Proposed Boschendal Village Development,
Stellenbosch Municipal Area, Western Cape

Visual Impact Assessment

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Prepared for:

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Executive Summary

The proposed Boschendal Village is sited in a generally flat, low-lying area in the Dwars River Valley, and is partly screened by existing buildings and trees. A detailed description of the site and it surroundings is given in Section 2.

A number of development alternatives have been tested in the past, leading to the current preferred alternative (Alternative 5c), a description of which is given in Section 3, based on the information contained in the Urban Design Framework. This Alternative is similar to 5b, the difference with Alternative 5a being reduced infill of the floodplain and the retention of the existing pear orchard to the east of the proposed development.

The proposals are at a concept stage and no architectural elevations were available for the visual modelling. Indication was given in the documentation of proposed planning and architectural controls.

Potentially sensitive viewpoints are Viewpoints 6 and 7 from the R45 Route, Viewpoint 8 from Boschendal, Viewpoint 9 from the R310 Route and Viewpoint 10. The proposed development would be screened from several other viewpoints by existing buildings and mature trees. Visual assessment criteria and assessment ratings are given in Sections 8 and 9.

The general finding of this Visual Impact Assessment is that the proposed Boschendal Village could have a potential visual impact of medium to high before mitigation and an acceptable medium significance after mitigation. This would apply to both Alternatives 5a and 5c because of the limited differences, although 5c would have a slightly lower significance. Over time, with the growth of extensive new tree planting, the visual impact could reduce further to medium-low significance.

The proposed development forms part of the Drakenstein urban node, as well as the cultural Winelands and the Boschendal Heritage Site. This context, along with the R45 and R310 scenic routes, were taken into account.

The finding was that a Cape-style village would not be inappropriate and could even benefit the derelict nature of the site. The general layout and design principles are supported. A visual concern, however, is the building massing in Precincts E1 and E2, which could be mitigated through further articulation of the building elevations and roofscapes in these Precincts at the next stage of design development.

It was considered that the substitution of orchards on the eastern edge with low-density single residential development on large erven in Alternative 5a could detract from the ‘compact village’ and distinct rural-urban ‘edge-making’, which are given as core principles. They could furthermore set an inappropriate suburban-type precedent for neighbouring farms.

The use of the green buffers on both sides of the R310 for large parking lots is a further visual concern, but could be mitigated through landscape planting. A number of visual mitigations are given in Section 10 to minimise the effects of parking, as well as lighting, signage and construction activities relating to the development.

Given the sensitive nature of the immediate surroundings in visual and heritage terms, the considerable scale of the proposed development, and the prestigious nature of the project, the Landscape Framework Plan is an important component of the proposals.

The potential visual impact of the large-scale project could be partly offset by the development of incrementally phased precincts over time, with each precinct being fully landscaped.

Declaration of Independence:

Quinton Lawson and Bernard Oberholzer hereby confirm their independence as visual consultants and declare that they do not have any interest, be it business, financial, personal or other, in any proposed activity on Portion 7 of Farm 1674 and Portion 10 of Farm 1674, other than fair remuneration for professional work performed in connection with the Visual Impact Assessment process for this project.

Quinton Lawson

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Name	Qualification	Prof. Registration	Experience
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1 Introduction

1.1 Background

A Visual Baseline Study for the Boschendal Village project was prepared in April 2015, which forms the basis for the current Visual Impact Assessment (VIA), which in turn will help to inform the Heritage Impact Assessment (HIA). The Visual Baseline provided visual indicators for the design and layout of the proposed 'rural village' which has subsequently gone through a number of iterations.

1.2 Scope of Work

The scope of work for the VIA is similar to that of the baseline Study and includes the following:

- Quantify and assess the existing scenic resources and visual characteristics on and around the proposed development site.
- Evaluate and classify the landscape in terms of its sensitivity to a changing land use.
- Determine viewsheds, view corridors and important viewpoints in order to assess the visual influence of the proposed project.
- Determine visual issues, including those identified in the public participation process.
- Review the legal framework that may have implications for visual / scenic resources.
- Asses potential visual impacts and recommend mitigation measures.

1.3 Definition of 'Visual'

The term 'visual' used in this report is taken in its broadest meaning to include visual, scenic, aesthetic and amenity values represented by the natural and cultural landscape, including the area's 'sense of place'.

1.4 Assumptions and Limitations

The VIA is based on the proposed Urban Design Framework, which included typical sections and architectural controls, (Briel, 2016). The final architectural treatment is not known at this stage as no architectural elevations or 3D model were available. No hard and soft landscape proposals were available for the external public and private spaces.

1.5 Methodology

The following sequence was used in the preparation of the Visual Baseline Study and the current VIA :

- A photographic survey of the study area during the field trip;
- Delineation of the view catchment area using a digital terrain model (DTM);
- The identification of landscape and cultural features from aerial photographs and fieldwork;
- The identification and mapping of important view axes, viewpoints and view corridors;
- The mapping of distance circles to determine levels of visibility;
- The identification visual indicators and guidelines that could inform the design;
- The use of visual criteria to assess potential visual impacts.

2 Description of Visual Characteristics

Important visual components of the site and area surrounding the proposed Boschendal Village site are outlined below:

2.1 Location and Context (See Figures 1, 2 and 3)

The site lies close to the intersection between the R45, which links Paarl and Franschhoek, and the R310, which follows the Dwars River Valley connecting to Stellenbosch via the Helshoogte Pass. The R310 would provide access to the proposed village development.

The site is partly surrounded to the south by the remainder of the Boschendal Estate, including the historic Boschendal homestead and werf, and associated vineyards. The Rhodes fruit canning factory, is located immediately to the north of the site.

The historical Meerlust and Lekkerwijn farmsteads, along with the Groot Drakenstein and Delta settlements, lie to the north of the R45, along with several other wine farms.

2.2 Physical Landscape

The scenically striking Simonsberg and Drakenstein Mountains, their blocky cliffs formed by sandstones of the Table Mountain Group of rocks, form a visual backdrop to the site. The weathered Cape Granite forms the gently sloping footslopes, while the site itself lies in the broad alluvial valley of the Dwars River.

The site slopes gently in a northeasterly direction towards the Dwars River some 200m to the east of the site. The area has been previously disturbed, consisting of old fields with little vegetation of any botanical value. A few wetland patches occur on the northeast and southeast edges of the site. A belt of large Eucalyptus (gum) trees occurs in the southeast portion of the site providing a useful windbreak.

The 1:50 and 1:100 floodlines of the Dwars River follow a similar alignment cutting across the northeastern corner of the site.

2.3 Existing Land Uses

The surroundings consist of an orthogonal pattern of agriculture, mainly vineyards and orchards, articulated in places by tree shelterbelts.

Neighbouring land uses include the Rhodes Food Group Head Office, Rhodes food factory and a police station to the north of the site. A disused railway track roughly follows the alignment of the R45 Route to the north of the site.

The site itself, being the subject area of the current application, includes a fruit packing shed, a pallet factory, derelict labourers' cottages, a school, a clinic, uncultivated land and a pear orchard on Portion 7 of the Farm 1674, east of the R310.

Portion 10 of the same farm, to the west of the R310, includes occupied labourers' cottages and vacant or underutilized land. (See also @Planning, February 2016).

