RESIDENTIAL DEVELOPMENT

Portion 1 of Farm 1202

Johannesdal

Visual Impact Assessment

Final Report ver. 1.6

March 2019

Prepared by:

Megan Anderson Landscape Architects

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Submitted to:

Withers Environmental Consultants

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EXECUTIVE SUMMARY

Withers Environmental Consulting (WEC) are undertaking the Basic Assessment process, in terms of NEMA, for the proposed single residential development on Portion 1 of Farm 1202, Johannesdal. Megan Anderson Landscape Architects has undertaken a Level 4 Visual Impact Assessment (VIA) for the proposed development.

The proposed site of development is to the west of the R310 and is on the south western edge of Johannesdal, in the Cape Winelands District Municipality of the Western Cape and Stellenbosch Local Municipality.

Two Alternatives are being assessed. The Preferred Alternative 1 with 27 residential erven and 2 road erven and Alternative 2 the No Go Option.

Basic architectural concept sketches have been provided to assist with this report. Erven will be terraced to provide multi-level entrances to the double storey dwellings and to reduce the height thereof in the landscape.

The proposed site of development is in the Cape Winelands, where historic rural development (vineyards, orchards, farmsteads, tree shelter-belts and rural towns and villages) has added to the spectacular natural mountain and riverine scenic resources. The site itself is a rural plot on the eastern slopes of the Simonsberg, with a small non-perennial stream cutting across a corner thereof and an existing dwelling adjacent to the R310. Remnants of a once productive orchard cover the slopes, now overgrown by grass with invasive alien vegetation starting to colonise.
The **scenic resources** of the site and surrounds can be described as rural and natural and are rated as **MODERATE to HIGH**.

The **view catchment** of the site is defined by the Simonsberg Mountains to the west, the Wemmershoek, Franschoek, Groot Drakenstein and Jonkershoek from north, to east to south, **10 – 15 km** away. The **Zone of Visual Influence** (ZVI) is reduced by distance, vegetation, landforms and buildings to between **2,5 and 5 km** from the site.

The **receptors** within the ZVI are rated as **LOW to HIGHLY** sensitive.

The inherent **visual sensitivity of the site** as a result of topography, slope, landform, landuse and special features, is **MODERATE to HIGH.**

The **Visual Absorption Capacity** of the site **is MODERATE** - e.g. partial screening by topography and vegetation.

The **Visual Intrusion** of the proposed development will be **MODERATE – partially fitting into the surroundings, but clearly noticeable.**

The potential visual impacts that are expected are:

Construction phase:

- Visual scarring when vegetation is cleared and 'cut and fill' platforms are prepared for development and building works are highly visible.

Operation Phase:

- Change from a vegetated, rural site to a built residential site;
- Visibility from sensitive receptors;
- Visual intrusion of night lighting on the rural landscape.

A summary of the potential impacts is provided below:

Potential Visual Impacts	Mitigation	Alternative 1	Alternative 2
Visual scarring as a result of vegetation clearing and construction works	BEFORE	MEDIUM	LOW
	AFTER	LOW	LOW
Change from vegetated to built site	BEFORE	MEDIUM - HIGH	LOW
	AFTER	LOW	LOW
Visibility from sensitive receptors	BEFORE	MEDIUM-HIGH	LOW
	AFTER	LOW	LOW
Visual Intrusion of night lighting on the rural landscape	BEFORE	MEDIUM-HIGH	LOW
	AFTER	LOW	LOW

The visibility and visual impact of the development may be reduced through the implementation of the following mitigation measures which would reduce negative visual impacts and enhance positive visual impacts.

- Pre-construction:
  - Survey and demarcate no-go areas to restrict earthworks and minimize disturbance and visual scarring;
  - Situate buildings on less visually sensitive slopes;
  - Preferably design dwellings to be terraced/split-level rather than double storey buildings, which are more visible;
  - Where double storey buildings are desired, look to break up the double storey facade with pergolas and plant trees to screen/soften part of the double storey facade;
  - Implement architectural guidelines to ensure architectural style and form including natural finishes and/or colours.
- During Construction:
  - Limit extent of damage, keeping cut and fill to a minimum. Minimise disturbance through fencing off construction areas, thereby protecting and retaining grass and vegetation in the areas that will not be built on;
  - Additional mitigation should be implemented during the operational phase: landscape cut/fill slopes/terraces/retaining walls and use natural finishes and/or colours on retaining walls.
- During Operation
  - Plant screening vegetation in typical Winelands patterns - trees rows and hedges in such a way that the buildings/development is screened from sensitive receptors but the views from the buildings are not lost;
  - Tree, shrub and all plant species should reflect the cultural and indigenous plant species typical of the surrounding landscape;
  - Boundary treatments (fencing/walls) must be visually permeable for the most part;
  - Draft and implement architectural guidelines to ensure recessive architectural style and form including natural finishes and/or colours;
  - Minimise street lighting - outdoor lighting preferably bollard lighting, all luminaires must be top covered, low spill type lights to minimize light spill and pollution.

