ANNEXURE A

RESPONSE TO NID FROM HWC

5th June 2015

HWC Case Number 15052003AS0525E

Case No: 130819SD13E
File No: HM/CAPE TOWN/ ERVEN 148638; 4651; 14888; 153558; 123311; 107747
Enquiries: Shaun Dyers
e-mail: Shaun. Dyers@pgwc.gov.za

Tel. (021) 483 9689

Date: 4 September 2013

iLifa leMveli leNishona Koloni
Erfenis Wes-Kaap
Heritage Western Cape

Interim Comment

Heritage Western Cape hereby notifies:

M. Atwell
2 Caxton Close
Oakridge
7806

of its Comments and Recommendations in terms of

Section 38(2) of the National Heritage Resources Act, 1999 (Act 25 of 1999)

For: Proposed Pedestrian Bridge and a single lane vehicle offramp.

At: Erven 148638; 4651; 14888; 153558; 123311; 107747, Cape Town Station, Cape Town.

INTERIM COMMENT:

A Heritage Impact Assessment (HIA) is required consisting of a visual impact study assessing the impact of the proposals on the Grand Parade; the Castle; City Hall and the surrounding context, and an archaeological study with an integrated set of recommendations.

Please feel free to contact this office for any other information.

Andrew Hall

Chief Executive Officer/Director
Heritage Western Cape

ANNEXURE B

PROPOSED BOSCHENDAL VILLAGE:
HERITAGE INDICATORS AND DIRECTIVES
April 2015
Prepared by Baumann, Winter, Dewar and Louw

Proposed Boschendal Village:
HERITAGE INDICATORS & DIRECTIVES

(submitted as part of the main assessment process in terms of the NEMA regulations)

April 2015

Prepared By:

Nicolas Baumann
Sarah Winter
Dave Dewar
Piet Louw

A. Introduction

This document is submitted as part of the assessment process in terms of NEMA regulations.

The document seeks to identify a range of heritage indicators which should be applied in an assessment of a proposal to create a small settlement on Boschendal owned land at the intersection of the R45 and the R310 in Stellenbosch (figure 1).

Previous heritage studies have emphasised that two issues are central to the heritage question in the case of Boschendal. The one is the harmonious and balanced relationship between the three landscapes of society: wilderness, rural and urban. The other is authenticity. Authenticity demands the retention of the dominance of agriculture and a settlement from which is appropriate to its agricultural setting: it requires achievement of qualities of rural village, not suburbia.

This document seeks to identify the qualities which need to be captured in the Boschendal village and to provide directives relating to the achievement of these qualities.

The document is structured into a number of sections:

A Overall Generic Performance-based Indicators

B Locational Indicators

C Context-Specific Sub-Regional Indicators

D Generic Village Qualities: Organizational Principles and Indicators

E Generic Structural Indicators

F Generic Street Organizational Indicators

G Context-Specific Village Indicators

H Visual Indicators (Oberholzer Lawson)

I Illustrating the Words

J Architectural Indicators and Controls

Appendix A: Visual Baseline Study

This structure inevitably generates some overlap and repetition. However, it is felt that this aids the use of the document as a design assist.

Figure 1: The Site: Location

A. Overall Generic Performance-based Indicators:

The identification of the cultural landscape qualities which should be achieved in the design and some factors which contribute to this.

1. Respect the historic cultural landscape:

- 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, gate¬way 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).

2. Maintain the dominance of the rural landscape:

- 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 cul-de-sacs should be minimized – there should always be the possibility of pedestrian access into the landscape;
- Minimize artificial gardens.

B. Locational Indicators

The first question that should be posed is whether and where development could be considered in the context of the Boschendal land–holdings as a totality? This question has been explored through the applications of a rigorous method.

B.1 Method

The indicators have been derived through a rigorous process of analysis. In simplified form, this method has followed a number of steps.

B.1.1

A set of indicators were developed for the site in three categories, based on specialist studies: natural systems (geology, soils, topography, climate, hydrology, flora and fauna), heritage or cultural landscape, and infrastructure (table 1). The information was then interpreted and spatialized into a number of layers (figure 2, 3 and 4), which were then overlaid to produce a composite constraints and informants map.

B.1.2

An approach to regional settlement formation was then conceptualized. This too was driven by a concern with authenticity. It argued that to be authentic, settlement could not simply be scattered anywhere. Rather, each new development parcel should contribute to an emerging and strengthening system, where the different elements of the system lean synergistically on each other. The settlement system should relate to historical investments in infrastructure: the settlement zones should be concentrated within the zones of influence of two emerging, hierarchical, regional corridors effectively confining settlement to the periphery of the working farm (figures 5 and 6). In terms of settlement, four principles, in particular, were seen as being central to authenticity: maintaining the dominance of wilderness and the working agricultural landscape; maintaining and enhancing continuities (of green space and of movement); respecting the valley section – no development on ridge-lines, steep slopes or public view-cones; and building on the agricultural superblock (figure 7). The overall approach is one of consolidation and integration, not scatter (figure 8a & b).

B.1.3

The constraints and informants map was then interpreted, in the light of the settlement model, to produce a three-category assessment of land potential:

- ‘No-go’ areas - areas where development definitely should not be allowed;
- ‘Tread lightly’ areas – area where some development is possible, while maintaining agricultural dominance;
- Land parcels which could be considered for development. This was done at the level of the site as a whole.

B.1.4

Those land parcels which had some developmental potential were then analysed in greater depth in the field by a specialist team and the constraints and informants map, as well as the zones of development potential, were then refined based on precinct-specific information. In order to portray this more detailed information, the total site was divided into three sections: a northern section, where most development potential lies; a southern section, named as Bethlehem; and an eastern section (Thembalethu). The composite constraints and informants for the northern precinct, within which the proposed site lies, is shown in figure 9.

STUDY	CRITERIA
CATEGORY A: NATURAL LANDSCAPE	
Landform	• 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
Minerals, fault lines and unstable soils	• No development over these. However, not applicable in this case
Productive quallity of soils	• Classified as good, moderate and poor. No building on good agricultural soils or on embedded moderate soils
Areas prone to flooding Wetlands Floodplains	• No development in these • No development in these • No development within 100 year floodplain
Riverine corridors	• No development within riverine corridors
Botanical ecology	• No development in areas of high biodiversity value • Protect and promote rare or endangered indigenous species or habitats • Clear invasive vegetation
Faunal ecology	• No development in areas of high biodiversity value • Protect and promote rare or endangered species or habitats • Maintain established migration patterns

Table One: Baseline Studies, and the Criteria Used in the Synthesis

STUDY	CRITERIA
CATEGORY B: CULTURAL LANDSCAPE	
Landscape character	• Identify landscape types or characters for more detailed precinct study
Archaeology	• Protect and avoid important archaeological remains; • Graded as 1, 2, 3A, 3B & 3C
Historical built form and settings	• Protect and enhance the historical architectural set pieces of the Valley (e.g. Rhone, Boschendal , Goede Hoop, Bethlehem, Rhodes Cottage/Nieuwedorp) • Protect and enhance the range of other conservation-worthy places (e.g. werfs, cottages, grave sites, ruins, outbuildings, social facilities) • No or limited new development within zones of high sensitivity, subject to more detailed heritage assessment at a precinct or site specific level • Retain and enhance historical fabric • Reinforce and enhance landscape settings • Allow for the demolition of structures of no or limited heritage significance, which detract from that significance
CATEGORY C: PUBLIC STRUCTURAL DESIGN INFORMANTS	
Regional settlement and route structure	• 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
Bulk infrastructure	• Wherever possible, make use of existing bulk infrastructure
Architecture	• Ensure that new building development is of a high quaity 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
Social facilities	• Where possible, reinforce existing facilities
Planting	• Protect and enhance planting patterns and trees of stature

Table One (continued): Baseline Studies, and the Criteria Used in the Synthesis

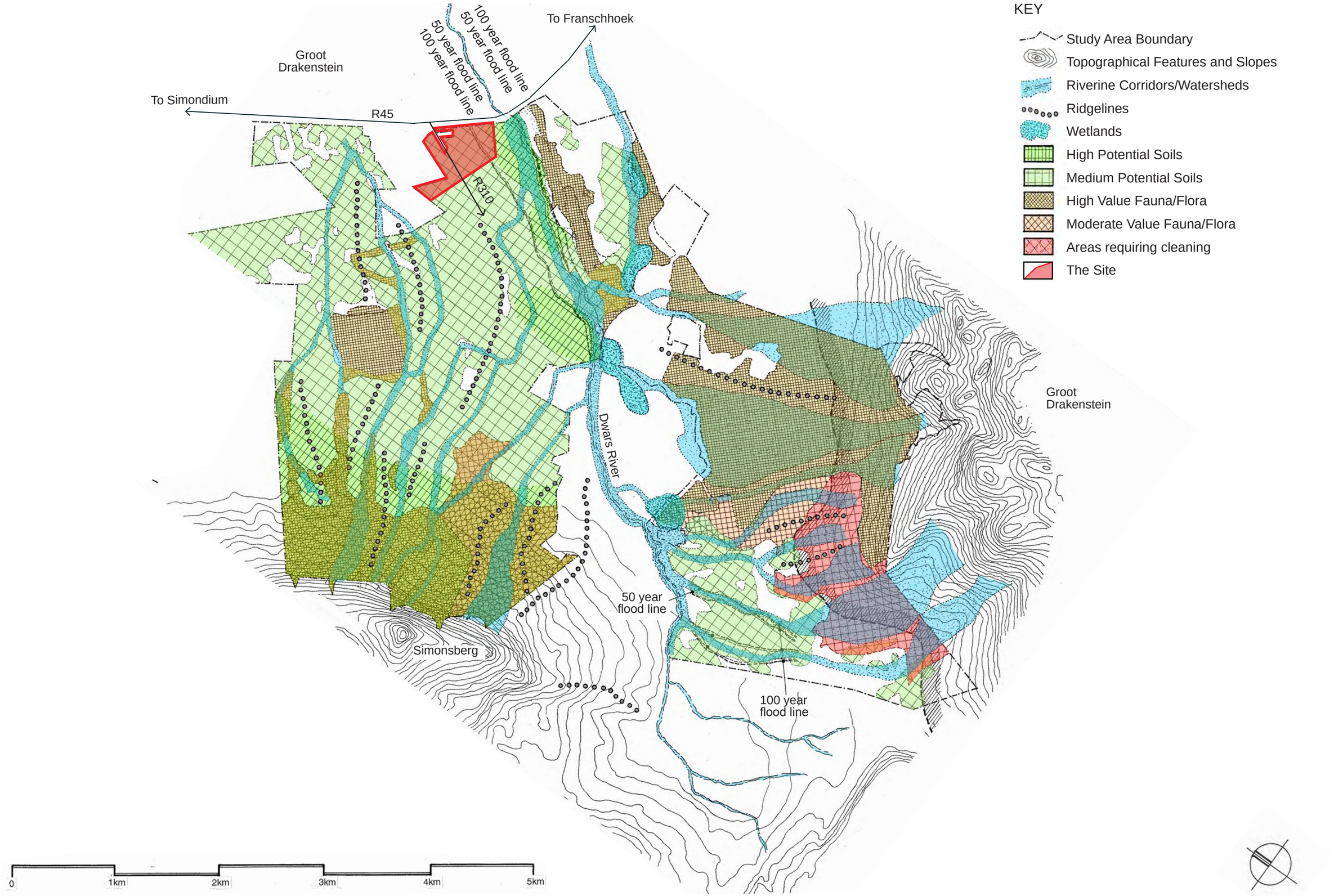


Figure 2: The Groot Drakenstein-Simondium Valley: Composite Constraints and Informants Relating to the Natural Environment

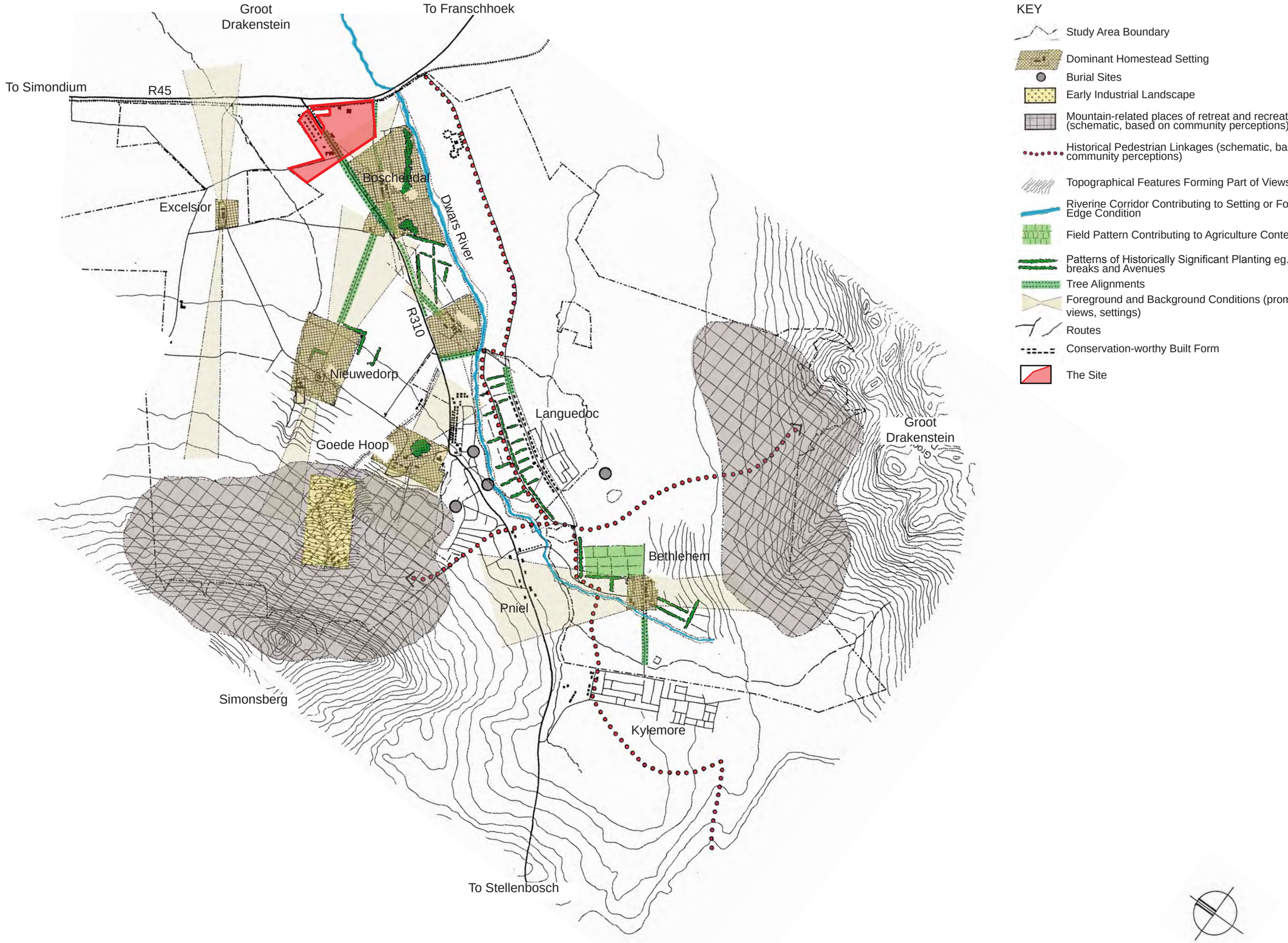


Figure 3: The Groot Drakenstein-Simondium Valley: Composite Constraints and Informants Heritage and Cultural Landscape

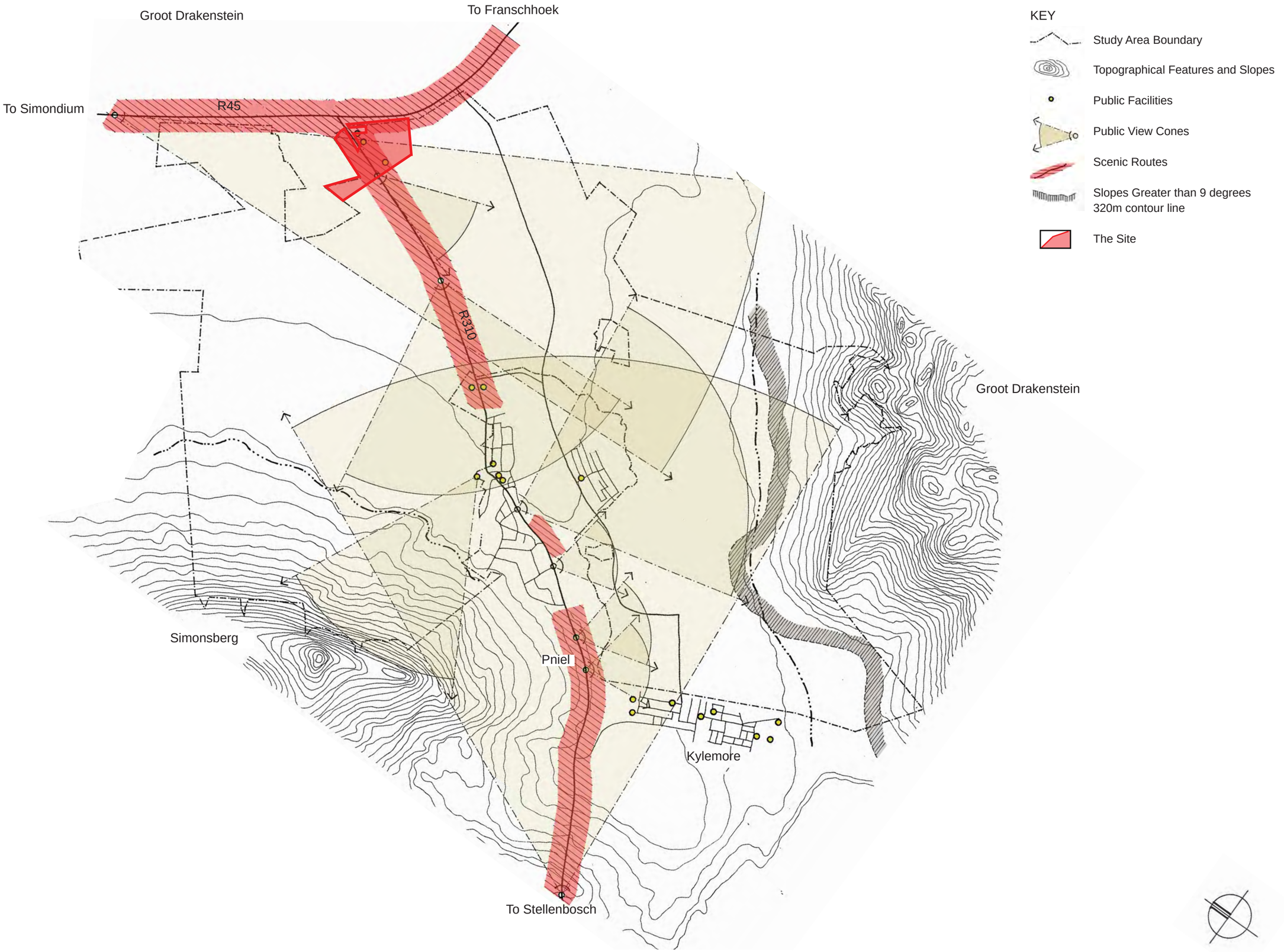


Figure 4: The Groot Drakenstein-Simodium Valley: Constraints and Informants Relating to Existing Public Structure and Design Factors

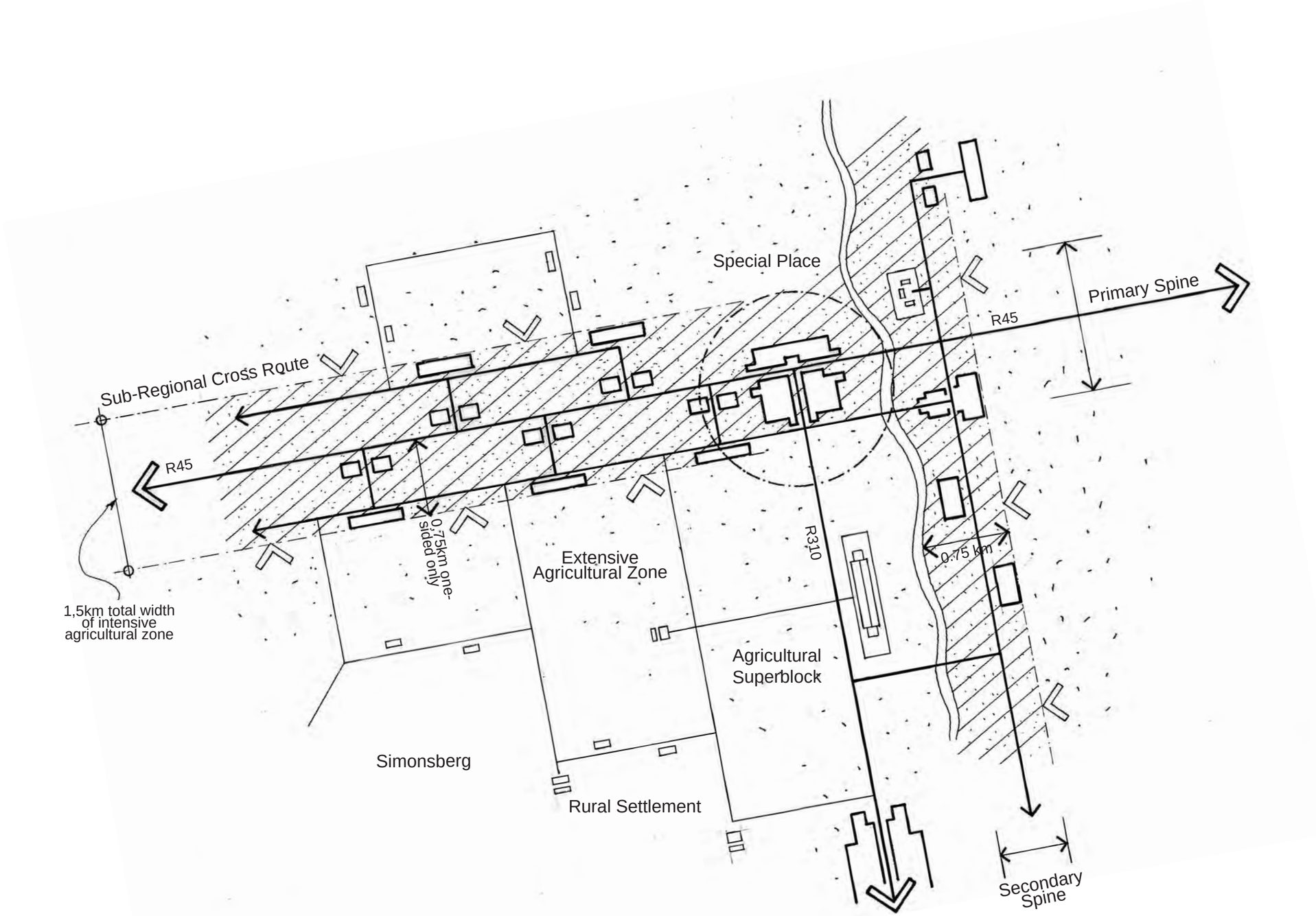


Figure 5: The Conceptual Approach of Interlinked Corridors and Agricultural Superblocks