2.4 Visual Significance

Boschendal, and numerous other historical farmsteads in the area, together with the vineyards, make this an important cultural landscape, nominated for World Heritage Site status. The Dwars River Valley has recently been gazetted by SAHRA as a provisional National Heritage Site.

The area relates to a major scenic and wine route network, with dramatic distant views towards the mountains, and numerous historical wine farms.

2.5 Constraints and Opportunities

The main visual constraints are views from the R45 and 310 Routes, which serve as wine and scenic routes in the area, as well as from the Boschendal homestead. The site is set back from the R45 and partly screened by industrial-type buildings in the foreground as well as by trees

(mainly invasive alien species). The site abuts the R310 and would therefore be more visible from this route. The rows of plane trees along the R310 would provide some visual screening. An avenue of trees in front of the Boschendal homestead tends to largely screen visibility of the site.

Derelict labourers' cottages on the site are to be demolished, and an opportunity exists for general upgrading of the area through the proposed development, including landscaping and particularly new tree planting.

3 Description of Development Proposals

3.1 Development Alternatives

Alternatives that have been tested over the past few years are described below, (see Boschendal Alternatives, Dec. 2015).

Alternative 1: No-go Option

The no-development option retains the status quo of the site, which is zoned for Agriculture. Portion 7 of Farm 1674 is occupied by a number of dwellings and vacant land, while Portion 10 is occupied by packing sheds, derelict labourer's cottages, a pallet factory, clinic (in old station building), vacant underutilised land and a pear orchard. The disadvantage is that the site could remain in a semi-derelict state.

Alternative 2: Retirement Village (DMP 2011)

An earlier proposal for the site consisted of a retirement village, including the following:

- 138 erven for residential purposes
- 25 assisted living apartments under sectional title
- A frail care centre consisting of 20 beds
- A convalescence facility consisting of 12 beds
- A rehabilitation centre
- A clubhouse including dining rooms and meeting rooms
- A small commercial and information centre
- Open space and access ways

This Alternative was not favoured because it represented a gated scheme with limited public access, suburban in character, too uniform in house types, and was located within the R310 scenic corridor.

Alternative 3: Rural Village (Briel, Sept. 2014)

This alternative involved a mixed use development which included shops, restaurants, a market, offices and other related businesses, as well as a hotel or guest accommodation of ±110 rooms, and 715 residential units at various densities from single dwellings to 3 storey apartments. The total footprint of this alternative was 34.5ha.

This alternative was not favoured as the densities were considered too high for a rural village, and did not take the wetlands adequately into account.

Alternative 4: Rural Village (Briel, May 2015)

This alternative is similar to Alternative 3, but has a reduced number of residential units and business floor area. It included mixed-use development, hotel or guest accommodation of 100 rooms, and 440 residential units at various densities. The footprint was reduced to 27.8ha.

It was felt that this alternative was too rigid in its layout, and the house types too uniform, more appropriate for an inner city development than for a rural village.

Alternative 5: Rural Village – Preferred Alternative (Briel, Oct. 2015)

This alternative is similar to Alternative 4, but has a refined layout, which partly breaks the rigidity of the grid. It has roughly the same business floor area, number of residential units and hotel or guest accommodation as Alternative 4, and has a development footprint of 27.45ha.

There are 2 variations to this option. Alternative 5a includes a row of single residential units with large erven on the eastern edge of the proposed village, requiring filling below the 1:100-year floodline. Alternative 5b excludes these units and retains the existing pear orchard, while Alternative 5c retains these residential units as well as the pear orchard.

3.2 Current Development Proposal

Alternatives 5a and 5c were used as the basis for the visual assessment, along with the No-go Alternative.

The main elements of the village are described as follows:

- A 'village high street' which is parallel to the R310 being the economic heart of the village with farmers' markets and traditional shops and restaurants with a total of 14 500m^2;
- A 'central avenue' axis off the village street which provides visual connection to the residential areas and the agricultural landscape beyond;
- Residential development, including low, medium and high density for a variety of income groups, with a total of 440 units and 100 rooms (hospitality);
- Existing civic activities (police station and clinic) along with other community facilities (taxi stops, possible pre-school and other afterschool facilities).

Table 1 Proposed Village Development for Alternative 5

Proposed facilities	**Footprint**	**Height**	**Comments**
Overall village footprint	34.5ha	max. 3 storeys	
Low density residential*	83 units	1 storey 4.5 - 5.4m	free-standing and row-houses. Masonry walls. Light colours.
Medium density residential	135 units	2 storeys 9.25 - 10.2m	Row-houses and duplexes. (equivalent to 2.5 storeys)
High density residential	232 units	3 storeys (not indicated)	Row-houses and flats (2-storey + basement)
Hospitality residential	50-room hotel 10 apartments	2 storeys	
Guest cottages	30 rooms	1 storey	Existing cottage buildings
Low density business	3 000m^2	1 storey	
Medium density business	retail: 500m^2 gen. business 3 000m^2	2 storeys	
High density business	retail: 1 000m^2 gen. business 6 000m^2	3 storeys	(2-storey + basement)
Market	retail: 1 000m^2	1 storey	(equivalent to 2 or 3 storeys)
Civic/community bldg.	500m^2	1 storey	(equivalent to 2 or 3 storeys)
Clinic	2 000m^2	unknown	
Internal access roads incl. 'High Street', 'Market Square' and Neighbourhood Square'.		n/a	Includes 2 traffic circles on the R310.

Proposed facilities	Footprint	Height	Comments
Formal Parking Overflow parking		n/a	Materials not indicated.
Open spaces		n/a	Mainly along R310 scenic route. Includes surface parking areas.
Wetlands		n/a	Includes buffers.
Street and outdoor lighting		unknown	Type and spacing unknown. No floodlights.
Landscaping		unknown	Indicative landscaping and structural planting indicated.

** Alternative 5c has a reduced fill area compared to that of 5a.*

The Site Development Plan indicates building footprints, road and parking layout, open space and structure planting. Architectural directives indicate development and building review/approval procedures.

Broad architectural design principals and indicative building types with examples are given, along with architectural guidelines. As the buildings have not been individually designed at this stage, the visual montages shown in Figures 7 to 12 are only block models at this stage.

4 Planning Policy and Legal Context

The proposed development is subject to the National Environmental Management Act (No. 107 of 1998) (NEMA) requiring a Basic Assessment. The VIA forms one of a series of studies to be included in the Basic Assessment Report.

The VIA also forms part of the Heritage Impact Assessment (HIA), which needs to be carried out in terms of the National Heritage Resources Act (Act 25 of 1999).

In terms of the Draft Stellenbosch Integrated Zoning Scheme, the site falls within a Heritage Overlay Zone, along with the R45 and R310 scenic routes.

The Western Cape Provincial Guidelines for Rural Land Use Planning and Management is another draft document that has relevance, and makes reference to visual impact on agricultural and natural landscapes.

Finally, the motivation for the rural village is based on the Stellenbosch Municipal Spatial Development Framework (SDF), which promotes a series of interconnected nodes at points of highest accessibility. The Groot Drakenstein node, located at the R45/R310 intersection, has been identified as a future development node. The node is seen as a highly accessible and important cross-roads located equidistant between Stellenbosch, Franschhoek and Paarl. It is the aim of Boschendal to develop a rural 'Cape village' with authentic urban qualities at this node. (See also @Planning, February 2016).