The significance of the potential visual impacts of the proposed preferred Alternative 1 would be generally Low. It is imperative that the Architectural Guidelines and Landscape Plans are approved by the Winelands Heritage Officer prior to development.

1. NAME, EXPERTISE AND DECLARATION

1.1. Name

Megan Anderson, of Megan Anderson Landscape Architects, is a self-employed Landscape Architect who has been consulting in the Western Cape since 1991, to clients from the public and private sector.

1.2. Expertise

Megan Anderson's projects range from:

- visual impact assessments (VIAs) of proposed developments for EIA and HIA processes;
- environmental and landscape policy and planning;
- upgrading and rehabilitation of natural systems;
- planning and implementation in heritage and cultural precincts; and
- planning, design and landscape development in residential and urban areas and community projects.

PRINCIPAL AGENT: Megan Anderson (PrLArch) Registered Professional Landscape Architect BLArch (UP) 1983 MILASA

REGISTRATION OF PRINCIPLE AGENT

1994 South African Council for Landscape Architect Professionals (94063)
1992 Institute of Landscape Architects of South Africa (P217)

QUALIFICATIONS

1983 University of Pretoria Bachelor of Landscape Architecture

VISUAL IMPACT ASSESSMENT EXPERTISE

Megan Anderson has been doing Visual Impact Assessments (VIA's)since 1989 when working for OvP and BOLA. Since then, she has completed more than 100 VIA's for a variety of developments including mining, harbours, wind and solar farms, communication towers, commercial and residential developments. A list of selected projects can be found in Appendix 11.1.

1.3. Declaration of independence

THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I Megan Anderson, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that I :

- in terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- in terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any report, plan or document prepared or to be prepared as part of the application; and
- am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014 (as amended).

Signature of the Specialist:	
Name of Company:	Megan Anderson Landscape Architect
Date:	11 January 2019

2. INTRODUCTION

A Basic Assessment Process will be undertaken for the proposed establishment of a Residential Development on Portion 1 of Farm No. 1202, Johannesdal, in the Winelands Municipality of the Western Cape.

2.1. Background to the Report

The applicant proposes developing single residential erven on Portion 1 of Farm 1202, Johannesdal.

Withers Environmental Consulting (WEC) are undertaking the Basic Assessment process for the proposed development in terms of NEMA.

Megan Anderson Landscape Architects has been appointed to undertake a Visual Impact Assessment (VIA) for the proposed development.

2.2. Scope of Study

In terms of the Western Cape Department of Environmental Affairs and Development Planning's guidelines for involving visual and aesthetic specialists in EIA processes, a level 3 - 4 VIA is required for this proposed development.
This requirement is based on:

- *The nature of the receiving environment:*
    - *Areas with proclaimed heritage sites or scenic routes;*
    - *Areas with intact or outstanding rural or townscape qualities;*
    - *Areas with a recognised special character or sense of place;*
    - *Areas lying outside a defined urban edge line;*
    - *Areas of important tourism or recreation value;*
    - *Areas with important vistas or scenic corridors.*
- *The nature of the project:*
    - *A change in land use from the prevailing use;*
    - *A significant change to the fabric and character of the area;*
    - *Possible visual intrusion in the landscape.*

- *The type and scale of the development:*
    - *Category 4 development e.g. medium density residential development, … medium-scale infrastructure.*

The correlation of environment type with development type leads to an expected High Visual Impact i.e.