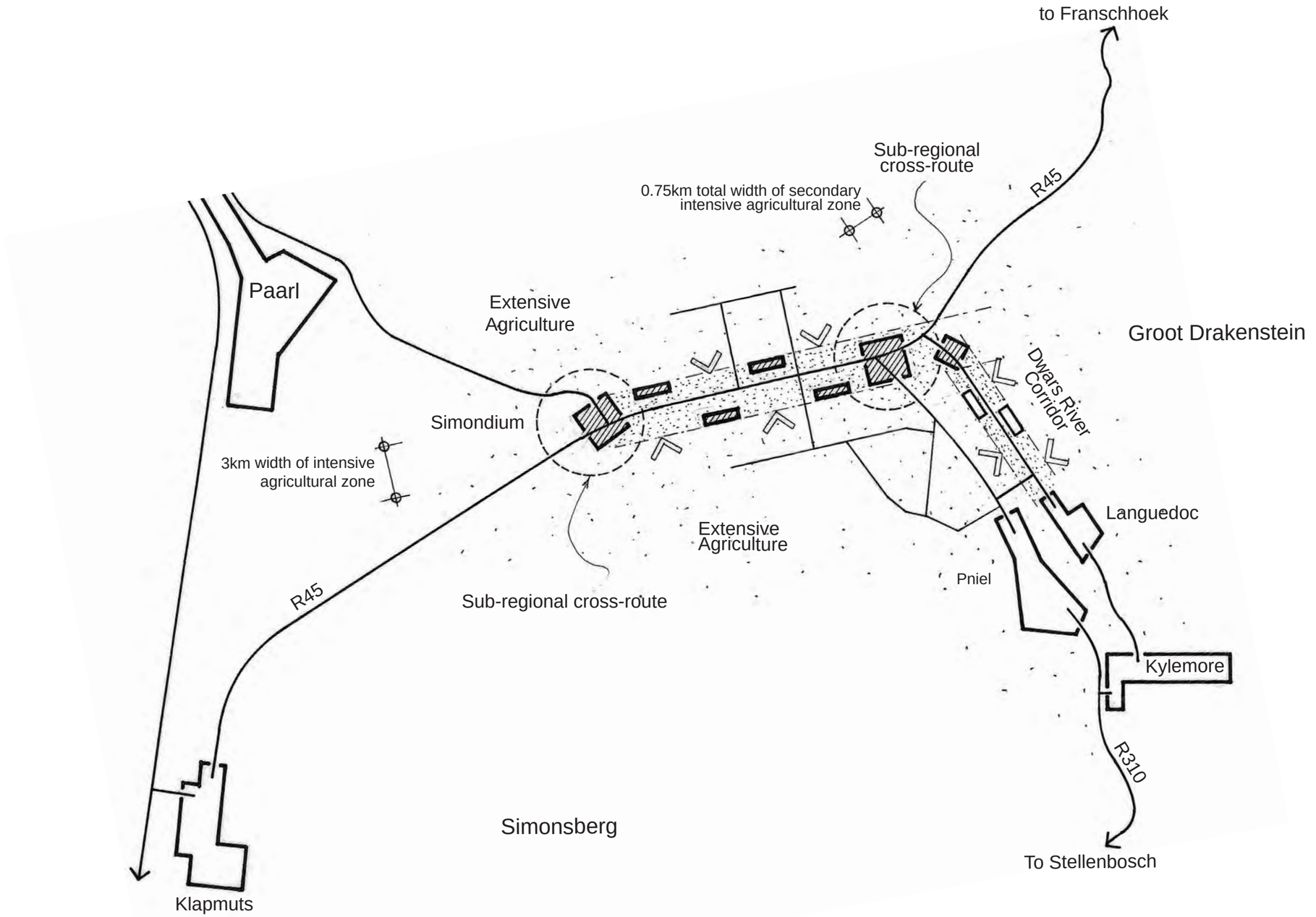
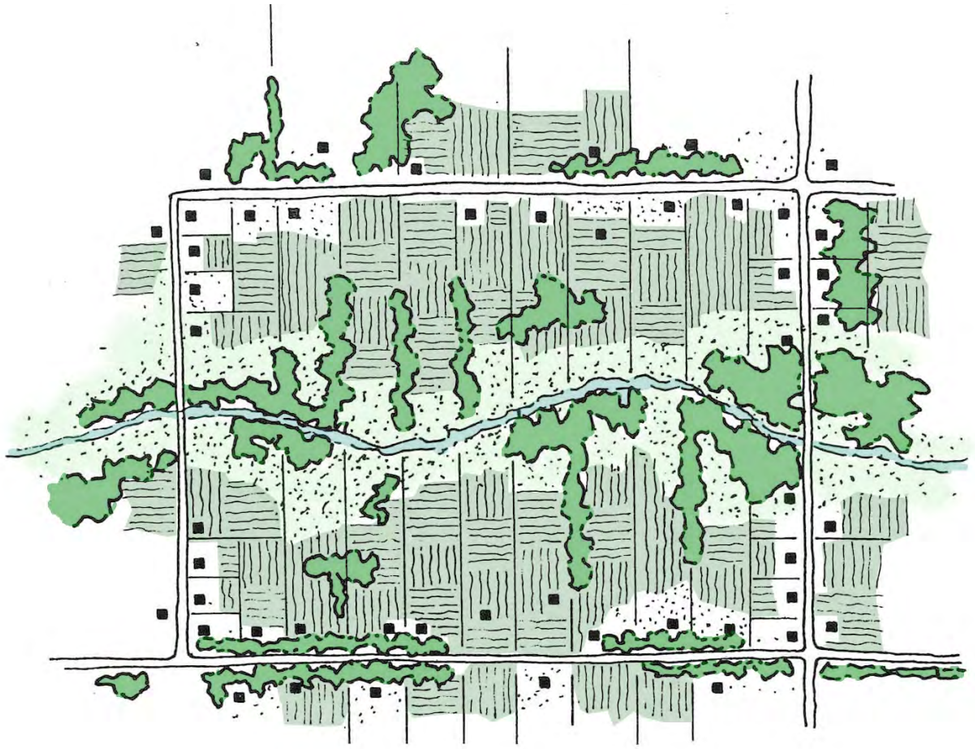
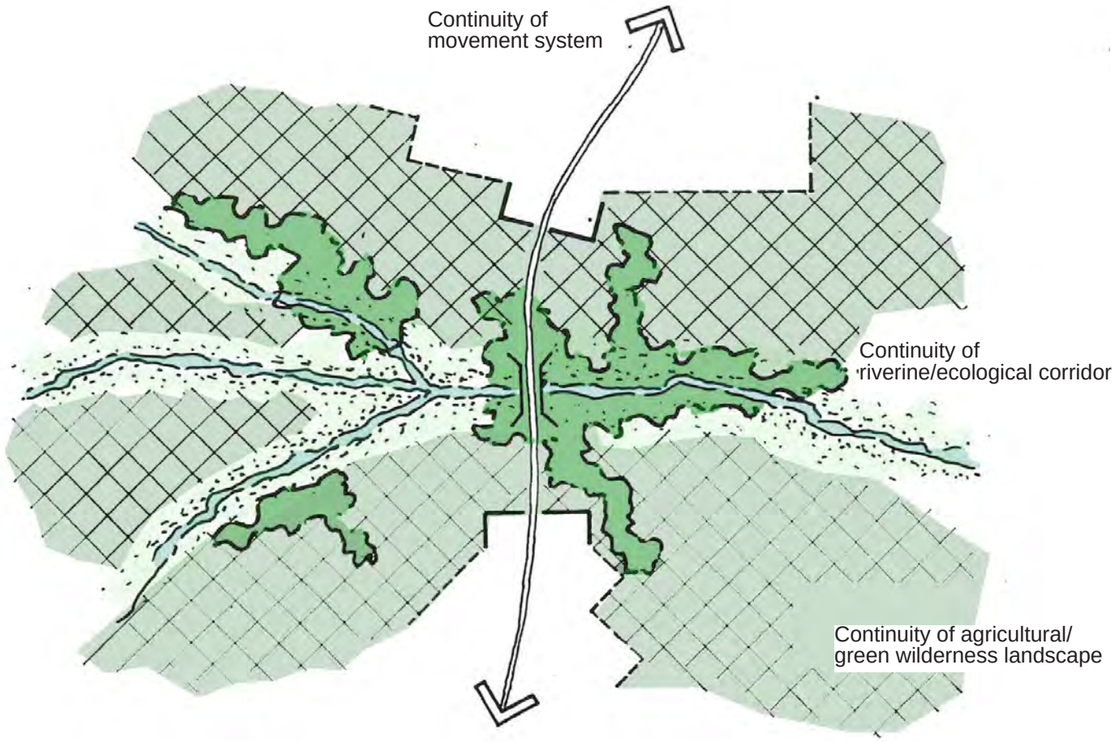


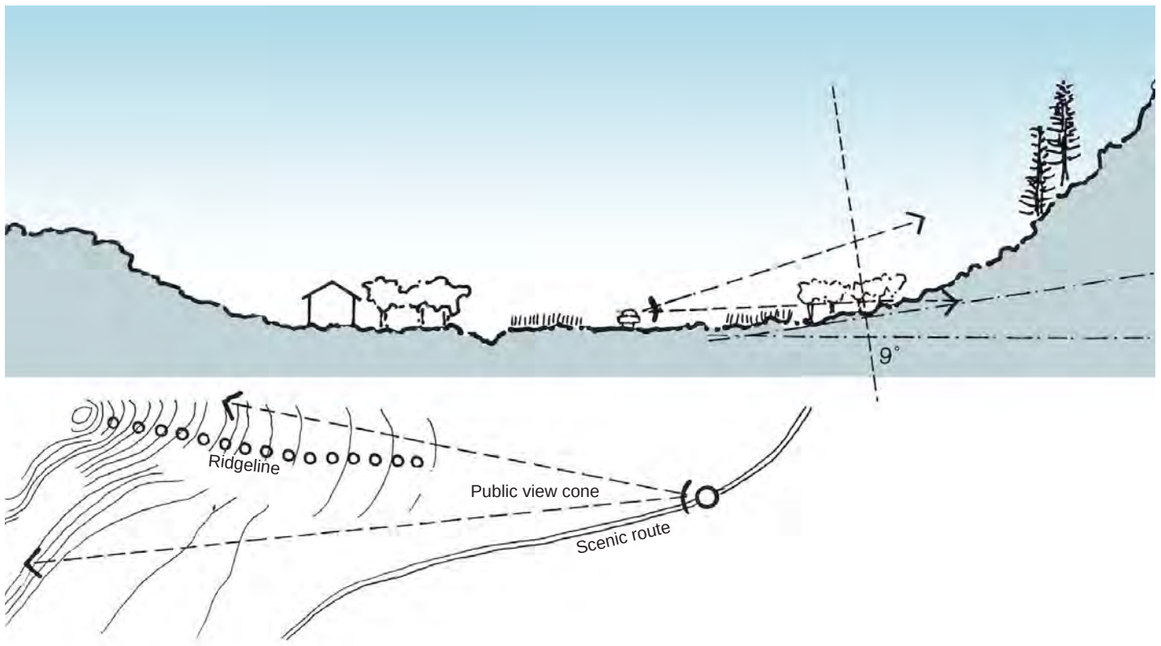
Figure 6: The Ideas Diagrammatically Applied to the Context-The Groot Drakenstein-Simondium Valley



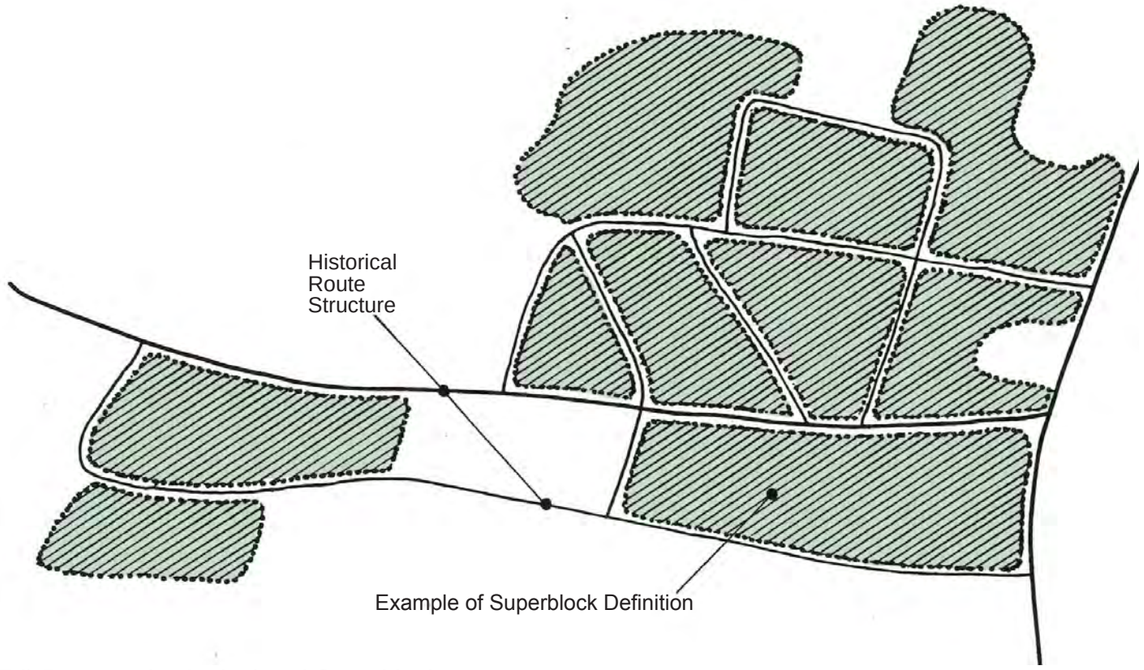
7a) Maintain the Dominance of Wilderness and Working Agricultural Landscape



7b) Maintain and Enhance Agricultural Continuity



7c) No Development on Ridge-Lines, Steep Slopes



7d) Respect the Agricultural Superblock

Figure 7: Central Considerations and Principles Relating to Rural Authenticity

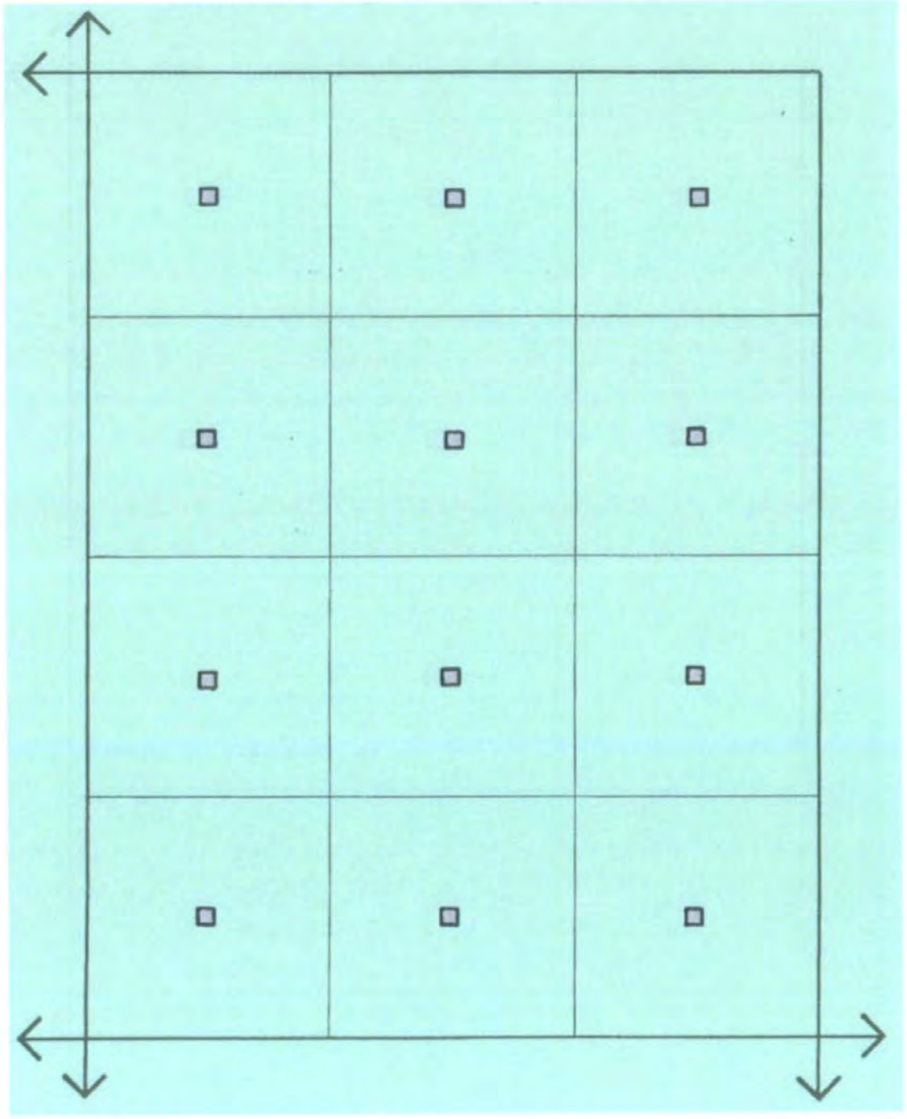


Figure 8a: In-principle Approaches to Settlement Formation: The Negative

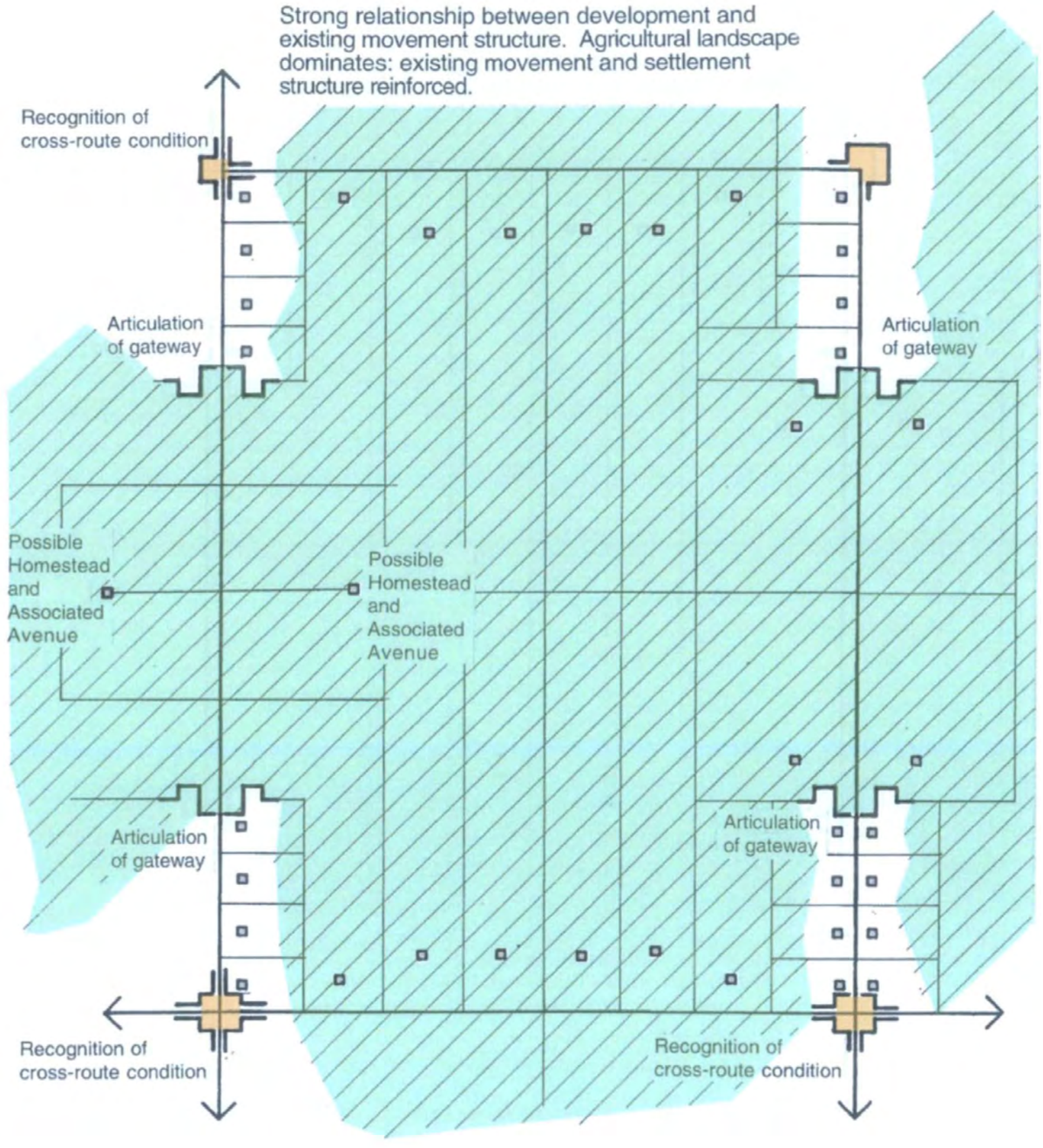


Figure 8b: In-principle Approaches to Settlement- Formation: The Concept of the Agricultural Superblock

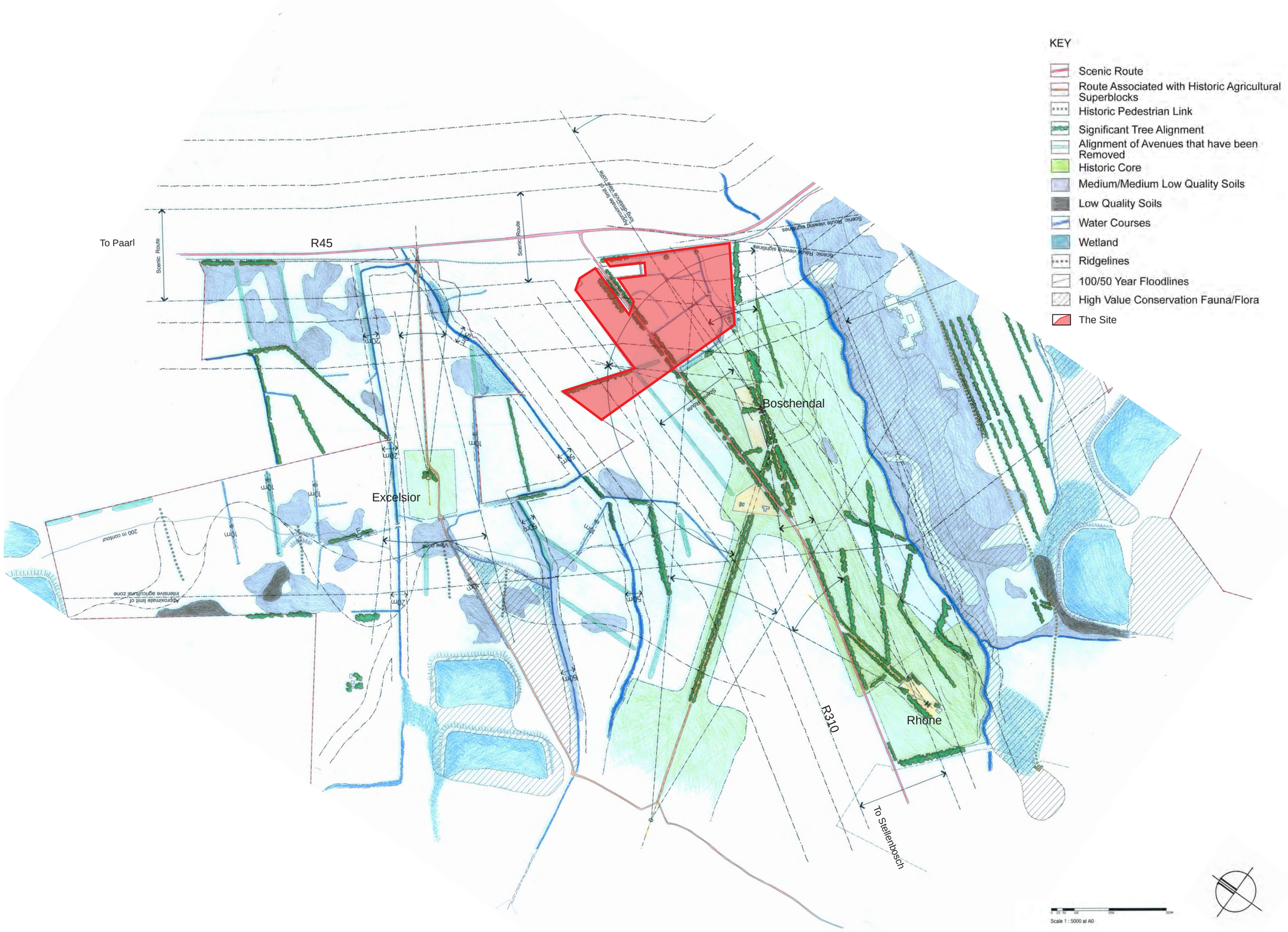


Figure 9: Composite of Precinct-Specific Refined Constraints and Informants: Northern Precinct

C. Context-specific Sub-regional Indicators:

1. The broader cultural landscape context should be respected (figure 10).

2. Within this context, the concept and dimensions of the rural corridors along the R45 and R310 should be respected.

3. A zone of potential settlement pockets along the R45 between Simondium and Groot Drakenstein should be identified, consistent with the parameters of the rural corridor concept. (figure 11)

4. Within the rural corridors along the R45 and R310, 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.

5. The northern edge of the village should be set back from the R45, to acknowledge the scenic nature of the R45.

6. The southern-most edge of the village should be no closer than 300 meters from the Boschendal homestead werf wall, in order to celebrate its setting and its agricultural context.