5 Visual Issues

Visual issues were obtained from the Comment and Responses document (Doug Jeffrey, 2015), and have previously been identified by the Visual Specialists in the Visual Baseline Study (Lawson and Oberholzer, 2015), including those from the Heritage Indicators study (Baumann et al, 2014). These are listed below.

- The high value of the cultural landscape and heritage significance of the area;
- The importance of the wine route and scenic routes for tourism;
- The proximity of the historical Boschendal homestead and werf complex;
- The visually open landscape represented by the vineyards and their seasonal colours;

- The need to retain the predominantly rural character of the area;
- The need to avoid fragmentation of the agricultural landscape;
- The need to upgrade or remove derelict or unsightly areas / structures.

6 Planning Principles

A number of planning and design principles have been set out by the project consultants, extracts of which have a bearing on visual implications relating to the proposed village development. (See also @Planning, February 2016):

- The village to be rooted in the Cape tradition of village-building, with traditional grid layout. Heritage indicators to ensure the development of an authentic Cape village with emphasis on urban edge-making, scenic routes, density, public access, vistas and views, and walled architecture.
- The village should be well-contained and as small and compact as possible.
- New agricultural areas should be brought right up to the settlement edges. The village should respond to the predominant agricultural patterns, but have strong spatial edge-definition to eliminate the possibility of future expansion or sprawl.
- The use of structural landscaping is paramount, with edges of the village clearly defined through strategic structural planting.

7 Visual Indicators

A number of visual indicators were identified in the earlier Visual Baseline Study (Lawson and Oberholzer, April 2015), the purpose of which was to inform both the heritage assessment and the layout of the proposed village. The visual indicators are listed here to provide a benchmark for the assessment of the current Urban Design Framework Plans (Alternatives 5a and 5c).

Heritage indicators:

- Maintaining a visual setback along the R45 scenic route;
- Maintaining a 300m agricultural setback from the Boschendal homestead werf wall;
- Bringing agriculture to the edge of the proposed village;
- Using avenues and windbreaks to define edges for the proposed village;

Building Heights:

Buildings generally restricted to 2 storeys;
3-storey buildings could emphasize focal points;
1-storey buildings used in visually sensitive areas.

Open Space and Landscaping:

A continuous system of both hard and soft spaces;
Community open spaces and landscaping designed in sympathy with the orthogonal cultural / agricultural landscape;
Excessively gardenesque-type landscaping avoided;
Professional landscape architect employed at an early stage of the project.

Roads and Parking:

Roads be laid out in sympathy with the orthogonal pattern of the farmlands, tree belts and irrigation canals;
Parking areas fronting onto the scenic routes avoided;
Parking screened with buildings, walls, berms and/or trees;
Parking organised into small parking courts of about 20 cars;
Excessive asphalt and barrier kerbs avoided;

Dish channels or grassed swales for stormwater;
Gravel parking areas to minimise runoff.

Lighting and Signage:

Outdoor lighting to be discrete to maintain the rural ambience;
Low-level bollard type lights and reflectors to minimise light spillage;
Advertising signage, banners and flags avoided;
Low-level signs, or fixing signs to walls.

Environmental management:

Environmental management plan (EMP) to be prepared, particularly for the construction period.

8 Visual Assessment Criteria

The following criteria have been used to determine potential visual impacts and benefits relating to the current alternative. These are then rated in Tables 2, 3 and 4, along with mitigations in Table 5, below.

8.1 **Visibility** (See Fig. 3, and Figures 8 to 12)

Visibility is largely determined by the distance of the viewer (or receptor) from the proposed project. This is measured by means of distance radii from the proposed project to a range of selected viewpoints. Given that much of the surrounding area consists of vineyards, tree belts or industrial-type uses, the visibility of the proposed village development does not tend to be a major factor, except possibly for users of the R310 Route. (See also Table 2).

8.2 **Visual Exposure** (See Fig. 4)

Potential visual exposure of the proposed village project is determined by the 'viewshed' or 'view catchment', being the zone within which the project would be visible. The viewshed, which is determined by means of a digital terrain model (DTM), would be fairly extensive in the open landscape, but would in reality be restricted by foreground buildings and trees.

8.3 Visual Absorption Capacity

This is the ability of the landscape to conceal or screen the proposed development. The most visually absorptive areas tend to be the low-lying or valley area, where the project is currently located. Tall vegetation and tree clumps would help to absorb / screen development, while the low vineyards and open fields provide little visual cover, and would be more visually sensitive. See comments in Table 2 for each selected viewpoint.

8.4 Landscape sensitivity

A number of important historic homesteads, such as Boschendal, Rhone and Excelsior, as well as those on neighbouring farms occur in the area, which along with the vineyards, add to the visual sensitivity of the area. The fact that many of these places have heritage value, and are also tourism destinations, tends to increase their sensitivity. Wine routes and scenic routes are for the same reason visually sensitive. Where these resources occur in combination, sensitivity is again heightened. Adjacent industrial land uses tend to reduce the visual sensitivity of the actual site.

8.5 Landscape integrity

Visual quality tends to be represented by the intactness of the natural or cultural landscape, lack of visual intrusions or incompatible structures, and the presence of a strong 'sense of place'. These qualities enhance the visual and aesthetic value of the area. Areas of high landscape integrity/value include the pattern of vineyards, orchards, avenues, linear shelterbelts and historical homesteads surrounding the site. Much of the site is currently cleared or is derelict.

Although the proposed village development would be in contrast to the rural surroundings, the site abuts an industrial canning factory, and could help to upgrade the run-down nature of the site.

8.6 Cultural landscape significance

Landscapes of cultural or heritage importance tend to have increased visual significance. Boschendal and its immediate surroundings, which provide the context, have important cultural landscape significance. The proposed village development would potentially form part of this context and have a strong influence on the cultural landscape.

8.7 Cumulative visual impacts

The cumulative impacts are the sum of all the effects of both existing and proposed development, and in this case, the potential effect on the scenic or rural quality of the area. The proposed village development would substantially increase the urban footprint of the area. The site is, however, seen as part of a planned urban node. Another consideration is the time span over which the proposed development would take place, an incremental, phased development having less of an immediate cumulative effect.

Table 2 Viewing Distances and Visibility

View-point	Location	Distance	Comment
1	Excelsior homestead	669m	Proposed development would not be visible beyond the dense tree belts.
2a	Allée Blueu Entrance on R45 at intersection with R310.	172m	Proposed development would be screened by foreground trees and buildings.
2b	Allée Blueu Entrance on R45 at intersection with R310.	198m	Development would be partly visible, but mainly screened by existing trees.
3	District farm access road	791m	Proposed development would not be visible beyond the dense treebelt along the Dwars River.
4	District road and R45 intersection	621m	Proposed development would not be visible beyond the dense treebelt along the Dwars River.
5	R45 at Solm / Delta entrance	616m	Proposed development would not be visible beyond the dense treebelt along the Dwars River.
6	R45 adjacent to development site	103m	Proposed development would be partly visible through trees, but over a short distance.
7	R45 at Dwars River Bridge	83m	Proposed development would be partly visible through trees, but over a short distance. Alien poplar trees may be removed, increasing visibility.
8	Boschendal Werf wall	244m	Proposed development would be clearly visible beyond existing cottages.
9	R310 southern edge of development site	205m	Proposed development would be clearly visible beyond existing cottages from R310 through tree avenue.
10	Local access road	29 / 285m	Proposed development would be clearly visible in the middle distance across open field.
11a	Local access road at site boundary	7m	Proposed development would be clearly visible adjacent to local access road.
11b	Local access road at site boundary	28m	Proposed development would be clearly visible adjacent to local access road.