- *Potential intrusion on protected landscapes or scenic resources;*
- *Noticeable change in visual character of the area;*
- *Establishes a new precedent for development in the area.*

The recommended Level of input required for an expected High Visual Impact is a Level 4 VIA, namely:

- Description of receiving environment and the proposed project;
- Establishment of view catchment area, view corridors, viewpoints and receptors;
- Indication of potential visual impacts using established criteria;
- Inclusion of potential lighting impacts at night;
- Description of alternatives, mitigation measures and monitoring programmes; and
- 3D modeling and simulations, with and without mitigation.

2.3. Assumptions and Limitations

The visual impact report is based on the assumption that the information provided by the Proponent, Project Team and Environmental Consultants is a fair representation of the proposed development and that all relevant information has been disclosed.

The desktop component of the visual study relies on a combination of 1:250 000 and 1:50 000 Topo-cadastral and Geological maps.

An accurate survey of the site has not yet been undertaken. The Engineering consultants have extrapolated survey information, i.e. using existing information e.g. Orthophotos with 5m contour levels, and digitally computing 1m contour levels from there. In other words, a surveyor has not been on site to take levels thereof. The former is less accurate than the latter.

A basic typology of the intended architecture has been provided for this visual assessment and is as yet not fully developed.

3. METHODOLOGY

A number of site visits (March, April and September 2016) and a photographic survey of the site and surrounds have been undertaken.

A desktop mapping study was undertaken to map the visual resources of the site and environs, the viewshed and zone of visual influence and the visual sensitivity of the site. Desktop mapping was verified by on-site fieldwork.

Photographic montages of the proposed development have been prepared through building a Google SketchUp model using the extrapolated contours and dwelling units based on dimensioned typology sketches, both provided by the architect. The development model was viewed from identified viewpoints and these perspectives were superimposed onto the photographs. These montages were used to assist in preparing mitigation measures.

4. THE PROPOSED DEVELOPMENT

4.1. Site Location

The proposed site of development is to the west of the R310 and is on the on the south western edge of Johannesdal, in the Cape Winelands District Municipality of the Western Cape and Stellenbosch Local Municipality.

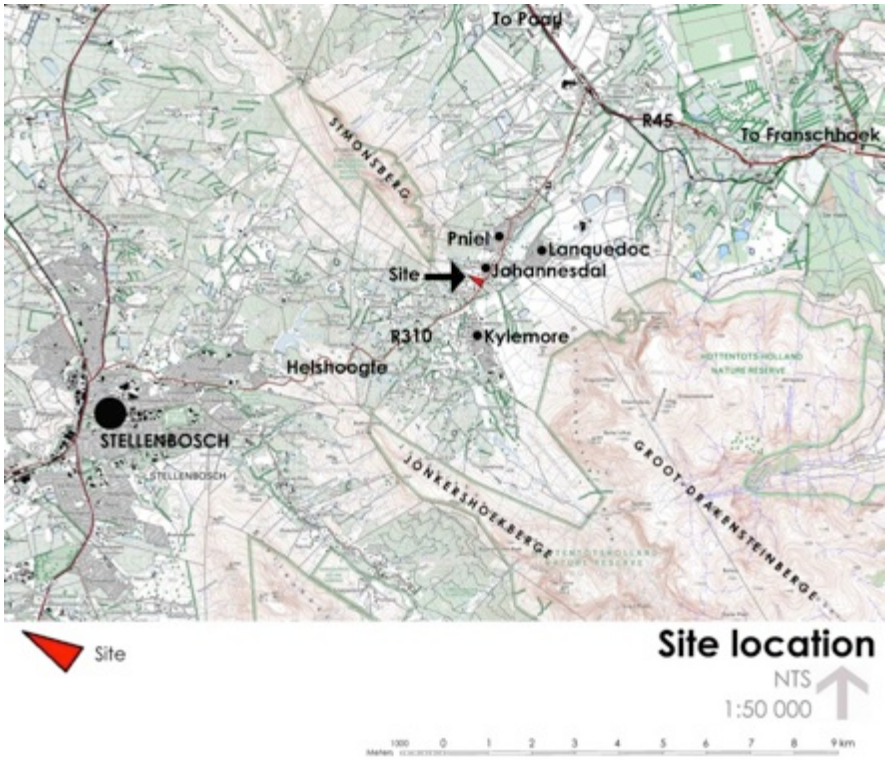


Figure 1: Location of the proposed site of development adjacent to the R310 on the south western edge of Johannesdal.

