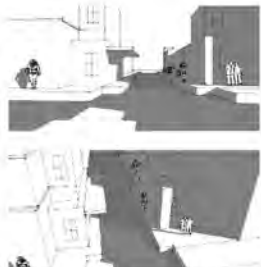


Fig. 50 Various indicative pinch points

3.4.b) Along private internal roads. Public space and transition zones are emphasised through the use of pinch points and gateways. It also creates the opportunity for providing surveillance features and integrated security barriers. These pinch points also function as traffic calming mechanisms and serves the purpose of doorways into outdoor rooms, whilst creating interest on facade plain.



Fig. 51 Gateway at Alphen (Brief, 2015)

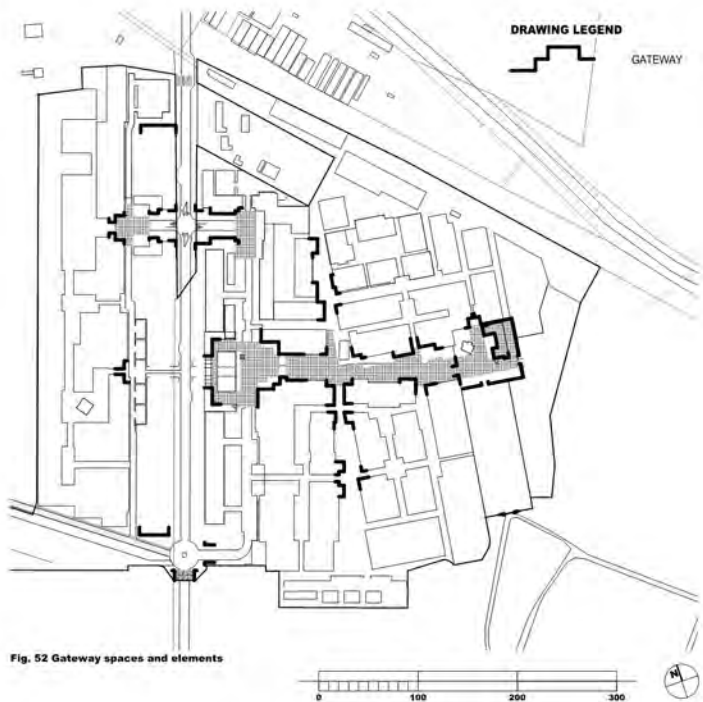


Fig. 52 Gateway spaces and elements

3.5. ACCESSIBILITY

As was discussed earlier, the principle of public accessibility is of great importance. This is a fundamental principle to adhere to, as a direct response in counteracting the gated village syndrome. Thus, the creation of the high-street, that is a mixed zone open to the general public on a 24hr basis, is being supported as a mandatory control to ensure accessibility.

However, the principle of safety and security is a reality that needs consideration. The central axis, leading to the main residential areas is entered across a threshold and through a gateway. It is not gated or barricaded as such, however it allows for observational surveillance and monitoring, thus deterring unwanted intrusion. The central axis will be open to the public as the community well is regarded as an activity zone and collection point for public gatherings and activities. However, the residential precincts, leading off the central avenue may be safeguarded through controlled access points, as was discussed under the gateway section. The trade-off between public accessibility and safety can be reconciled if these principles are adhered to.

The northern-western precinct is regarded as an island, due to its location and is secured due to its sole function as a residential zone, however, it is not walled, onto the public open space. The front of buildings are facing this zone, thus creating a street scape that is active, rather than dead and thus serving the function of wall applying perimeter building typology

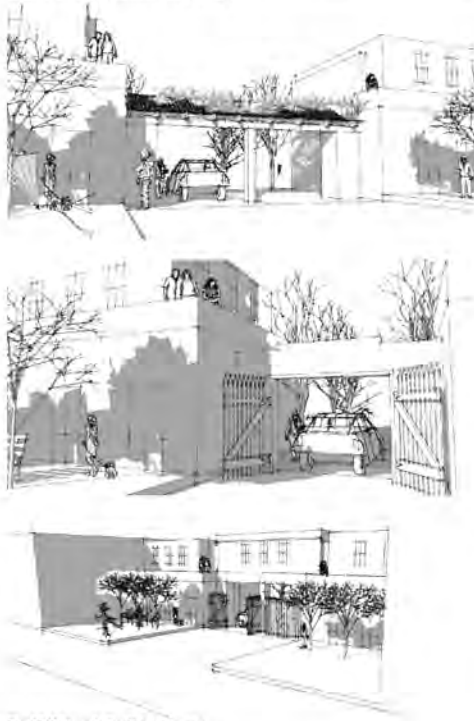


Fig. 53 Various indicative gateways

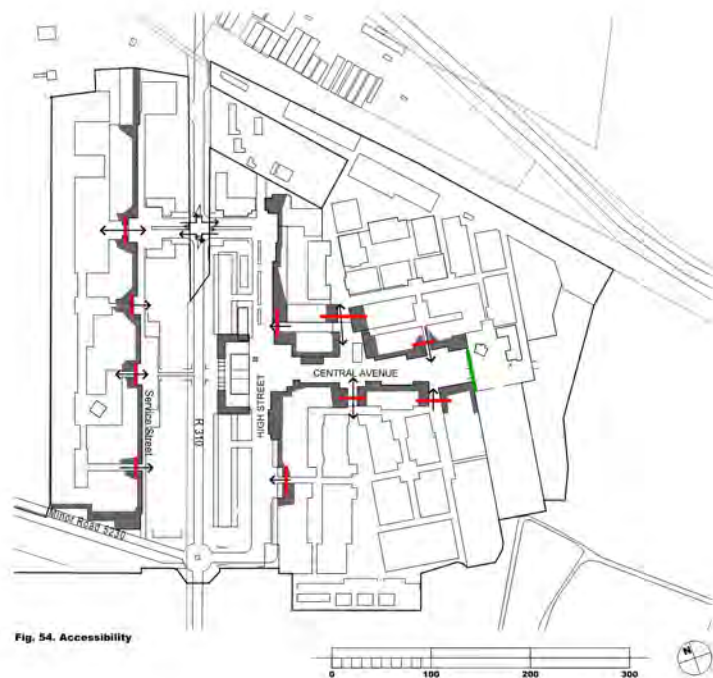


Fig. 54. Accessibility

3.6. PUBLIC VS PRIVATE SPACE

Figure 56 illustrates the extent of public accessible areas in relation to private areas. Public access falls within areas of significant commercial and social activity.

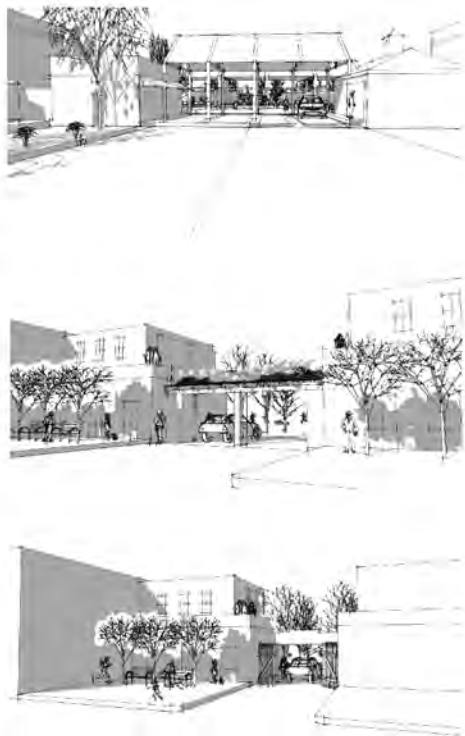


Fig. 55. Indicative gateway structures

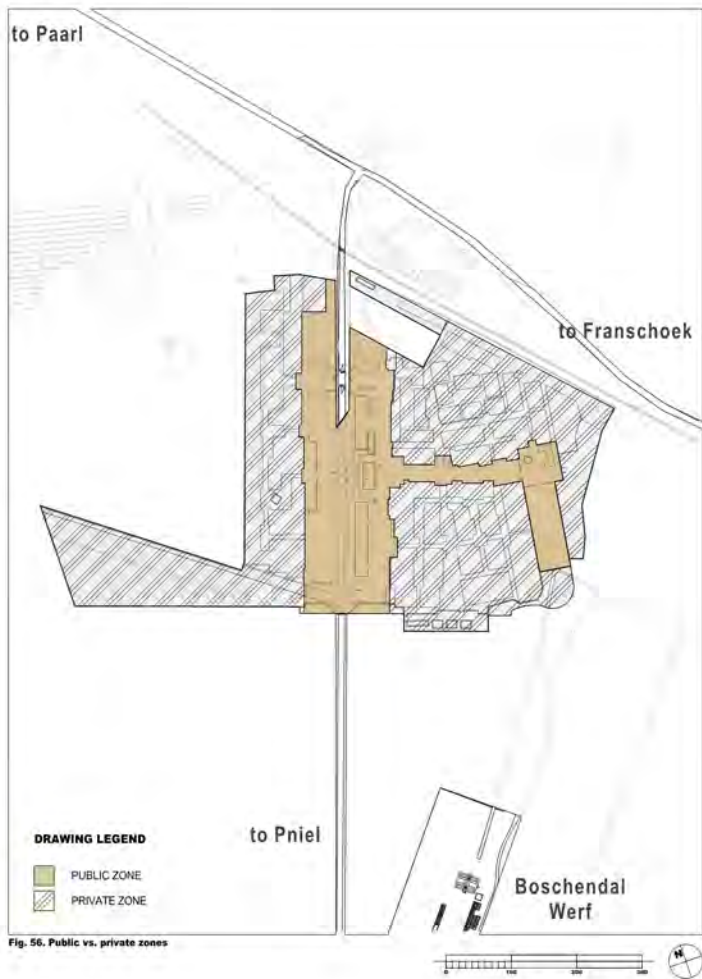


Fig. 56. Public vs. private zones

3.7 OPEN SPACES

3.5.1 Hierarchy and location of public open spaces: The urban design of the village is dominated by the location and connection of public open spaces. It consists of a combination of green open spaces as well as hard open spaces. The predominant green structure is that of a family of werfs, scattered across the site. The green open space adjacent to the R310 should remain as grassland, punctuated by an incomplete werf wall on both ends to provide for structure, order as well as gateway elements. This space is regarded as the foreground to views towards the north-west and should remain uncluttered. It not only responds to the genius-locc of the Cape werf, endemic of the area, but also structures open space in such a way that it can be utilised as flexible community spaces or outdoor rooms as these werfs are generally flat open and centrally located. The low character of the werf concept along the R310 also serves as a gateway element and resists the temptation to create municipal fynbos gardening. The low walls not only contain and formalise space but also allows for views across and for a generally feel of openness, which is particularly important due to its location along a scenic route.

The predominant urban open space is that of the market square which will be characterised by a bustling atmosphere. It is located on a major intersection and consists of the main market square and two secondary freed squares on either side of the main axial entrance to the residential zone. Street life and cafe culture will spill over into these secondary squares whilst mixed trading will happen in the main square. The market square itself will be managed and controlled by Boschendal which is planning on it being a major organic artisanal food outlet and tourist hub. These will be the main social public spaces of the village. The market building and other mixed use buildings should directly abut, and help make and define, these spaces.

The main axis leading from the market square, will traverse an elongated public open space, formalised by a lane of trees and a lee-voor, down the gentle slope, towards the quieter residential neighbourhoods. The surrounding buildings which abut the street edge uniformly around all its edges, creates an active edge. Human scale is brought into these areas through the provision of doorways, plinths, steps, windows, verandas and colonnades.

A single public pavilion building will be located within this space. The central avenue space will terminate in a generous community werf at the bottom of the hill. This werf will serve as a flexible outdoor space and will set up an architectural conversation with the existing historical werf at the Boschendal manor house. These two werfs are connected by means of a meandering lower order cycle and pedestrian pathway. It will also serve as a collection point for public gatherings and occasions and will serve as a gateway from the village to the farm. The werf will be home to a health centre and other public conveniences, including a coffee shop and restaurant.



Fig. 57 Indicative corner square as public space



Fig. 58 PAVILION MARKET BUILDING

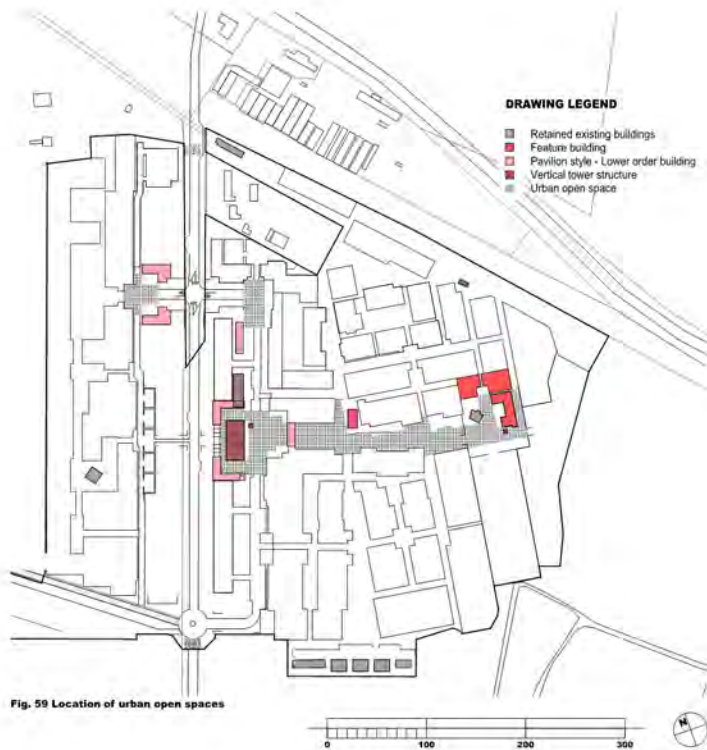




Fig. 60 Werf at Boschendal (Google Maps, 2015)



Fig. 61 Biscuit Mill Market

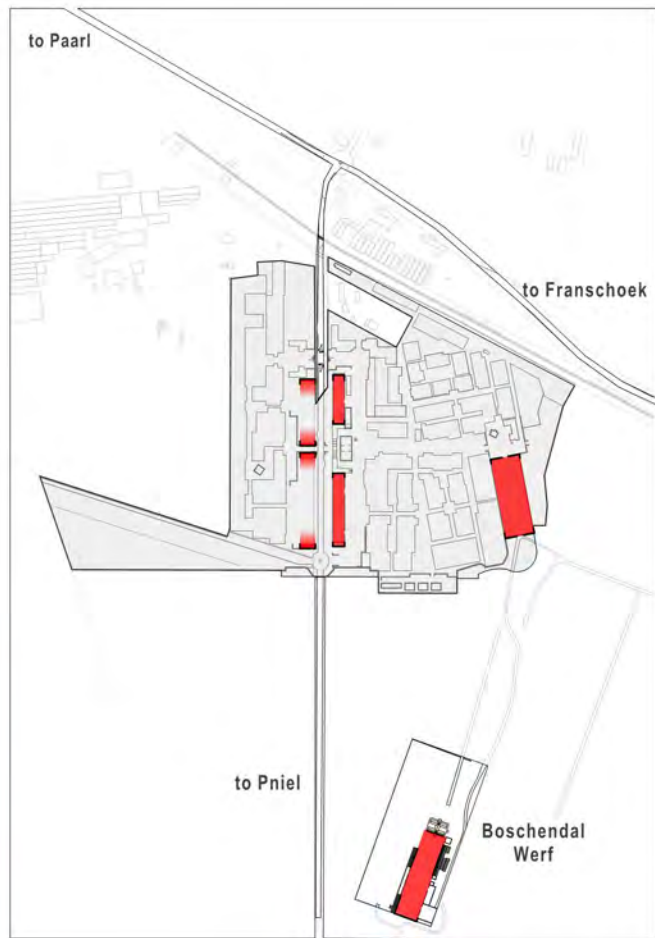


Fig. 62 a Family of Werfs



3.7.2 Structural planting and green open space.

The existing trees along the R 310 should be conserved and reinforced through a long term planting programme. As a significant amount of plane trees are already planted along the R310 towards Pined, it would be desirable to use the same species of tree to allow for continuation all the way to the T-Junction with the R45. Invasive blue-gums and pines could be removed over time as the plane trees establish themselves. The jacaranda forest to the north of the R310 should be kept as part of the existing green open space, as is stipulated by the Heritage indicators. The existing hedge to the south of the R310 is an important landscaping element in terms of visually shielding the proposed new development. However it is proposed that a significant gap be created at the junction with the market square and central axis, to allow for a momentary window on to the high street, thus enticing travellers to deviate and enter the high street at any of its two entrance points. It is also important to abruptly end the hedge when that the iconic view towards the Boschendal manor house opens up, travelling from east to west. The area within the mentioned view cone above should remain void of any landscaping that might impair the view and should rely on low, horizontal, uncluttered and simple, meadow planting.