9 Potential Visual Impacts

Potential visual impacts along with impact ratings are given in Table 3 below for Alternatives 5a and 5c. Impacts for Alternative 5a would be slightly higher than for 5c as the former includes filling and the removal of part of a pear orchard.

Table 3 Potential Visual Impacts

Criteria	Comments	Alternative 5a	Alternative 5c
Visibility of development Distance from selected viewpoints	Mainly visible from the R310 scenic route, and from Boschendal Manor House. Other viewpoints and view corridors are partly screened by existing mature trees and buildings. Cranes and trucks could add visibility during construction phase.	Medium	Medium
Visual exposure Zone of visual influence or view catchment	The mapped viewshed should be seen as nominal and would be more contained by the effect of existing mature trees and buildings around the site.	Medium	Medium
Visual sensitivity Landscape features	The site has been previously disturbed and is partly vacant / derelict. The wetlands are a sensitive landscape feature retained in the current layout. Other features include a gum tree belt and pear orchard.	Medium	Medium
Visual absorption capacity (VAC) Potential for concealment	The site is relatively flat and located in a broad valley, with existing mature trees and buildings, which would tend to partly conceal the proposed development.	Medium	Medium
Landscape integrity Effect on character of the area	The proposed village would introduce additional urban development to the existing node. The building massing of high-density residential / commercial development would be in contrast to the rural context.	High	High
Cultural landscape Heritage value of the landscape	The proposed village would involve a major new element in an area of high heritage significance. Existing cottages and trees of value would be retained as part of the proposed development. Alternative 5a would include single residential units along the eastern edge.	High	Medium-high
Construction phase impact	Construction phase impacts include additional heavy traffic, excavation equipment, dust and noise, but are short term.	Medium-high	Medium-high
Cumulative visual impact	The proposed village development, once fully developed, would substantially increase the size of the existing urban node. Visual impact would be reduced over time as trees mature.	Medium-high	Medium-high
Visual impact intensity		**Ranges from medium to high**	**Ranges from medium to high**

Table 4 Synthesis of Visual Impacts/Benefits before Mitigation

Criteria	Scoring	Alternative 5a	Alternative 5c	Alternative 1 No Develop-ment
A. Intensity or magnitude of impact Intensity of visual impact.	Low (1) Low-medium (2) Medium (3) Medium-high (4) High (5)	Medium-high (4)	Medium-high (4)	Low (1)
B. Spatial extent Degree of influence over a geographic area - local, district, regional or national.	Local (1) Regional (2) National (3)	Local (1)	Local (1)	Local (1)
C. Duration Projected life-span of the proposed project.	Short-term <2 yrs (1) Med-term 2-15 yrs (2) Long-term 15 yrs+ (3)	Long-term (3)	Long-term (3)	Long term (3)
Consequence	A+B+C Low (3-5), Med (6-8) High (9-11)	Medium-high (8)	Medium-high (8)	Low (5)
Probability Degree of possibility of the impact occurring.	Degree of possibility of the impact occuring.	Probable	Probable	Highly probable
Significance	Consequence+ probability	**Medium-high significancce**	**Medium-high significancce**	**Low significance**
Status	Negative or positive effect	Negative	Negative	Neutral
Confidence Degree of confidence in predictions.	Based on available information and photomontages.	Med-high	Med-high	High
Construction phase impacts	Additional activity, noise and dust in the short term	Med-high	Med-high	None
Cumulative impacts	Adds to existing urban node	**Medium-high significancce**	**Medium-high significancce**	**Low significance**

10 Recommended Mitigations

The visual assessment tables above and photographic montages in Figures 8 to 12 provide an indication of potential visual impacts resulting from the proposed village development, and the scale of the impacts.

Recommended mitigations, including the visual indicators outlined in the Visual Baseline Study (Lawson and Oberholzer, April 2015), are outlined in Table 5 below.

Table 5 Potential visual Impacts and recommended mitigations

Potential visual impact	Recommended mitigation
Despite being an identified node, the overall village development would increase the urban footprint and result in a change to the area.	The proposed village development should be softened through major site rehabilitation and landscape planting, appropriate for the cultural and agricultural setting. A Landscape Framework Plan should be prepared as part of the current planning application by a professional Landscape Architect.
The overall scale of the fully completed village development, particularly if implemented in one intensive phase, could potentially signify a significant visual change in the character of the area.	An incremental or phased approach should be considered for the development of the proposed village, to minimise the visual effect of a large-scale development. A precinct phasing plan should be prepared as part of the planning application.
The proposed siting of low-density single residential developments on the eastern and western edges of the village in Precincts F2 and F3 could result in a more suburban visual effect than that of the compact residential types.	The stated principle of a 'well-contained, small and compact' village, including 'urban edge-making' should be emphasized. The existing orchards should beretained, as currently proposed in Alternative 5c, as they provide useful visual screening, and constitute the essential rural context. The proposed filling of the floodplain on the eastern edge should be avoided or minimised, as these corridors provide an essential hydrological and biological function, as well as being part of the larger landscape framework.
The proposed 'high-density' residential and commercial components of the development, particularly large building massing of 3 storeys in Precincts E1 and E2, could potentially detract from the rural character of the area.	The stated principle of a 'Cape tradition of village-building', and an 'authentic Cape village' should be emphasized. Preferably limit buildings to 2 or 2.5 storeys to minimise visual intrusion above tree canopies. (3-storey structures could be strategically used to emphasize focal points). Long or slab-like buildings should be more articulated and varied to express individual units, both in their elevation and in roofscape, to create more of a Cape village fabric.
The proposed large parking lots located in the green buffer to the east of the R310 in Precincts A2 and A3 could be visually intrusive on the rural scenic route. The overflow parking in the green buffer strip to the west of the R310, would similarly be visually intrusive, and could too easily become a formalised parking lot.	Parking areas along the R310 should be set back from the scenic route to allow multiple rows of trees for screening. Parking should be screened with buildings, walls, berms and/or trees, where possible. Parking should be organised into smaller parking courts of about 20-30 cars to avoid visually and climatically exposed parking lots. (The 2 parking lots to the east of the R310 should ideally have exits to allow for hunting and circulation). Excessive use of asphalt and barrier kerbs should be avoided to retain the rural character of the area. Parking areas could have gravel surfaces for visual informality and to minimise stormwater runoff. Stormwater should consist of dish channels and grassed swales, or traditional furrows (as indicated in the proposed Urban Design Framework).
Street and outdoor lighting could potentially create light 'pollution' and sky-glow in the rural setting.	Street and outdoor lighting should be discrete to maintain the rural ambience of the area. Outdoor lighting should be fitted with reflectors to minimise light spillage.

	Low-level bollard type lights could be used for parking areas and pedestrian paths.
Uncontrolled signage could create visual 'clutter', particularly along the R310 and R45 scenic routes.	Advertising signage, banners and flags should be avoided, Low-level signs are less visually intrusive. Signs should be fixed to walls where possible to minimise the visual clutter of support poles.
Construction activities could result in visual intrusion on the surroundings, including excavation equipment, trucks, dust and noise.	An environmental management plan (EMP) should be prepared and included in all contract documentation, particularly during the construction period. A suitably qualified Environmental Control Officer (ECO) should be employed to manage potential environmental and visual impacts on the site.
Uncompleted phases could result in vacant land and the visual detraction of a building site.	Each phase should be implemented as a completed development as far as possible, including all the landscaping, particularly if there is a long time period before another phase is undertaken.