7. Agricultural activity associated with the Boschendal setting should be brought hard against the edges of the village, to reinforce the agricultural context of the werf and homestead.

8. Planting mitigation measures (eg avenues, windbreaks) should be used to 'edge' the village, clarify its domain and contribute to the cultural landscape expression.

9. The settlement pockets should be announced by strategically located elements creating a gateway, a sense of arrival, the effect of pauseway and traffic calming. These should be consistent with the measures implemented at Pniel, 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.

10. The intersection between the R45 and the R310 should be marked by a traffic circle.

11. The southern entrance of the R310 into the village should also be announced. The preference is for a small traffic circle.

12. Access into the village should respect the transportation requirements of the Provincial Roads Engineer.

13. 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.
    Tread-lightly zones are zones where a small amount of low impact development, as understated as possible, could be considered but where the dominance of agriculture remains paramount. If the form of such developments is suburban, plots should be 4000 sq meters or larger.

Figure 10: Broader Cultural Landscape: Rural Corridor Zone

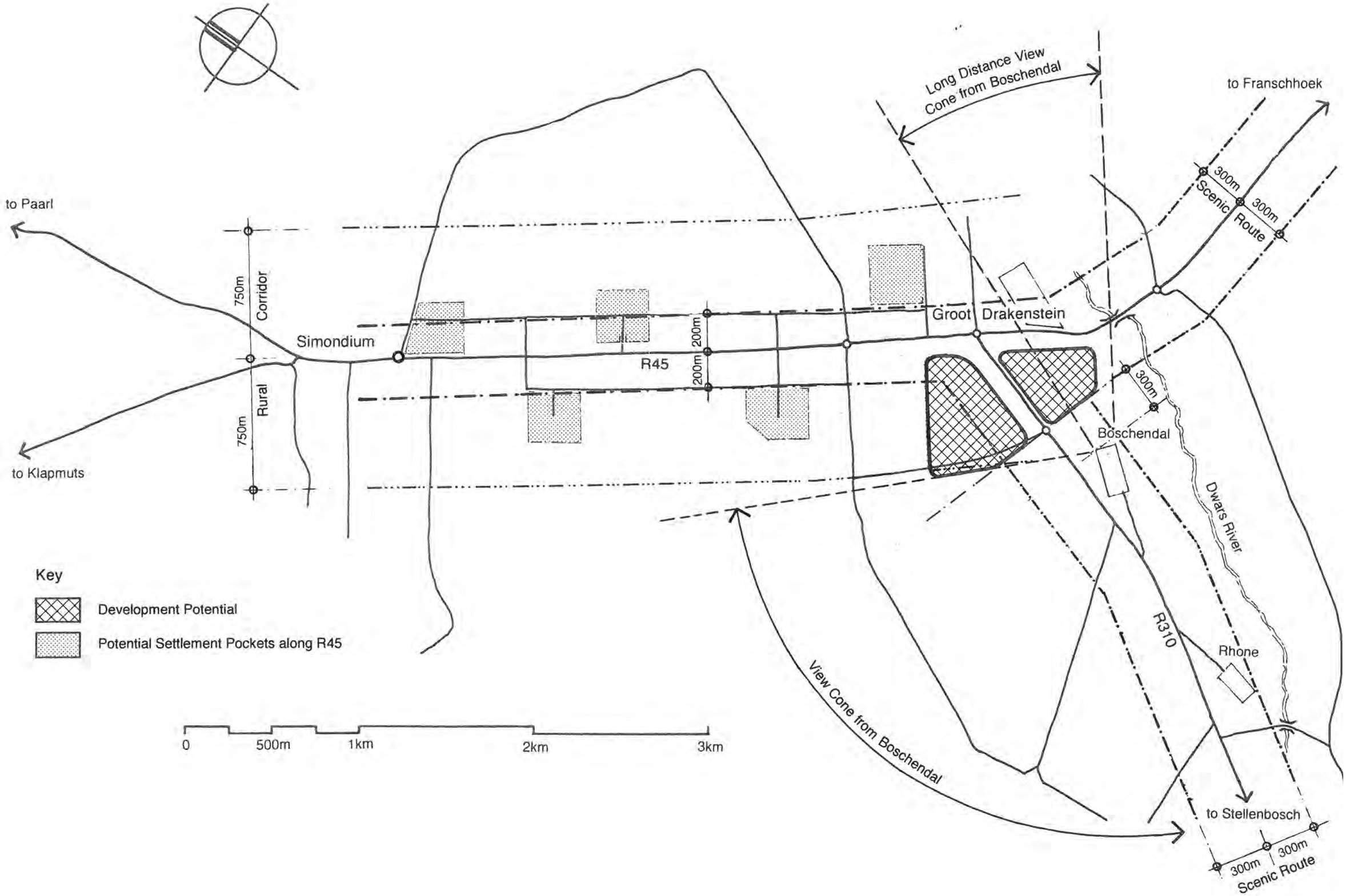


Figure 11: Rural Corridor Zone: Coarse-grained Definition of Village Footprint

D. Generic Village Qualities, Organizational Principles and Indicators:

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 spacesyntax, 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: stormwater 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.

E. Generic Structural Indicators:

1. Movement Network

The following factors 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’ (multifunctional 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. Public Space

The following factors 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 announced;

- All buildings should be used to define and make public space. The architecture should primarily take the form of background buildings.

3. Public Facilities

Any public institution/community facility should occur in exposed (highly accessible) locations.

4. Height

The following should hold in relation to height:

- Height policy should respond to access, with the highest density at the most accessible places

- 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.

F. 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 stoeps 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 stoeps and pergolas can be used as modulating 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.

G. Context Specific Village Indicators:

1. Planning and design responses should respect and work with the following (figure 12):

    - 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 treed avenue.

3. The movement network should tie in with the sub-regional system of movement (figure 13).

4. The movement network should be highly permeable. To illustrate this, figures 14 - 18 explore ways in which a highly permeable network could be created, while respecting the dictum that the historic movement network should be retained to the greatest degree possible. The sequence of figures also explores where the traffic calming circle on the R310 should be located.

    - Figure 14 shows entrance possibilities into the village from the R45 and the R310, using the existing movement network.

    - In figure 15, the system is adjusted to create the most direct pattern of entry.

    - In figure 14, the option of moving the traffic calming circle on the R310 from the entry point into the village to the centre-point is assessed. It shows that this creates a condition of car-dominance.

    - Figures 17 and 18 show how a filtered hierarchical system of access could be created off the main frame. The system creates a wide range of access conditions, from very public or exposed to very private or embedded, thereby maximizing choice.

5. A hierarchical public space network should overlap and correspond to the movement network, knitting together the elements of public significance (figure 19).

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 (figure 20).

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 (figure 21).

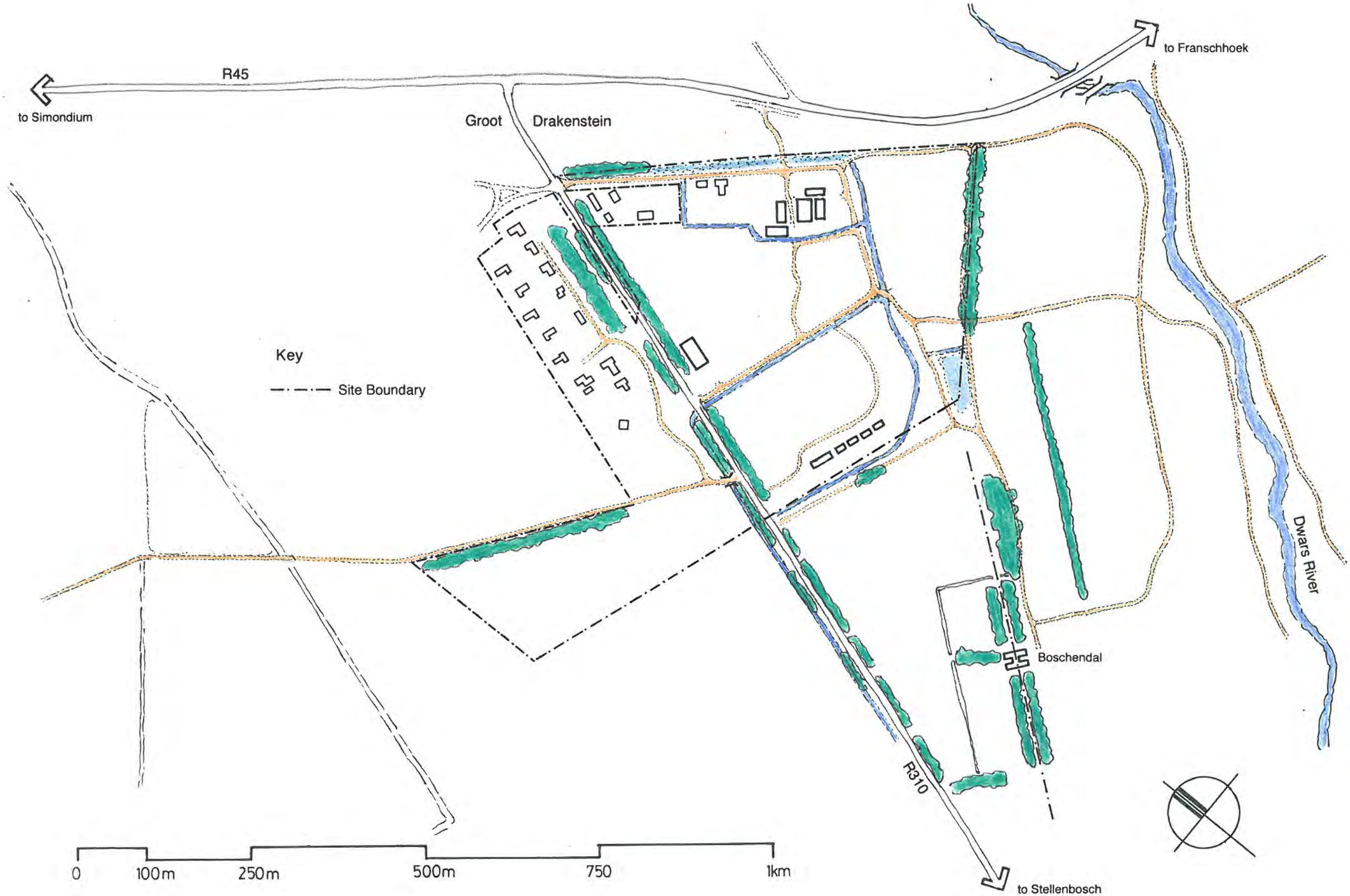


Figure 12: Existing Historical and Landscape Context

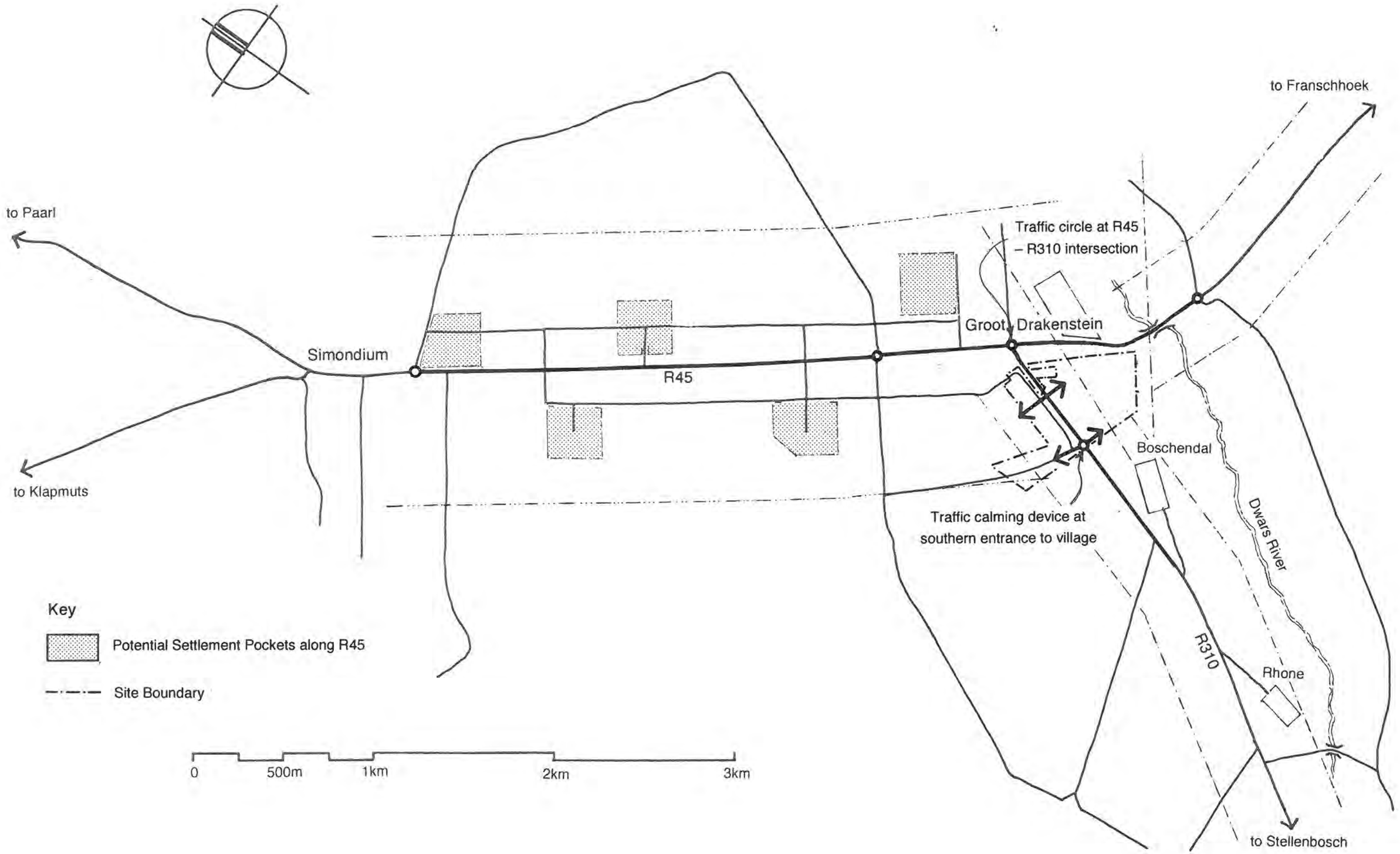


Figure 13: Sub-Regional Context: Rural Corridor Concept - Access Points to Village