Fig. 63 Village green Stanford, Overberg

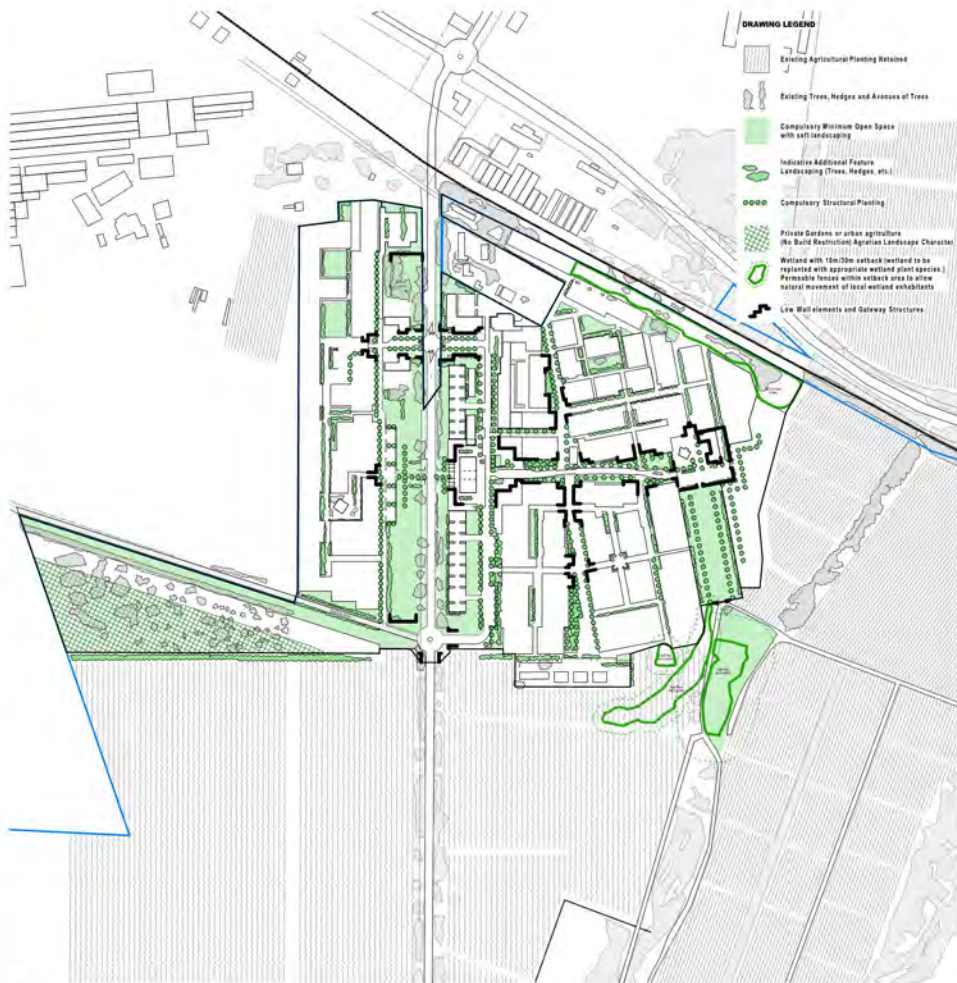


Fig. 64 Structural planting and green open space

A hedge should be planted along the village side of the existing farmworkers' cottages to provide a visual barrier from the manor house onto the new village. Vineyards should be planted up to a minimum of 5 metres from the existing farmworkers' cottages on the western edge.

A straight line of plane trees should be planted along the central avenue in order to reinforce the axis down to the main wharf at the bottom of the hill. The High street should also be flanked by an avenue of plane trees, echoing the linearity of the planting along the R310. Not only will this provide shade in a busy public space but also emphasise the importance of these two routes. The same species of tree will also be used as shade trees in the parking areas. Hedging should be included around the parking areas to mitigate the presence of cars and buses en-masse. The residential squares should be framed by trees in order to formalise and shade these outdoor public spaces.

Compulsory planting of vineyards as indicated, hard up against the village edge and the rehabilitation of wetlands by specialists is required.



Fig. 65 Braak at Stellenbosch as flexible open space (Brief, 2015)

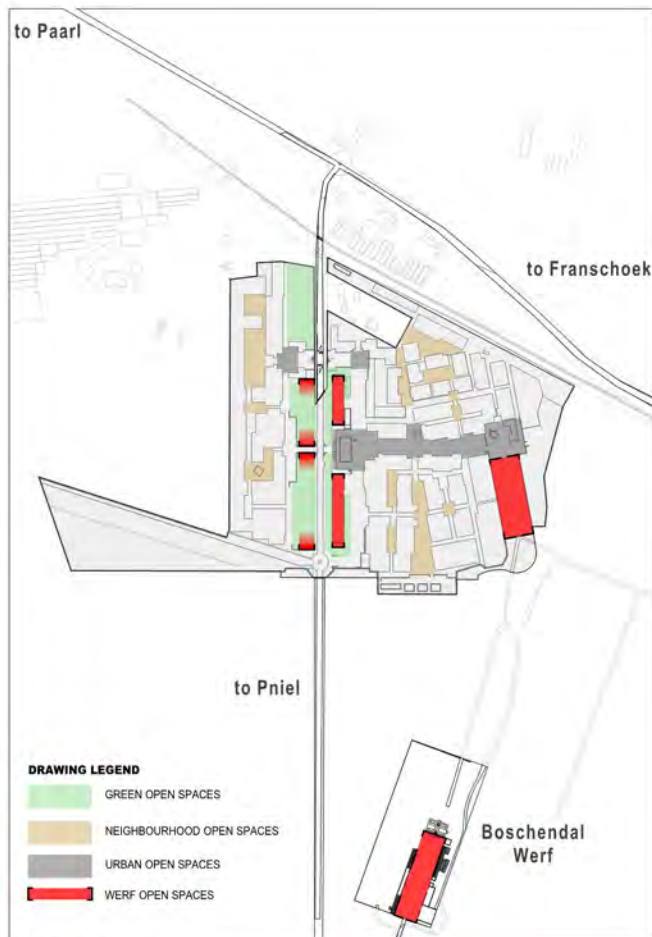


Fig. 66 Composite of open spaces

3.7.3 Surface water structure.

Storm water will be dispersed predominately by means of open surface treatment. The availability of stone on site will allow for the building of traditional Cape lei-voor systems. As water could be brought onto site, by means of dam overflow higher up on the farm, the idea of a functioning lei-voor system can be successfully created. The gravity fed system will flow year round and will not only cool the immediate environment in summer but will also contribute to the character of a rural, agrarian platteland village. Traversing these waterways means the construction of bridges, culverts and swales which in itself will provide the opportunity to deliver hard landscape architecture which will further re-inforce an agrarian character.



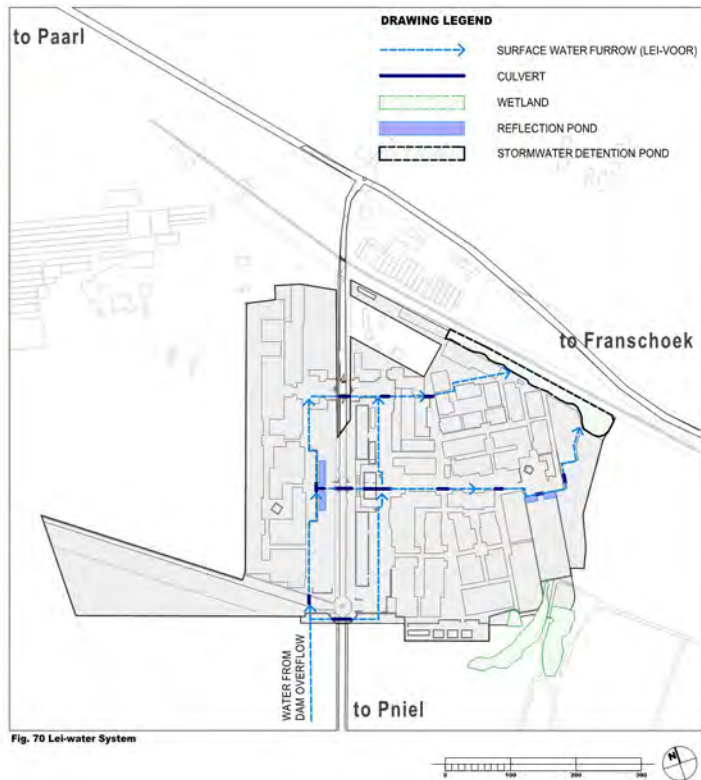
Fig. 67 Surface water channel at Groot Constantia (Briel, 2015)



Fig. 68 Lei-voor, Stellenbosch (Briel, 2015)



Fig. 69 Duck pond and bridge Groot Constantia (Briel, 2015)

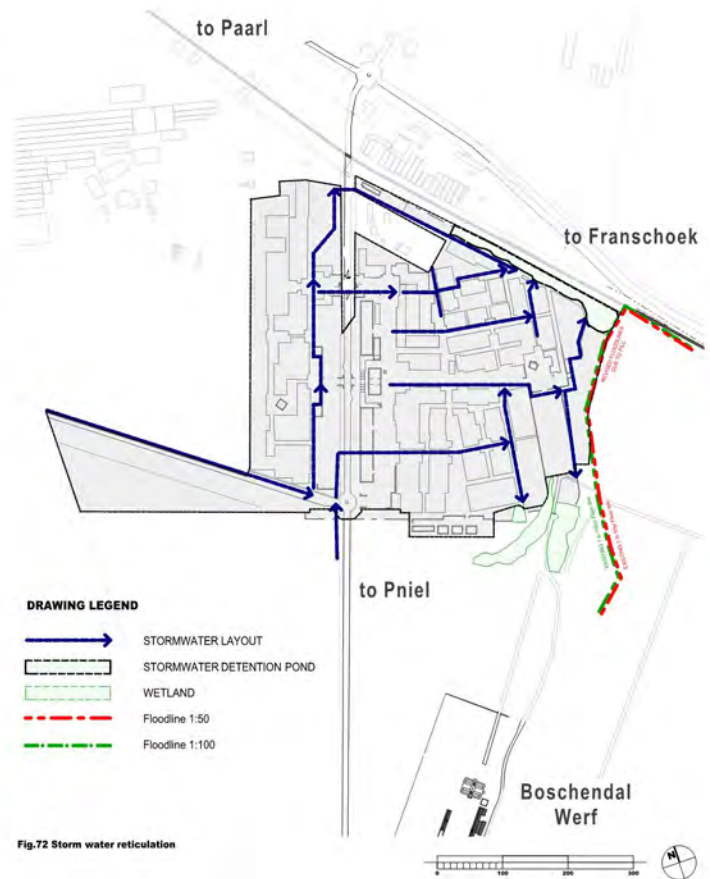


The storm water and lei-voor system will disperse into a natural green, permeable retention pond, situated along the north-eastern boundary of the site. As it stretches along the entire northern boundary it will thus create a green visual zone, which answers to the Heritage indicators in terms of visual mitigation from the R45.

The use of the lei-voor as edging also serves as a barrier to vehicles entering no go zones, without having to erect any vertical barriers or bollards. This further enhances the rural quality of the village, and controls traffic without having to populate the environment with too many signs, fences or visual barriers.



Fig. 71 Lei-voor, Prins Albert (Tony, 2014)



3.8 HEIGHT AND DENSITY.

3.6.a. Gradation of heights - The gradation of the development in terms of height is informed by the principle of hierarchy as well as visual mitigation from the Boschfontein weef and scenic routes. The building increase from one storey to three storeys as it recedes from the quiet edges of the development towards the bustling mixed use centre. Height restrictions are imposed as per the attached diagrams and tables. A gradation of heights and associated uses of buildings should be employed, with increased height and publicness of uses responding to higher degrees of access. No building should exceed 3 storeys in height, and all buildings in the "bread lightly" edge zones should be single storey. Public and institutional or community facilities must occur in visually exposed and highly accessible locations. All of the above aspects have been well-integrated into the proposed village design. Heights transition from single storey around the village edges, to three storeys close to the central intersection point with the R310. Similarly, the more public and community/institutional facilities are all concentrated along the R310, where they are highly visually accessible to a broader population of people, as well as being highly accessible along the network of permanently open, public streets running parallel to the R310.



Fig. 73 Example of small town grid layout (Google Maps, 2015)



Fig. 74 Gradation and height variations

3.9. LAND USE

3.9.1 Amenities contributing to public good.

The site is dotted with civic and community oriented functions. The civic zone already contains a police station and clinic. Educational facilities like a crèche/ early child development/ aftercare centre as well as a community market will be provided in close proximity to the civic zone, where it provides easy access to surrounding communities. These amenities are relatively easily reached by means of an existing pedestrian and cycle path from Pniel. The concept of key services personnel housing, as was described in the introduction to this chapter and is an important component in terms of delivering public good and these will also be located within the high street zone.



Fig. 75 Amenities contributing to Public good



3.10 PERIMETER FENCING.

The southern portion is fully fenced along the R310 as well as the railway side with a high quality palisade fence. The internal farm fencing, bordering the proposed village consists of typical farm wire mesh fencing. The northern-western precinct is fenced along the common boundary with Rhodes Food Group by means of a wall and with wire mesh along the remaining edges. It is recommended that these fences can remain. However it has to be interrupted with openings along the R310 which corresponds with the openings in the existing hakia hedge. Thus the hedge and fence functions as a homogenous element (see fig. 77). It is recommended that any other fencing required should be a combination of palisade and hedge as per the existing palisade fence colour.



Fig. 76 Example of intergrated fence and hedge (Babylonstoren) (Briel, 2015)

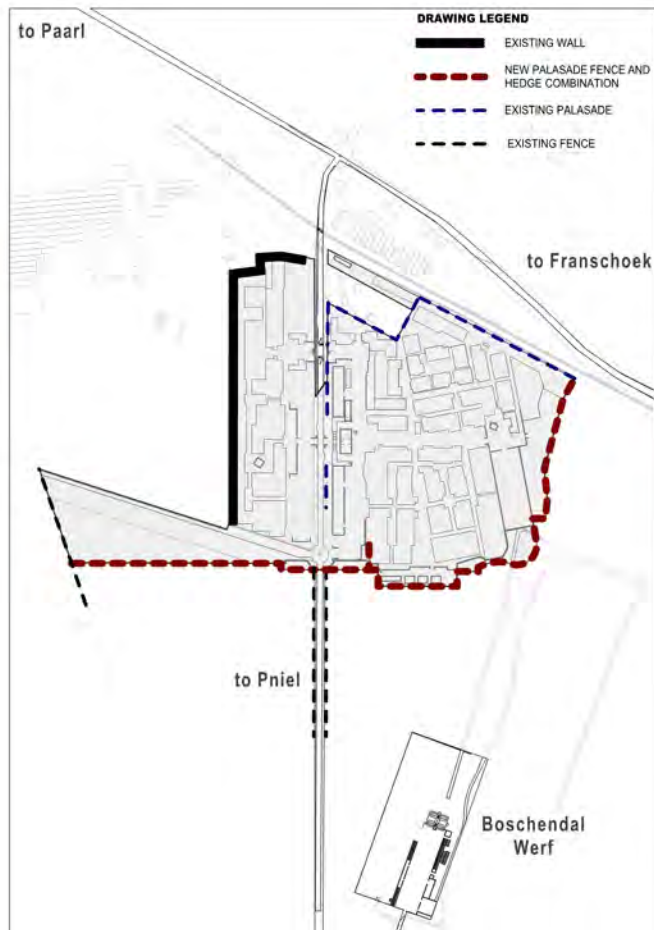


Fig. 77 Proposed fences

3.11 OVERALL VILLAGE CONCEPT

The Boschendal village is a portion of the overall larger "Groot Drakenstein Development Node". For the full spatial planning analysis refer to the Planning Motivation Report prepared by @Planning.

The development concept incorporates the following features:

- Scenic route quality of the R310 which is reinforced in the node by significant open space provision along the R310;
- Retaining the dominance of the rural landscape and providing mixed use development which will contribute towards the development of the Groot Drakenstein Node, which is a larger area development node than just the Boschendal Village on its own;
- Developing a village high street which is parallel to the R310 and which provides for the economic heart of the village where farmers markets and more traditional shops and restaurants will contribute towards a unique village experience;
- A central avenue axis off the village street which provides visual connection to the residential areas and the agricultural landscape beyond;
- A variety of residential options which include low density, medium density and high density development proposals, which will also serve a variety of income groups;
- Existing civic activities (police station and clinic) are to be strengthened with other community facilities (taxi stops, possible pre-school and other afterschool facilities) located in the vicinity thereof;
- Gradation of residential densities from most dense at the centre to least dense on the periphery;
- Edge making - ensuring strong structural edges where the village interfaces with agriculture to ensure future urban sprawl is contained;
- Areas of high public access located within the centre of the village graduating to areas of greater privacy in residential neighbourhoods located further away from the high street;
- Ensuring visual and pedestrian connections with the historical Boschendal Manor House and Werf;
- Creating gateway spaces and landmark buildings which will ensure an architectural language which is congruent with the historical context of the site.

Control: The Boschendal Village will be developed generally in accordance with the overall village concept illustrated in Figure 78.