A summary of potential visual impacts, both before and after mitigation, are given in Table 6 below. Although Alternatives 5a and 5c have similar overall visual impact significance (given the limited differences), Alternative 5c would have a slightly lower significance, and would therefore be the preferred alternative from a visual perspective.

Table 6 Summary of potential visual impacts before and after mitigation

	Comments	**Significance before mitigation**	**Significance after mitigation**
Alternative 5a village development	Density and building massing could visually intrude on rural / cultural setting, but could be partly offset by greater articulation of elevations and roofscape. Single residential suburban-type development on the eastern and western edges could erode the principle of a small, compact village, but could be mitigated if orchards are retained and treebelts introduced.	Medium-high significance	Medium significance
Alternative 5b Village development	Density and building massing could visually intrude on rural / cultural setting, but could be partly offset by greater articulation of elevations and roofscape. Limited infill below the 1:100 year line, and retention of existing orchards (Preferred alternative in visual terms).	Medium-high significance	Medium significance
Alternative 5 Construction Phase	Construction could result in additional visual intrusion from construction equipment, trucks, dust and noise. Impacts would, however, be short-term, and could be mitigated through the EMP.	Medium-high significance	Medium significance
No Development Alternative	Status quo maintained. Vacant, derelict land lacks visual amenity, but could be rehabilitated.	Low significance	Low significance

Over time, with the growth of extensive new tree planting, the visual impact for both Alternatives 5a and 5c could reduce further to medium-low significance.

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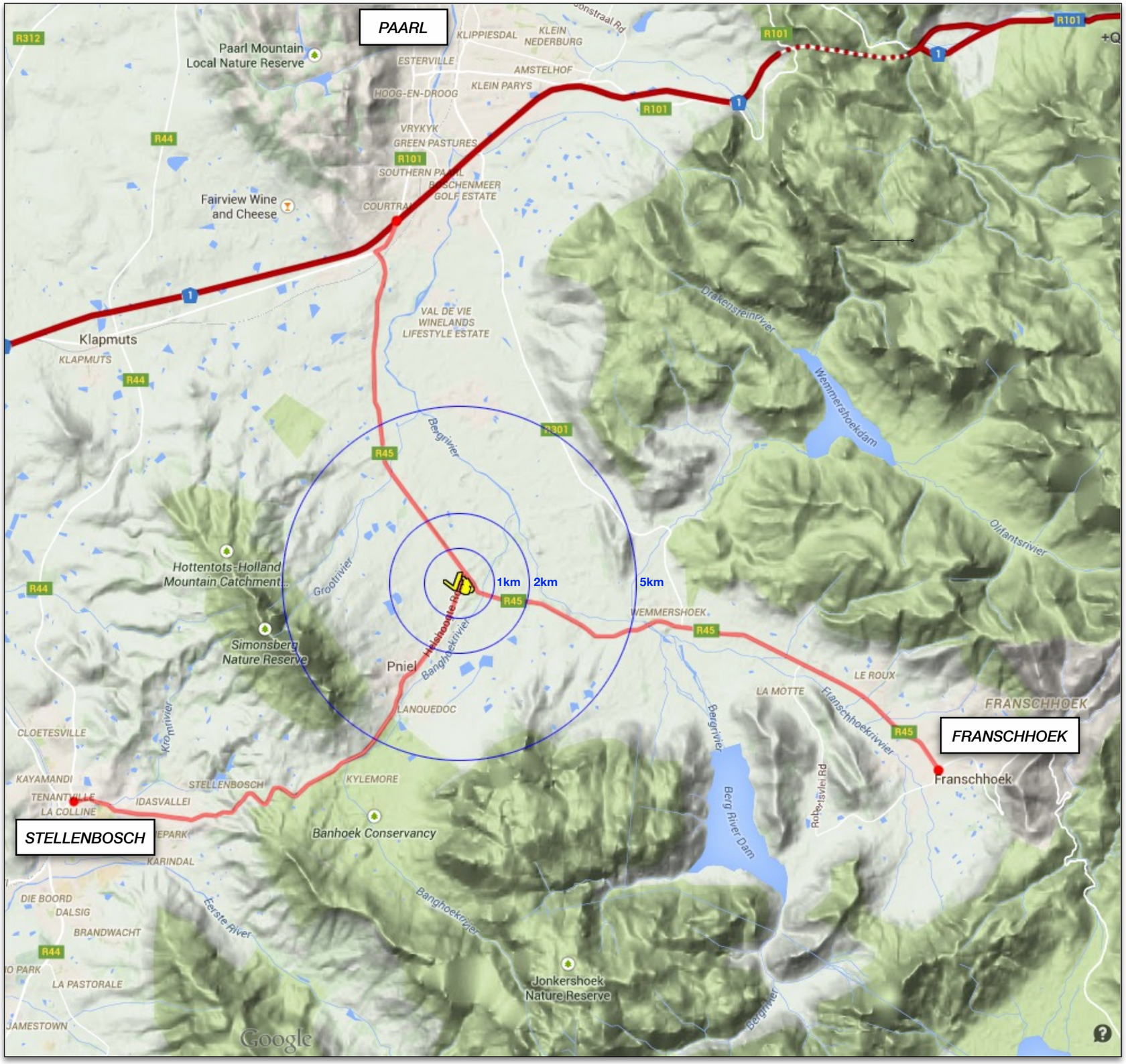


Base Map Source : Google Maps 2015

0 5km 10km

Figure 1 • Locality Map

to Paarl

Base Map Source : Chief Directorate : National Geo-Spatial Information : 1:50 000 Topographic Series : 3318 DD Stellenbosch (5) 2000 • 3319 CD Franschhoek (3) 1997

0 1km 2km

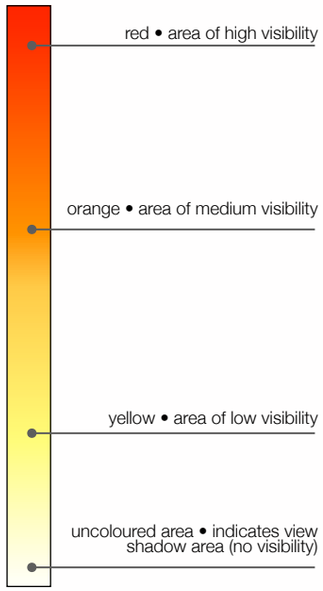
Figure 2 • Local Context and Distance Radii