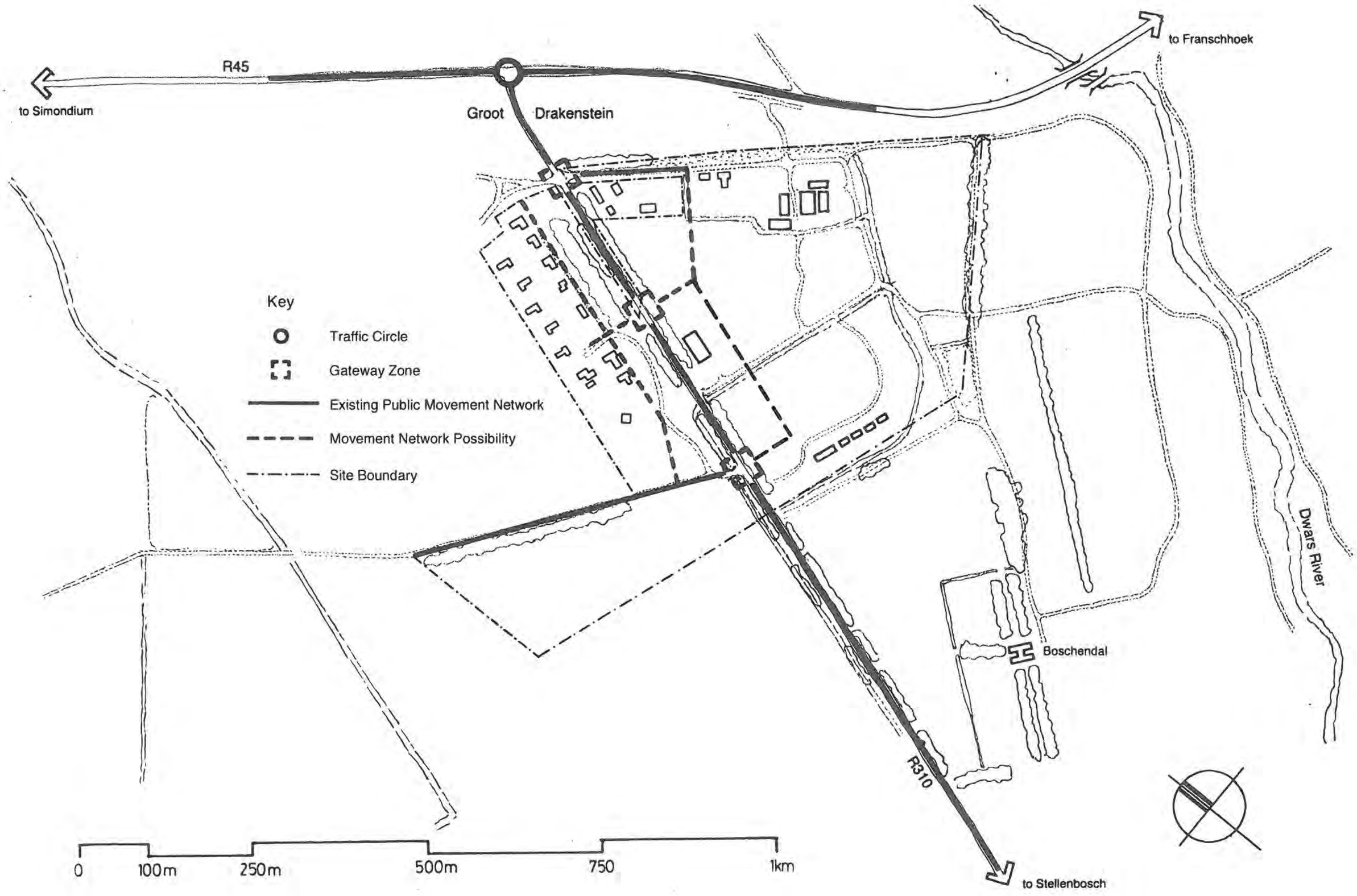


Figure 14: Movement Network Exploration - Option 1

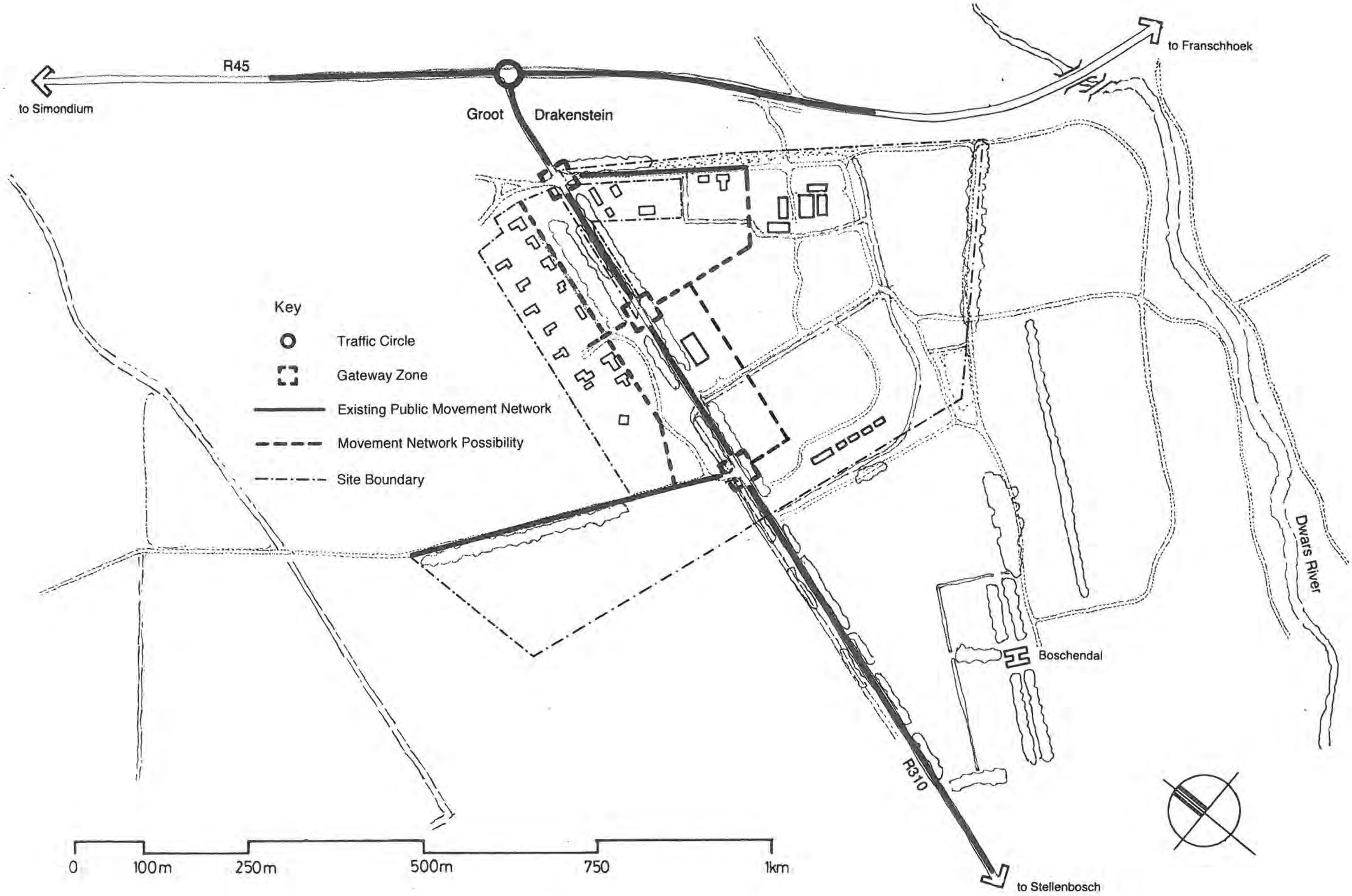


Figure 15: Movement Network Exploration - Option 2

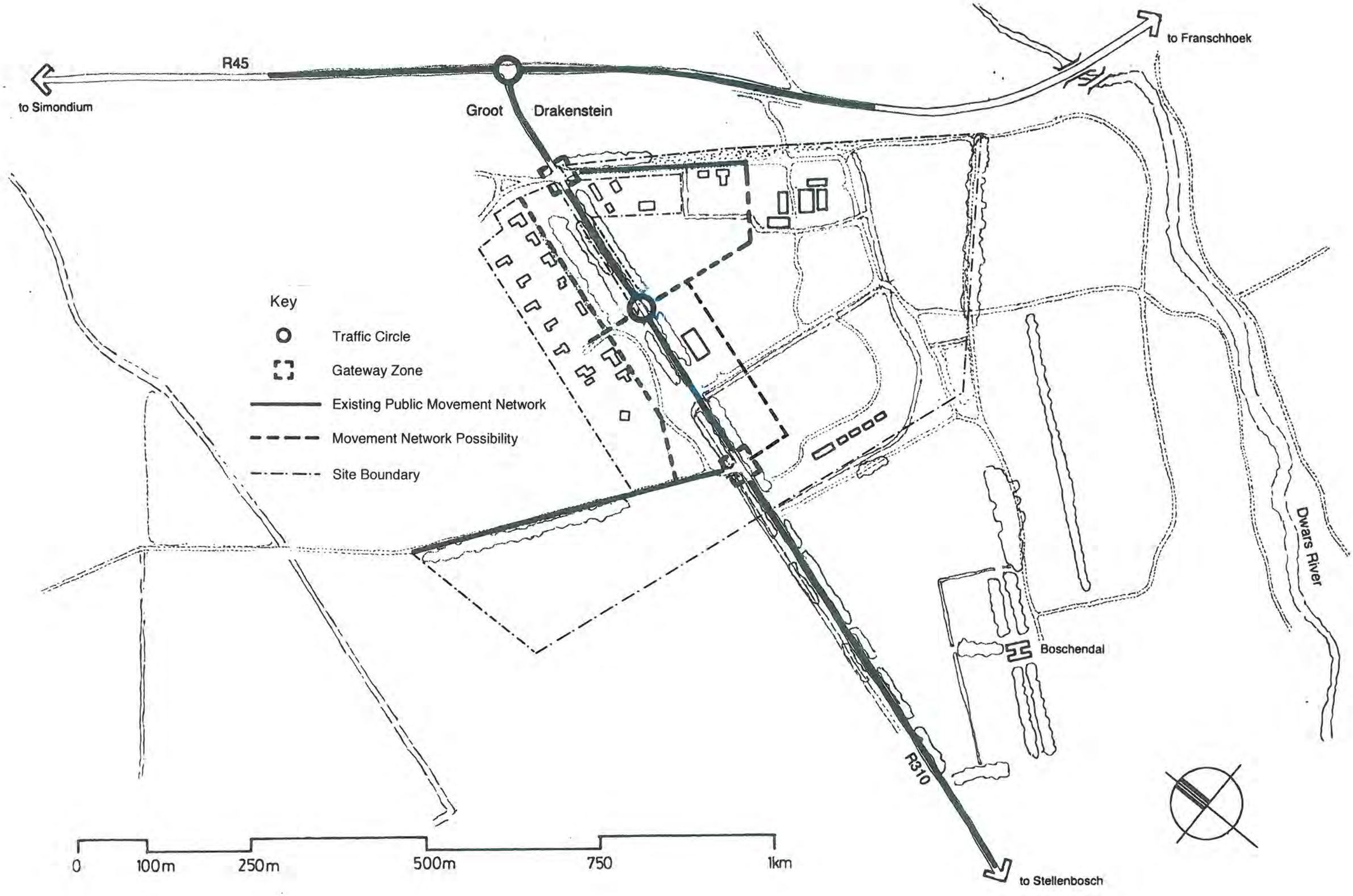


Figure 16: Movement Network Exploration - Option 3

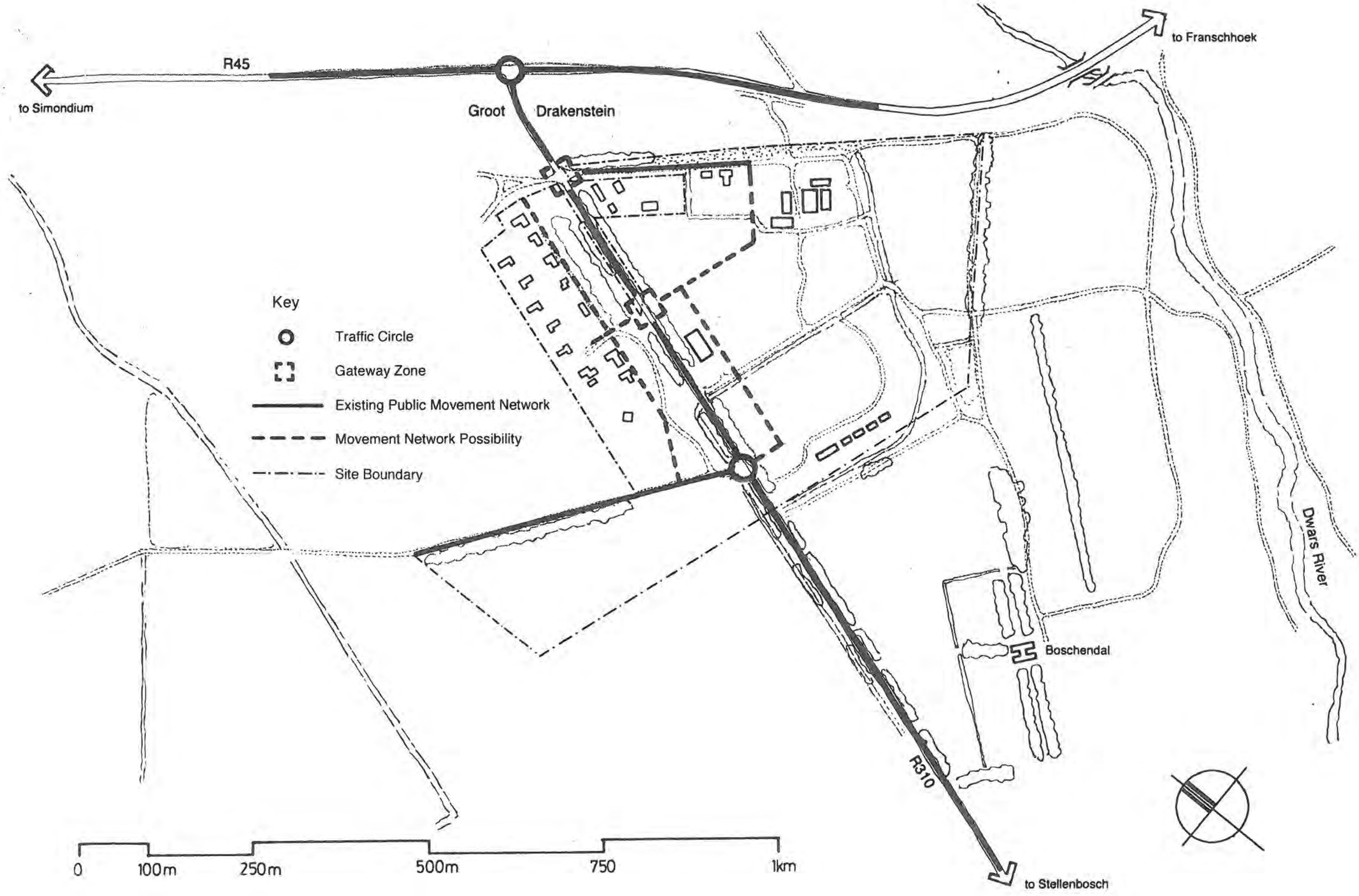


Figure 17: Movement Network Exploration - Option 4

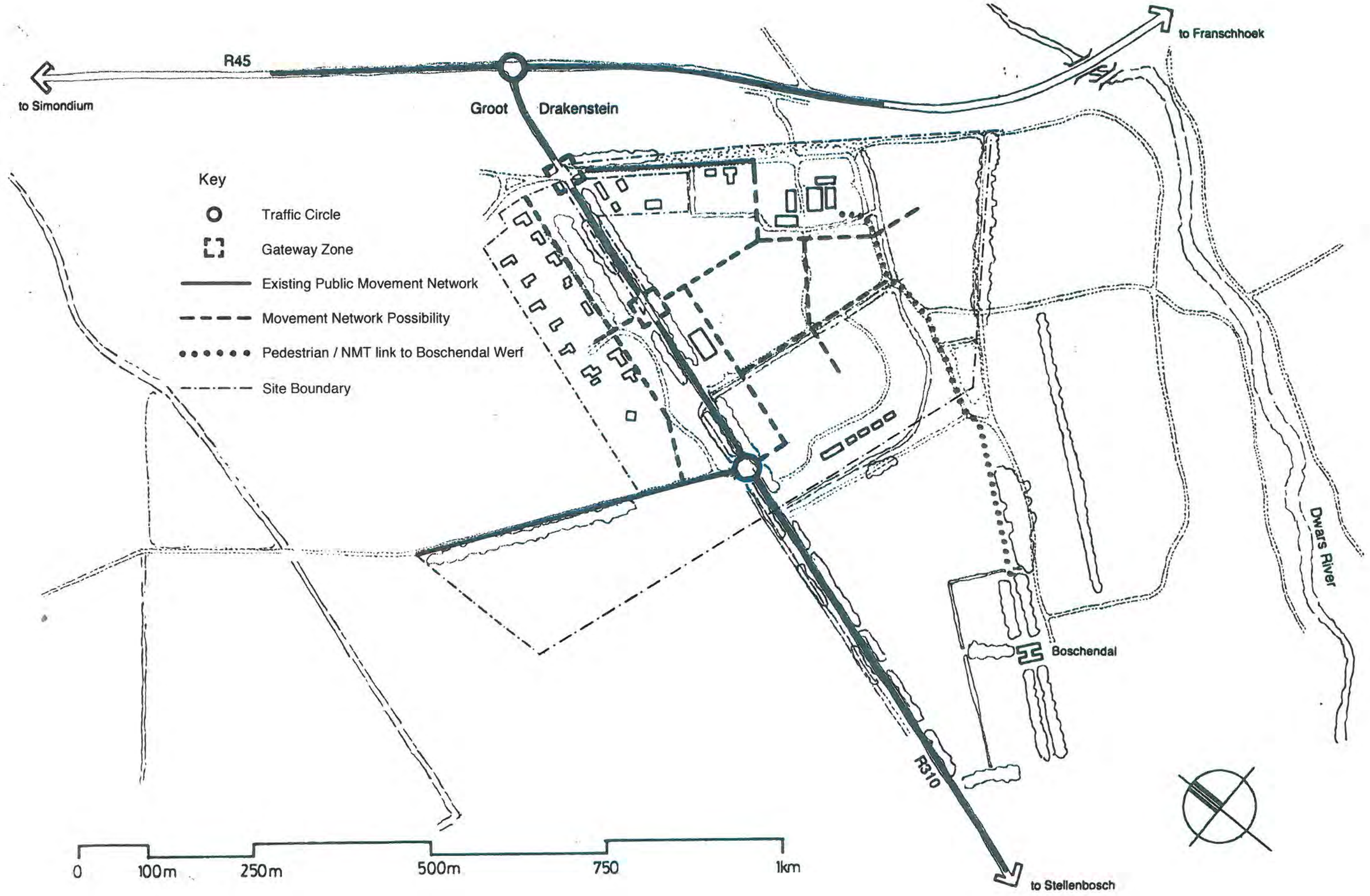


Figure 18: Movement Network Exploration - Option 5

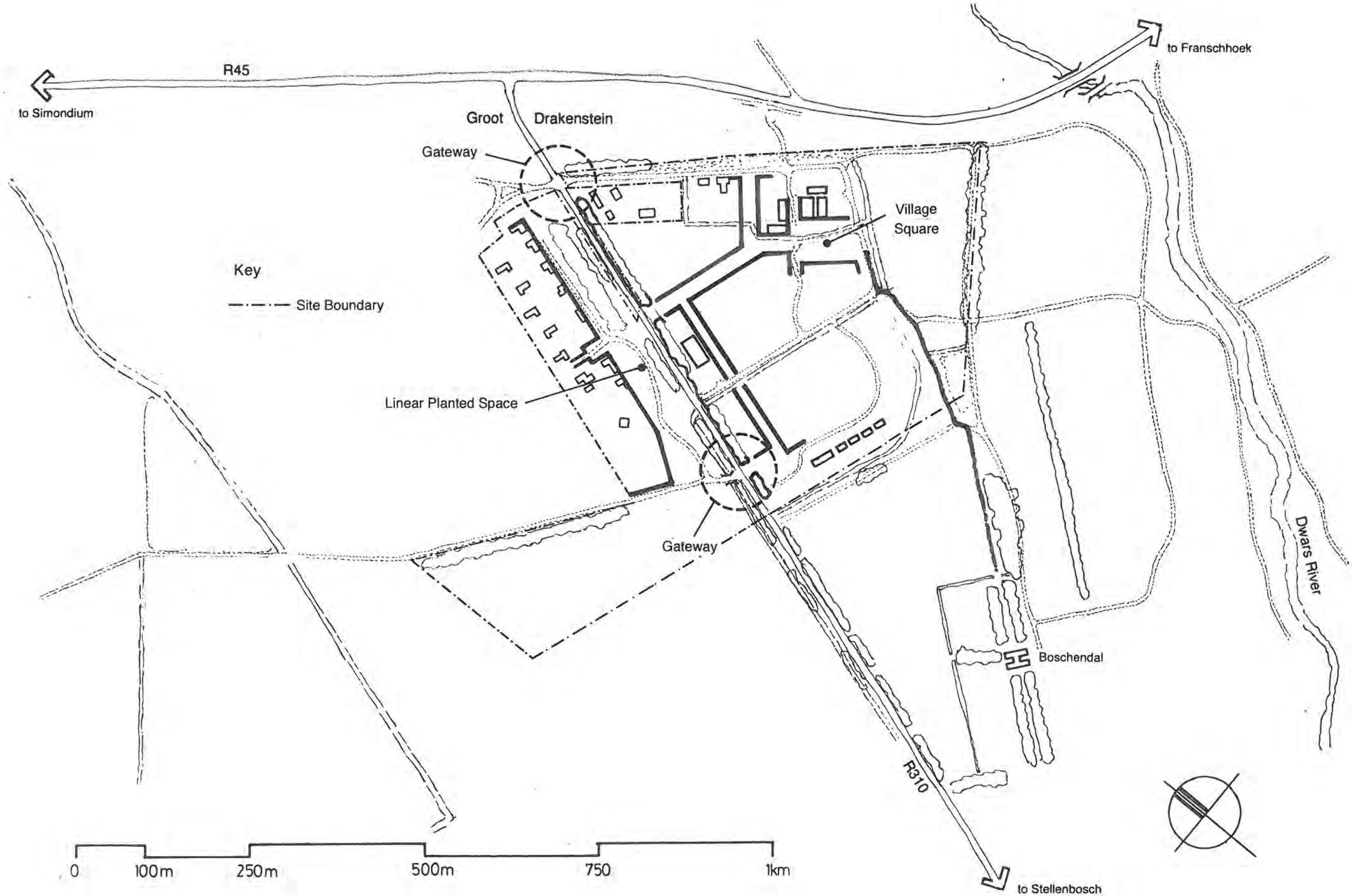


Figure 19: Hierarchial Public Space Network

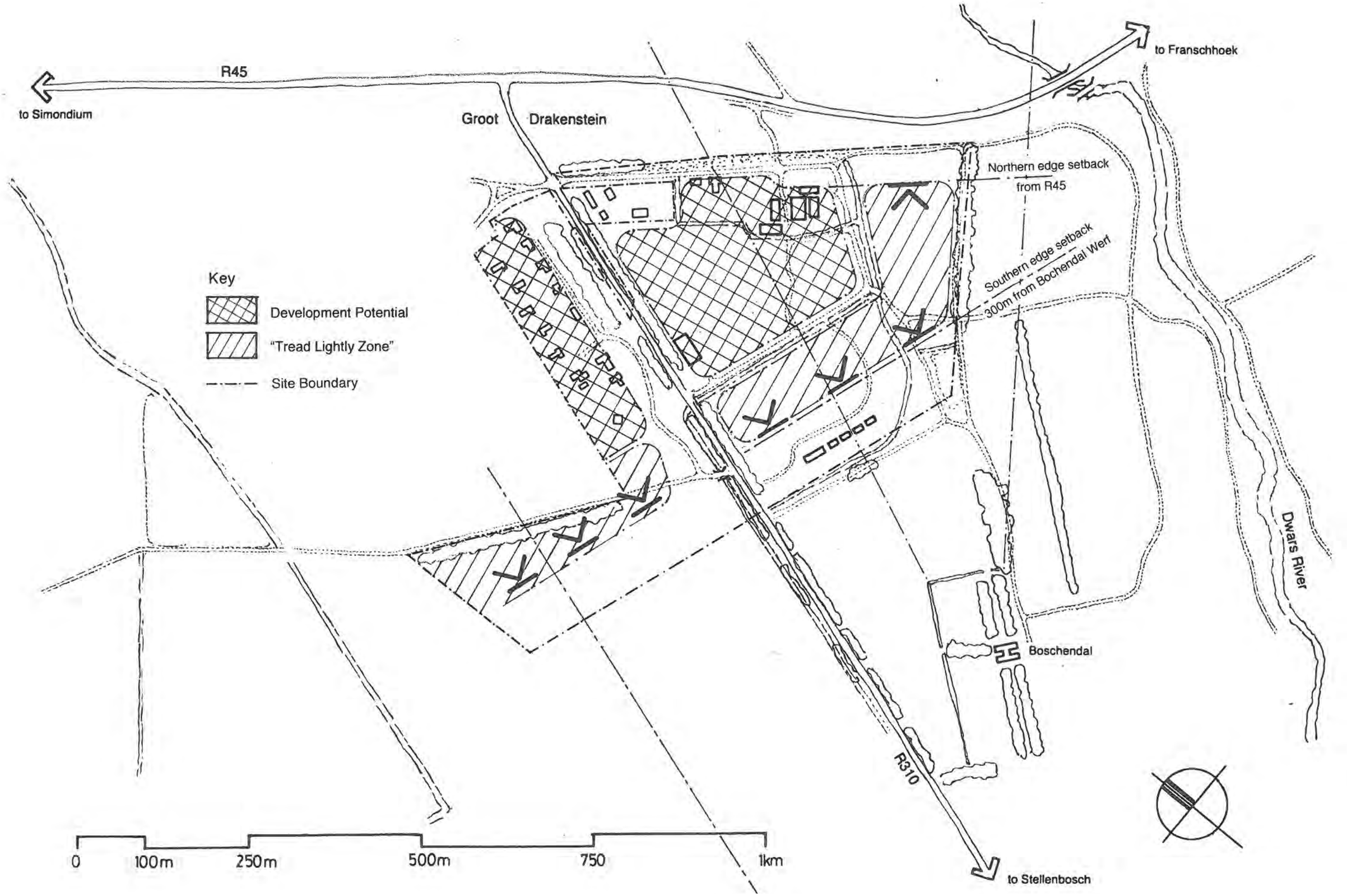


Figure 20: Village Definition and Density Gradient

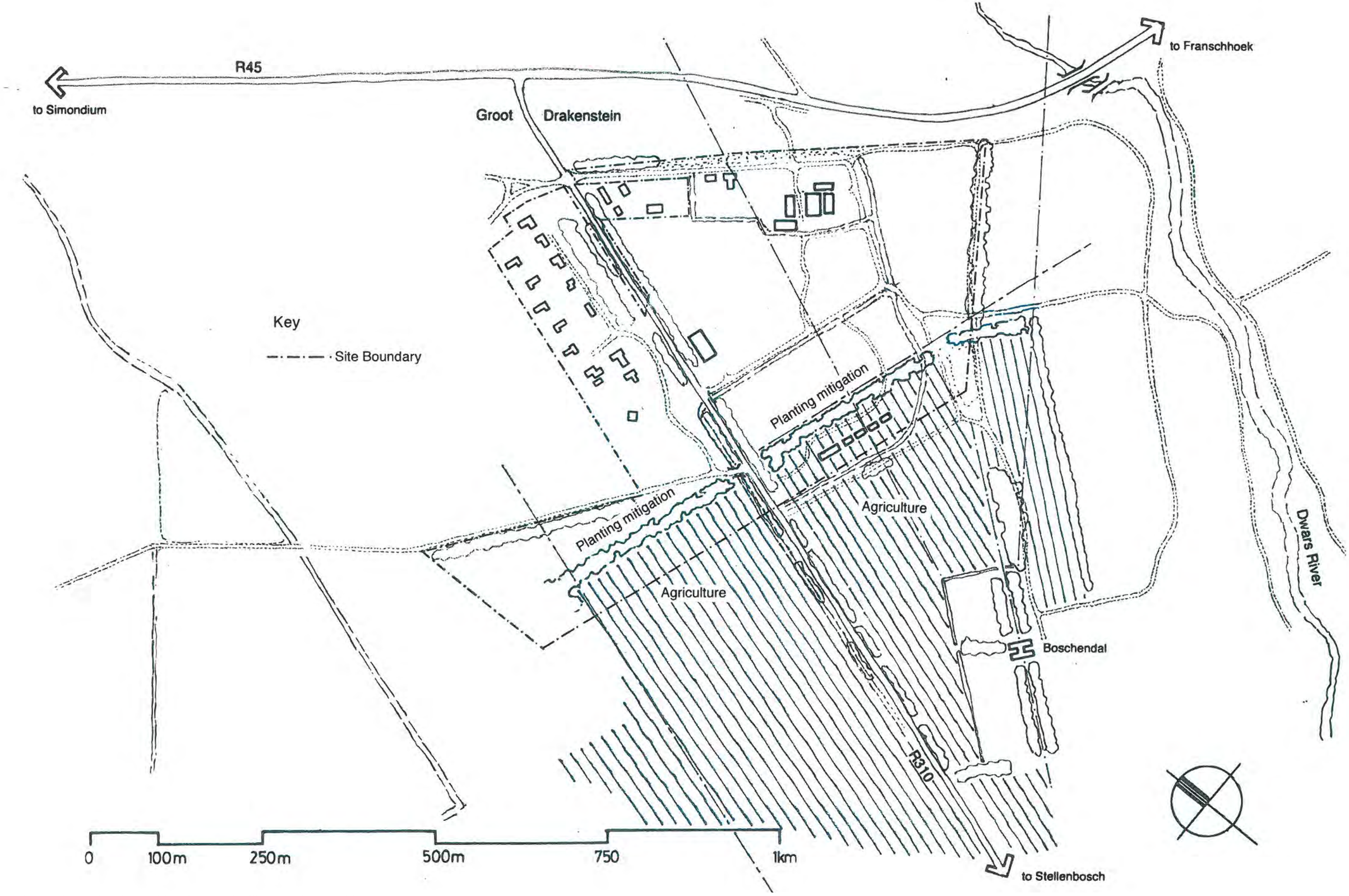


Figure 21: Planting Mitigation and Village Edge Making

H. Visual Indicators: *

The purpose of identifying visual indicators is for these to contribute to the heritage assessment and in turn to inform the planning and design of the proposed village. The visual indicators will also be used during the VIA stage for the preparation of mitigation measures.

The heritage indicators and directives (Baumann et al, 2014) are supported as these have significant visual implications. Specifically, these include:

- 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;

Other general urban design, landscaping and architectural guidelines include the following:

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 werf-type layout typical in the Winelands. 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.

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Lighting and Signage:

Outdoor lighting should generally be discrete to maintain the rural ambience of the area. Lowlevel 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 fixing signs to walls, helps to minimise visual clutter.

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.

* The visual indicators have been prepared by Oberholzer and Lawson. The full report is included as Appendix A.