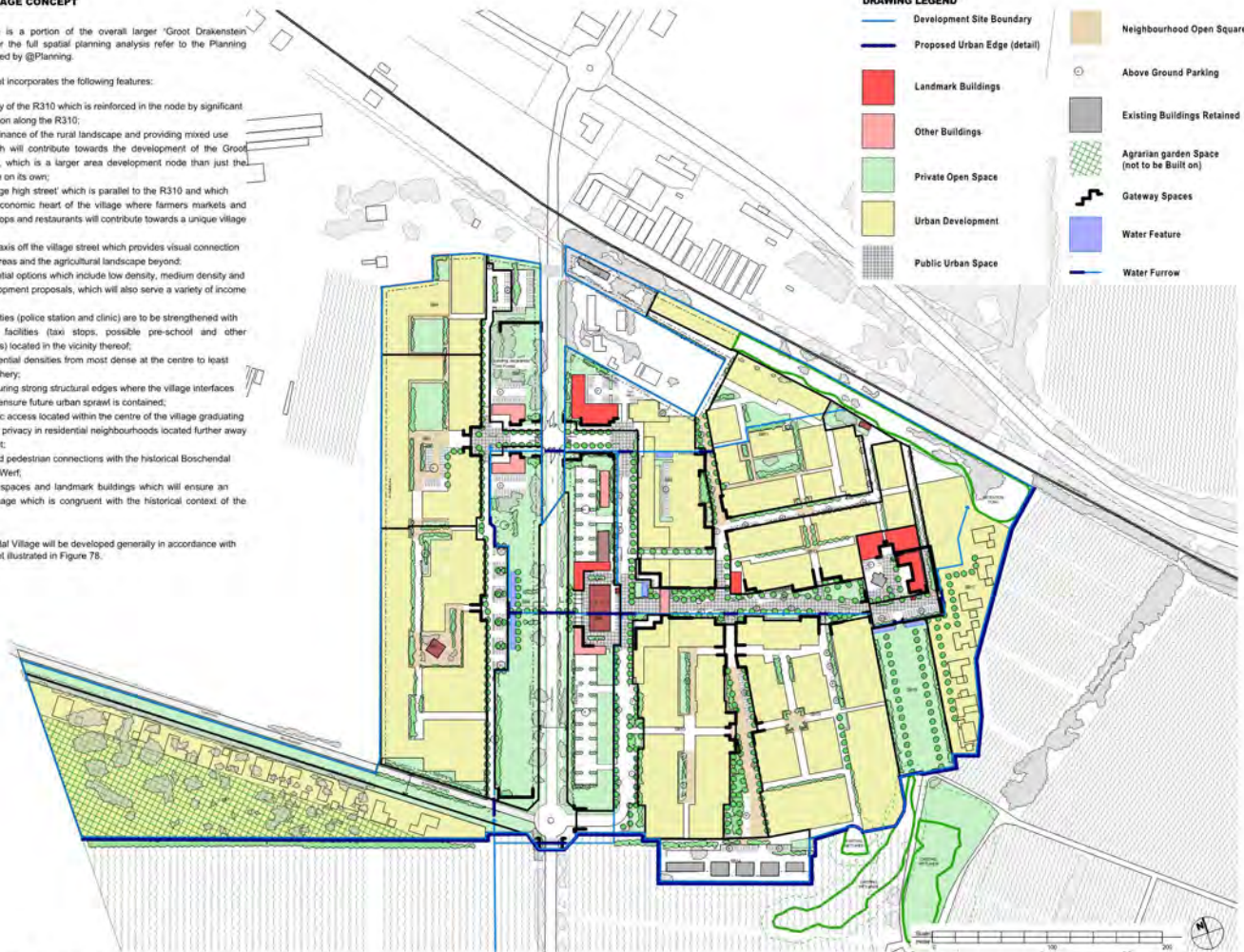


Fig. 78. Overall Village Development Concept | Scale 1:3000 @A3

3.12 INDICATIVE SUBDIVISION AND BUILDING FOOTPRINT DRAWING

The Subdivision Plan which will accompany the planning application currently under consideration shows the subdivision of the village footprint off the current farm portions. Furthermore, the Subdivision Plan creates the public road portion for the R310, the village high street, the central avenue and the private open spaces as main structuring elements. (refer to the Subdivision Plan in Figure 79)

Whilst the zoning has been allocated to land parcels where no further subdivision is anticipated, the superblocks where further subdivision is anticipated are to be rezoned to Subdivisional Area in order to provide for its further future subdivision and subsequent allocation of zoning.

The indicative future subdivision of the superblocks, illustrating the gradation of grain and density is indicated in figure 79 and 80

The purpose of the indicative subdivision and building footprint drawing is to indicate the ultimate development intent insofar as the future subdivision of the village is concerned. This should be read with the Subdivision Plan.

Controls: The future subdivision of the superblocks shall be generally in accordance with Figures 79 and Figure 80 insofar as land use mix, density grain and subdivision intent is concerned. Any substantive deviation from the intent illustrated in figure 80 will require approval from the competent authorities.

A subdivision plan for each superblock will be submitted which will indicate the intended internal subdivisions, zoning and land use of each land parcel.

The external building lines as indicated shall not be exceeded except with the approval of the relevant local authority.



Fig. 79 Subdivision Diagram | scale 1:3000 @ A3



Fig. 80 Subdivision with indicative building footprint intent | scale 1:3000 @ A3

3.13 PROPOSED LAND USE CONCEPT

The land use mix on the property is illustrated in the land use table (Fig 6.1) and furthermore illustrated on the land use concept plan in Figure 81.

The core of the development will comprise mixed use development which includes a farmers market, shops, and restaurants, places of entertainment, offices and other related businesses as well as apartments on the upper levels.

The mixed use core of the village will be surrounded with residential development of varying densities and unit sizes, ranging from 2 storey residential buildings near the core which contain rowdium to high density flats, double storeyed town & row houses to one and two storey free standing residential units. In line with provincial guidelines, the highest densities of the village will be located at the centre of the village, whilst the lower densities will be located around the edges.

Maximum 475 residential units are proposed in this development of which at least 10% (Maximum 47 units) of the accommodation will be housing for key workers such as teachers, policemen, nurses etc. in the form of a rental housing scheme owned by Boschendal (Pty) Ltd.)

A hotel or guest accommodation of approximately 100 rooms is also proposed.

Controls: The final land use mix in the development shall be generally in accordance with the land uses illustrated in Figure 81 and table 6.1. The maximum development extent which may not be exceeded is summarised as follows:

- Residential: 475 dwelling units
- General Business GLA: 14 500m²
- Hotel/Guest accommodation: 100 bedrooms
- Community facilities GLA: 3000 m² GLA

LAND USES:

- RESIDENTIAL, LOW DENSITY (Free standing)
- RESIDENTIAL, GARDENS ONLY (NO STRUCTURE)
- RESIDENTIAL, LOW DENSITY (Town houses)
- RESIDENTIAL, MEDIUM DENSITY (Free standing)
- RESIDENTIAL, HIGH DENSITY (Flats)
- RESIDENTIAL (HOSPITALITY)
- COTTAGES (WITH CONSENT FOR GUEST ACCOMMODATION)
- BUSINESS, LOW DENSITY (MAX. 1 STOREY)
- BUSINESS, MEDIUM DENSITY (MAX. 2 STOREY)
- BUSINESS, HIGH DENSITY (MAX. 3 STOREY)
- BUSINESS, MARKET
- COVE BUILDINGS
- CLINIC, EARLY CHILD DEVELOPMENT + AFTER-SCHOOL
- UPLIFT REFUGE
- OPEN SPACE
- HERBICIDE PLURAL
- RIGHTS PUBLIC
- RIGHTS PRIVATE 1
- EXISTING FARM TRACKS INDICATED
- 50 yd FLOODLINE
- 100 yd FLOODLINE
- WETLAND + BUFFER ZONE
- RETENTION POND
- DEVELOPMENT SITE BOUNDARY

Community facilities, including a clinic, early child development and after-school centre, maintenance and recycling facilities are also proposed. It is proposed that these facilities is clustered around and in close proximity to the existing police station. Possible locations for these facilities are indicated with a star symbol on plan.

Restricted maximum retail of 500m² floor area per franchise as principle to establish a balanced competitive market between local and national retailers. Preferable average size of retailers $\leq 150m^2$

The final land use mix for each superblock will be indicated on the subdivision plan for that superblock.

EXISTING POOL CAPTOP

EXISTING POOL CAPTOP

NEW PLANTING

NEW PLANTING

Fig. 6.1 LAND USE TABLE

LAND USE	DENSITY	UNITS
Free standing (single) houses, town houses	Residential (Low Density)	24 Dwelling Units
Free houses, single story	Residential (Low Density)	50 Dwelling Units
Row houses & duplexes (double stories)	Residential (Medium Density)	100 Dwelling Units
Apartment 4 or more, Three storey	Residential (High Density)	200 Dwelling Units
Free studios/apartments	Residential (High Density)	10% or max of 47 units
Residential Total		475 Dwelling units
Hotel/Guest accommodation/Club cottages	100 Bedrooms	
Retail, single story	Business (Low density)	Retail: 1 000m ² GLA
Retail on ground story	Business (Medium density)	Retail: 300m ² GLA
General Business (Flats on 1 st floor)	Business (High density)	Shop Business: 3 000m ² GLA
Retail on ground story	Business (High density)	Retail: 1 000m ² GLA
General Business (Flats on 1 st floor)	Business (High density)	Retail: 6 000m ² GLA
Retail, single story	Business (High density)	Retail: 1 000m ² GLA
Business Total		Retail GLA: 5 000m² GLA General Business GLA: 9 300m² GLA GRAND TOTAL BUSINESS: 14 300m² GLA
Club (to be developed)		2-3 Dwelling units in Business GLA
Early childhood development and after-school		400 m ² GLA
Club/Community Buildings (small purpose spaces which may be used as a place of worship)		500m ² GLA
Home access utility (Pharmacy and distribution)		1 000m ² GLA

Fig. 81 Proposed land use | scale 1:3000 @ A3

3.14 PROPOSED OPEN SPACE NETWORK

The open space network is informed by the following elements:

- The scenic route along the R310, including the current hedges and trees along the scenic route, and the view cones towards the manor house from the R310;
- The wetlands located on the edges of the site;
- The gradation of most public places to most private places;
- Structural planting required for edge-making and place making.

In Figure 82 the proposed open space network is illustrated, showing all compulsory elements which have to be implemented by the developer as each phase is developed. The detailed landscape plans for each precinct shall be generally in accordance with Figure 82.

Controls: A landscape plan shall be prepared for each superblock by a registered landscape architect and submitted at the same time as the submission of services plans for a specific precinct. These plans must be approved by the municipality prior to the commencement of construction of the phase. The plan shall at the very least indicate the following:

- all existing trees and hedges to be retained;
- the compulsory new planting for that precinct;
- identify at which stage the landscaping in the precinct must be completed (prior to transfer or occupation);
- compulsory structural planting shall be undertaken for each phase by the developer prior to the sale/registration of any land units or alternatively, in the event that the developer retains ownership and constructs the buildings, then prior to the occupation of those buildings;
- A 'no-build servitude' shall be registered over the private gardens where no buildings or structures are permitted.

DRAWING LEGEND

- Existing Agricultural Planting Retained
- Existing Trees, Hedges and Avenues of Trees
- Compulsory Minimum Open Space with soft landscaping
- Indicative Additional Feature Landscaping (Trees, Hedges, etc.)
- Compulsory Structural Planting
- Private Gardens or urban agriculture (No Build Restriction) Agrarian Landscape Character
- Wetland with 10m/30m setback (wetland to be replanted with appropriate wetland plant species.) Permeable fences within setback area to allow natural movement of local wetland inhabitants
- Low Wall elements and Gateway Structures

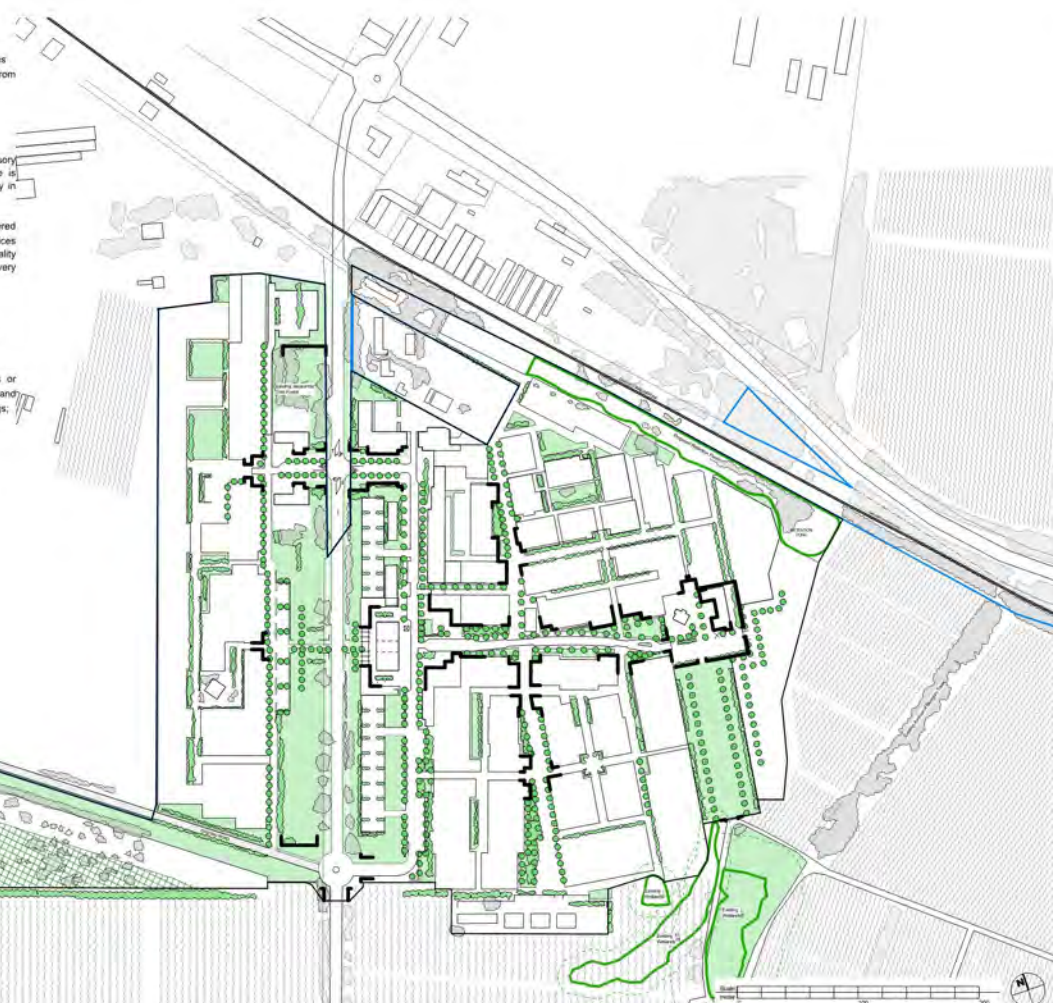


Fig. 82 Proposed Open Space Network | scale 1:3000 @ A3

3.15 ROAD AND MOVEMENT NETWORK

The main public movement network consists of provincial roads which are designated as public roads in terms of the applicable legislation. These are the R45, R310 and minor road 5230. Two traffic circles are proposed, one at the intersection of the R45/R310 and one at the R310 and minor road 5230. A new full intersection is proposed halfway between these two circles which will provide further access to the development.

The development proposal furthermore consists of a network of roads which, although officially designated as private roads, will have different levels of public access, ranging from the most publicly accessible roads of the high street to the most private roads internal to the residential areas. The high street is in effect a service road running parallel to the R310 and which will be the activity street of the development.






The internal road hierarchy is illustrated in Figure 83 clearly illustrates the intended road network.

The pedestrian movement network on the site is also illustrated on Figure 83. This establishes the principle of controlled public access across the site to provide pedestrian circulation towards the Manor House and West.

Controls: The final development will be generally in accordance with the movement network as illustrated in figure 83.

Full access control may only be implemented on the indicative internal network of private roads. The rules of the owners association will ensure full public access to the high street and controlled public access to the central avenue during business hours, subject to the rules adopted by the owners association. The public road portion of the R310 will be subdivided and ceded to the relevant authority.

DRAWING LEGEND

-  Existing Public Roads
-  Main Structuring Private Roads With High Degree of Public Access (servitude right of way)
-  Indicative Network of Internal Private Roads
-  Proposed New Traffic Circle
-  Proposed New Pedestrian Crossing
-  Existing Public Pedestrian Routes
-  Main Private Non Motorised and Pedestrian Routes with Daytime Public Access
-  Development Site Boundary
-  Gateway Spaces

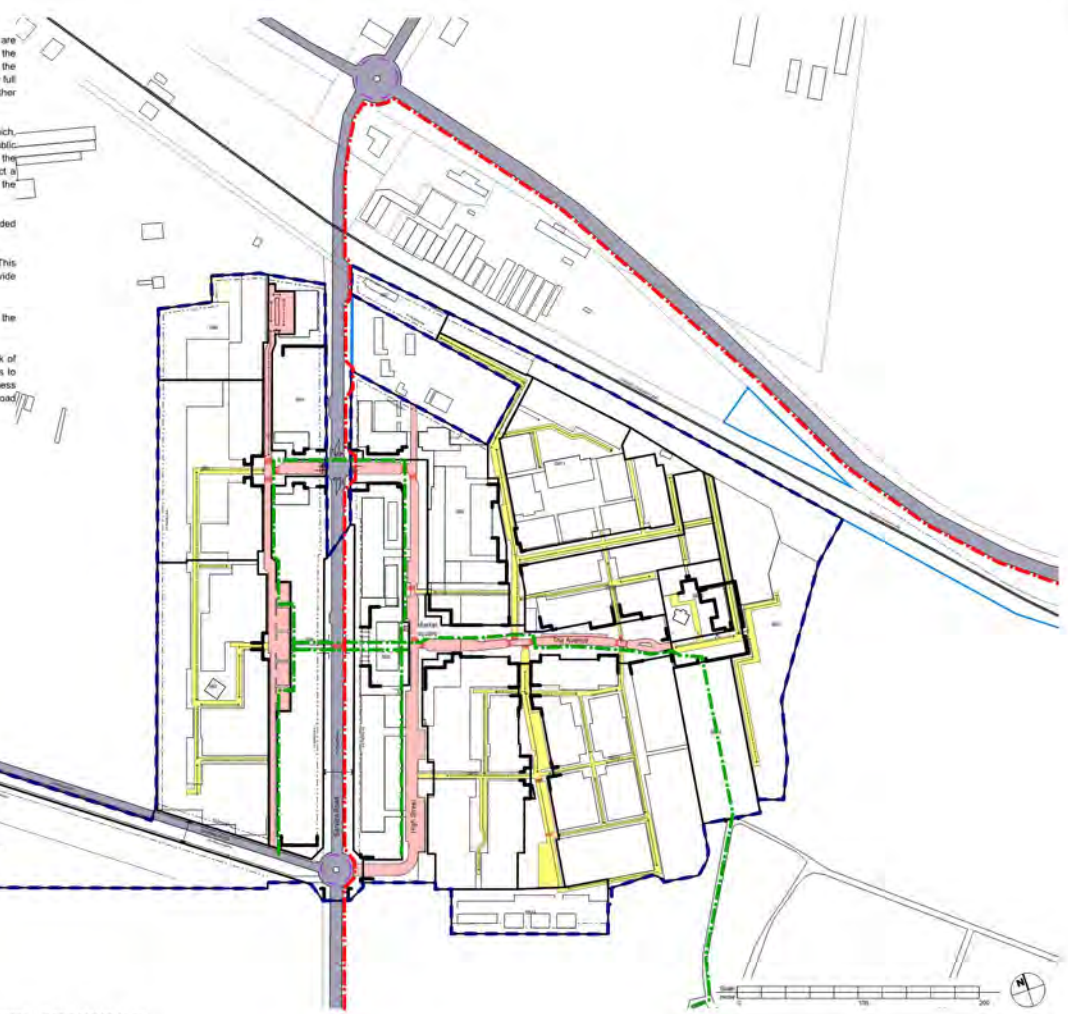


Fig. 83 Proposed Road and Movement Network | scale 1:3000 @ A3

3.16 PARKING PLAN

Parking will be provided throughout the development as indicated in table 9.1 and on Figure 84:

Fig. 9.1 Parking Table:

Land Use	Ratio Bays	Total bays
Dwelling Houses (83):	1/unit	83
Row Houses (135):	2/unit	270
Row Houses visitors:	0.25/unit	34
Flats (large 210):	2/unit	420
Flats visitors:	0.25/unit	53
Flats (afford 22):	1/unit	22
Flats visitors:	0.25/unit	6
Business GLA (14 500m ²):	4/100m ²	580
Hotel (160 rooms):	0.7/room	70
Clinic (2 consulting rooms):	3/consulting room	6
Civic/club house (100 seats):	1/8 seats	13

The parking provided will exceed the requirements of the approved zoning scheme. The parking will be provided within the private road reserves as on-street parking, within dedicated parking areas, on individual properties themselves, and within parking basements which will be constructed as super-basements which may serve a number of buildings.