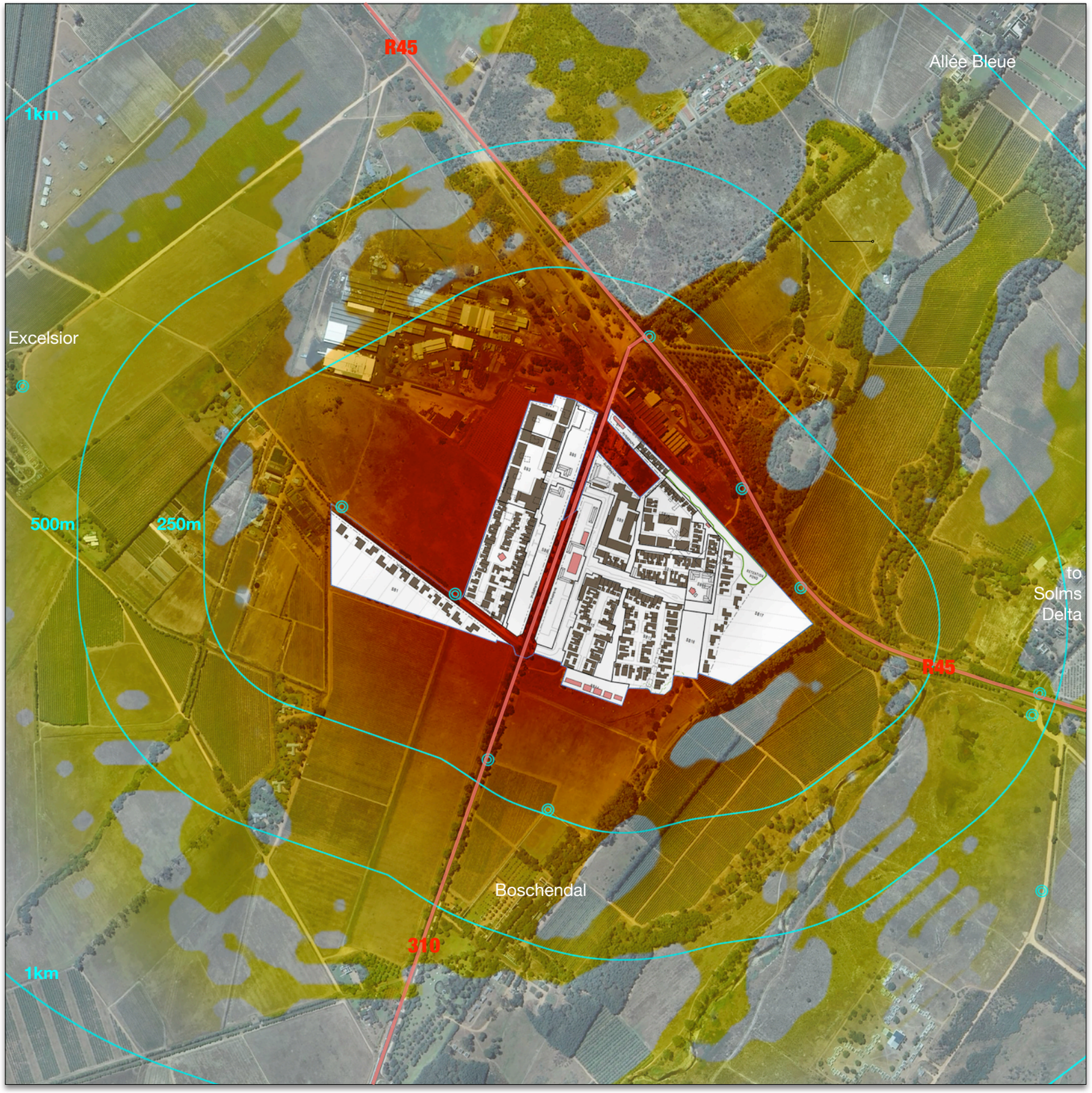
Base Map Source : NGI Aerial Photography • 2010

0 250m 500m

Figure 3 • Local Context : Viewpoints and Distance Radii

VISIBILITY GRADIENT LEGEND





Base Map Source : NGI Aerial Photography • 2010

0 250m 500m

Figure 4 • Nominal Viewshed and Distance Radii

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.

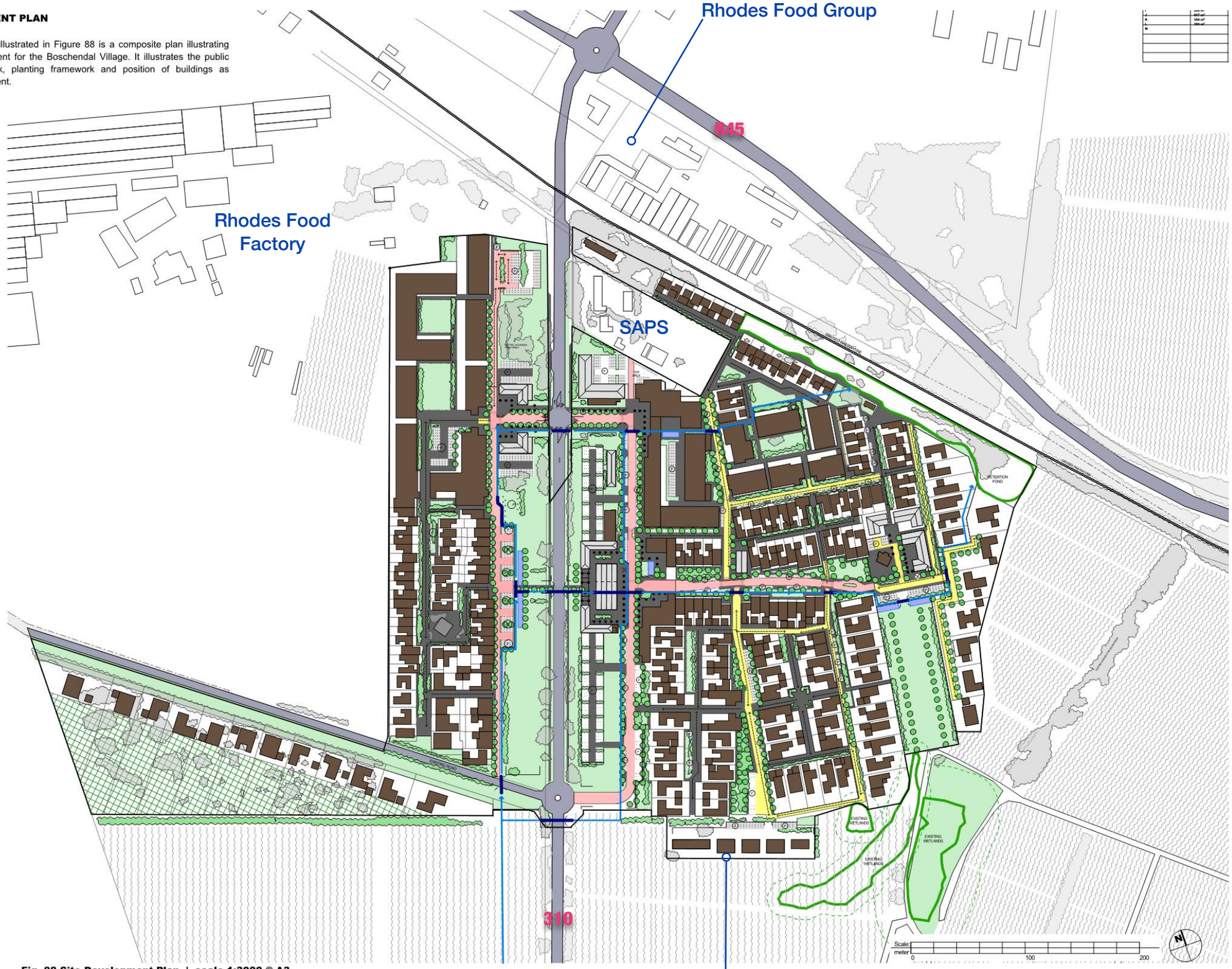


Fig. 88 Site Development Plan | scale 1:3000 @ A3

source : Philip Briel Architecture • Urban Design 2016 • Alternative 5c June 2016