I. Illustrating the Words:

In order to illustrate some of the principles discussed in previous sections, as well as important architectural principles articulated in the following section, a number of examples, drawn mostly from the Cape, are shown. It must be stressed, however, that it is the principles which are important, not the forms shown. The same principles can be captured in many forms.

Figure 22: Oude Libertas Centre, Stellenbosch: Agriculture Presses Hard Up Against Pockets of Settlement

Figure 23: Oude Libertas Centre, Stellenbosch: The Dominance of Agriculture

Figure 24: Boschendal Homestead: The Relationship Between Wilderness, Agriculture and Settlement

Figure 25: Rhodes Cottage, Boschendal Farmlands: Showing the Importance of Horizontality in the Winelands of the Cape

Figure 26: A Modern Expression of Horizontality: House Maison by Van der Merwe Miszewski Architects

Figure 27: Bethlehem Farm Complex, Boschendal Farmlands: Horizontaility of a Different Kind

Figure 28: House Maison by Van der Merwe Miszewski Architects: The Importance of Axial Alignments, Gateways Framing Views and the Use of Formal Planting Gardens

Figure 29: Alphen Hotel Complex, Constantia

Figure 30: Orthogonal Geometries of the Winelands, Western Cape

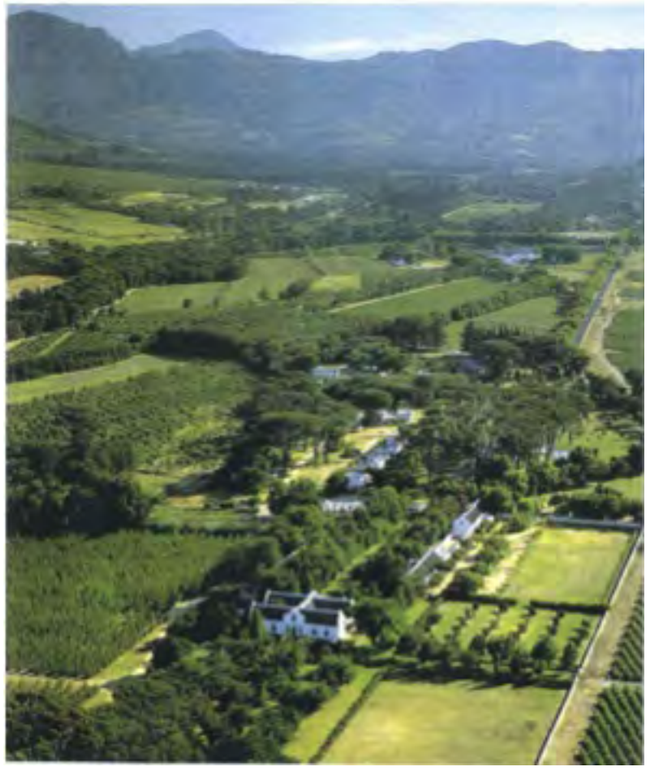


Figure 31: Orthogonal Geometries of the Winelands, Western Cape

Figure 32: Alphen Hotel Complex, Constantia with Barnyard Architectural Qualities: It reflects the ‘Wallness’ of Cape Architecture

Figure 33: Alphen Hotel Complex, Constantia: Buildings Making Space

Figure 34: Alphen Hotel Complex, Constantia: Buildings Making Space

Figure 35: Wynberg Village: Rural-scaled Street

Figure 36: Wynberg Village: Special Treatment of Corner Conditions

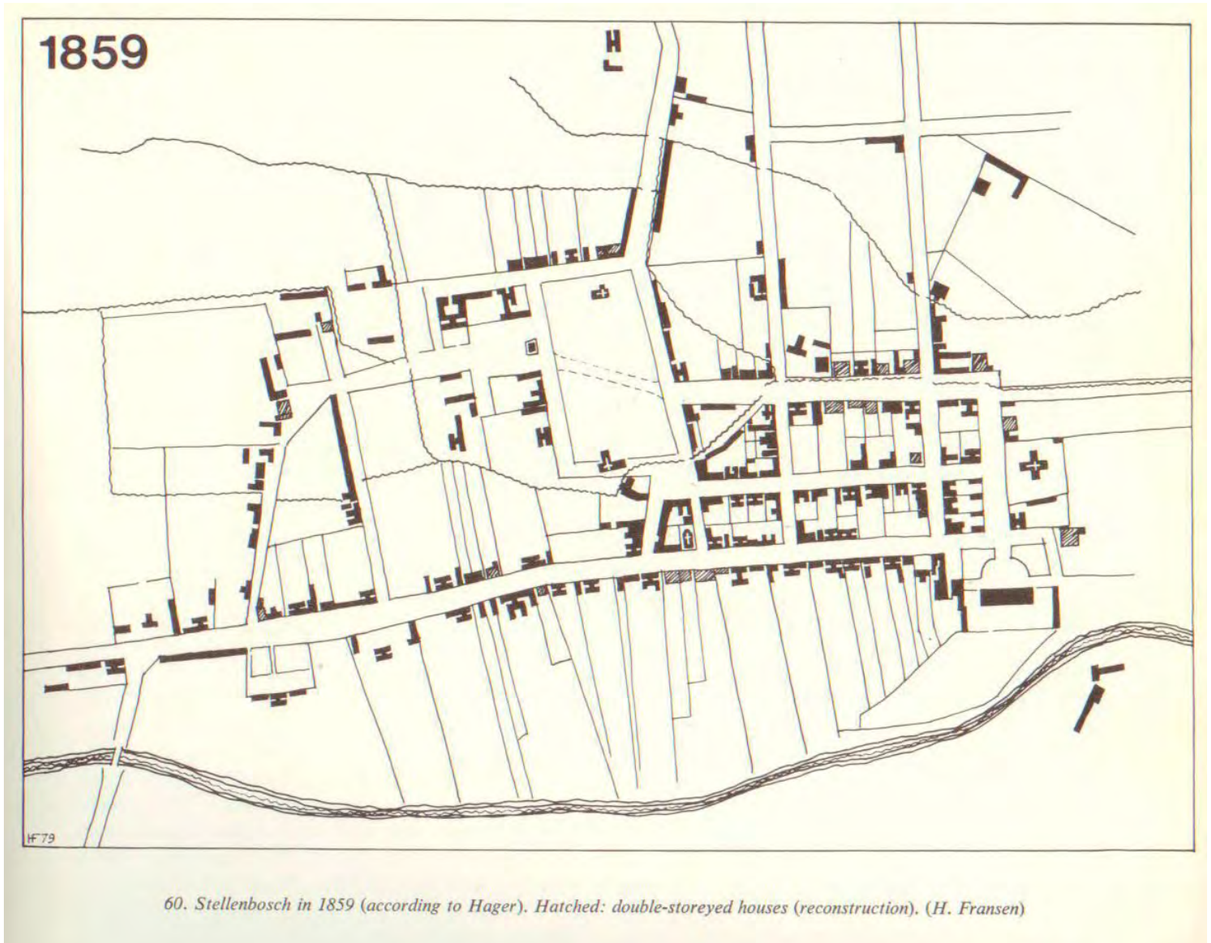


Figure 37: Historical Stellenbosch (Buildings lining streets, green hollow blocks)

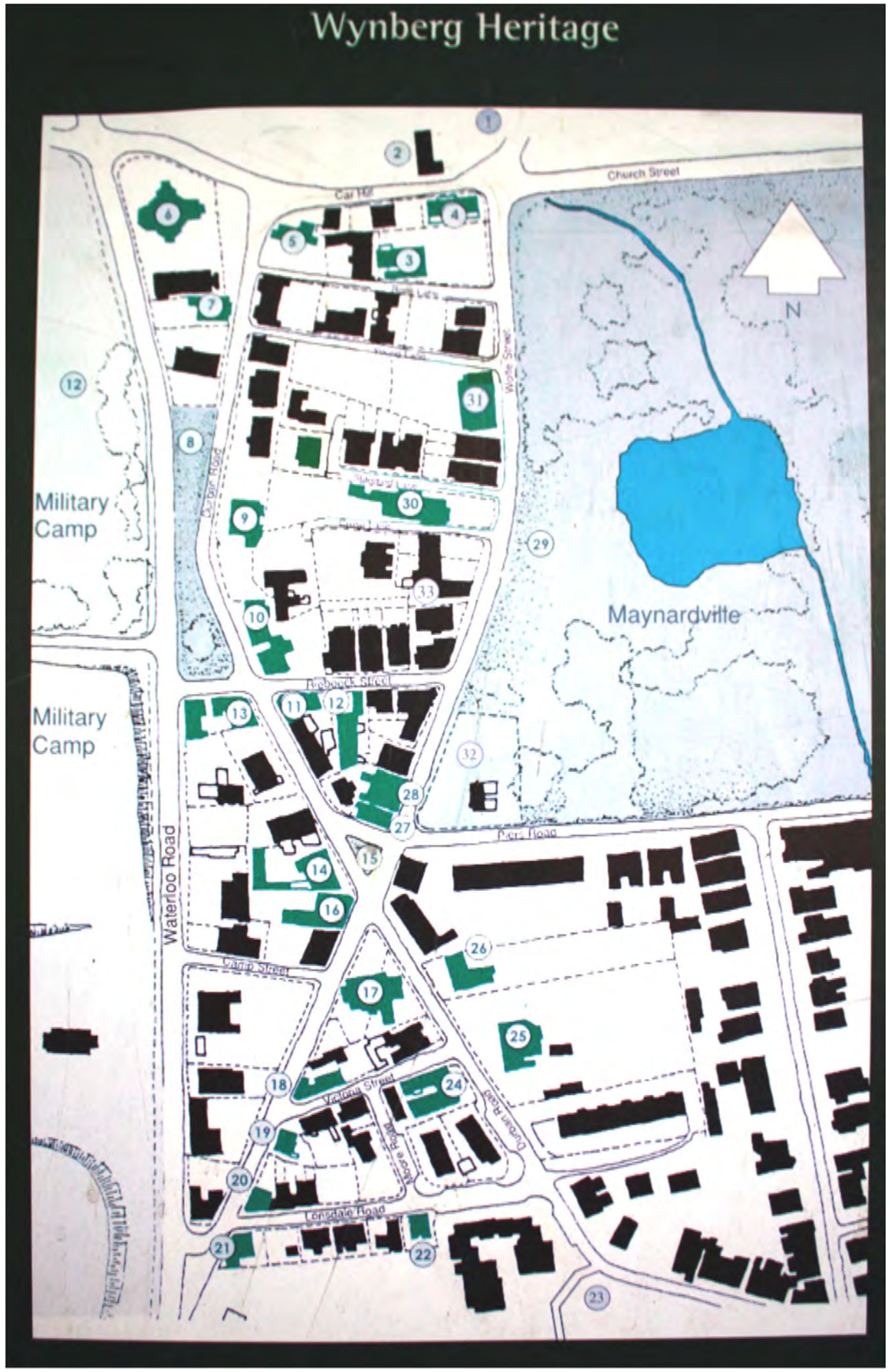


Figure 38: Wynberg Village (Buildings lining streets) and the Option of Hollow Blocks

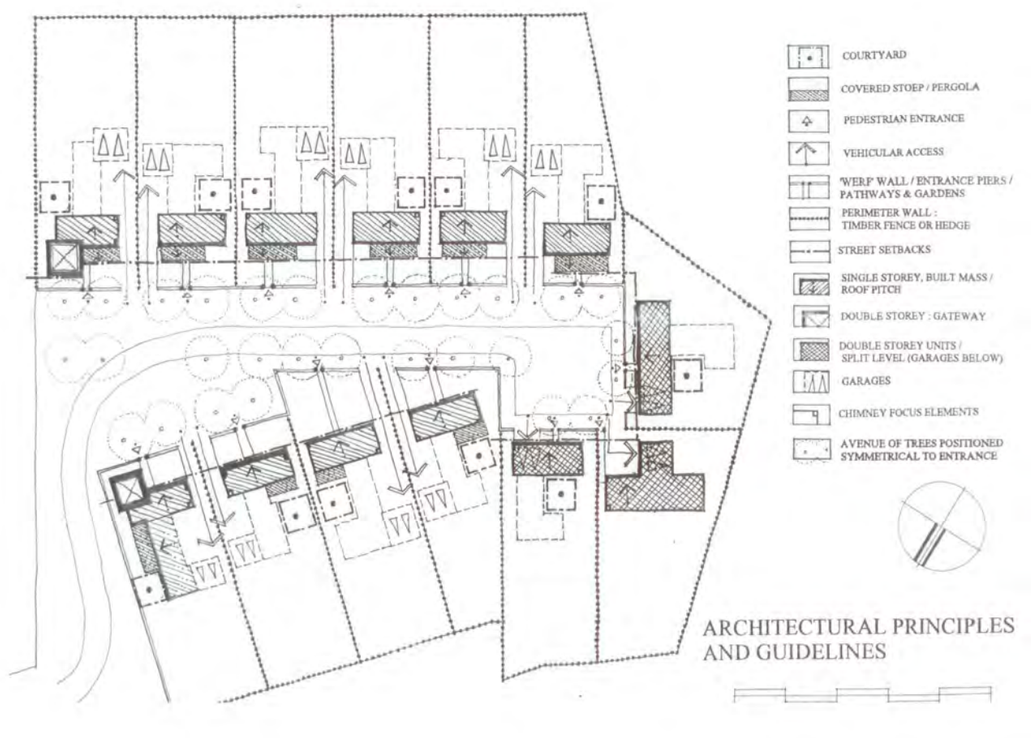


Figure 39: Prototypical Example of Making Settlement Through Architectural Controls and Guidelines - P. Louw & M. Kruger: A family of public spaces, spaces, not movement, as the primary structural elements, qualities of street, using buildings to define

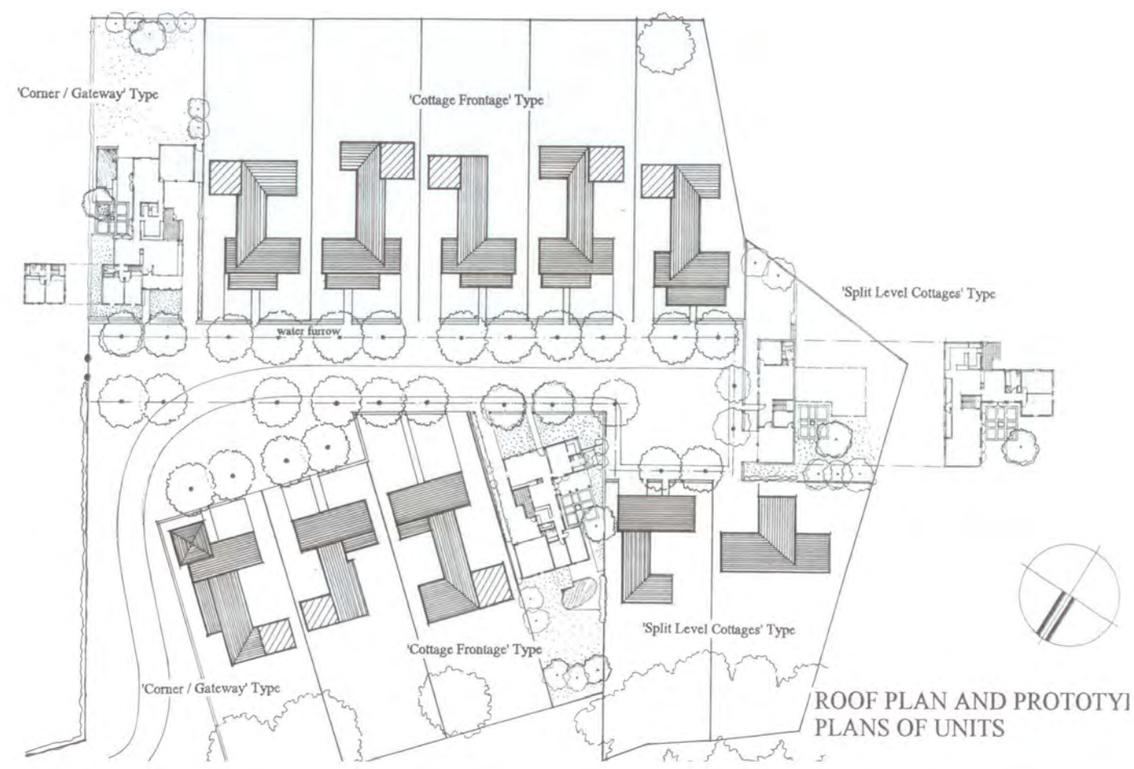


Figure 40: Prototypical Example of Making Settlement Through Architectural Controls and Guidelines - P. Louw & M. Kruger

Figure 41: Elevations and Sections - P. Louw & M. Kruger: Working with the site. Height informed by the character of the site and by structural positioning.

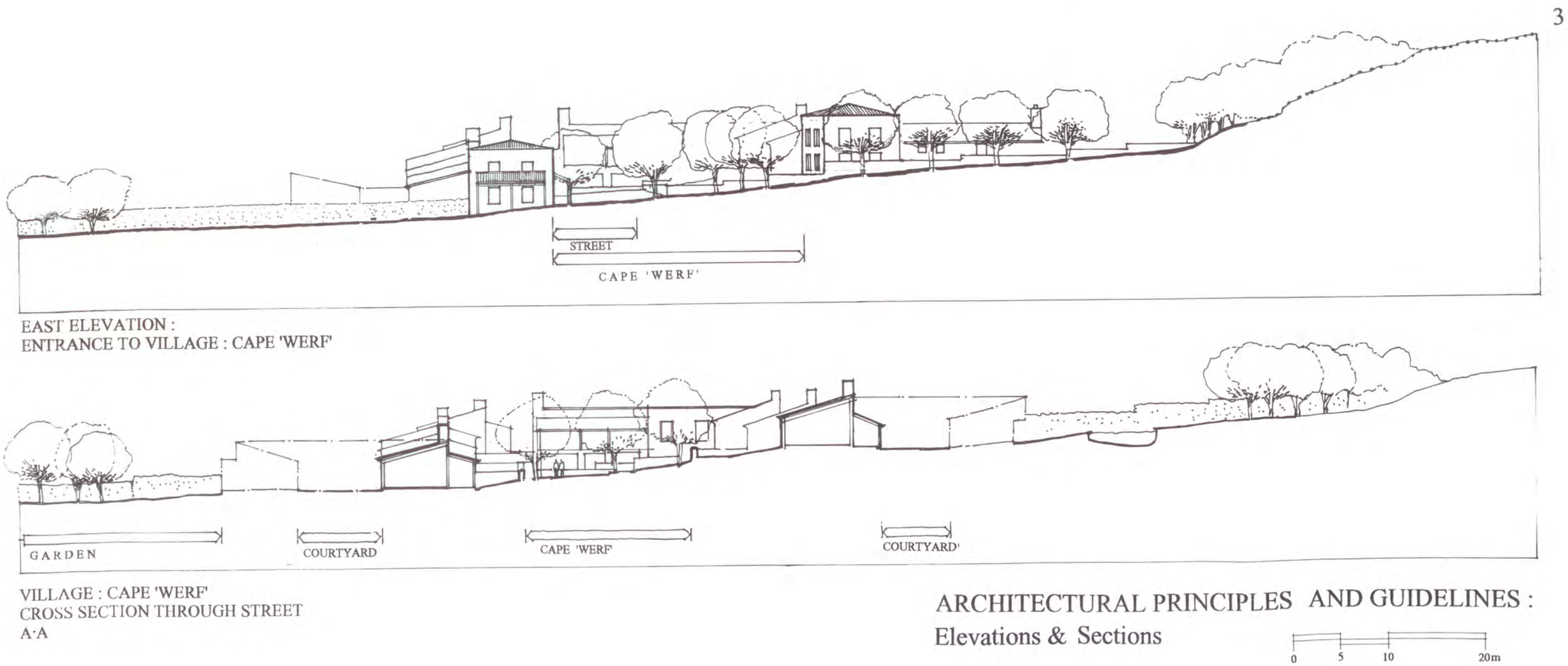


Figure 42: Architectural Principles: Elevations and Sections - P. Louw & M. Kruger

Figure 43: Perspective View of the Quality of Village: Cape ‘Werf’: P. Louw & M. Kruger

Figure 44: Wynberg Village: The Use of ‘Wall-like’ Architecture

Figure 45: The Use of Rural Elements

Figure 46: The Use of Rural Elements

Figure 47: The Use of Rural Elements

Figure 48

Figure 49: The Tradition of the Cape Werf

Figures 48-51: The use of Rural Elements

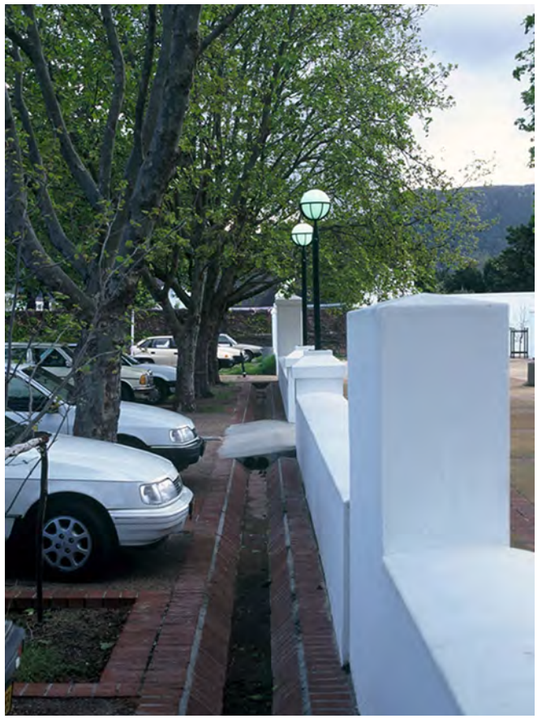


Figure 50

Figure 51: Landscaping Should be an Integral Part of Design

Generic Street Organizational Indicators

- The street hierarchy should be clear and legible, with the dominance of the Main Street apparent;
- Throughout, buildings along the Main Street must be double storey, to accentuate its hierarchical dominance;
- Minor streets should have a narrow street surface. It should be 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. Height can be used to protect privacy (figures 52-56);
- There should be no kerbs. Storm-water run-off to occur on the surface and channels should be used as place-making elements.

Figure 52

Figure 53: The Use of Height to Achieve Greater Privacy

Figure 52-56:
A Clear Transition from Public to Private: Somerset-East

Figure 54

Figure 55

Figure 56: More Public Buildings Defining Gateways of the Main Corridor: Alphen Hotel Complex, Constantia

J. Architectural Indicators and Controls:

Three levels of concern are addressed in this section:

1. Generic indicators; these logically flow from the preceding settlement-orientated indicators. However, the focus shifts to individual or complexes of buildings. Particular emphasis is placed on how each building 'works' with its neighbour, in order to jointly contribute towards the creation and character of the villages as a whole;

2. Mandatory controls to achieve the generic indicators; these generally relate to the public interface and fronts of the units (that portion of the unit which is visible from the street) as well as aspects relating to roof silhouette and sky-lines;

3. Principles of Sustainability

1. 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 'Capeness' 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, pavillions);

- 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

2. Mandatory Controls

- Buildings should not occur at an angle to the street boundary;

- Compulsory build-to lines should be 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 tread-lightly zones;

- No more than ground floor plus one more floor for flat roofed buildings;

- All flat roofed buildings should have a parapet on three sides in order to create a 'boxed; feeling. No gutters should appear on the front of the unit but should occur to the rear;

- For pitched-roof buildings, ground floor only is permitted. \ Upper floor accommodation must be within the pitch;

- When roofs are pitched, the allowable range is between 35° - 45°;

- No mono-pitched roofs are allowed;

- No tiled roofs are allowed;

- Significant interruptions to the horizontally promoted by the roof silhouettes (e.g. high chimneys) are not allowed;

- No expressed gable ends (parapets) are allowed. Roof 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 accommodation in pitched-roof buildings facing the public street;

- The use of skylights is acceptable if not visible from the road;

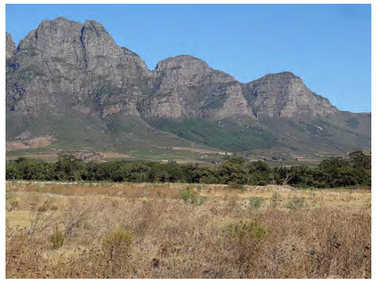
- Windows in the dominant facade must be vertically proportioned, consistent with the traditions of walled architecture;

APPENDIX A

Proposed Boschendal Village Development, Stellenbosch Municipal Area, Western Cape

Visual Baseline Study

April 2015




Prepared by:

Quinton Lawson, MLB Architects
Bernard Oberholzer, Landscape Architect

Prepared for:

Boschendal Ltd

Contents

Figures

1 Introduction

1.1 Background

A number of visual and heritage studies have been carried out over the last few years for the Boschendal Estates, including those for the 'Founders Estate' and the 'Remainder', which provide useful background information for the current study.