Controls: Notwithstanding the parking requirements in the applicable zoning scheme, parking will be provided in accordance with the ratios as indicated in table 9.1 above and generally in accordance with Figure 84.

The developer shall submit a parking plan for each superblock which clearly sets out how each subdivided land portion will either share in the communal parking and/or provide its own parking on site.

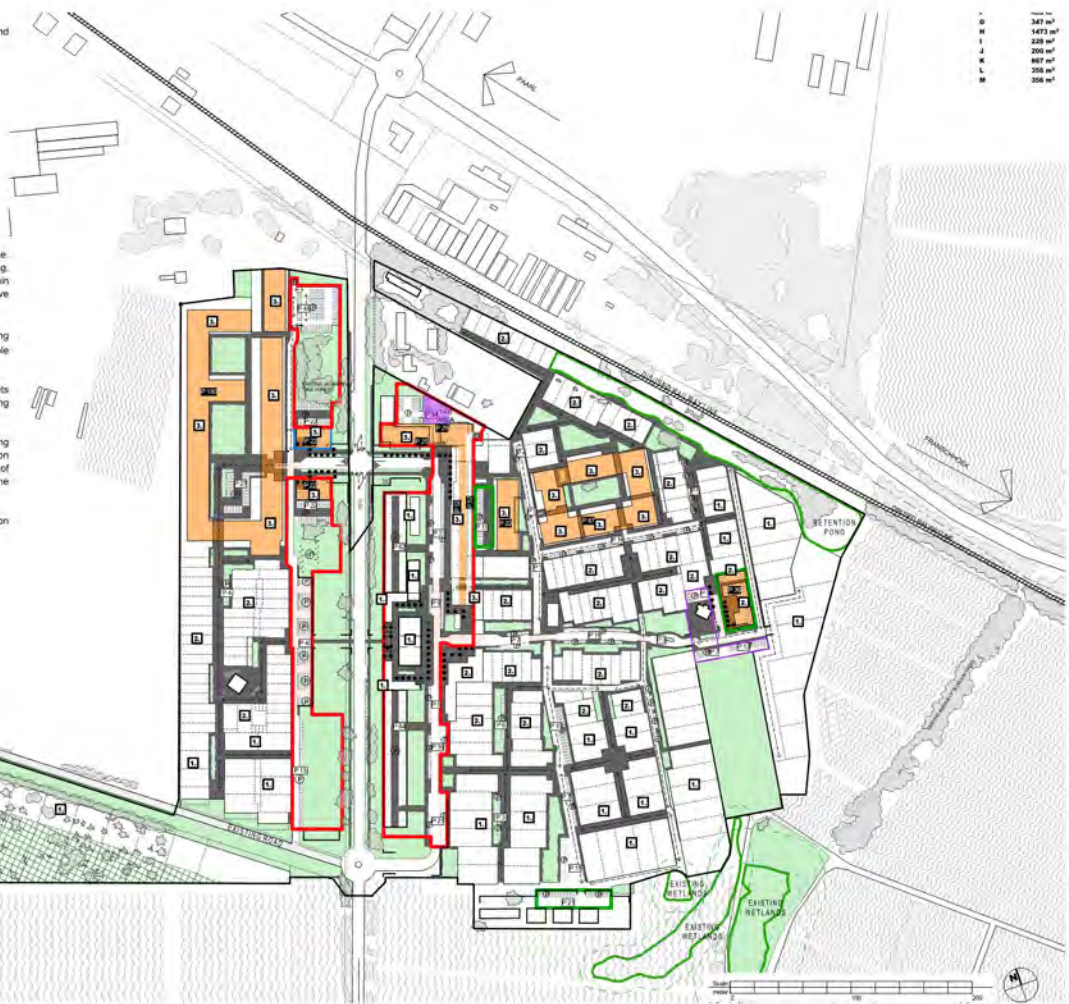
The developer shall construct the communal parking areas and on-street parking bays for each superblock as is indicated in Figure 84 prior to the subdivision clearance or occupation (whichever comes first) of that particular precinct. Areas of open green space could be utilised as informal overflow parking space should the need arise on special event days.

Each dwelling house and row house shall provide parking for at least 2 vehicles on the property.

DRAWING LEGEND

-  Above Ground Parking
-  Indicative informal coach parking area
-  Below Ground Parking
-  Indicative informal parking area
-  Above ground parking unit count
-  Below ground parking unit count
-  Proposed Taxi holding area
-  Parking allocation toward Clinic = 80 Bays
-  Parking allocation toward Civic/Club house = 13 Bays
-  Parking allocation toward Hotel = 76 Bays
-  Parking allocation toward Business = 879 Bays

Fig. 84 Proposed Parking Layout | scale 1:3000 @ A3



...	347 m ²
...	1473 m ²
...	228 m ²
...	200 m ²
...	887 m ²
...	358 m ²
...	358 m ²

3.17 HEIGHT CONTROLS

The maximum height of buildings is indicated in Figure 85. The concept is to allow a gradation of heights from the most urban dense development at the heart of the village, less dense and lower buildings at the edges.

Controls: Buildings shall not exceed the number of storeys as indicated on the attached Figure 85. Notwithstanding this restriction, where pitched roofs are permitted by the urban design guidelines, an additional storey may be provided within the pitched roof portion of the building, provided that the urban design and architectural guidelines are adhered to.

DRAWING LEGEND

- 1 Storey
- 2 Storey
- 3 Storey
- Tower

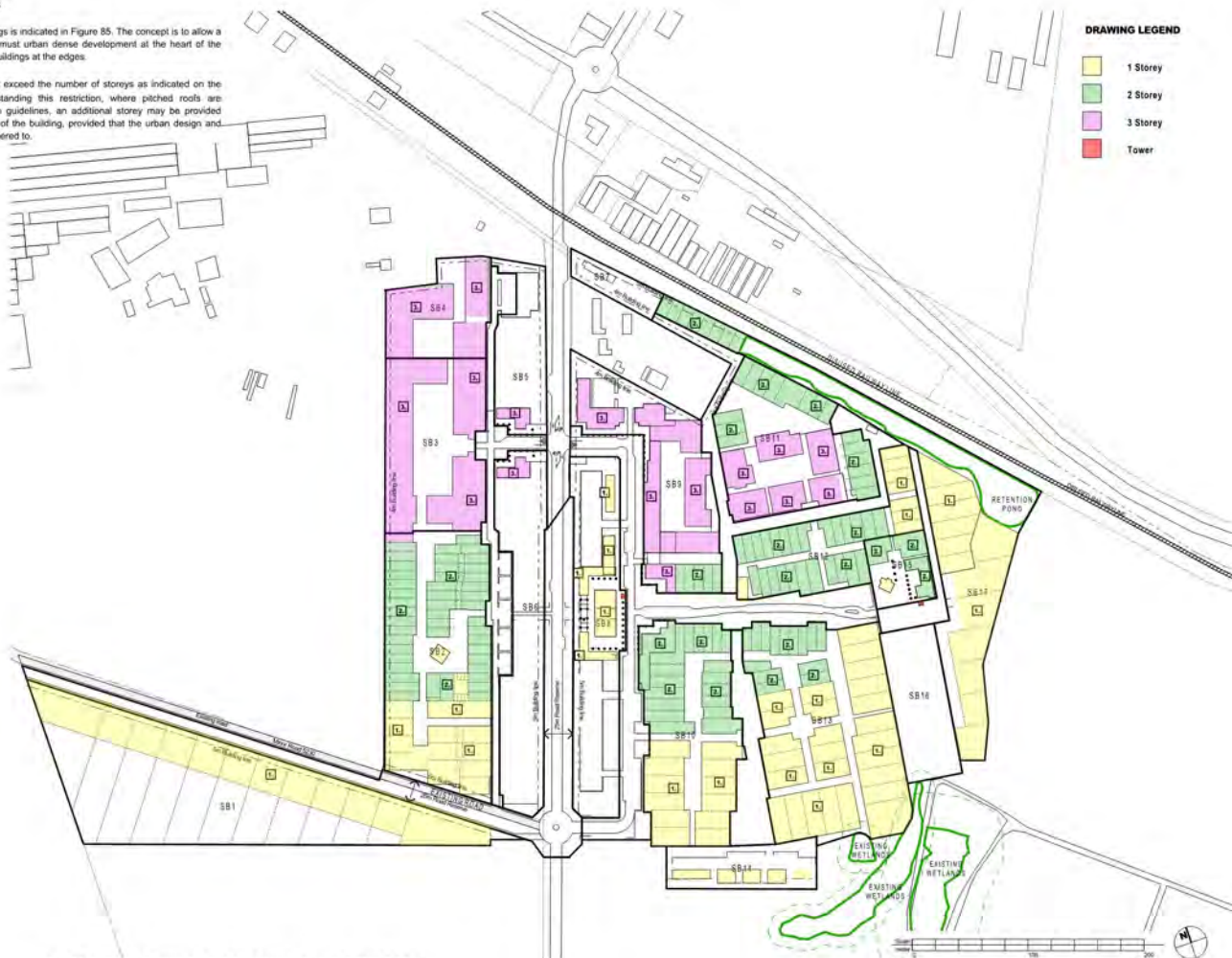


Fig. 85 Maximum Permissible Building Heights | scale 1:3000 @ A3

L	1477 m ²	3
M	1477 m ²	3
N	288 m ²	3
O	288 m ²	3
P	887 m ²	3
Q	358 m ²	3
R	358 m ²	3

DRAWING LEGEND

- DEVELOPMENT SITE BOUNDARY
- LANDMARK BUILDING
- PAVILION STYLE - LOWER ORDER BUILDING
- COMPULSORY COLONNADE
- PUBLIC PARKING
- COMPULSORY WERF WALL & GATEWAY ELEMENT
- CULVERT & GATEWAY ELEMENT
- COMPULSORY BUILT TO LINE
- COMPULSORY BUILT TO LINE FOR MINIMUM 70% OF FACADE
- BUILDING LINES
- TOWER VERTICAL STRUCTURE
- VISUALLY PERMEABLE FENCE
- EXISTING PLANTS RETAINED
- STRUCTURAL PLANTING
- URBAN OPEN SPACE
- NEIGHBOURHOOD OPEN SQUARE
- GREEN OPEN SPACE
- PRIVATE GARDENS OR URBAN AGRICULTURE
No-build restriction servitude
- WETLAND/STORMWATER DETENTION
- WATER
- SURFACE WATER FURROW
- GATEWAY
- EXISTING BUILDING
- COMPULSORY PUBLIC STREET FRONTAGE
- PEDESTRIAN CROSSING
- ARTICULATED CORNER BUILDING
- MAXIMUM NO OF STOREYS
- INDICATIVE INTERNAL ROAD NETWORK
- URBAN EDGE

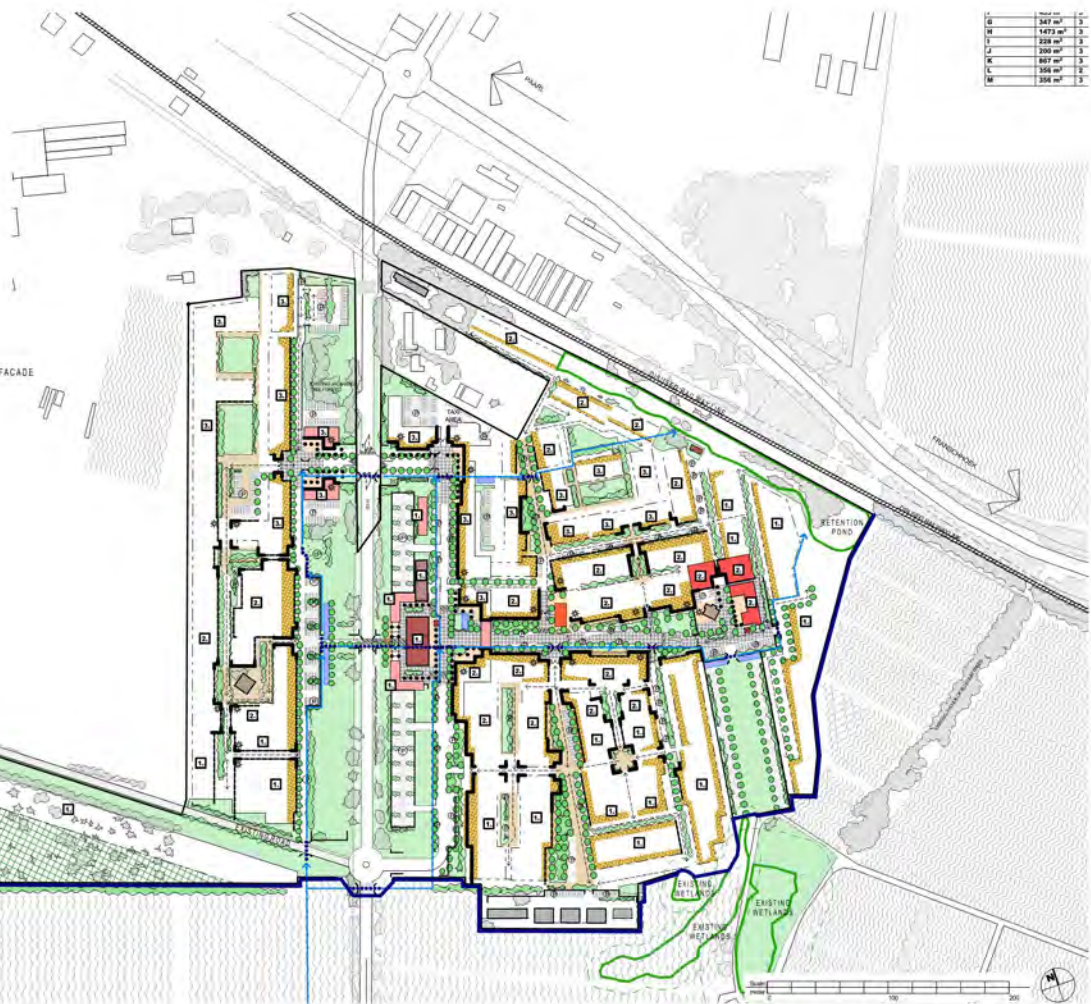


Fig. 86 Urban Design Framework and Controls | scale 1:3000 @ A3

3.18 COVERAGE DENSITY

The Proposed coverage density in relation to Plot area is illustrated by Fig 87.



Fig. 87 Figure Ground diagram illustrating grain and density

3.19 SITE DEVELOPMENT PLAN

The site development plan illustrated in Figure 88 is a composite plan illustrating the overall development intent for the Boschendal Village. It illustrates the public spaces, movement network, planting framework and position of buildings as envisaged for the development.