Figure 5 • Proposed Site Development Plan

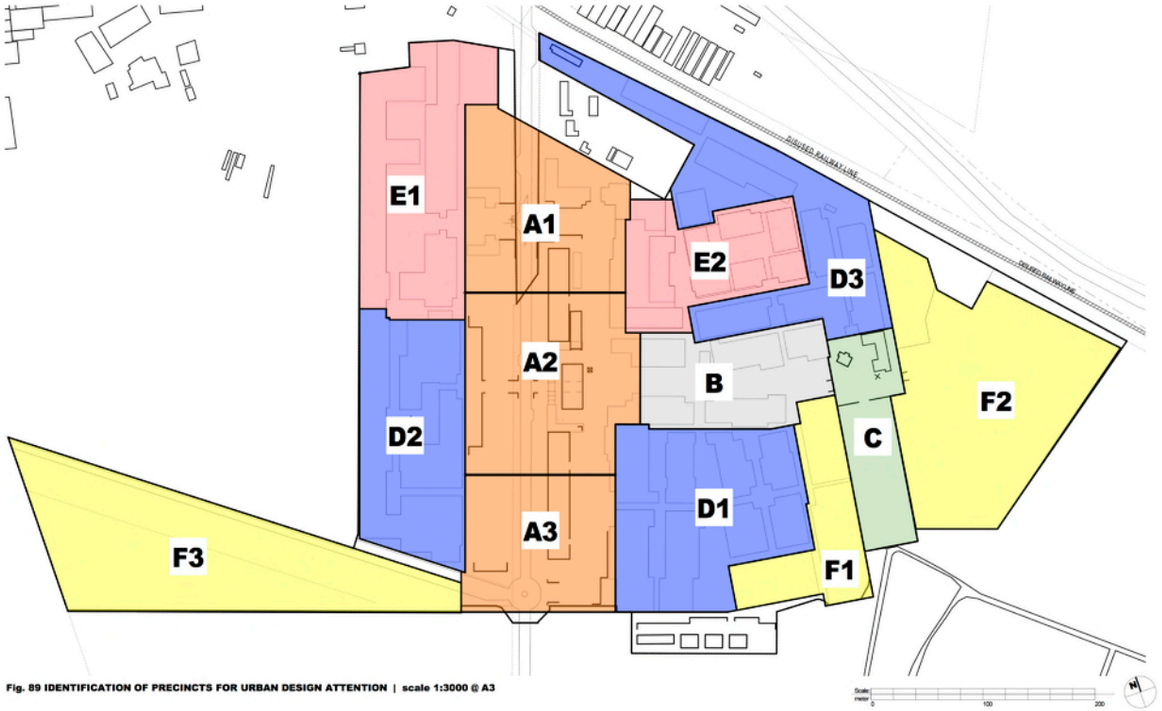


Fig. 89 IDENTIFICATION OF PRECINCTS FOR URBAN DESIGN ATTENTION | scale 1:3000 @ A3

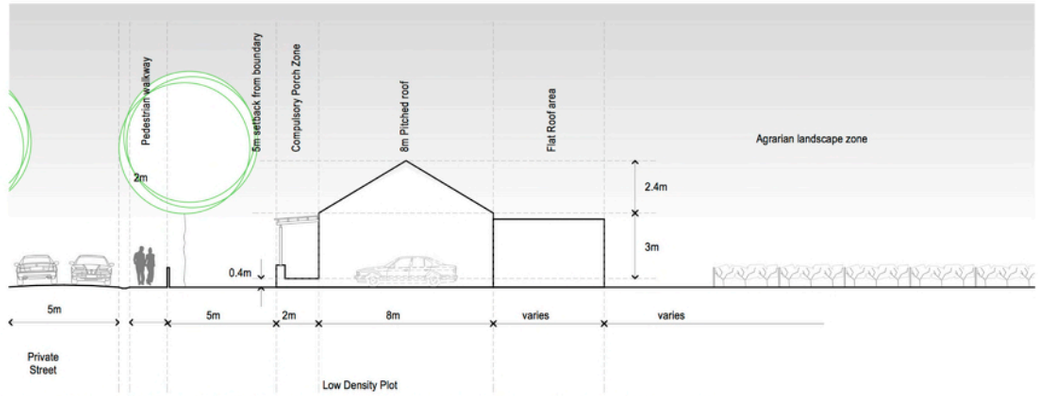


Fig. 117 LOW DENSITY RESIDENTIAL (Precincts: F2 +F3) (Single residential erfen) scale 1:250 @A3