The intention of the current proposal is to create a small settlement, or 'rural village', on Boschendal owned land near the intersection of the R45 and R310 main routes, in the vicinity of the Rhodes fruit canning complex.

The purpose of this Visual Baseline Report is to make a general visual assessment of the study area, which would inform and provide visual indicators for the planning and design of the proposed settlement.

The visual assessment forms part of a larger environmental and heritage study by a number of specialists, and needs to be read in conjunction with the larger study.

The study is based on previous visual assessment work for the Boschendal Estates, and on recent fieldwork relating to the current village proposals.

1.2 Scope of Work

The visual assessment for the Boschendal Village project involves 2 phases: the current Visual Baseline Study (VBL), followed by the Visual Impact Assessment (VIA). The scope of work for the baseline study 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.
- Formulate visual indicators to inform the next stage of the planning process.

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, which can in totality be described as the area's 'sense of place'.

1.4 Assumptions and Limitations

No public participation has taken place at this early stage of the project, and issues have therefore been largely derived from the Heritage Indicators and Directives (Baumann, Winter, Dewar and Louw, Oct. 2014).

Only a broad Land Use Concept Diagram, (Philip Briel, April 2015) was available during the preparation of the VBL, and therefore a detailed description of the project, and its visual implications, was not possible at this stage.

1.5 Methodology

The following sequence was employed in the visual baseline study :

- 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 formulation of important visual indicators and guidelines.

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 potentially provide access to the proposed 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 mountain slopes of the Simonsberg and Drakenstein Mountains form a visual backdrop to the site, which lies in the Dwars River valley. At this point the alluvial valley widens out and the slopes become more even. The site itself slopes gently in a north-easterly direction towards the Dwars River some 300m to the east of the Site.

2.3 Existing Land Uses

An orthogonal pattern of agriculture, mainly vineyards and orchards, articulated in places by tree shelterbelts, predominate in the surroundings.

The study area already includes fruit canning factory uses nearby, a police station and a clinic. A disused railway track follows the alignment of the R45 Route to the north of the site.

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 the Village Project

A preliminary ‘Land Use Concept’ including a land use table, (Philip Briel, 20 April 2015) was made available during the preparation of this visual baseline study (See Fig. 5). According to the Planners for the project (Anine Trumpelmann), the concept is not a detailed development proposal, nor a development controls document. It is also not a zoning plan or a subdivision plan.

The overall footprint of the proposed village development is 34.5ha. The proposed land uses in summary consist of the following:

Residential - low density (80 units), 1-storey height;
Residential - medium density (120 units) 2-storey height;
Residential - high density (240 units) 3-storey height;
Residential – hospitality (50-room hotel and 10 apartments) 2-storey height;
Guest cottages (30 rooms) 1-storey height;
Business – low density (1000m^2) 1-storey height;
Business – medium density (2000m^2) 2-storey height;
Business - high density (4500m^2) 3-storey height;
Business – market (1000m^2) 1-storey height;
Civic/community buildings (500m^2);
Clinic (2000m^2).

Privately owned agricultural land is also indicated. The area for roads, parking and open space are not given at this stage, but are indicated on the Concept Plan.

The visual impact assessment (VIA) stage would require an indication of actual building footprints, building form and architectural character, as well as landscaping proposals, outdoor lighting and perimeter fencing or walls, in order to prepare 3D models and photomontages of the proposed development.

4 Planning Policy and Legal Context

Certain planning policies and legal parameters need to be taken into account. These will be covered in more detail in the Heritage Study. Aspects that have visual or landscape implications are mentioned here.

- The proposal to apply for World Heritage Site status for the Stellenbosch winelands has important implications for development in the area, and particularly for maintaining the landscape integrity of the vineyards and mountain slopes in general.
- The Stellenbosch (SDF) includes a number of principles, including the conservation of the architectural, historic, scenic and cultural character of the settlements, farms and rural areas in the Stellenbosch Municipality.

5 Visual Issues

No public participation has taken place at this early stage of the project. Visual issues have therefore been identified by the Visual Specialists and those based on the Heritage Indicators study (Baumann et al, 2014) as outlined 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 Visual Assessment Criteria

6.1 Visual Exposure (See Fig. 4)

Potential visual exposure of the proposed village project would be 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. Visual exposure is therefore expected to be fairly limited.

6.2 Visibility (See Fig. 3, and Figures 6 to 11)

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, it is not expected that visibility of residential scale development would be a major factor, except possibly for users of the R310 Route. (See also Table 1).

6.3 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. This would be assessed for each selected viewpoint.

6.4 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.

6.5 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.

Table 1 Viewing Distances and Visibility

View-point	Location	Distance	Comment
1	Excelsior homestead	550m	Proposed development would not be visible beyond the dense tree belts.
2a	Allée Blueu Entrance on R45 at intersection with R310.	171m	Proposed development would be screened by foreground trees and buildings.
2b	Allée Blueu Entrance on R45 at intersection with R310.	192m	Development would be partly visible, but mainly screened by existing trees.
3	District farm access road	765m	Proposed development would not be visible beyond the dense treebelt along the Dwars River.
4	District road and R45 intersection	540m	Proposed development would not be visible beyond the dense treebelt along the Dwars River.
5	R45 at Solm / Delta entrance	490m	Proposed development would not be visible beyond the dense treebelt along the Dwars River.
6	R45 adjacent to development site	91m	Proposed development would be partly visible through trees, but over a short distance.
7	R45 at Dwars River Bridge	42m	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	275m	Proposed development would be clearly visible beyond existing cottages.
9	R310 southern edge of development site	208m	Proposed development would be clearly visible beyond existing cottages from R310 through tree avenue.
10	Local access road	15 / 295m	Proposed development would be clearly visible in the middle distance across open field.
11a	Local access road at site boundary	0m	Proposed development would be clearly visible adjacent to local access road.
11b	Local access road at site boundary	10m	Proposed development would be clearly visible adjacent to local access road.

7 Visual Indicators

The purpose of identifying visual indicators is for these to contribute to the heritage assessment and in turn to inform the planning and design of the proposed village. The visual indicators will also be used during the VIA stage for the preparation of mitigation measures.

The heritage indicators and directives (Baumann et al, 2014) are supported as these have significant visual implications. Specifically, these include:

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

Other general urban design, landscaping and architectural guidelines include the following:

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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).

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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 werf-type layout typical in the Winelands. 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.

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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.

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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 fixing signs to walls, helps to minimise visual clutter.

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.

8 Conclusions and Recommendations

The general finding of this visual baseline study is that the proposed village would not be significantly visible from the general surroundings, nor from neighbouring historical farmsteads and scenic routes, such as the R45 and R310. The reason for this is that the proposed village is sited in a low-lying area, which is part of the Dwars River Valley, and secondly that the development site is mostly screened by existing buildings and trees.

Potentially sensitive viewpoints are Viewpoints 6 and 7 from the R45 Route, Viewpoint 8 from Boschendal, and Viewpoint 9 from the R310 Route. Visual impact from these viewpoints could however be reduced by means of mitigation measures, such as foreground tree planting and building height restrictions.

It is recommended that further consideration be given to the layout proposals in the Land Use Concept Plan (April 2015) for the following areas:

1) The possible retention of the existing orchard at the eastern end of the proposed Block A, (see Viewpoint 11b), which forms part of the rural landscape and provides useful visual screening of the proposed development.

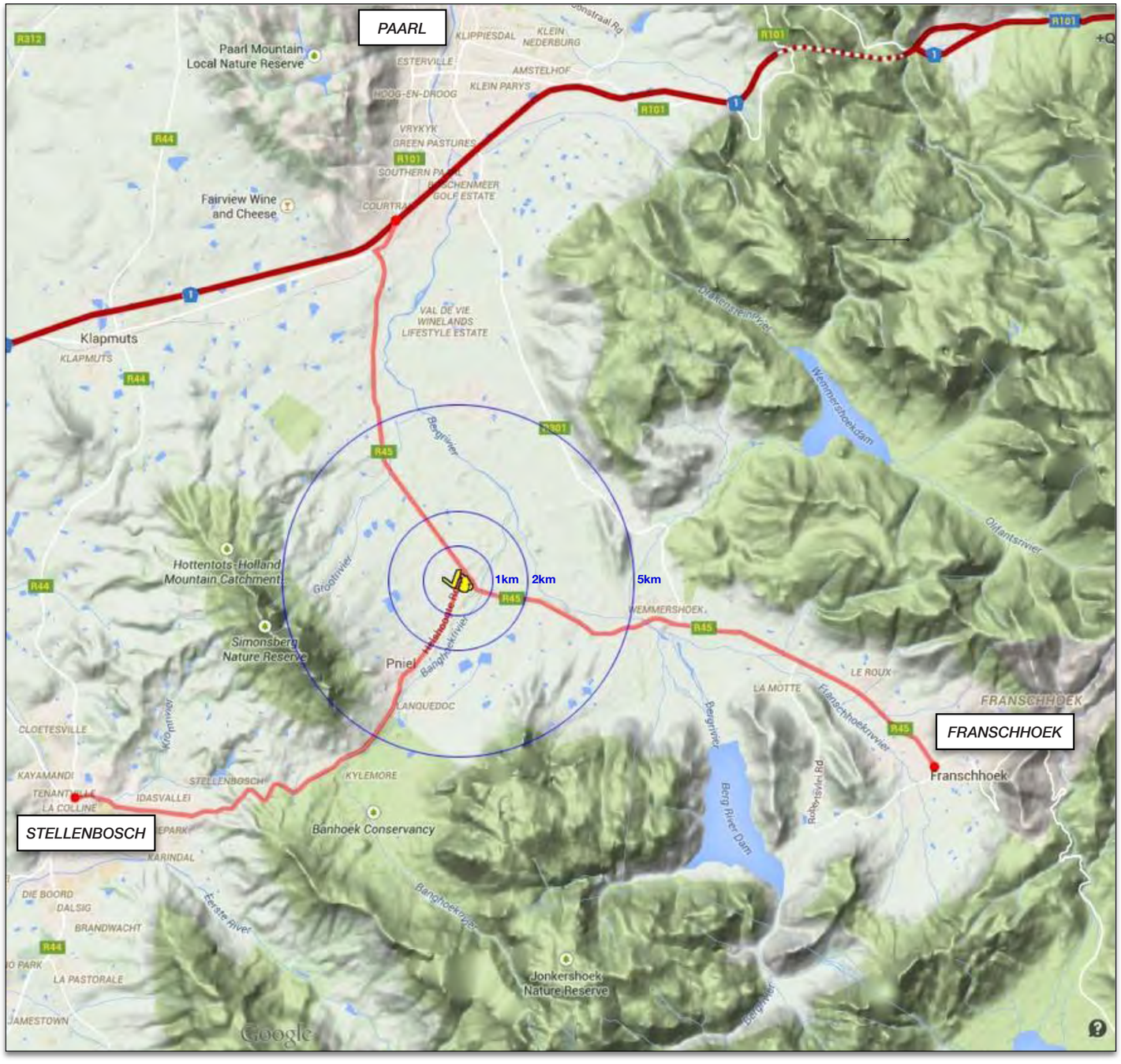
2) The possible removal or relocation of those parts of Block N, which are below the 100-year floodline, which consist of existing vineyards, and which are potentially visible from the R45 scenic route. (Filling of the floodplain is not advised for hydrological and visual reasons).

Should additional area be required for residential development, consideration could be given to using part of the triangular ‘private agriculture’ portion of Block A. Existing trees along the western and southern edges of Block A should however be retained for visual screening of any proposed development.

3) References

Baumann N, Winter S, Dewar D, Louw P, Oct. 2014. Proposed Boschendal Village: Heritage Indicators and Directives. 47pp.

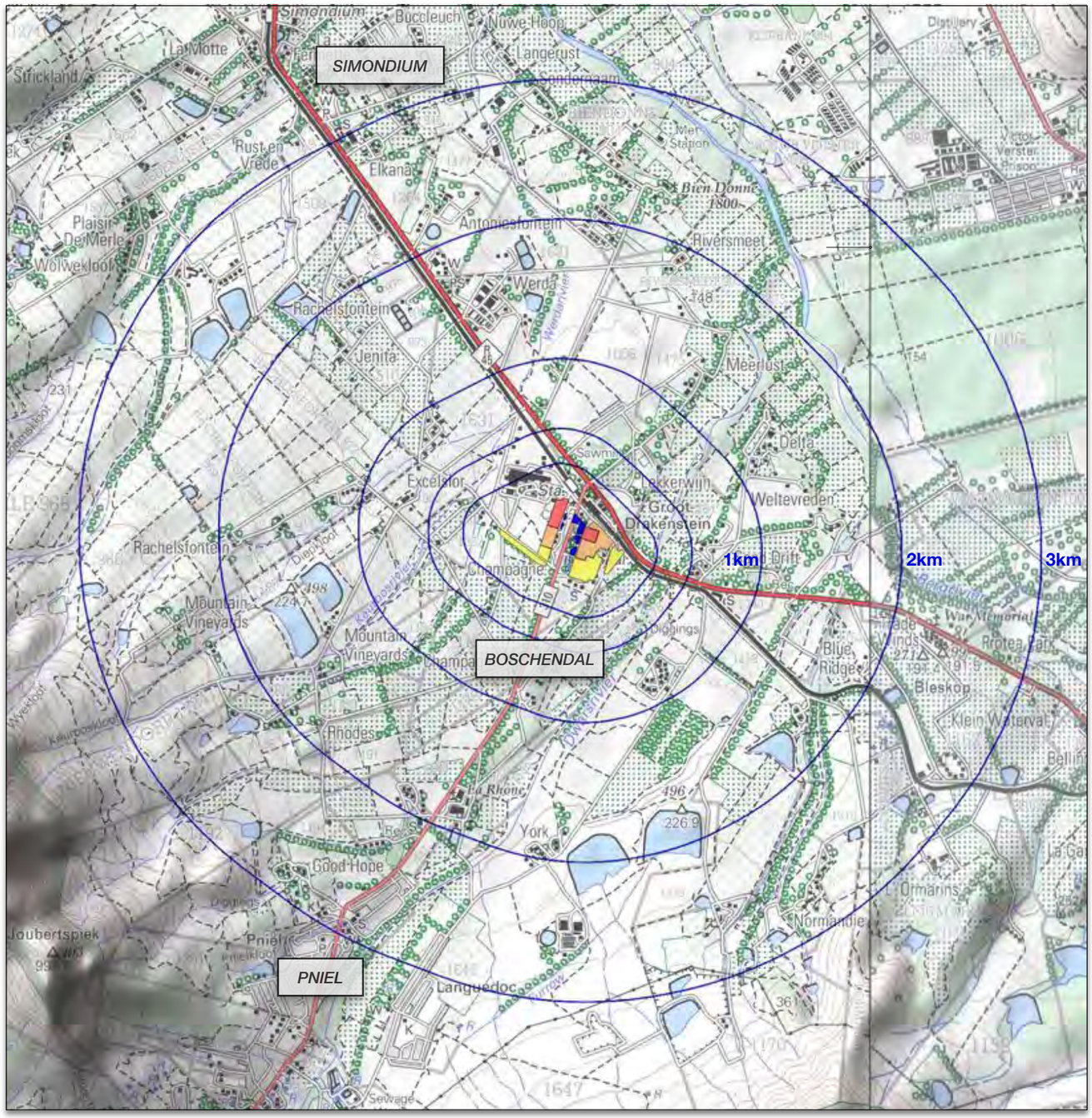
Briel, Philip, April 2015. New Village Boschendal: Land Use Concept Diagram. Dwg. No. SDP.1. Scale 1:2000 at A1.