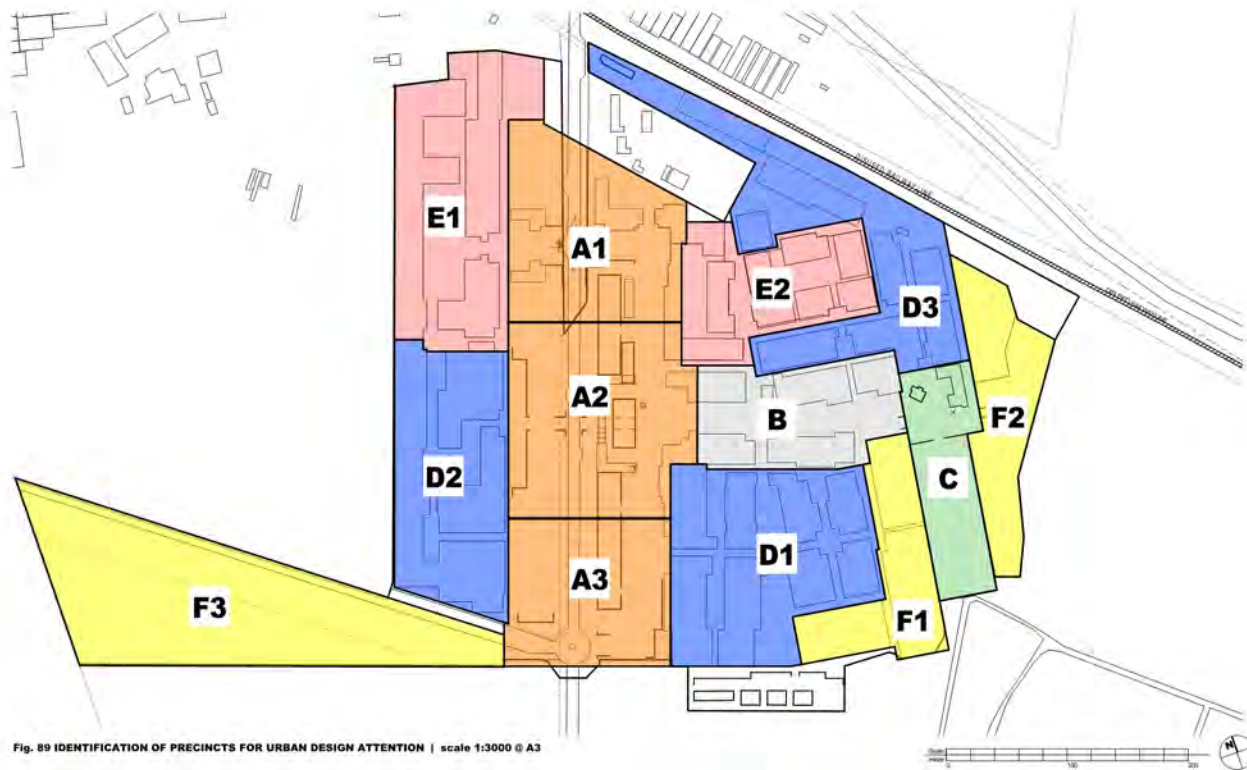


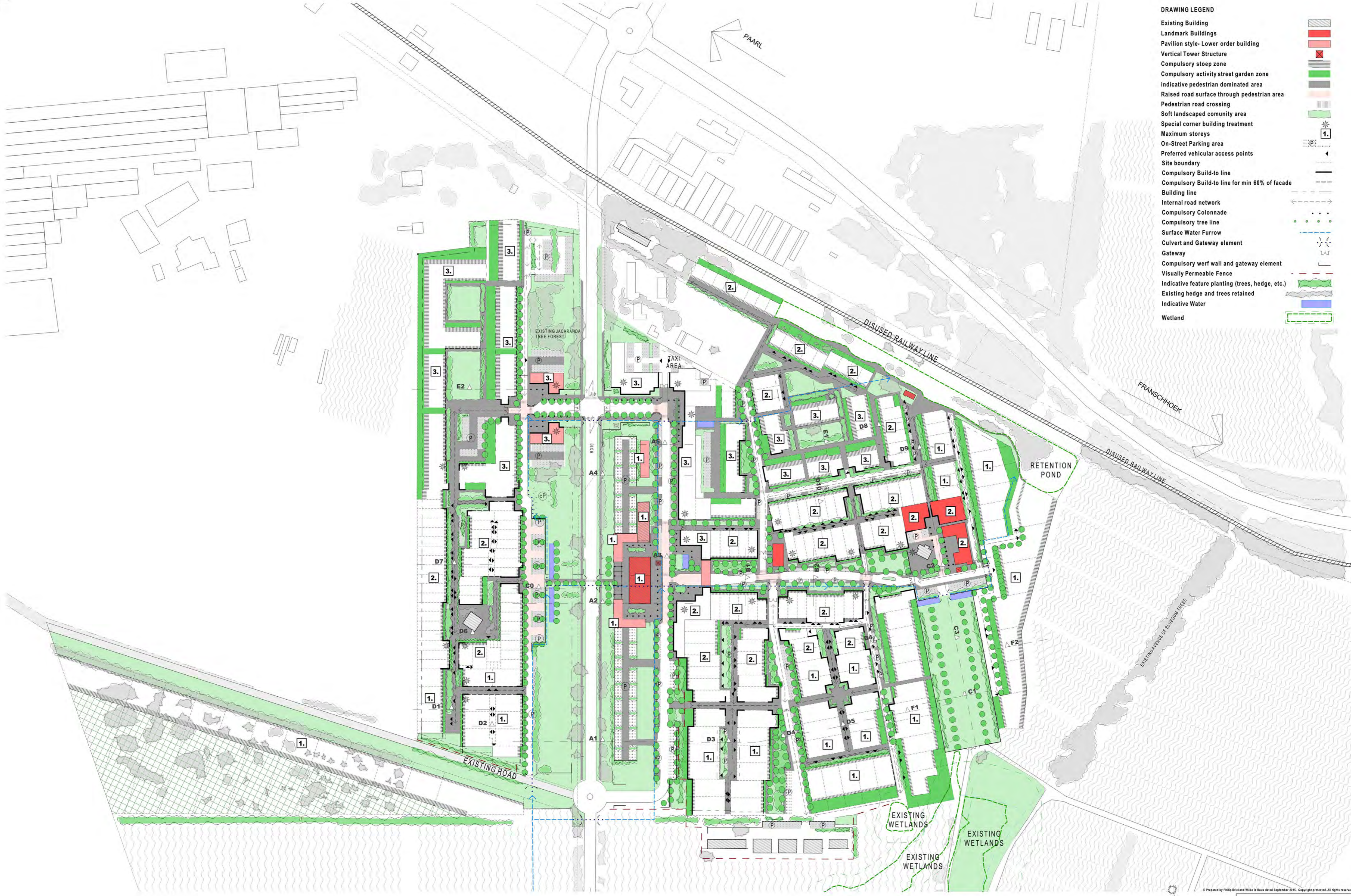
Fig. 88 Site Development Plan | scale 1:3000 @ A3

CHAPTER 4 . PRECINCT PLANS

4.1 IDENTIFICATION OF PRECINCTS FOR URBAN DESIGN ATTENTION

The overall village concept is subdivided into smaller precincts to enable the concept design to be developed in closer detail. Fig. 89 illustrates the location of the different precincts outlined in this chapter.

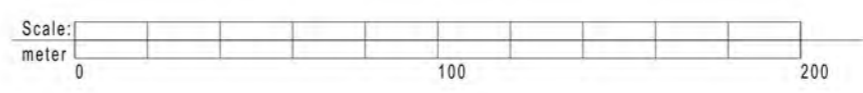




DRAWING LEGEND

- Existing Building
- Landmark Buildings
- Pavilion style- Lower order building
- Vertical Tower Structure
- Compulsory stoep zone
- Compulsory activity street garden zone
- indicative pedestrian dominated area
- Raised road surface through pedestrian area
- Pedestrian road crossing
- Soft landscaped community area
- Special corner building treatment
- Maximum storeys
- On-Street Parking area
- Preferred vehicular access points
- Site boundary
- Compulsory Build-to line
- Compulsory Build-to line for min 60% of facade
- Building line
- Internal road network
- Compulsory Colonnade
- Compulsory tree line
- Surface Water Furrow
- Culvert and Gateway element
- Gateway
- Compulsory werr wall and gateway element
- Visually Permeable Fence
- Indicative feature planting (trees, hedge, etc.)
- Existing hedge and trees retained
- Indicative Water
- Wetland

Fig. 90 Urban Design Precincts | scale 1:1000 @ A0

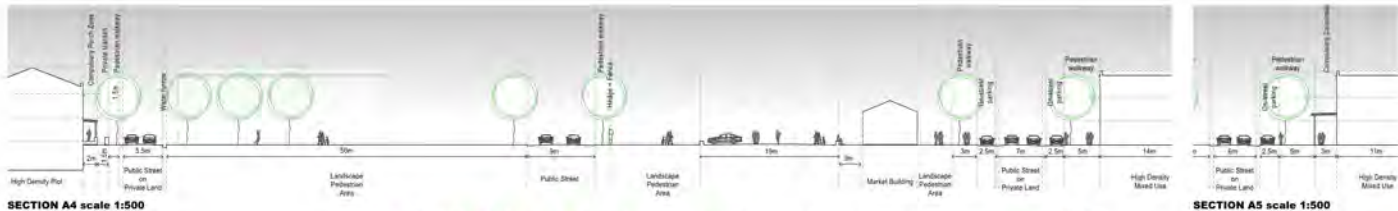


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CAPE TOWN.

PHILIP BRIEL

ARCHITECTURE - URBAN DESIGN



SECTION A4 scale 1:500

SECTION A5 scale 1:500

4.2 PRECINCT A

1. Intent and desired character

The R310 divides the precinct into two portions, abutted by green open space on either side.

By setting the village edges back from the R310, visual impact of the built environment, on the established scenic route is thus minimized.

The village High street and commercial centre is located towards the east of the R310. The western edge of precinct A1 is lined with mixed housing types.

In both instances the buildings forming the village boundary delivers an urban character, with active street frontages whilst retaining the core elements associated with a rural scenic route, namely greenness and openness.

2. Precinct No: A

- 3. Area: 6.8 ha
- 4. Land Use: Mixed Use Business + General Residential
- 5. Height: As Indicated
- 6. Coverage: Refer to Fig.87, pg41
- 7. Zoning Density: Refer to Fig.81, pg35

8. The role and performance expectation of the precinct:

- 8.1 To provide low, medium and high density retail, commercial and residential opportunities.
- 8.2 To establish the village core retail and commercial opportunities in support of residential opportunities at the village and in the surrounding communities.
- 8.2 Restricted maximum retail of 500m² floor area per franchise as principle to establish a balanced competitive market between local and national retailers. Preferable average size of retailers +150m².

9. Mandatory Performance Controls

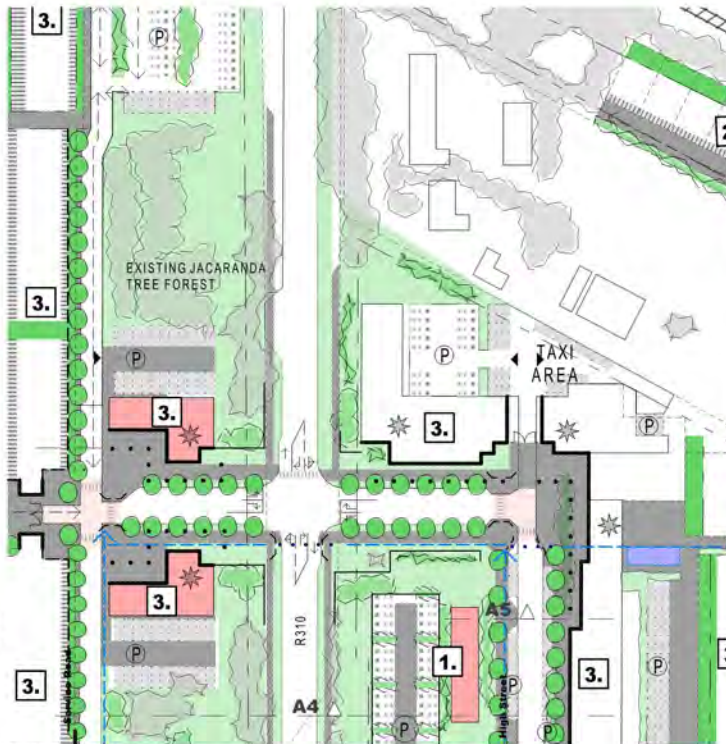
9.1 Building Lines:

Residential:

- Variable Build-to, Building and Set back lines as shown.
- 4m External building lines.
- Minimum 1.5m Set Back Landscape along street edge between building and boundary fence.
- Minimum 2m Porch zone along street facing edge to establish an open community character and surveillance zone.



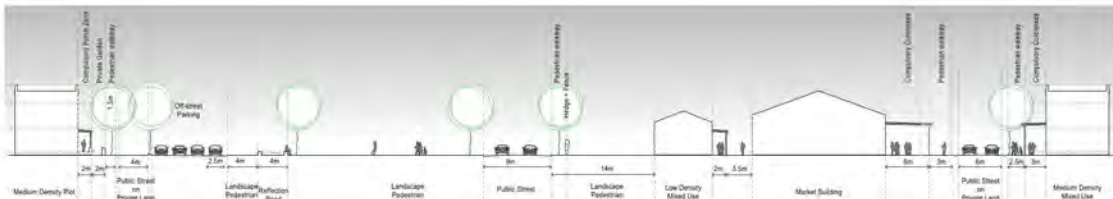
LOCATION PLAN
scale 1:10 000



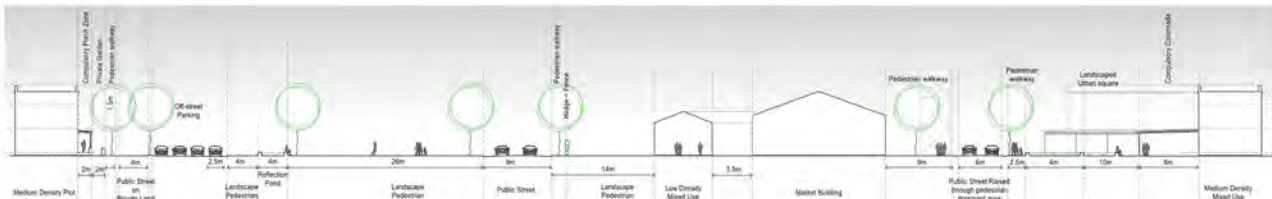
PRECINCT PLAN (portion A1)
scale 1:1000 (A3)

DRAWING LEGEND

Existing Building	
Landmark Buildings	
Pavilion style-Lower order building	
Vertical Tower Structure	
Compulsory stoop zone	
Compulsory activity street garden zone	
Indicative pedestrian dominated area	
Raised road surface through pedestrian area	
Pedestrian road crossing	
Soft landscaped community area	
Special corner building treatment	
Maximum storeys	
On-Street Parking area	
Preferred vehicular access points	
Site boundary	
Compulsory Build-to line	
Compulsory Build-to line for min 60% of facade	
Building line	
Internal road network	
Compulsory Colonnade	
Compulsory tree line	
Surface Water Furrow	
Culvert and Gateway element	
Gateway	
Compulsory werr wall and gateway element	
Visually Permeable Fence	
Indicative feature planting (trees, hedge, etc.)	
Existing hedge and trees retained	
Indicative Water	
Wetland	
Retention pond	



SECTION A2 scale 1:500



SECTION A3 scale 1:500

9.1 Building Lines: (Cont.)

- Compulsory build-to lines to define various pinch points along access routes into the precinct, thereby strengthening the perimeter edge of the precincts.

Business:

- Build-to lines to guide the shape and permeability of the urban edge.
- Compulsory build-to lines to define various pinch points along access routes into the precinct, thereby strengthening the perimeter edge of the precincts.

9.2 Access:

- Two intersections branching off the R310 as shown.

9.3 Parking:

- Off-Street parking is available at various allocated parking areas as shown.
- On-Street parking is an important element of high street design, as it offers convenience as well as creating a buffer for activity on the sidewalk and adjoining properties.



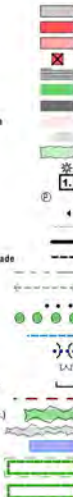
LOCATION PLAN
scale 1:10 000



PRECINCT PLAN (portion A2)
scale 1:1000 @ A3

DRAWING LEGEND

- Existing Building
- Landmark Buildings
- Pavilion style- Lower order building
- Vertical Tower Structure
- Compulsory steep zone
- Compulsory activity street garden zone
- Indicative pedestrian dominated area
- Raised road surface through pedestrian area
- Pedestrian road crossing
- Soft landscaped community area
- Special corner building treatment
- Maximum storeys
- On-Street Parking area
- Preferred vehicular access points
- Site boundary
- Compulsory Build-to line
- Compulsory Build-to line for min 60% of facade
- Building line
- Internal road network
- Compulsory Colonnade
- Compulsory tree line
- Surface Water Furrow
- Culvert and Gateway element
- Gateway
- Compulsory weir wall and gateway element
- Visually Permeable Fence
- Indicative feature planting (trees, hedges, etc.)
- Existing hedge and trees retained
- Indicative Water
- Wetland
- Retention pond





SECTION A1 scale 1:500

9.3 Parking: (cont.)

Parking is separated into small manageable clusters throughout the area as a strategy to minimize the visual impact on the natural landscape. The use of parking werfs, edged by low walls and hedges is allocated where en-masse parking is required.

9.4 Special features:

The high street will contain pedestrian-oriented edges, blending together two seemingly incompatible characteristics into a highly mobile, yet walkable thoroughfare. The inclusion of on-street parking, bicycle travel, and wide landscaped pedestrian areas will complement the mixed-use character of the high street. The main square should be of a different surface material to encourage non-motorised travel in that area as it is perceived as a busy, lively public space, blurring the lines between non-motorised and motorised dominance. The road surface to be no wider than 7metres.

Further traffic calming interventions to compliment driver awareness and the making of a pedestrian dominant space:

- Narrow road sections where pedestrian activity increase as incentive to drivers to slow down, and be more aware of their surroundings.
- Strategic location of pedestrian crossings to compliment traffic calming interventions.
- Different surface texture of the road surface where pedestrian activity is encouraged.
- Raised road surface for pedestrian dominant areas.

The jacaranda forest to the north west of the R310 should be kept as part of the existing green open space, as is stipulated by the Heritage indicators. The existing hedge to the east of the R310 is an important landscaping element in terms of visually shielding the proposed new development. However it is proposed that a significant gap be created at the junction with the market square and central axis, to allow for a momentary window on to the high street, thus enticing travellers to deviate and enter the high street at any of its two entrance points. It is also important to abruptly end the hedge when that the iconic view towards the Boschendal manor house opens up, travelling from north to south.



LOCATION PLAN scale 1:10 000



DRAWING LEGEND

- Existing Building
- Landmark Buildings
- Pavilion style- Lower order building
- Vertical Tower Structure
- Compulsory steep zone
- Compulsory activity street garden zone
- indicative pedestrian dominated area
- Raised road surface through pedestrian area
- Pedestrian road crossing
- Soft landscaped community area
- Special corner building treatment
- Maximum storeys
- On-Street Parking area
- Preferred vehicular access points
- Site boundary
- Compulsory Build-to line
- Compulsory Build-to line for min 60% of facade
- Building line
- Internal road network
- Compulsory Colonnade
- Compulsory tree line
- Surface Water Furrow
- Culvert and Gateway element
- Gateway
- Compulsory werf wall and gateway element
- Visually Permeable Fence
- Indicative feature planting (trees, hedge, etc.)
- Existing hedge and trees retained
- Indicative Water
- Wetland
- Retention pond

4.3 PRECINCT B

1. Precinct intent and desired character

The precinct forms the main route for vehicular access into the village portion located east of the R310. In addition multiple street liner buildings will open up onto the central avenue and are therefore important to protect pedestrian dominance in this area.