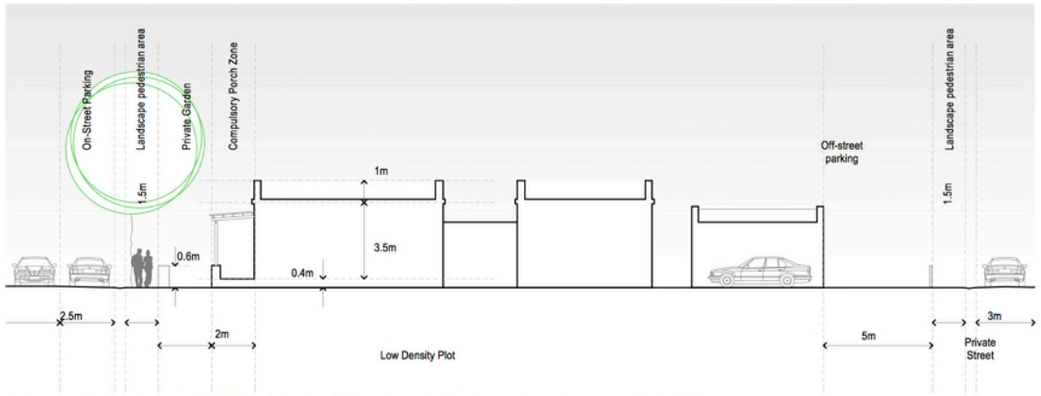


Fig. 118 LOW DENSITY RESIDENTIAL (Precinct: F1+D2)
scale 1:250 @A3

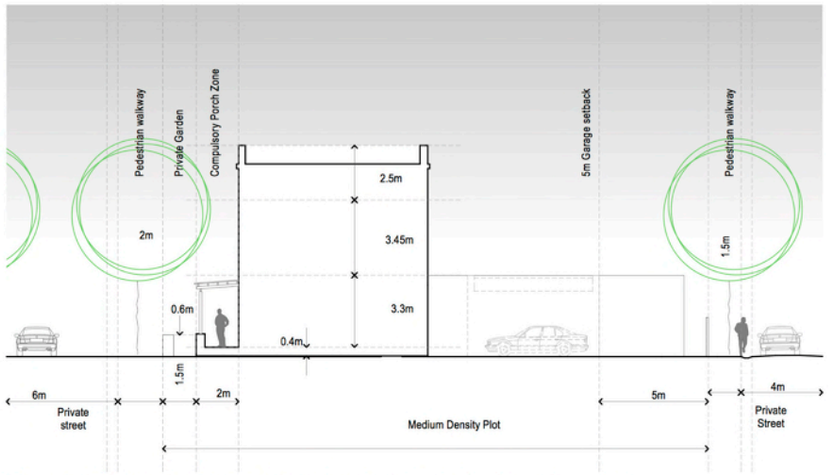


Fig. 116 MEDIUM DENSITY RESIDENTIAL (Precints: B+D1+D2+D3) scale 1:250 @A3

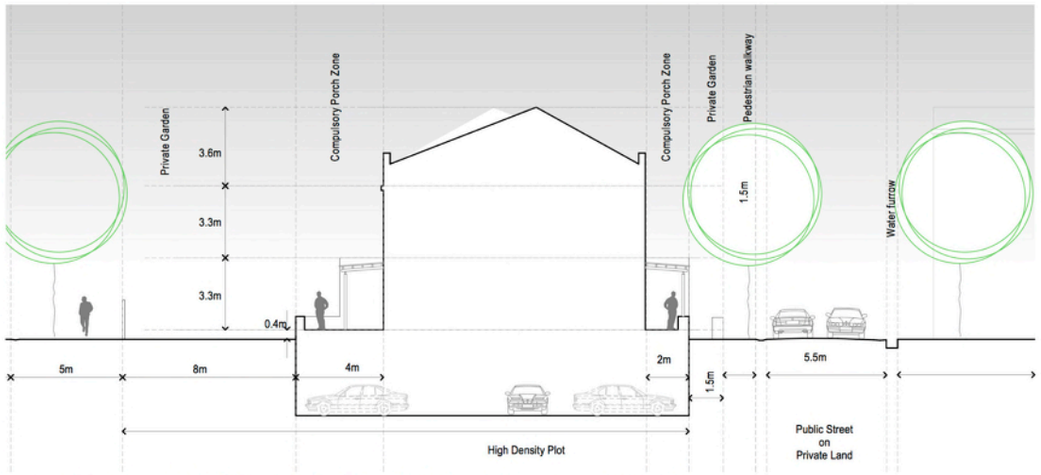


Fig 119 HIGH DENSITY RESIDENTIAL (Precinct E1+E2)
scale 1:250 @A3

source : Philip Briel Architecture • Urban Design 2016

Figure 6 • Proposed Development Controls

source : 3D Model by MLB/BOLA 2016

Figure 7 • 3D Model

viewpoint 2a • from Allée Blueu Entrance on R45 • distance 172m

viewpoint 2b • from from Allée Blueu Entrance on R45 • distance 198m

photographs : bola/mlb 2015

Figure 8 • Viewpoint 2

viewpoint 3 • from district farm access road • distance 791m

viewpoint 6 • from R45 adjacent to Development Site • distance 103m

photographs : bola/mlb 2015

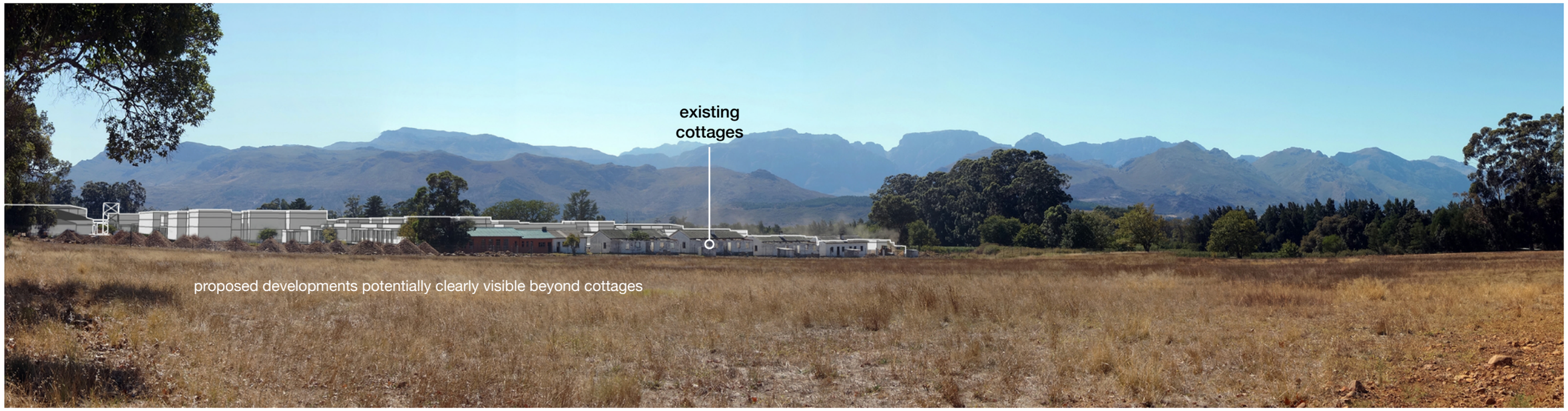
Figure 9 · Viewpoints 3 and 6

viewpoint 7 • from R45 at Dwars River Bridge Pedestrian Pathway • distance 83m

viewpoint 8 • from northern end of Boschendal werf wall • distance 244m

photographs : bola/mlb 2015

Figure 10 · Viewpoints 7 and 8

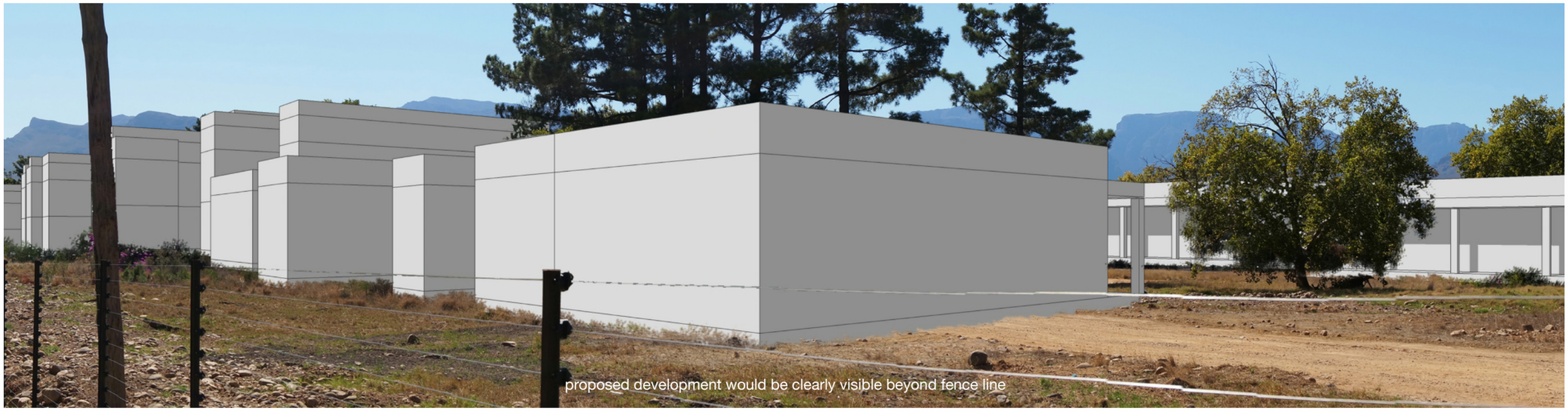


viewpoint 9 • from R310 at southern buffer edge of development • distance 205m

viewpoint 10 • from Local Access Road • distance 29m / 285m

photographs : bola/mlb 2015

Figure 11 · Viewpoints 9 and 10



viewpoint 11a • looking North-East from Local Access Road at Development Site Boundary • distance 7m

viewpoint 11b • looking South-East from Local Access Road at Development Site Boundary • distance 28m

photographs : bola/mlb 2015

Figure 12 • Viewpoint 11