Base Map Source : Google Maps 2015

Figure 1 • Locality Map

to Paarl



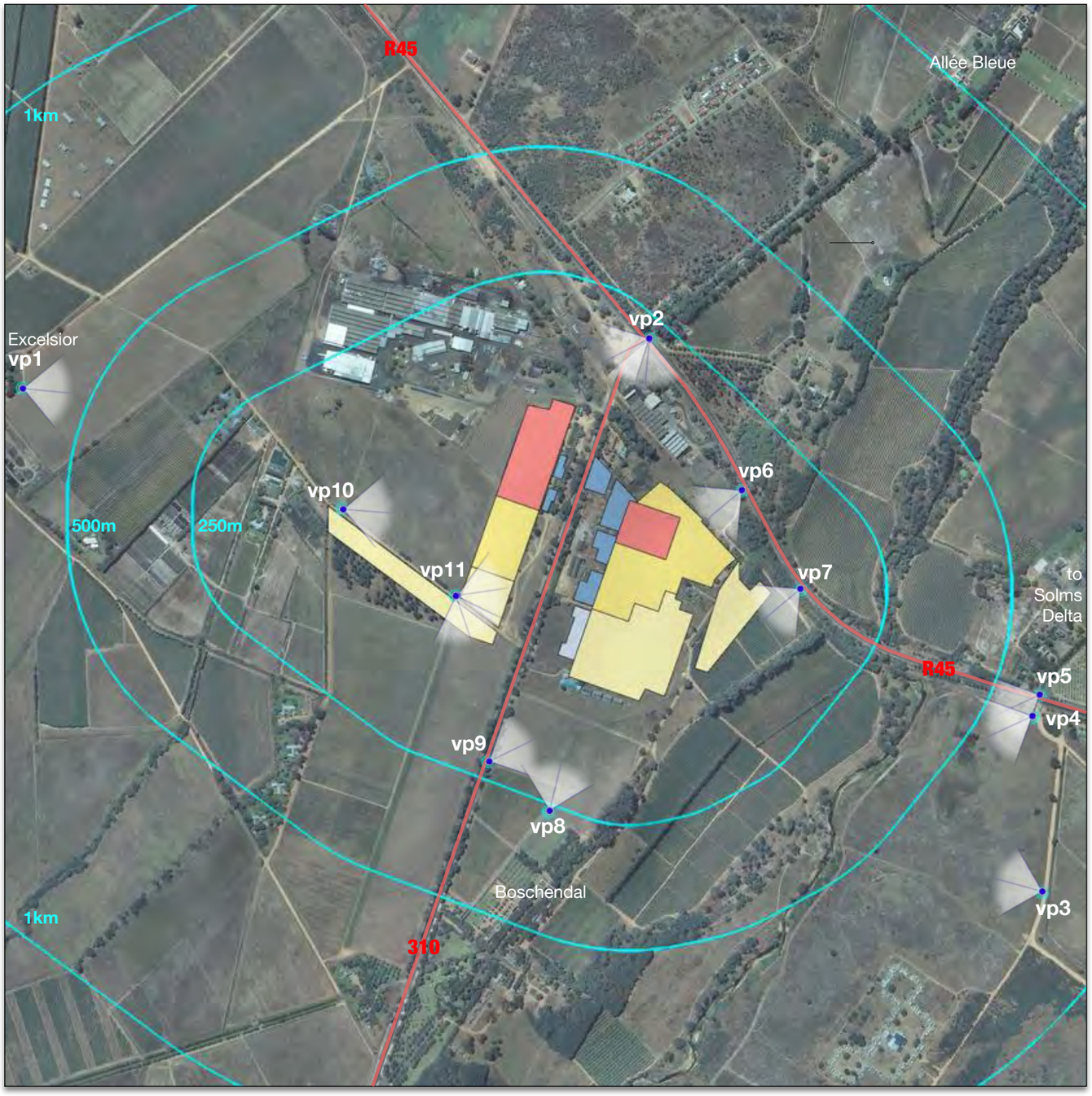
to Franschhoek

to Stellenbosch

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

Figure 3 • Local Context : Viewpoints and Distance Radii

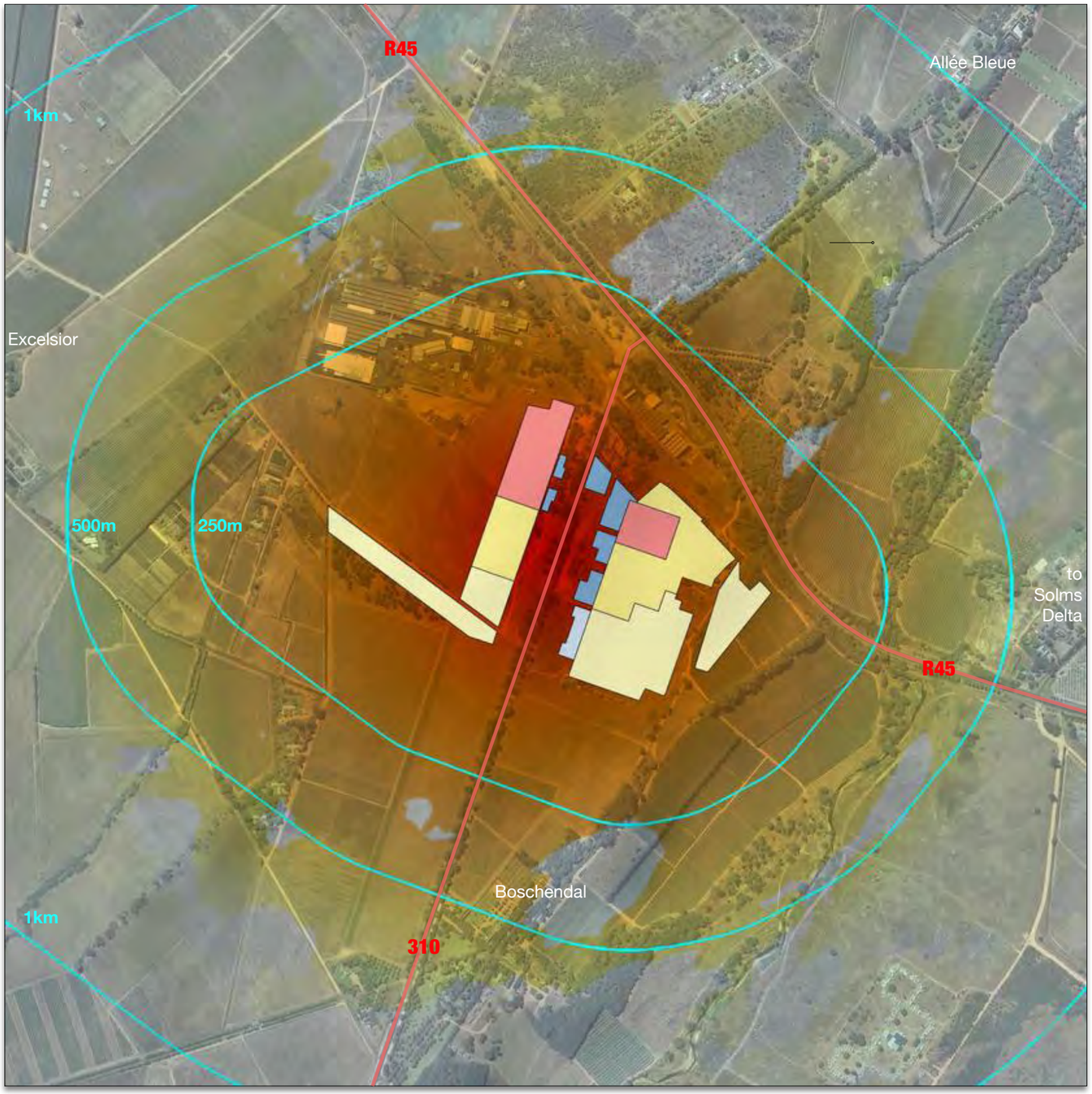
VISIBILITY GRADIENT LEGEND

red • area of high visibility

orange • area of medium visibility

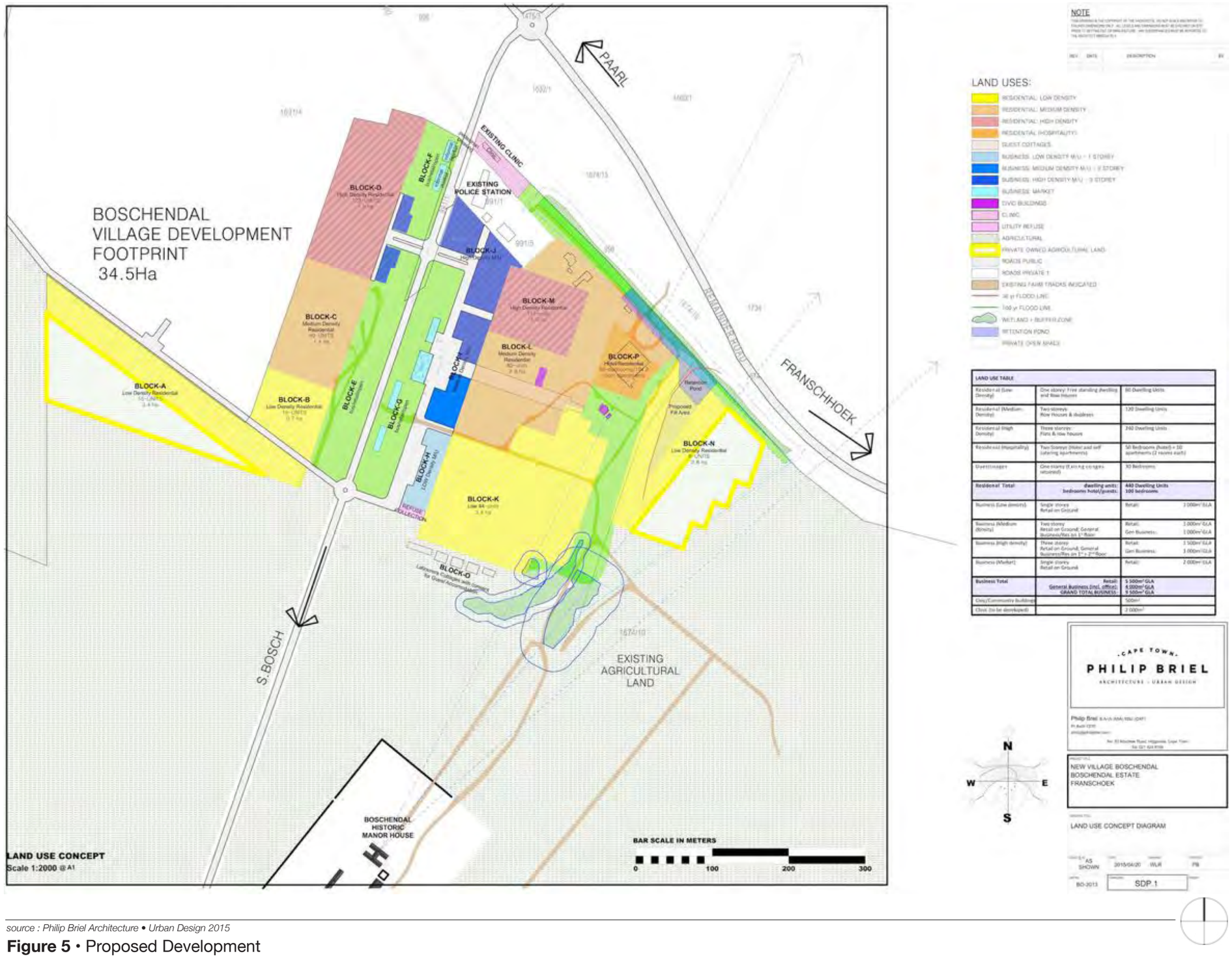
yellow • area of low visibility

uncoloured area • indicates view shadow area (no visibility)



Base Map Source : NGI Aerial Photography • 2010

Figure 4 • Nominal Viewshed and Distance Radii



source : Philip Briel Architecture • Urban Design 2015

Figure 5 • Proposed Development

viewpoint 2a • from Allée Blueu Entrance on R45 • distance 171m

viewpoint 2b • from from Allée Blueu Entrance on R45 • distance 192m

photographs : bola/mlb 2015

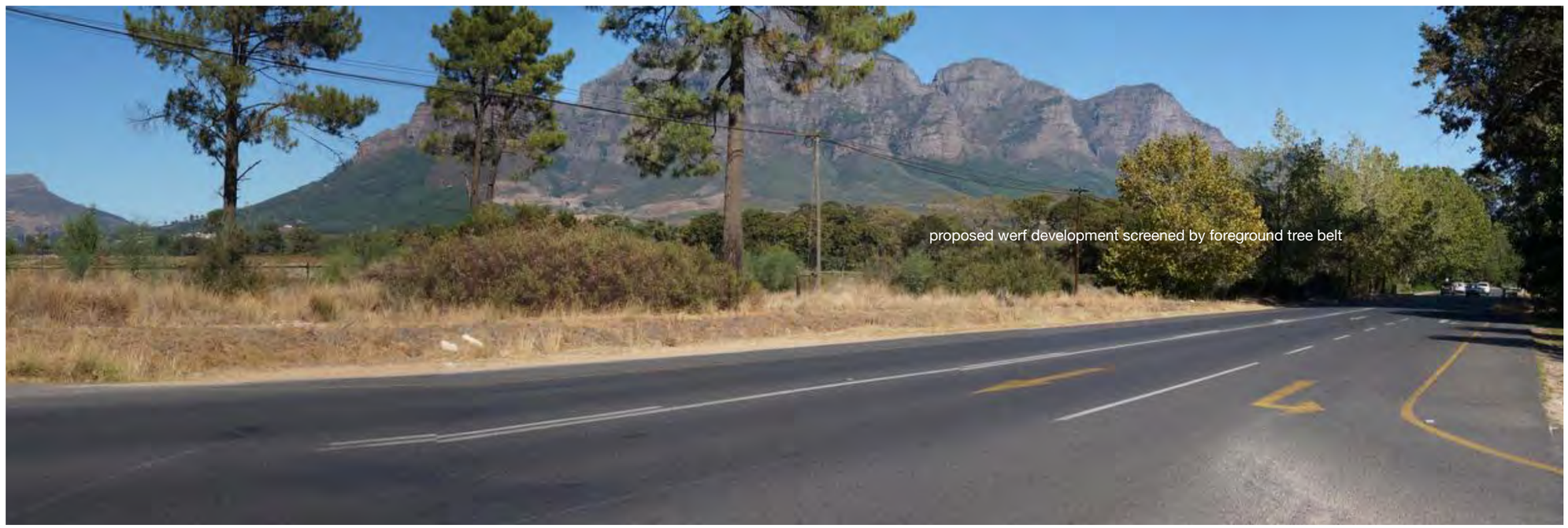
Figure 6 • Viewpoint 2

viewpoint 3 • from district farm access road • distance 765m

viewpoint 4 • from R45 at district road intersection • distance 540m

photographs : bola/mlb 2015

Figure 7 • Viewpoints 3 and 4



viewpoint 5 • from R45 at Solms Delta Entrance • distance 490m

viewpoint 6 • from R45 adjacent to Development Site • distance 91m

photographs : bola/mlb 2015

Figure 8 • Viewpoints 5 and 6

viewpoint 7 • from R45 at Dwars River Bridge Pedestrian Pathway • distance 42m

viewpoint 8 • from northern end of Boschendal werf wall • distance 275m

photographs : bola/mlb 2015

Figure 9 • Viewpoints 7 and 8

viewpoint 9 • from 310 at southern buffer edge of development • distance 208m

viewpoint 10 • from Local Access Road • distance 15m / 295m

photographs : bola/mlb 2015

Figure 10 • Viewpoints 9 and 10

viewpoint 11a • from Local Access Road at Development Site Boundary • distance 0m

viewpoint 11b • from Local Access Road at Development Site Boundary • distance 10m

photographs : bola/mlb 2015

Figure 11 • Viewpoint 11

ANNEXURE C

ARCHAEOLOGICAL ASSESSMENT

March 2015

Prepared by ACO

Archaeological Assessment of Portions 7/1674 And 10/1674 Of The Boschendal Estate.

Report prepared for Sarah Winter on behalf of the proponent

Boschendal

March 2015

ACO Associates cc
Archaeology and Heritage Specialists

Prepared by
Natalie Kendrick
Tim Hart

ACO associates CC
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St James
7945
Phone 021 7064104

Summary

ACO Associates CC was appointed by Boschendal Estates, to undertake an archaeological assessment of a proposed development of the "New Village Boschendal", on a section of the Boschendal estate.

The proposed activity has triggered section 38.8 of the National Heritage Resources Act which requires the completion of an Archaeological Impact Assessment. The proponent wishes to construct mixed density residential housing and general business buildings, including retail. Sarah Winter is undertaking the Heritage Impact Assessment of which this report is a specialist component.

The proposed development is situated on mixed land straddling Helshoogte Road (R310), and just off the R45 in Stellenbosch on portions 7/1674 and 10/1674. Currently the land contains some residential housing, orchards, unused land with uninhabited labourers cottages and a saw mill.

Findings: The site is not archaeologically sensitive as it has been heavily transformed. No clear evidence of Early or Middle Stone age archaeological material was encountered, nor are there any buildings that require grading.

Grading: Indications are that there are no finds worthy of grading in terms of HWC's draft policy document on the grading of archaeological sites (in prep 2015). No mitigation is called for.

There are no objections to the proposed activity on archaeological grounds.

Contents

Introduction

ACO Associates CC was contracted by Boschendal Estates (pty) Ltd to undertake an archaeological assessment of a proposed development in the Dwars River area that is part of the Boschendal estate (on, but not all of portions 7/1674 and 10/1674). The site is situated on mixed land straddling Helshoogte Road, and just off the R45. This report forms a specialist component of the Heritage Impact Assessment being compiled by Sarah Winter.

The proposed development, currently under the name "New Village Boschendal", will include mixed density residential housing and general business buildings, including retail. Currently the development footprint is used for residential housing, orchards, unused land with uninhabited labourers cottages, a saw mill and an old unused canning factory.

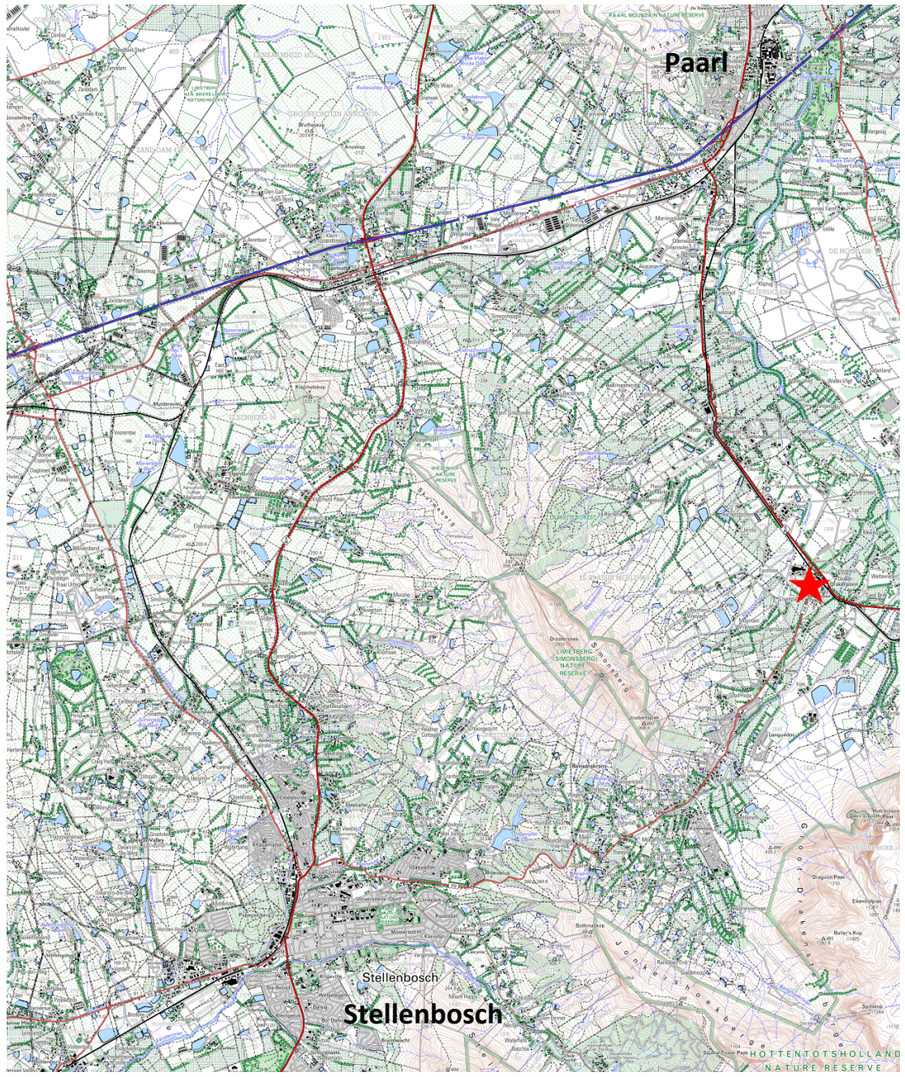

Figure 1. Location of the proposed development (red star), on Helshoogte Road.

Terms of reference

ACO associates was appointed to conduct a site inspection and report on the presence and quality of any archaeological material.

Legislation

The NHRA provides protection for the following categories of heritage resources:

- Landscapes, cultural or natural (Section 3 (3))
- Buildings or structures older than 60 years (Section 34);
- Archaeological Sites, palaeontological material and meteorites (Section 35);
- Burial grounds and graves (Section 36);
- Public monuments and memorials (Section 37);

- Living heritage (defined in the Act as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships) (Section 2 (d) (xxi)).

Methods

The proposed development footprint was surveyed by Liesbet Schietcatte and Natalie Kendrick (ACO Associates), on foot and by vehicle. The surveyed tracks were recorded on a hand held Garmin GPS device, and photos were taken.

Restrictions

Restrictions to the survey were few. (See Affected Environment below for descriptions of the sections). In Section B the fenced houses were difficult to survey. However the surface of this area was highly disturbed and transformed. In Section C and D the grass and Port Jackson trees made it difficult to see the surface, again however the surface has been greatly impacted by various activities including the digging of rubbish pits and the creation of tracks over the years.

Affected Environment

Figure 2. Proposed development (red outline) and tracks (in blue). The footprint has been divided into 5 sections (A-E) for the purpose of description, and identifying where the photos were taken.

The following describes the land in the proposed development according to arbitrarily designated sections (see Figure 2), these sections do not correspond to plans but are rather divided by the roads on the property. The development footprint is on the northern sections of portions 7/1674 and 10/1674 closest to the R45. The Le Rhone House is situated on portion 10/1674 to the south of the development (not shown on Figure 2.)

Section A contains a plum orchard (on the east side), fallow/unused land (south west) and a pine grove (north west) (See figures 2-4).

Section B is a gated community of relatively modern housing. There is some open space at the south end of the section, and running along the west hand side. This space has been transformed by old rubbish pits and old tracks, and pine trees run along the west hand side (pine needles being destructive to plant growth on the surface).

Section C is largely fallow land that has been transformed by tracks, rubbish pits, and an infestation of alien Port Jackson trees. In the south west corner there is a saw mill that is still being operated. In the north east corner there are various (used and unused) agriculture buildings and an old canning factory. There are also old uninhabited labourers houses in the north of the section. One is still occupied (see figure 6 and 7).

Section D is a largely open grassed area. There are two rows of uninhabited labourers cottages, one running roughly east-west, the other roughly north – south (see Figure 5). The ground has been ploughed and dug. It is covered in cobbles and thick short grass. Near the centre is a large pit that may have been some kind of dam.

Section E contains fruit orchards, with two Blue Gum wind breaks.

Overall the area is highly transformed by agricultural activity, human occupation and the saw mill and old canning factory. The ground (other than the orchards), is covered in relatively dense cobbles, which occur quite deep under the surface (see Figure 3.) Non-agricultural areas (mainly B & C) are also covered in rubbish, and there are a high number of rubbish pits which have further transformed the ground surface.

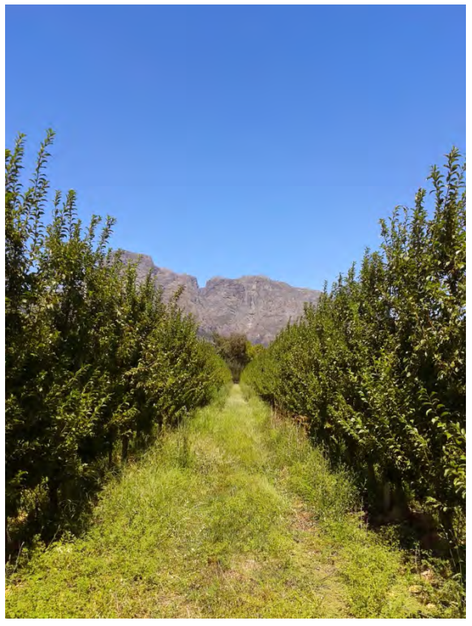

Figure 6. Open area and uninhabited cottages in Section D

Figure 3. Blue gum trees in Section E.

Archaeological Background

The Dwars River Valley between Paarl and Franchoek, has been occupied since the Early Stone Age (ESA). Artefacts have been found in the area, especially along river terraces. The first identification of ESA stone artefacts was made on along the Eerste River in Stellenbosch, and the tool types (hand axes and clevers) were denoted as the 'Stellenbosch Culture". Kaplan (2005) reported ESA artefacts on the Boschendal property, found amongst the vineyard rows and in the piles of rocks cleared from the vineyards. Likewise he found artefacts on other farms in the area, in similar situations. This demonstrates that highly transformed nature of the area (through agriculture), and that ESA artefacts are not known to be found *in situ*.

Evidence of Middle and Later Stone Age activity is less common, but artefacts have been found in the Paarl/Stellenbosch area (Kaplan 2005) and at Solms Delta (Hart pers com.) It is also known that Khoisan people used the area. By 2000 BP the Khoi pastoralists, the Cochoqua, kept a principal cattle kraal close to Paardeberg (Hart 2007), north of Paarl. It is not unlikely that they would have moved their cattle along the Berg River close to the study area, however no evidence is as of yet documented.

The Dwars river valley and the surrounding Paarl/Stellenbosch area is rich with colonial archaeology. ACO Associates have concluded a number of studies in the area including on the nearby Boschendal farms Bethlehem and the Founders Estate. The roots of Boschendal go back to around 1688, but the main farm Boschendal was bought by the de Villiers Family in 1715. The various farms that were later incorporated into Boschendal date back to the late 17th century. Boschendal was bought by the de Villiers family in 1715, and saw much growth under them throughout the 18th century. Later on the estate saw substantial growth under its ownership by C.J. Rhodes. It was also owned by the de Beers group in the 20th century. Boschendal contains a number of 18th century structures including farm houses and barns. The Le Rhone House, on the development portion, dates back to 1795 (Fransen 2004). The Founders Estate is also home to an old VOC silver mine dating back to c 1748 (the earliest European mine in South Africa).

Findings

The footprint of the proposed development is not archaeologically sensitive. This is due largely in part to transformation through cultivation of fruit trees in the past, habitation and infrastructure such as tracks. There was no clear evidence of Early of Middle Stone Age occupation, nor was any archaeological material encountered. There is also no historical archaeology present on these sections of the Boschendal estate.

No mitigation is required.

Conclusion

ANNEXURE D

VISUAL IMPACT ASSESSMENT

June 2016

Prepared by Lawson and Oberholzer

Proposed Boschendal Village Development,
Stellenbosch Municipal Area, Western Cape

Visual Impact Assessment

May 2016
Revised June 2016

Prepared by:

Quinton Lawson, MLB Architects
Bernard Oberholzer, Landscape Architect

Prepared for:

Boschendal Ltd

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

Bernard Oberholzer

Name	Qualification	Prof. Registration	Experience
Quinton Lawson	B.Arch (Natal)	SACAP reg. no. 3686	Visual / heritage: 20 years
Bernard Oberholzer	B.Arch (UCT), MLA (Pennsylvania)	SACLAP reg. no. 87018	Visual: 25 years

Contents

Figures

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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Doug Jeffrey Environmental, 2015. Boschendal Village: Comment and Responses document.