The precinct is characterised as a central avenue that would be perceived more as a longitudinal open space rather than a thoroughfare. Its character is derived from the inclusion of on-street parking, bicycle travel, and wide landscaped pedestrian walkways abutting a lei-voir along its edges.

On either side of the curved road, building edges contribute to the character by defining a perimeter shape that contains a series of interconnected urban rooms. The perimeter built edge is set back substantially from the road with landscaped portions to soften the landscape and distance the buildings from the busy road.

When viewed from the perspective of a visitor cycling or driving down the road, the curve in the road plays an important role in exposing focal points along the street, thereby creating a simple labyrinth that draws a visitor down the road and deeper into the precinct until reaching the activity space that is located at the furthest end of the street.

2. Precinct No: B

3. Area: 1.4 ha

4. Land Use: Row Houses

5. Height: 2 Storey

6. Coverage: 60% (Refer to Fig 87, pg41)

7. Zoning Density: Refer to Fig 81, pg35

8. The role and performance expectation of the precinct:

8.1 To provide access into the village precincts located east of the R310.

8.2 To provide medium density residential opportunities

8.3 To provide soft landscape open space for neighbourhood activity in support of surrounding residential opportunities.

9. Mandatory Performance Controls

9.1 Building Lines:

Residential:

- Variable Build-to, Building and Set back lines as shown.
- Minimum 1.5m Soil Landscape along street edge between building and boundary fence/hedge.
- Minimum 2m Porch zone along street facing edge to establish an opSECTION B1 scale 1:500
- community character and surveillance zone.
- Compulsory building-to lines to establish a well defined urban edge that contains and define a series of interlocking urban rooms.

9.2 Access:

- Access through the main entrance located off the village high street.
- Access to other precincts is obtained through access control points leading off this precinct.



LOCATION PLAN
scale 1:10 000

10.3 Parking:

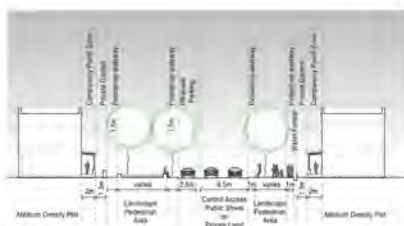
- Off-street parking is available in a small muse accessed from the back of properties through controlled access points and available to residents only
- On-street parking is provided along the High street as a convenience to visitors in support of the residences located along the route and the activities provided at landmark building structures.

Parking is separated into small manageable clusters throughout the area as a strategy to minimize the visual impact on the natural landscape. The use of parking reefs, edged by low walls and hedges is allocated where en-masse parking is required.

10.4 Special features:

The precinct will contain pedestrian-oriented edges, blending together two seemingly incompatible characteristics into a highly mobile, yet walkable thoroughfare. The inclusion of on-street parking, bicycle travel, and wide landscaped pedestrian areas will complement the character of the precinct.

Traffic calming interventions to complicit driver awareness and the making of a pedestrian dominant space:



PRECINCT PLAN
scale 1:1000 @ A3

- Narrow road sections where pedestrian activity increase an incentive to drivers to slow down, and be more aware of their surroundings.
- Strategic location of pedestrian crossings to compliment traffic calming interventions.
- Different surface texture of the road surface where pedestrian activity is encouraged.
- Raised road surface for pedestrian dominant areas.

Attention to the design and detailing of soft and hard landscaping features, urban furniture, etc. plays a supportive role to define the character of the main activity spaces and contribute to the theme of place-making applied throughout the village.

DRAWING LEGEND

Existing Building	[Grey rectangle]
Landmark Buildings	[Red rectangle]
Pavilion style- Lower order building	[Light red rectangle]
Vertical Tower Structure	[Red square with 'X']
Compulsory steep zone	[Green rectangle with diagonal lines]
Compulsory activity street garden zone	[Green rectangle with dots]
indicative pedestrian dominated area	[Light green rectangle]
Raised road surface through pedestrian area	[Dark green rectangle]
Pedestrian road crossing	[Green rectangle with white line]
Soft landscaped community area	[Light green rectangle with dots]
Special corner building treatment	[Green rectangle with star]
Maximum storeys	[Green rectangle with '12']
On-Street Parking area	[Green rectangle with 'P']
Preferred vehicular access points	[Green rectangle with arrow]
Site boundary	[Dashed line]
Compulsory Build-to-line	[Solid line]
Compulsory Build-to-line for min 80% of facade	[Dashed line]
Building line	[Dotted line]
Internal road network	[Dotted line]
Compulsory Colonnade	[Dotted line]
Compulsory tree line	[Green rectangle with dots]
Surface Water Furrow	[Green rectangle with wavy line]
Colvert and Gateway element	[Green rectangle with 'L/G']
Gateway	[Green rectangle with 'L/G']
Compulsory well wall and gateway element	[Green rectangle with 'L/G']
Visually Permeable Fence	[Green rectangle with wavy line]
Indicative feature planting (trees, hedge, etc.)	[Green rectangle with wavy line]
Existing hedge and trees retained	[Green rectangle with wavy line]
Indicative Water	[Blue rectangle]
Wetland	[Green rectangle with wavy line]
Retention pond	[Green rectangle with wavy line]

SECTION C3 scale 1:500

4.4 PRECINCT C

1. Precinct intent and desired character

The central avenue street will terminate in a generous community werf at the bottom of the hill. This werf will serve as a flexible outdoor space and will set up an architectural conversation with the existing historical werf at the Boschendal manor house.

These two werfs are connected by means of a meandering lower order cycle and pedestrian pathway. It will also serve as a collection point for public gatherings and occasions and will serve as a gateway from the village to the farm. The werf will be home to a hotel and associated public conveniences.

2. Precinct No: C

- 3. Area: 1 ha
- 4. Land Use: Hotel + Open Space
- 5. Height: as indicated
- 6. Coverage: Refer to Fig.87, pg41
- 7. Zoning Density: Refer to Fig.81, pg35

8. The role and performance expectation of the precinct:

- 8.1 To provide community amenities to residents and visitors.
- 8.2 Serve as a visual and physical connection with the historic werf at Boschendal farm.

9. Mandatory Performance Controls

9.1 Building Lines: N/A

9.2 Access:

- Access through the main vehicular road running through the village. Pedestrian access route provided to Boschendal farm.

9.3 Parking:

Provision for parking is separated into small manageable clusters throughout the area as a strategy to minimize the visual impact on the natural landscape. The use of parking werfs, edged by low walls and hedges is allocated where en-masse parking is required.

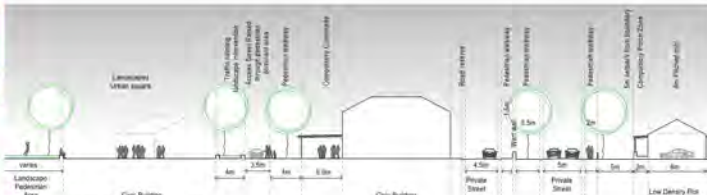
9.4 Special features:

Special attention to the design and detailing of soft and hard landscaping features, urban furniture, werf walls, trees, etc. plays a supportive role to define the character of the precinct and contribute to the theme of placemaking applied throughout the village.



PRECINCT PLAN
scale 1:1000 @A3

LOCATION PLAN
scale 1:10 000



SECTION C2 scale 1:500



SECTION C1 scale 1:500

DRAWING LEGEND

- | | | | |
|---|--|--|--|
| Existing Building | | Site boundary | |
| Landmark Buildings | | Compulsory Build-to-line | |
| Pavilion style- Lower order building | | Compulsory Build-to-line for min 80% of facade | |
| Vertical Tower Structure | | Building line | |
| Compulsory steep zone | | Internal road network | |
| Compulsory activity street garden zone | | Compulsory Colonnade | |
| Indicative pedestrian dominated area | | Compulsory tree line | |
| Raised road surface through pedestrian area | | Surface Water Furrow | |
| Pedestrian road crossing | | Culvert and Gateway element | |
| Soft landscaped community area | | Gateway | |
| Special corner building treatment | | Compulsory werf wall and gateway element | |
| Maximum storeys | | Visually Permeable Fence | |
| On-Street Parking area | | Indicative feature planting (trees, hedge, etc.) | |
| Preferred vehicular access points | | Existing hedge and trees retained | |
| | | Indicative Water | |
| | | Wetland | |
| | | Retention pond | |

4.5 PRECINCT D1

1. Precinct Intent and desired character

The precinct is characterized by a gradation in height and density as one moves away from the village centre toward Boschendal farm. The gradation of the development in terms of height is informed by the principle of hierarchy as well as visual mitigation from the Boschendal reef and scenic routes. A more formal urban edge along the north and west, where the precinct border the village high street and a relaxed neighborhood edge toward the south and east edges, where the precinct meets the farm.

The urban grid is slightly rotated to align the lower slopes with the existing contours and to allow the community weft at the end of the central avenue to be mostly flat. The rotated grid has the added benefit of opening up a funnel-like view cone in line with the manor house according to the heritage indicator conditions. A further benefit of the rotated grid is that it alleviates monotony in terms of the geometry as the various intersections demand varied architectural solutions. This concept accentuates the theme of place-making applied throughout the village.

2. Precinct No: D1

- 3. Area: 3 ha
- 4. Land Use: Row Houses + Guest cottages
- 5. Height: as indicated
- 6. Coverage: 50% (Refer to Fig 87, pg41)
- 7. Zoning Density: Refer to Fig 81, pg35
- 8. The role and performance expectation of the precinct:
 - 8.1 To provide low and medium density residential opportunities
 - 8.2 To negotiate the transition from the village core to the low impact rural farm edge. p
- 9. Mandatory Performance Controls

9.1 Building Lines:

- Variable Build-to, Building and Set back lines as shown
- Minimum 1.5m Soft Landscape along street edge between building and boundary fence.
- Minimum 2m porch zone along street facing edge to establish an open community character and surveillance zone.
- Compulsory build-to lines to define various pinch points along access routes into the precinct, thereby strengthening the perimeter edge of the precincts.

9.2 Access:

- From the north as shown with promotion of one-way traffic flows to prevent congestion at a single access point.

9.3 Parking:

- Off-street, Access from internal private route for garage parking located to the back of plots with compulsory 5m garage setback from boundary edge to prevent vehicles blocking private streets.
- On-street parking for visitors is provided on the central access route.

9.4 Special Features:

- Semi-public green and urban spaces for use by residents.
- Predominant pedestrian routes.

DRAWING LEGEND

- Existing Building
- Landmark Buildings
- Pavilion style- Lower order Building
- Vertical Tower Structure
- Compulsory steep zone

- Compulsory activity street garden zone
- Indicative pedestrian dominated area
- Raised road surface through pedestrian area
- Pedestrian road crossing
- Soft landscaped community area
- Special corner building treatment

- Maximum storeys
- On-Street Parking area
- Preferred vehicular access points
- Site boundary
- Compulsory Build-to line
- Compulsory Build-to line for min 60% of facade

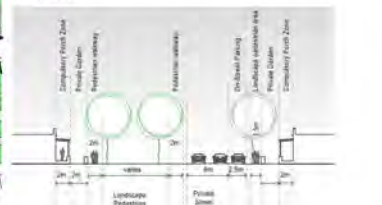
- Building line
- Internal road network
- Compulsory Colonnades
- Compulsory tree line
- Surface Water Furrow
- Culvert and Gateway element
- Gateway
- Compulsory weft wall and gateway element
- Visually Permeable Fence
- Indicative feature planting (trees, hedge, etc.)
- Existing hedge and trees retained
- Indicative Water
- Wetland
- Retention pond



PRECINCT PLAN
scale 1:1000 @ A3



SECTION D3
scale 1:500

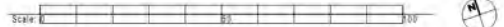


SECTION D4
scale 1:500



SECTION D5
scale 1:500

LOCATION PLAN
scale 1:10 000



4.6 PRECINCT D2

1. Precinct intent and desired character

Located on the West side of the R310, the precinct is characterised by its dual facing frontage and pedestrian dominant urban spaces.

The precinct fronts onto a open green activity space and has a strong presence of surveillance over the green. An approach road running parallel between the green and buildings provide a physical buffer as one moves from Public and semi-public to private space. The Precinct is accessed off the approach road through controlled access.

Dwellings on the back edge of the precinct fronts onto the inside of the precinct and contribute to a lively internal character that is accentuated by a pedestrian dominance. This concept is supported by a strong pedestrian connection with the High street and Market located at the heart of the village entrance on the opposite side of the R310.

2. Precinct No: D2

3. Area: 1.9 ha

4. Land Use: Row Houses

5. Height: 1 and 2 Storey residential

6. Coverage: 60% (Refer to Fig.87, pg41)

7. Zoning Density: Refer to Fig.81, pg35

8. The role and performance expectation of the precinct:

8.1 To provide low and medium density residential opportunities.

9. Mandatory Performance Controls

9.1 Building Lines:

- 4m external building line on western boundary.
- Variable Build-to, Building and Set back lines as shown.
- Minimum 1.5m Soft Landscape along street edge between building and boundary fence.
- Minimum 2m Porch zone along street facing edge to establish an open community character and surveillance zone.
- Compulsory building-to lines to define and strengthening the perimeter edge of the precincts.

9.2 Access:

- From the service access street which is parallel to the R310 with two-way traffic flows to prevent congestion at a single access point.

9.3 Parking:

- Off-street, access from internal private street for garage access with compulsory 5m garage setback from boundary edge to prevent vehicles blocking streets. Where garages face public space, the frontages of properties are obscured with more generous green planting.
- On-street parking for visitors is provided on the service access street.

9.4 Special features:

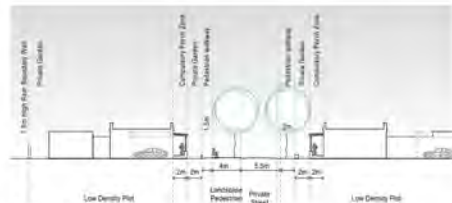
- Internal green and urban spaces.
- Predominant pedestrian routes and strong pedestrian connection with village high street.



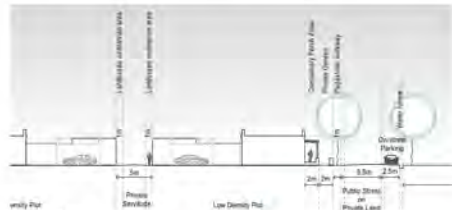
LOCATION PLAN
scale 1:10 000



PRECINCT PLAN
scale 1:1000 @ A3



SECTION D1 scale 1:500



SECTION D2 scale 1:500

Building

Existing Building

Landmark Buildings

Pavilion style-Lower order building

Vertical Tower Structure

Compulsory stoop zone

Compulsory actively street garden zone

Indicative pedestrian dominated area

Raised road surface through pedestrian area

Pedestrian road crossing

Soft landscaped community area

Special corner building treatment

Maximum storeys

On-Street Parking area

Preferred vehicular access points

Site boundary

Compulsory Build-to line

Compulsory Build-to line for min 66% of facade

Building line

Internal road network

Compulsory Colonnade

Compulsory tree line

Surface Water Furrow

Culvert and Gateway element

Gateway

Compulsory wall and gateway element

Visually Permeable Fence

Indicative feature planting (trees, hedge, etc.)

Existing hedge and trees retained

Indicative Water

Wetland

Retention pond

4.7 PRECINCT D3

1. Precinct intent and desired character

The precinct intent is to provide mixed residential opportunities in support of the village. The precinct is characterised by higher density units and urban design with a private street network running through it. The narrowness and relative quietness of some of the streets will automatically lead to pedestrian dominance.

2. Precinct No: D3

3. Area: 1.2 ha
4. Land Use: Row Houses
5. Height: As indicated
6. Coverage: 60% (Refer to Fig.87, pg41)
7. Zoning Density: Refer to Fig.81, pg35
8. The role and performance expectation of the precinct:
- 8.1 To provide low and medium density residential opportunities.

9. Mandatory Performance Controls

9.1 Building Lines:

- 10m buffer along the wetland.
- Variable Build-to: Building and Set back lines as shown.
- Minimum 1.5m Soft Landscape along street edge between building and boundary fence.
- Minimum 2m porch zone along street facing edge to establish an open community character and surveillance zone.
- Compulsory building-to lines to define and strengthening the perimeter edge of the precincts.

9.2 Access:

- From the south and west through roads branching off the village main vehicular axis.

9.3 Parking:

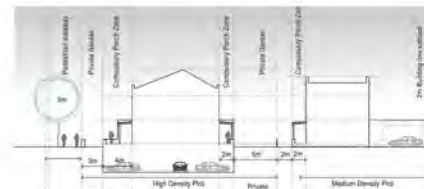
- Off-street, access from internal private street for garage access toward the back of plots with compulsory 5m garage setback from boundary edge to prevent vehicles blocking private streets.
- On-street parking for visitors is provided on the central access route.

9.4 Special features:

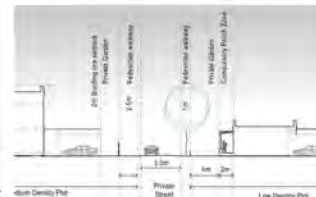
- Internal green and urban spaces for use by residents.
- Pedestrian preferential internal private streets.



SECTION D10 scale 1:500



SECTION D8 scale 1:500



SECTION D9 scale 1:500



PRECINCT PLAN scale 1:1000 @ A3

DRAWING LEGEND

- Existing Building
- Landmark Buildings
- Pavilion style- Lower order building
- Vertical Tower- Structure
- Compulsory stoop zone
- Compulsory activity street garden zone
- indicative pedestrian dominated area
- Raised road surface through pedestrian area
- Pedestrian road crossing
- Soft landscaped community area
- Special corner building treatment
- Maximum storeys
- On-Street Parking area
- Preferred vehicular access points
- Site boundary
- Compulsory Build-to line
- Compulsory Build-to line for min 60% of facade
- Building line
- Internal road network
- Compulsory Colonnade
- Compulsory tree line
- Surface Water Furrow
- Culvert and Gateway element
- Gateway
- Compulsory wall and gateway element
- Visually Permeable Fence
- Indicative feature planting (trees, hedge, etc.)
- Existing hedge and trees retained
- Indicative Water
- Wetland
- Retention pond



LOCATION PLAN scale 1:10 000

Scale 0 50 100



4.8 PRECINCT E1

1. Precinct Intent and desired character

Located on the west side of the R310, the precinct is characterised by its dual facing frontage and pedestrian dominant urban spaces. The precinct provides high density housing opportunities.