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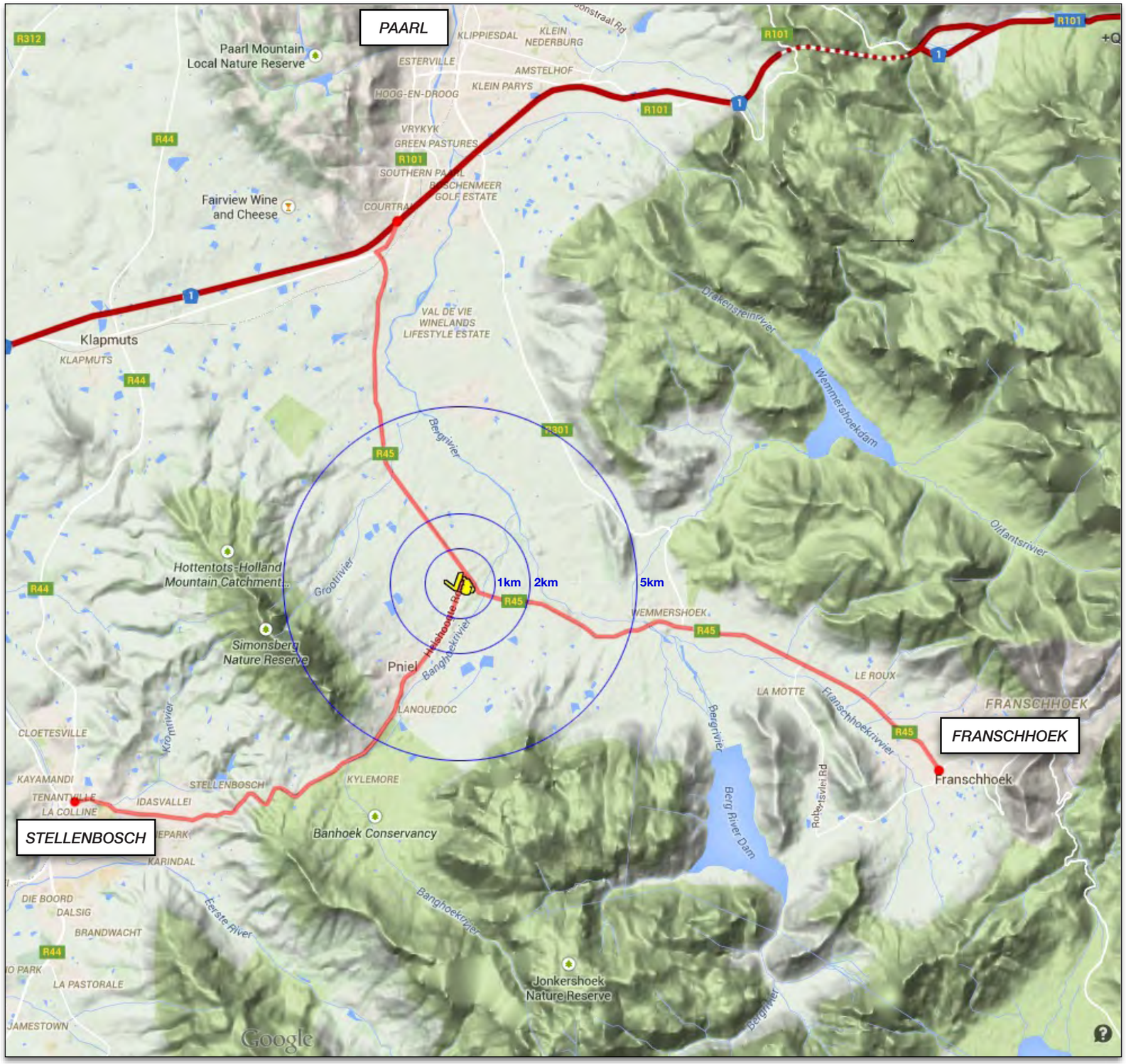
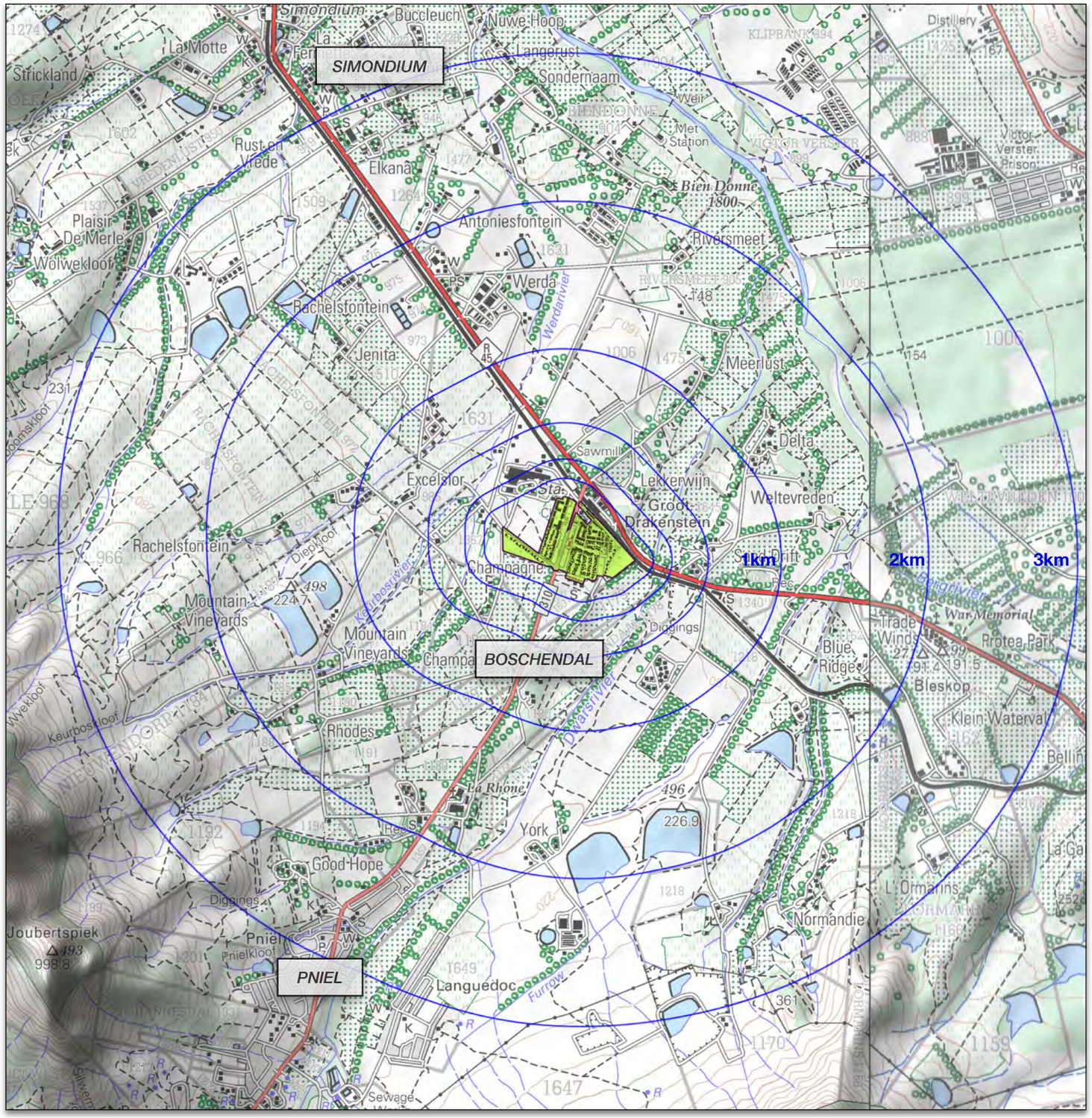


Base Map Source : Google Maps 2015

0 5km 10km

Figure 1 • Locality Map

to Paarl



to Franschhoek

to Stellenbosch

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

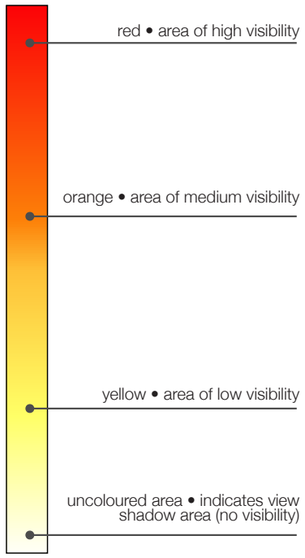
Figure 2 • Local Context and Distance Radii

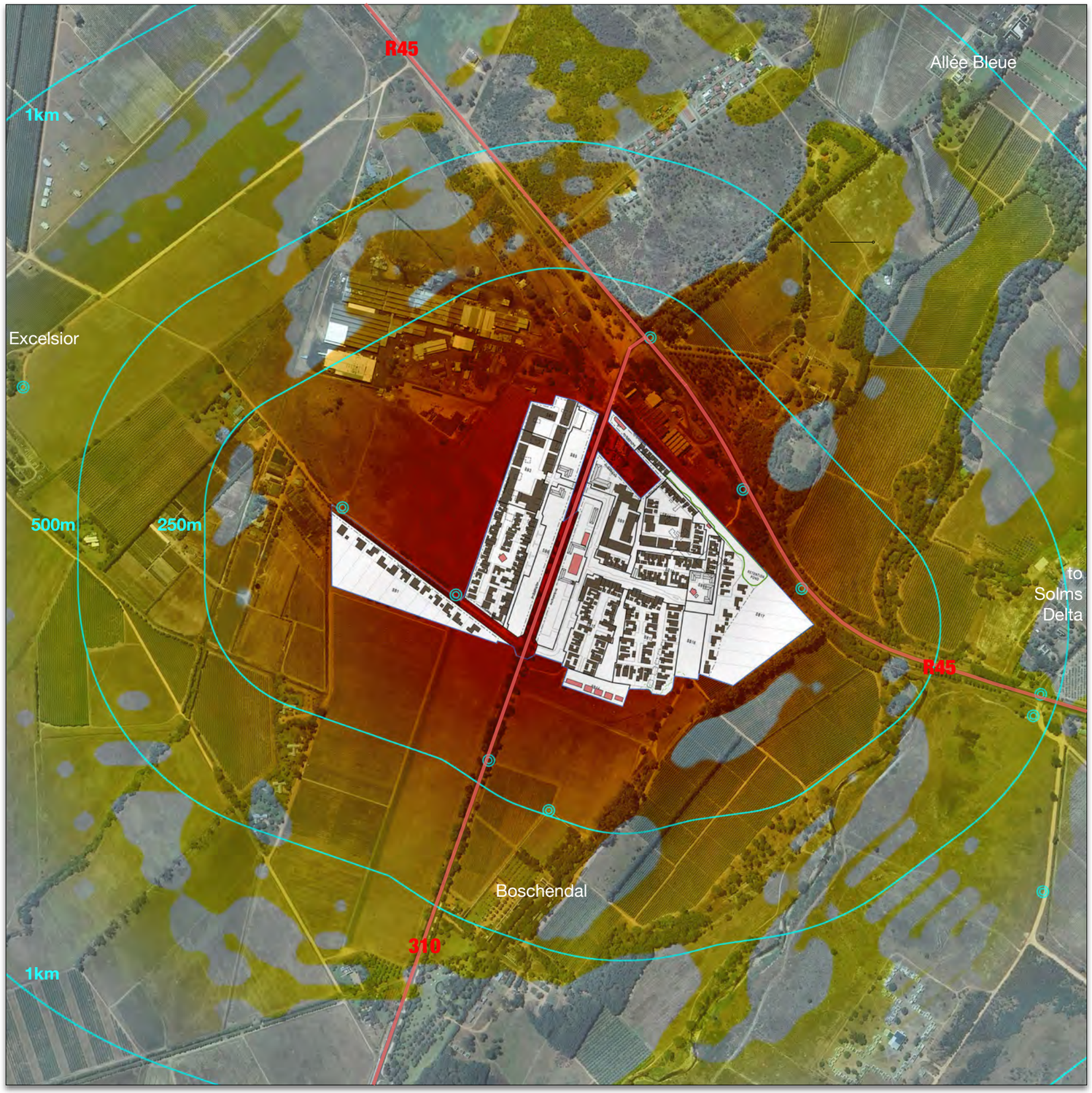
Base Map Source : NGI Aerial Photography • 2010

0 250m 500m

Figure 3 • Local Context : Viewpoints and Distance Radii

VISIBILITY GRADIENT LEGEND





Base Map Source : NGI Aerial Photography • 2010

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.

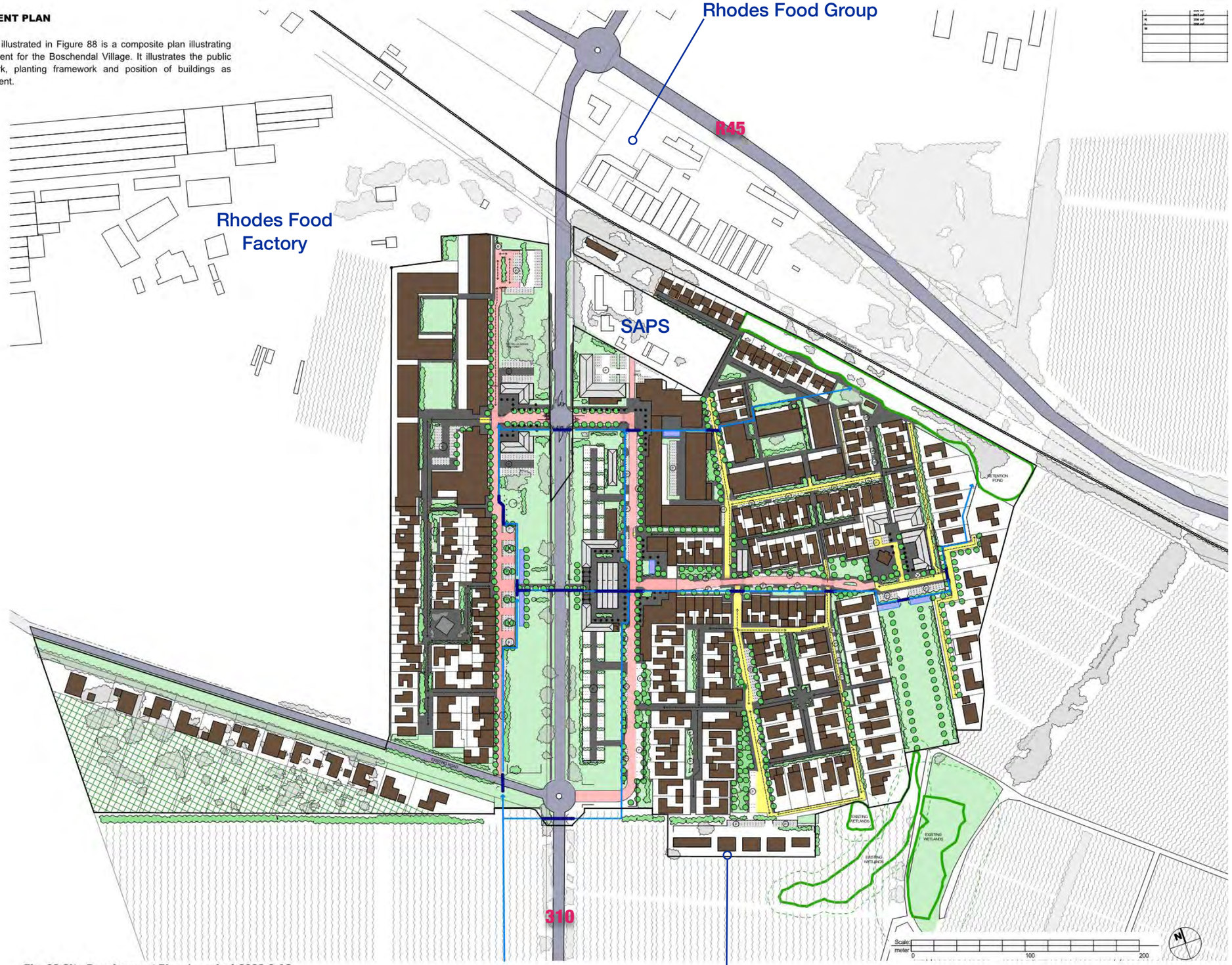


Fig. 88 Site Development Plan | scale 1:3000 @ A3

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

Figure 5 • Proposed Site Development Plan

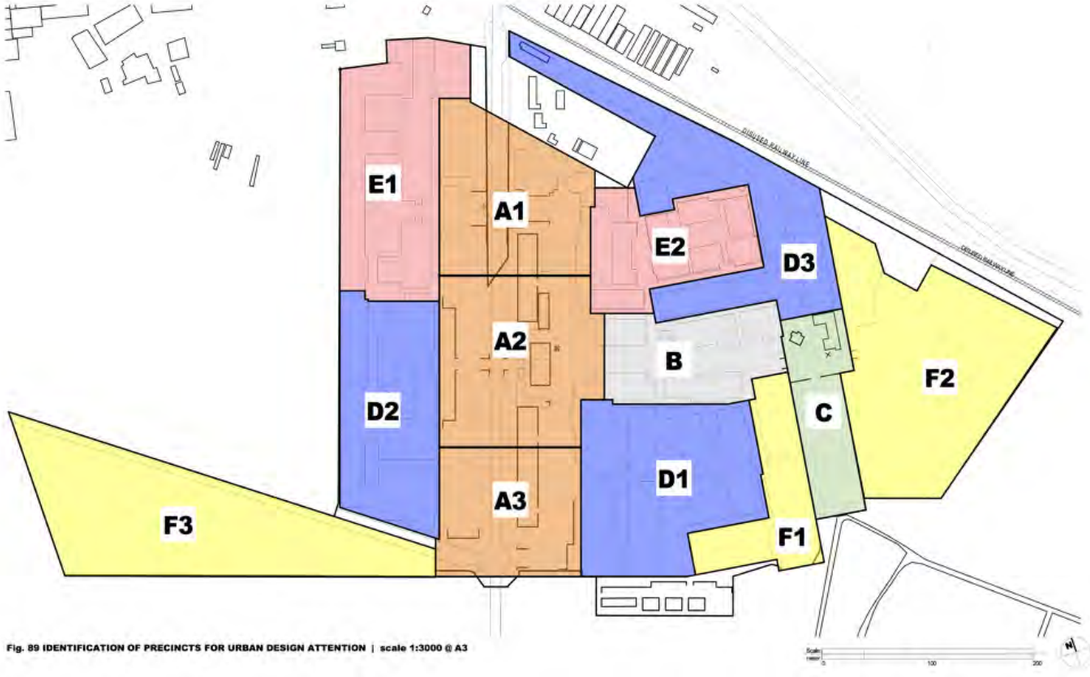


Fig. 89 IDENTIFICATION OF PRECINCTS FOR URBAN DESIGN ATTENTION | scale 1:3000 @ A3

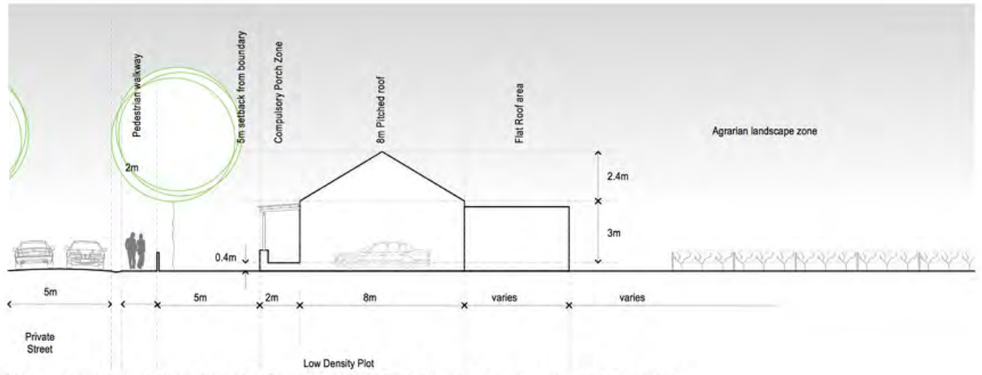


Fig. 117 LOW DENSITY RESIDENTIAL (Precincts: F2 +F3) (Single residential erfen) scale 1:250 @A3

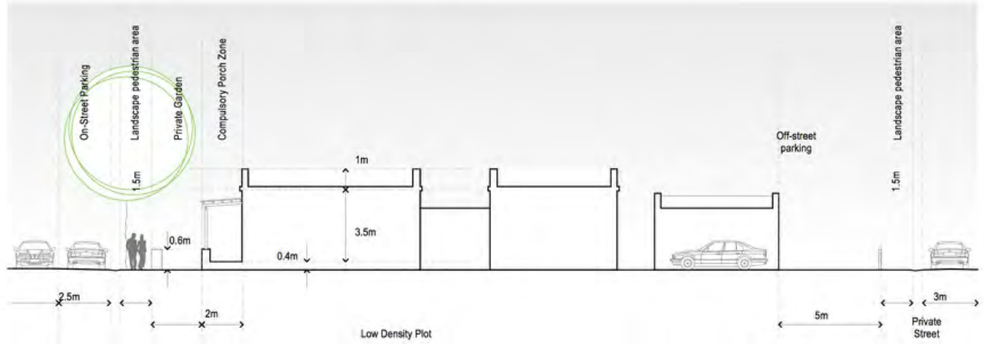


Fig. 118 LOW DENSITY RESIDENTIAL (Precinct: F1+D2) scale 1:250 @A3

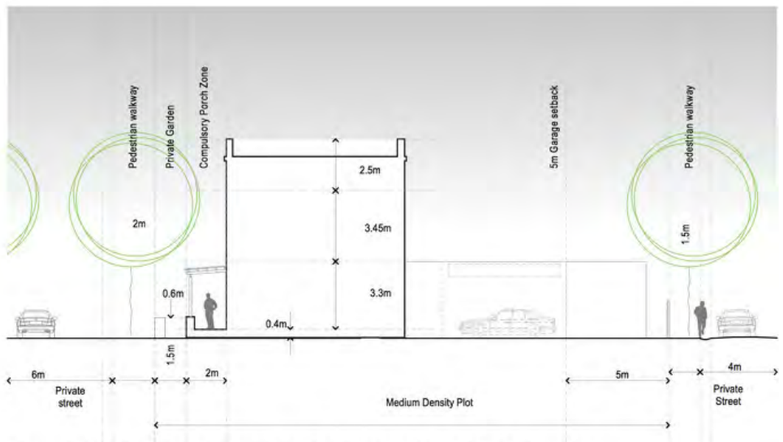


Fig. 116 MEDIUM DENSITY RESIDENTIAL (Precints: B+D1+D2+D3) scale 1:250 @A3

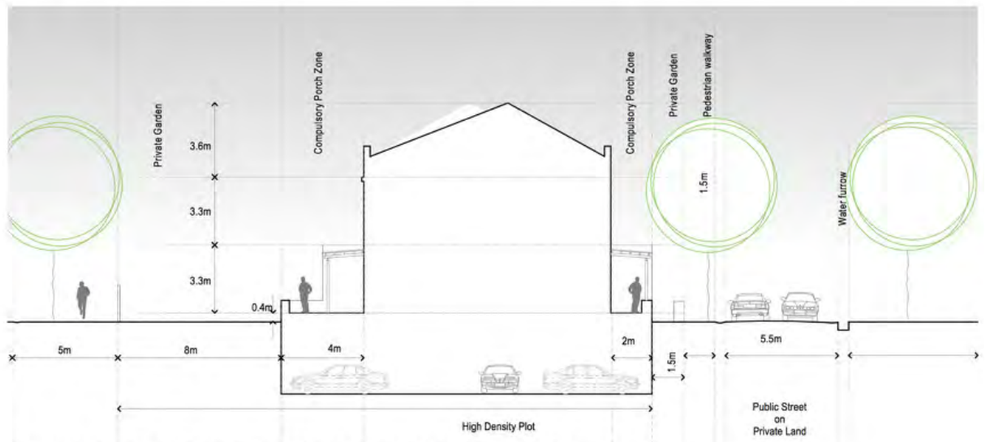


Fig 119 HIGH DENSITY RESIDENTIAL (Precinct E1+E2) scale 1:250 @A3

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

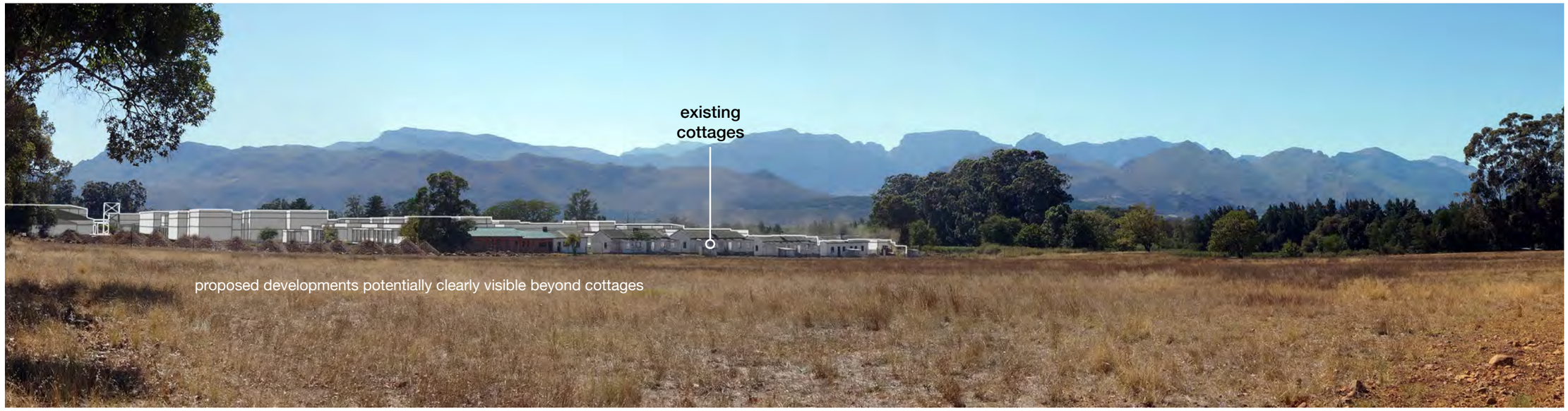
Figure 9 · Viewpoints 3 and 6

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