The precinct fronts onto an open green activity space and has a strong presence of surveillance over the green. A service street running parallel between the green and buildings provide a physical buffer as one moves from public and semi-public to private space. The precinct is accessed off the approach road through controlled access.

Buildings on the back edge of the precinct front onto the inside of the precinct and contribute to a lively internal character that is accentuated by a pedestrian dominance. This concept is accentuated by a strong pedestrian connection with the high street on the opposite side of the R310.

2. Precinct No: E1

3. Area: 2.2 ha

4. Land Use: Flats

5. Height: 3 Storey residential

6. Coverage: 50% (Refer to Fig.87, pg41)

7. Zoning Density: Refer to Fig.81, pg35

8. The role and performance expectation of the precinct:

8.1 To provide high density residential opportunities.

9. Mandatory Performance Controls

9.1 Building Lines:

- 4m building line on western and northern common boundary.
- Variable Built-to, Building and Set back lines as shown.
- Minimum 1.5m Soft Landscape along street edge between building and boundary fence.
- Minimum 2m Porch zone along street facing edge to establish an open community character and surveillance zone.
- Compulsory building-to lines to define and strengthening the perimeter edge of the precincts.

9.2 Access:

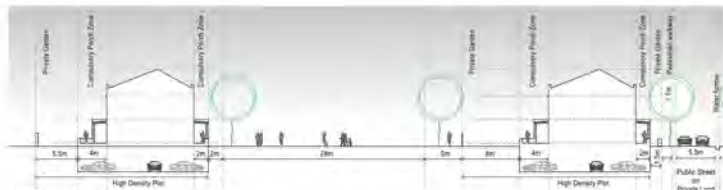
- From the east off the service road running parallel to the R310.
- From the south via precinct D2.

9.3 Parking:

- Off-street, private basement parking for residents and visitors accessed through an access control point

9.4 Special features:

- Internal green and urban spaces for use by residents.
- Pedestrian preferential private internal streets.



SECTION E2 scale 1:500

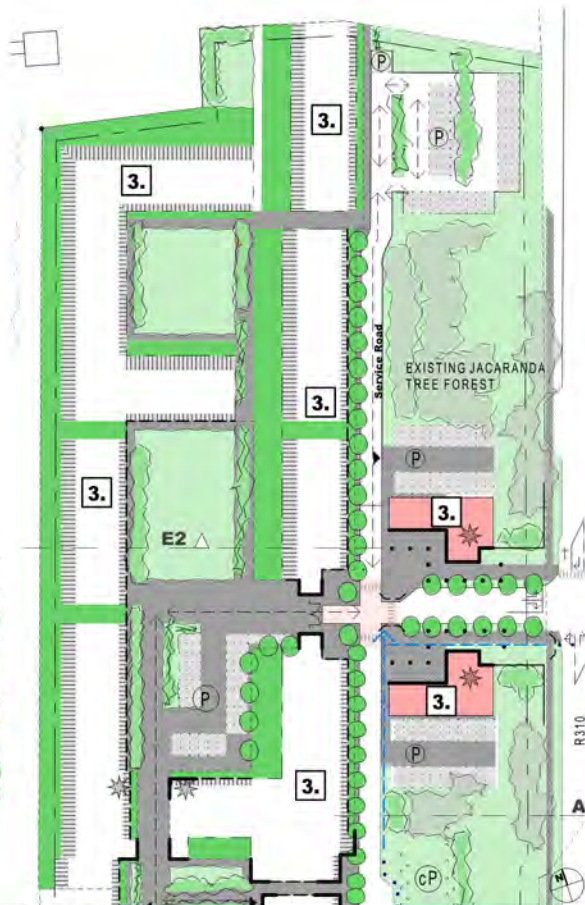
DRAWING LEGEND

Existing Building		Raised road surface through pedestrian area	
Landmark Buildings		Soft landscaped community area	
Pavilion style- Lower order building		Special corner building treatment	
Vertical Tower Structure		Maximum storeys	
Compulsory steep zone		On-Street Parking area	
Compulsory activity street garden zone		Preferred vehicular access points	
indicative pedestrian dominated area		Site boundary	
		Compulsory Built-to line	

	Compulsory Built-to line for min 60% of facade
	Building line
	Internal road network
	Compulsory Colonnade
	Compulsory tree line
	Surface Water Furrow
	Culvert and Gateway element
	Gateway
	Compulsory welf wall and gateway element
	Visually Permeable Fence
	Indicative feature planting (trees, hedge, etc.)
	Existing hedge and trees retained
	Indicative Water
	Wetland
	Retention pond



LOCATION PLAN
scale 1:10 000



PRECINCT PLAN
scale 1:1000 @ A3

4.9 PRECINCT E2

1. Precinct intent and desired character

The precinct provides high density housing opportunities and is located in the heart of the north-east portion of the village.

The precinct has a well defined edge facing various private and activity streets with a strong presence of surveillance over the surrounding area.

The precinct has a private internal character, pedestrian dominant internal streets and landscape activity zone.

2. Precinct No: E2

3. Area: 0.7 ha

4. Land Uses: Flats

5. Height: 3 Storey residential

6. Coverage: 60% (Refer to Fig.87, pg41)

7. Zoning Density: Refer to Fig.81, pg35

8. The role and performance expectation of the precinct:

8.1 To provide high density residential opportunities.

9. Mandatory Performance Controls

9.1 Building Lines:

- Variable Build-to, Building and Set back lines as shown.
- Minimum 1.5m Soft Landscape along street edge between building and boundary fence.
- Minimum 2m Porch zone along street facing edge to establish an open community character and surveillance zone.
- Compulsory build-to lines to define and strengthening the perimeter edge of the precincts.

9.2 Access:

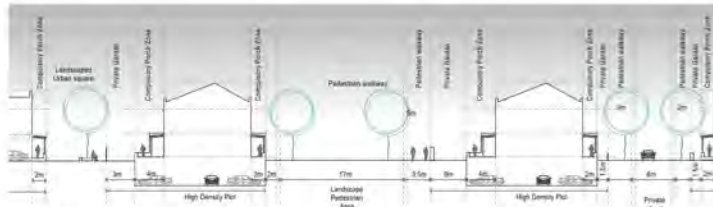
- From the south and east through the main intersection to the R310

9.3 Parking:

- Off-street, private basement parking for residents and visitors accessed through an access control point

9.4 Special features:

- Internal green and urban spaces for use by residents.
- Pedestrian preferential internal private streets.



SECTION E1 scale 1:500



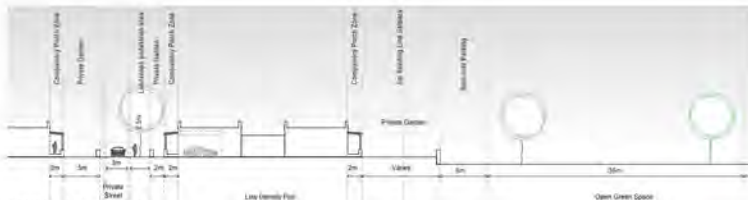
PRECINCT PLAN scale 1:1000 @ A3

DRAWING LEGEND

Existing Building	
Landmark Buildings	
Pavilion style- Lower order building	
Vertical Tower Structure	
Compulsory stoop zone	
Compulsory activity street garden zone	
Indicative pedestrian dominated area	
Raised road surface through pedestrian area	
Pedestrian road crossing	
Soft landscaped community area	
Special corner building treatment	
Maximum storeys	
On-Street Parking area	
Preferred vehicular access points	
Site boundary	
Compulsory Build-to line	
Compulsory Build-to line for min 60% of facade	
Building line	
Internal road network	
Compulsory Colonnade	
Compulsory tree line	
Surface Water Furrow	
Cuivert and Gateway element	
Gateway	
Compulsory kerf wall and gateway element	
Visually Permeable Fence	
Indicative feature planting (trees, hedges, etc.)	
Existing hedge and trees retained	
Indicative Water	
Wetland	
Retention pond	



LOCATION PLAN scale 1:10 000



SECTION F1 scale 1:500

4.10 PRECINCT F1

1. Precinct Intent and desired character

The precinct consists of low density housing opportunities bordering the Boschendal farm.

The precinct is located on the edge of the village and at the closest proximity to the werf and manor house at Boschendal. It's character defines the most significant threshold of the development and serves as a mechanism to manage the transition from village to farm landscape and the impact of one on the other.

2. Precinct No: F1

3. Area: 1 ha
4. Land Use: Dwelling houses

5. Height: 1 Storey

6. Coverage: 50% (Refer to Fig 87, pg41)

7. Zoning Density: Refer to Fig 81, pg35

8. The role and performance expectation of the precinct:

- 8.1 To provide low density residential opportunities.
- 8.2 To employ a sensitive approach to design that is sympathetic to the historic buildings and werf at Boschendal. The design of this precinct must have a submissive and uncompetitive character toward the historic manor house at Boschendal.

9. Mandatory Performance Controls

9.1 Building Lines:

- Variable build-to, building end set back lines as shown.
- Various building line setback along the rear boundary of properties as shown
- Soft landscape of various thickness along street edge between building and boundary fence as shown.
- Minimum 2m porch zone along street facing edge to establish an open community character and surveillance zone.
- Minimum 2m porch zone along the rear boundary edge to establish a frontage toward the surrounding areas.
- Compulsory building-to lines to define various pinch points along access routes into the precinct, thereby strengthening the perimeter edge of the precincts.



LOCATION PLAN
scale 1:10 000

9.2 Access:

- Off the main access road from the north and as shown with promotion of one-way traffic flows to prevent congestion at a single access point.

9.3 Parking:

- Off-street, access from street facing side with a compulsory 5m garage setback from street boundary edge to prevent vehicles blocking private streets.
- On-street, limited parking for visitors is provided.

9.4 Special features:

- Private green and urban spaces for use by residents.
- Pedestrian preferential internal private streets.



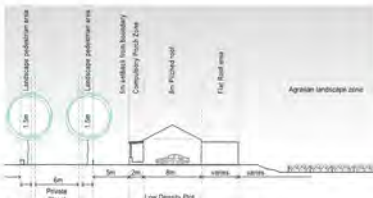
PRECINCT PLAN (portion F1)
scale 1:1000 @ A3

DRAWING LEGEND

Existing Building	
Landmark Buildings	
Vertical Tower Structure	
Compulsory stoop zone	
Compulsory activity/street garden zone	
Indicative pedestrian dominated area	
Raised road surface through pedestrian area	
Pedestrian road crossing	
Agrarian landscaping/urban agriculture no-build servitude	
Soft landscaped community area	
Special corner building treatment	
Maximum storeys	
On-Street Parking area	
Preferred vehicular access points	
Site boundary	
Compulsory Build-to line	
Compulsory Build-to line for min 60% of facade	
Building line	
Internal road network	
Compulsory Colonnade	
Compulsory tree line	
Surface Water Furrow	
Culvert and Gateway element	
Gateway	
Compulsory werf wall and gateway element	
Visually Permeable Fence	
Indicative feature planting (trees, hedge, etc.)	
Existing hedge and trees retained	
Indicative Water	
Wetland	
Retention pond	

SCALE: 1:1000 @ A3





SECTION F1 scale 1:500

4.11 PRECINCT F2

1. Precinct intent and desired character

The precinct consists of low density housing opportunities bordering the Boschendal farm.

The precinct is located on the edge of the village overlooking Boschendal's vineyards. The character of the precinct reflect the rural setting and forms the interface with the existing working farm.

2. Precinct No: F2

3. Area: 0.8 ha

4. Land Use: Dwelling houses

5. Height: 1 Storey

6. Coverage: 50% (Refer to Fig.87, pg41)

7. Zoning Density: Refer to Fig.81, pg35

8. The role and performance expectation of the precinct:

- 8.1 To provide low density residential opportunities.
- 8.2 To employ a sensitive approach to design that is sympathetic to the historic buildings and werf at Boschendal. The design of this Precinct must have a submissive and uncompetitive character toward the historic manor house at Boschendal.

9. Mandatory Performance Controls

9.1 Building Lines:

- 5m building line along minor road 5230 measured from edge of road reserve
- Variable Build-to, Building and Set back lines as shown.
- Various building line setback along the rear boundary of properties as shown.
- Soft landscape of various thickness along street edge between building and boundary fence as shown.
- Minimum 2m porch zone along street facing edge to establish an open community character and surveillance zone.
- Minimum 2m porch zone along the rear boundary edge to establish a frontage toward the surrounding areas.

9.2 Access:

- Off access-controlled private road.

9.3 Parking:

- Only off-street parking with a compulsory 5m Garage setback from street boundary edge.

9.4 Special features:

- Sensitive urban edge against agricultural farm edge.



LOCATION PLAN
scale 1:10 000



PRECINCT PLAN (portion F2)
scale 1:1000 @ A3

DRAWING LEGEND

- Existing Building
- Landmark Buildings
- Pavilion style- Lower order building
- Vertical Tower Structure
- Compulsory steep zone
- Compulsory activity street garden zone
- Indicative pedestrian dominated area
- Raised road surface through pedestrian area
- Pedestrian road crossing
- Agrarian landscaping/urban agriculture no-build servitude
- Soft landscaped community area
- Special corner building treatment
- Maximum storeys
- On-Street Parking area
- Preferred vehicular access points
- Site boundary
- Compulsory Build-to line
- Compulsory Build-to line for min 66% of facade
- Building line
- Internal road network
- Compulsory Colonnade
- Compulsory tree line
- Surface Water/Furrow
- Colvert and Gateway element
- Gateway
- Compulsory werf wall and gateway element
- Visually Permeable Fence
- Indicative feature planting (trees, hedge, etc.)
- Existing hedge and trees retained
- Indicative Water
- Wetland
- Retention pond

Scale: 0 10 20 30 40



CHAPTER 5 . ARCHITECTURAL DIRECTIVES AND CONTROLS

5.1 Broad architectural design principles

The architectural design principles is an extension of the overall village concept and support the design principles discussed in preceding chapters.

Three levels of concern is addressed in the Boschendal Heritage Impact assessment (Baumann et al 2015) and architectural guidelines:

1. Generic Indicators: These follow logically from preceding settlement-orientated indicators. However the focus shifts to individual or complexes of buildings. Particular emphasis is placed on the relation buildings have on one another and their impact in contributing to the overall village design and character.
2. Mandatory controls: These relate to the buildings interaction with the 'streetscape' and how a building creates a public interface with the street. These controls contribute to the realization of the generic indicators.
3. Principles of sustainability

5.2 Generic Indicators

- All new buildings should reflect recessive architecture (they should be background buildings).
- More important public buildings should not mimic the architecture of the past (e.g. the use of gables etc.). They should be modern in their architecture. Nevertheless, the 'wall-plate' architecture of the Cape should dominate;
- No architectural themes (eg Tuscan);
- Buildings, structures, built elements and landscaping should promote the natural, rural, historical and architectural character of the broader Boschendal precinct within the valley;
- Existing architecturally significant buildings and homesteads of historical or aesthetic importance, including their landscape settings, should be conserved and, where necessary, pre-served;
- The character of new buildings and associated elements must reflect qualities of 'Cape-ness' and 'ruralness', expressed in the spirit of contemporary design;
- Buildings must be designed to optimize their spatial and design structural role (e.g. gateway buildings, corner buildings, landmark buildings, street-liners, pavilions);
- Most buildings must be designed as background buildings, to make them as unobtrusive and recessive as possible. More prominent buildings should be used strategically (for example, as landmarks or as terminating elements for important axes);
- Buildings and their associated elements (walls, hedges, etc.) must contribute to defining and thus making the street along which they are located;
- The geometries of horizontality reflected in the landscape must be respected, especially in considerations of roof silhouettes;
- Buildings generally must be kept low but height should be used to reinforce spatial structure;
- Roof silhouettes must be as unobtrusive as possible;
- Proportions must be elegant, with wall surfaces dominating openings and cut-outs (apertures). The apertures should be vertically proportioned;
- Surveillance over public space, including the street, is compulsory: no dead-edges are allowed;
- Colours must be muted;
- Where appropriate, use barnyard architecture to define space.

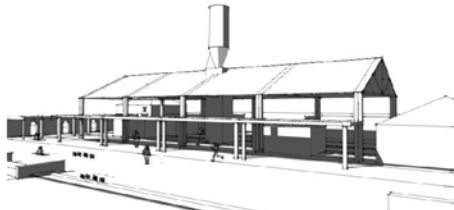


Fig. 104. Indicative gateway building



Fig. 105. Perimeter block with articulated street corner

5.3 Mandatory Controls

- Buildings should not occur at an angle to the street boundary;
- Compulsory build-to lines are defined to ensure that buildings play their spatial and design structural role most effectively. (e.g. buildings close to the street);
- The maximum height is three storeys in dense areas, two storeys in the more embedded areas and one storey in the 'read-lightly' zones;
- No more than ground floor plus two more floor for flat roofed buildings;
- All flat roofed buildings should have a parapet on three sides in order to create a 'boxed' geometry;
- No gutters should appear on the front of the unit but should occur to the rear;
- When roofs are pitched, the allowable range is between
 - 35° - 45°;
- In single storey structure with pitched roofs, accommodation will be allowed in a roof void, however all skylights to be flush with the roof plain and not to face any public street.
- No mono-pitched roofs are allowed;
- No tiled roofs are allowed;
- No significant interruptions to the horizontally promoted by the roof silhouettes (e.g. chimneys higher than 1.5 m above the roof ridge) are not allowed; the only exception is on corners or with landmark buildings;
- No expressed gable ends (parapets) are allowed;
- Materials must project over the end walls and finish flush with
 - The outside face;
 - No dormer windows are allowed in the roof of upper floor in pitched-roof buildings facing the public street;
- The use of skylights is acceptable if not visible from the road;
- Wall openings must be vertically proportioned, consistent with the traditions of walled architecture



Fig. 106. Indicative corner buildings

5.4 ARCHITECTURAL GUIDELINES

5.4.1 Primary Building Forms

- The use of horizontality and wall architecture is to be the dominant architectural form. This is to mitigate the visual impact, to promote simplicity and to deliver cohesive design. Certain buildings and nodes will have to deviate from the principal of horizontality, specifically in relation to the roof form, in order to allow for legibility, hierarchy and diversity and is demarcated as such. (See Fig 109)

The use of perimeter building blocks should be widely applied. It results in active street edges and promotes walkability and safety. The building edges, which generally is built to line, results in impermeable, but living walls. It allows for buildings to serve as a soft security layer. It also allows for the parking of cars out of view, by locating garages within courtyards and mews.

- Street edges will be made up of various types of buildings, strung together. These buildings will spill out directly onto streets in some instances (central Avenue) or setback behind narrow gardens and stoeps in other areas (neighbourhood zones).
- Corners will be articulated responsively by the introduction of special corner buildings.
- Certain buildings are designated gateway buildings and should be articulated as such.
- Street liners should be fitted in amongst these various types and should be generally more recessive.
- Colonnaded building edges are compulsory in certain areas as edges to buildings are important in terms of providing human scale. It does not only provide shade and shelter but also reduce the scale of buildings. This is particularly helpful in the mixed use areas as a substantial amount of pedestrian use is envisaged along those edges.
- Landmark buildings and structures: Certain buildings or structures are designated landmark buildings. (Refer to Fig 78) It allows for legibility and orientation and emphasizes the hierarchical importance of certain public spaces. These buildings are allowed to deviate from the general rule of horizontality and wall plate architecture and may exceed the limitations on height in a specific location.

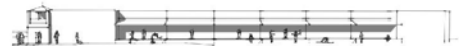


Fig. 107. Indicative recessive street liners



Fig. 108. Indicative colonnaded buildings



Fig. 109. Indicative landmark building

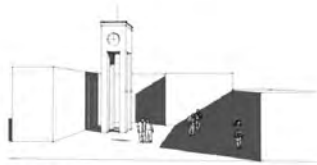


Fig.110. Indicative landmark structures



Fig.111. Example of rural free standing cottage - Werf cottages at Boschendal



Fig. 112 Market building example Martin Kruger Architects - Birkenhead Brewery.



Fig. 113 Alternative Market building example Philip Briol Architects -Olive Press at Boschendal



Fig. 114. Triple Storey townhouse example: Alphen, Cape Town.



Fig. 115. Recessive and light third floor. Revol Fox and Partners

5.4.2 The design of architectural forms and related built elements should:

1. conform to the principles of the relationships between buildings to street space, as defined by the compulsory building lines.
2. Contribute towards 'Green Architecture' which includes:
 - Local water capture through a series of surface run water furrows and dealing with storm water runoff.
 - Climate control through use of traditional building forms and openings, including promotion of party walls, cross ventilation and recessed covered verandas.
 - Appropriate design in reaction to the orientation of the site.
 - Planting to shade buildings and minimize heat reflection off hard landscape surfaces.
 - Promoting the use of solar energy and obscuring unsightly panels from view behind roof parapet walls.
 - Employing recycling practices.
 - The use of Green materials.
 - A minimum of 50% of building energy requirements to be provided through sustainable technologies.
3. Promote a sense of community.

5.4.3 Public Interface and Street Frontage:

Buildings fronting onto active streets should promote the open character of the space, while not being completely detached from it. A small garden space at the front edge of properties promotes a degree of privacy from the activity street while a compulsory porch zone promotes a strong sense of surveillance, relationship and community. Fencing along the street boundary is allowed, but restricted to 600mm height to ensure the visual connection over the private/public threshold is not lost.

All elevations facing activity streets to be symmetrical and proportioned as outlined in the architectural directives.

All solar panels, chimneys, Air Conditioning units, heat pumps, satellite dishes, skylights and the like, should be located between the parapet lines of the roof and not be visible from the pavement area immediately abutting the street boundary.

All above ground water storage tanks and water storage elements must be located toward the back of the property and no part thereof may be visible from the pavement area immediately abutting the street boundary.

5.4.4 Roofs:

Flat roof behind parapet walls along the activity street edge defines a strong walled architecture. Mono-pitch roofs toward the rear of properties will be allowed, but should be obscured from the activity street view. Maximum roof angles as per architectural directives.

5.4.5 Ground plane and Surface treatment:

The surface treatment between vehicular and pedestrian areas should be predominantly continuous to promote a sense of shared interaction with only slight changes to deal with water runoff and form surface water furrows. Surface water furrows and 'Leiswater' areas to be maintained along the road edge and where indicated.

Materials should be a coarse textured paving or cobbles to promote awareness of a prevailing pedestrian urban landscape.

Surface level changes between dwellings and the surrounding area to define public, semi-public and private space. A 'front' 'Slopes' level of 400mm above NGL is required.

5.4.6 Walls:

Thick masonry walling with punched openings, reflecting the rural architectural character of the surrounding landscape. Low masonry farm walls to demarcate social areas within the landscape.

5.4.7 Fenestration and Openings:

The use of natural resources for lighting, cross-ventilation and airflow within buildings is encouraged. Uncovered North and West facing windows should be set deep into walled surfaces to provide solar protection. West facing windows should be protected by covered verandas and trees where practical to do so. A 1:2 width to height ratio is required for all openings. Openings must be vertically orientated.

All openings to have functioning shutters, with the exception of front doors.

5.4.8 Material, and Colour:

Use of local and natural materials is encouraged. Light paint colours to be used for walls, with dark colours to be used for mono-pitch roofs and other metal elements.

5.4.9 Side and Rear Boundary treatment:

Masonry boundary walls, posts and fencing allowable to a height of 1.8m along the side and rear boundaries only. Hedges are also permitted and encouraged.

Where palisade fencing is used, it has to be in combination with a hedge to completely obscure the fence. Precast walling, barbed-wire and electrical fencing is not allowed. Instead clearly defined zones with associated human surveillance through good design is promoted.

5.4.10 Parking:

Access from internal private street for garage access situated at the back of plots with compulsory 5m garage setback from boundary edge to prevent vehicles blocking private streets. No shade netting or parking structures is allowed. Limited street parking is allowed in activity streets. Only trees may be used to provide shading for on-street parked vehicles. No garage access permitted from high street/central avenue.

5.4.11 Landscaping:

Use indigenous plants and tree species to promote the character of an agrarian landscape and as per the plant species guideline established for the village. Trees along the street edge to be spaced at average 10m intervals. Landscaping to be in accordance with the landscape master plan to be designed by a registered landscape architect.

5.4.12 External Lighting:

No floodlighting is allowed.

5.4.13 Signage:

No billboards are allowed. Signage should not be overwrought and should follow the guidelines as set out in the architectural directives.



Fig. 117 LOW DENSITY RESIDENTIAL (Precincts: F2 + F3)
(Single residential erf) scale 1:250 @A3



Fig. 118 LOW DENSITY RESIDENTIAL (Precinct: F1+D2)
scale 1:250 @A3



Fig. 116 MEDIUM DENSITY RESIDENTIAL (Precincts: B+D1+D2+D3) scale 1:250 @A3

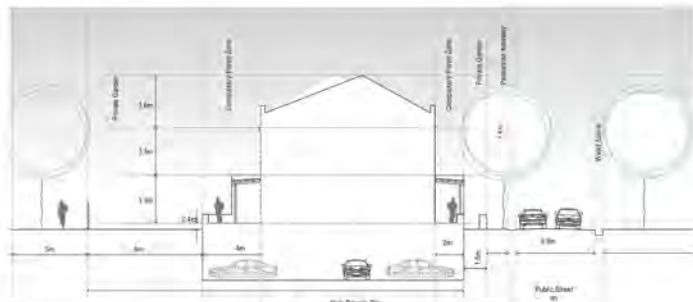


Fig. 119 HIGH DENSITY RESIDENTIAL (Precinct E1+E2)
scale 1:250 @A3

CHAPTER 6 . IMPLEMENTATION

6.3 ACTION AREAS AND ACTION PROJECTS:

The attached Fig.120 illustrates areas of considerable importance in terms of the scenic route and public accessible areas of the development. These areas are of interest from a design perspective and has been identified as areas that require particular attention and scrutiny as a measure to ensure an appropriate design response to the historical cultural context.

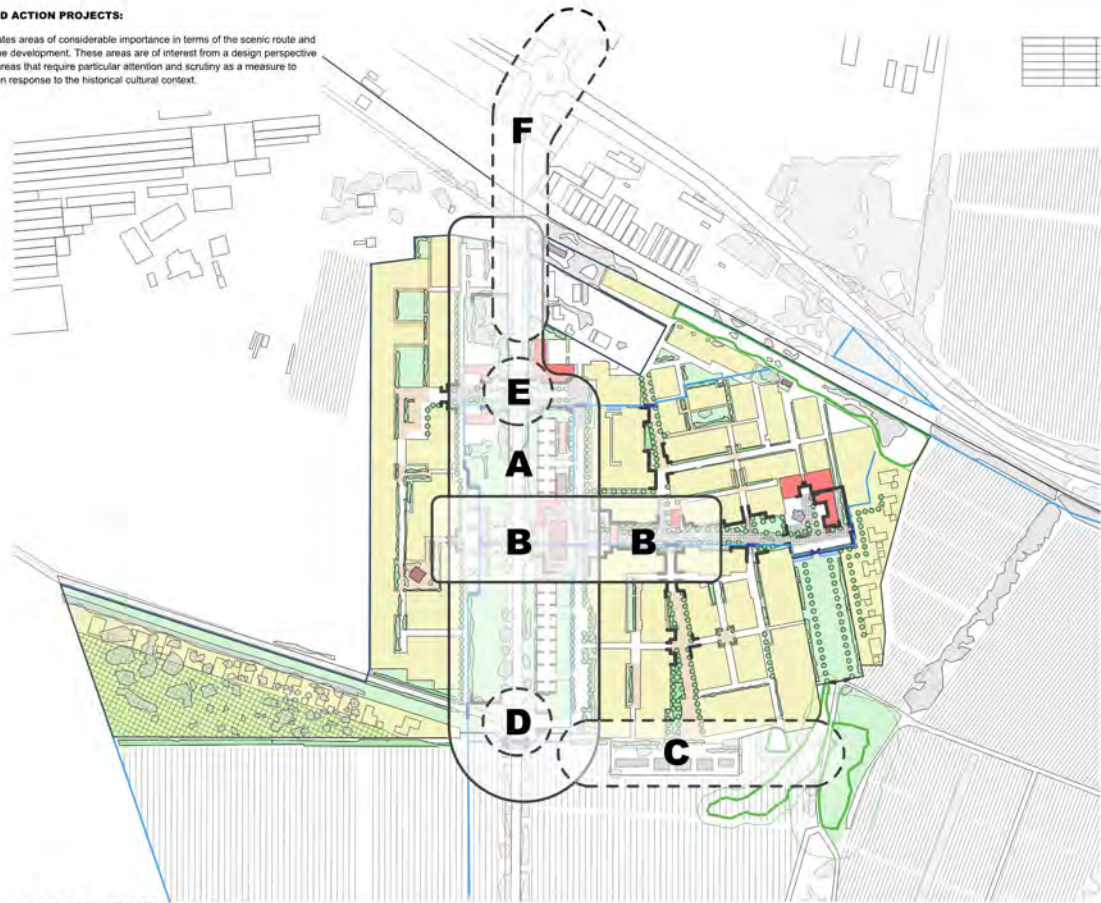


Fig. 120 Action Areas and Action Projects

6.4 ARCHITECTURAL DIRECTIVES:

6.4.1. Introduction

It is the responsibility of the developers to ensure the delivery of quality architecture at Boschendal Village and to avoid, at all cost, the creation of anything resembling an architectural theme park. The preservation and celebration of the historic character of Boschendal and the region is paramount, and it is thus imperative to only allow recessive, timeless architecture that is more concerned with the village and region as a whole, than with singular architectural statements.

6.4.2. Appointment of architects and review mechanism.

- Multiple architects will design the buildings at Boschendal Village. Therefore, competent, architectural practices must be invited to participate in bringing a variety of quality architecture to Boschendal Village. This is to prevent repetition and blandness.
- All architectural practices must be SACAP-Registered Professional Architects (Pr. Arch).
- The approved team of architects must be subjected to a system of peer review amongst themselves.
- The architects will also be subjected to an architectural review committee. This committee will be appointed by the developer.

6.4.3 Private erven development planning, submissions and approval requirements.

- All buildings must comply with the guidelines and controls set out herein in addition to Municipal and National Building regulations.
- The approval process requires the signature and stamp of the Controlling Architect and the Developer and later the Architectural Review Committee as appointed by the Owners' Association without which the drawings will not be accepted by Local Authority.
- Until such time as the Owners' Association has been inaugurated references herein relating to it and the Architectural Review Committee shall be replaced by the Controlling Architect and the Developer.
- No building work may be undertaken without the specified approval procedures having been followed. The construction of all buildings and out-buildings, structures of any nature, swimming pools and all additions and alterations to such buildings must comply with the architectural requirements of the development and shall be approved by the Board of Trustees after consideration by the Architectural Review Committee.
- Every homeowner, shall be a member of the Association and shall be obliged to abide by the architectural & landscaping regulations of the development as laid out in Architectural Directives.
- The following structures have been put in place for the building plan submission of the village prior to it being sent to the Local Authority for approval.

6.4.4. Architectural review committee

In terms of the constitution of the Boschendal Village Owners' Association (the Association) the Trustees shall appoint an Architectural Review Committee, whose function shall be inter alia:

- to ensure that construction in the village is performed in a proper and workman-like manner;
- to ensure that the architectural and landscaping design manual condition in respect of the land is complied with at all times;
- The Architectural Review Committee shall be constituted as follows:
 - An appointed Trustee
 - Two practising professional architects
 - The Chairperson of the Association
 - The maintenance manager appointed by the Owners' Association

6.4.5. Approval process.

The procedures as set hereunder will apply to all building operations of whatsoever kind in the Village and have been devised to ensure a harmonious development, and a consistent high quality architectural outcome.

- All Architectural design including Engineering drawings must be submitted to the Association for all proposed building works and a record will be kept of all plans submitted as well as the date of submission.
- Any homeowner intending to undertake building work in the village shall be obliged to inform owners of all properties immediately adjoining his property of his intention to build. Such notification shall be done via registered mail, and proof of such notification shall be submitted to the Association as part of the application process.
- The building plans and all required documentation shall then be submitted on to the professional architect appointed by the Association who will scrutinize the plans and documents to ensure compliance with the design criteria as set out in the urban design framework and architectural directives.

- Upon scrutiny of the plans, the professional architect shall verify departures in breach of the urban design framework and architectural directives (if any), that need to be addressed in order for plans to be eligible for approval.

- The Controlling Architect and Developer shall meet when necessary and once the Architectural Review Committee is in place it shall meet once a month on a specified and predetermined day for the purpose of considering plans submitted for approval. All plans must be submitted at least seven days prior to each monthly meeting of the Committee, failing which they will stand over to the next meeting. The Architectural Review Committee shall have discretion to limit the amount of plans to be discussed during each monthly meeting. All plans shall be reviewed on a chronological basis according to the date the plan was submitted.

- All plans submitted shall be subject to review by the Architectural Review Committee. Upon consideration of the plans, the Committee will then make a recommendation with regard to the approval or rejection of the plans. Where plans are rejected, the Committee shall provide reasons for the rejection and provide recommendations on areas that need to be addressed in order for plans to be reconsidered for approval.

- The Architectural Review Committee shall after each meeting prepare a report setting out its recommendations in respect of all plans considered. This report shall be presented to the Board of Trustees at its monthly meeting. The Trustees shall then finally authorize or reject the plans submitted. The Association shall thereafter immediately notify the homeowner of the decision of the Trustees.

- Upon approval of the plans by the Board of Trustees, the Association shall return the approved plans to the homeowner concerned who shall then submit such plans together with the prescribed fees to the local authority for its consideration.

6.4.6. Scrutiny fees and deposits.

- Upon submission of the plans to the Association, the homeowner shall pay a fee for the scrutiny thereof and subsequent site inspection by the architect appointed by the Association, together with a sidewalk deposit.
- The amount of the scrutiny and inspection fee shall be dependent upon the nature and extent of the building work to be undertaken and shall be as determined by the Association from time to time. The Association reserves the right to charge an additional fee in the event of further consultations with the homeowner and/or his architect being necessary.

6.4.7. Adoption of Architectural Directives

- The Owners Association may, at its annual meetings, or any special meeting adopt, amend or vary the Architectural Directives.
- The Architectural Directives will inform all building design and building plans

REFERENCES

Specialist Reports:

1. Abrahams C. 2015. Proposed Boschendal Village: Urban Design Parameters Report.
2. Baumann N, Winter S, Dewar D, Louw P. 2015. Proposed Boschendal Village: Heritage Indicators and Directives.
3. Kendrick N, Hart, T. 2015. Archaeological Assessment of Portions 7/1674 and 10/1674 of Boschendal Estate.
4. Schroms, H. 2015. Grondverslag vir die plaas Boschendal Village.
5. Snaddon, K. 2015. Environmental Impact assessment of proposed Boschendal Village, Boschendal Estate: Freshwater ecosystems baseline report.

Email:

6. Helme, N. 2015. Email, Comment on revised, proposed layout for Boschendal Village development.

Websites:

7. BMW Motorrad Club Cape, Tony. 2014. viewed September 2015, <<http://www.bmwmotorcycleclubcape.co.za/cant-wall-sequel>>
8. Boschendal Farm 2015, Site map, Google maps, South Africa, viewed September 2015, <<https://www.google.co.za/maps/@-33.8750765,19.003418,9225m/data=!3m1!1e3>>
9. Google Maps, Stellenbosch, Arisal, 2012. viewed September 2015, <www.panoramio.com>.