Figure 2: The site of proposed development in relation to the surrounding area as seen on an aerial photograph (source: Google Earth 2016)

4.2. Development Description

4.2.1. Alternative 1 (Preferred Alternative)

The Preferred Alternative 1 proposes rezoning, subdivision and development of 27 single residential erven, with sizes varying from ±320 m² to ±3 950 m² (figure 3), a Gate House and service road erf and an erf for the partially re-routed R310.

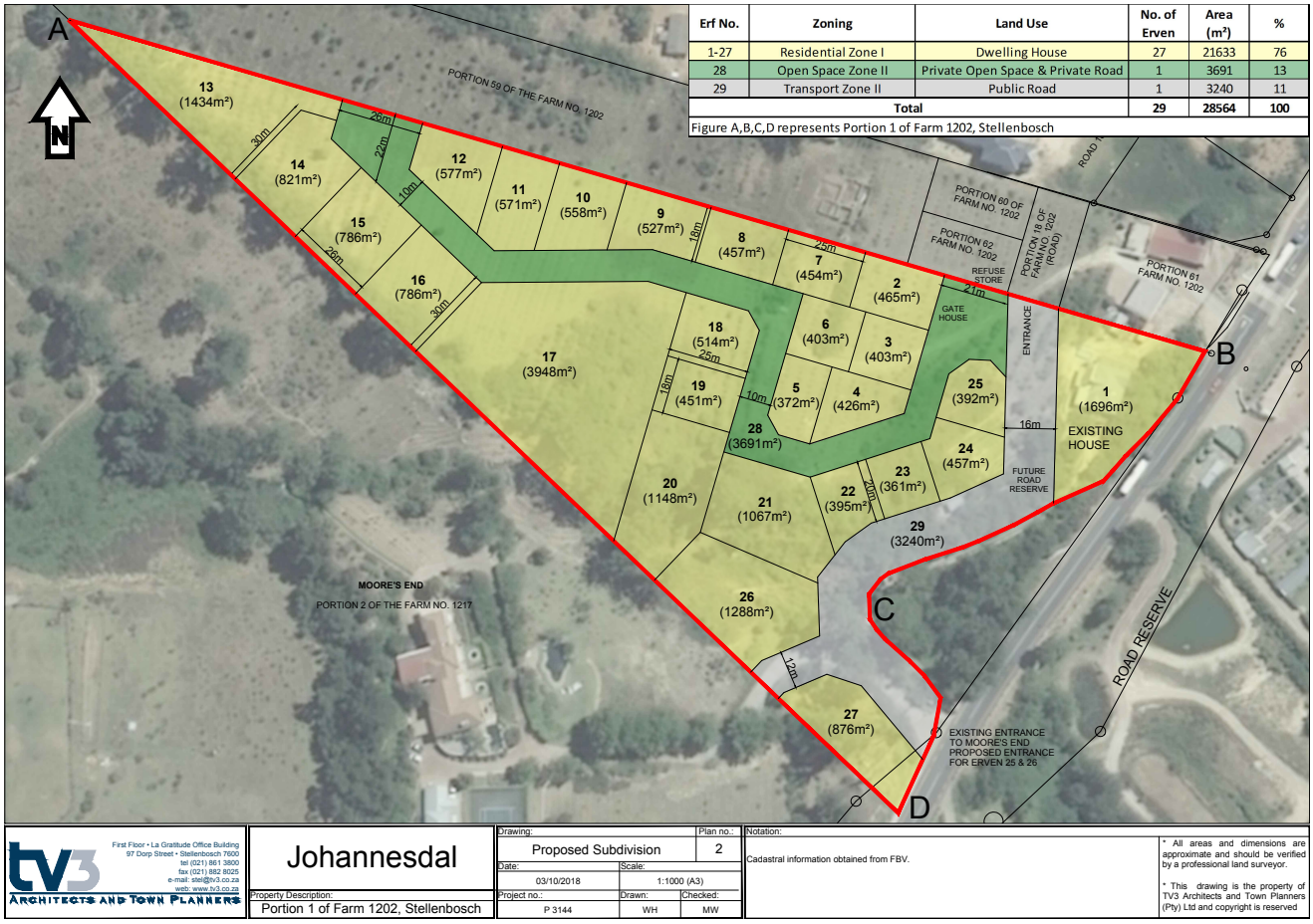


Figure 3: Proposed subdivision into 27 residential erven, one Open Space One II (service road and gate house) and one Transport Zone II Erf (future R310) (source: TV3).

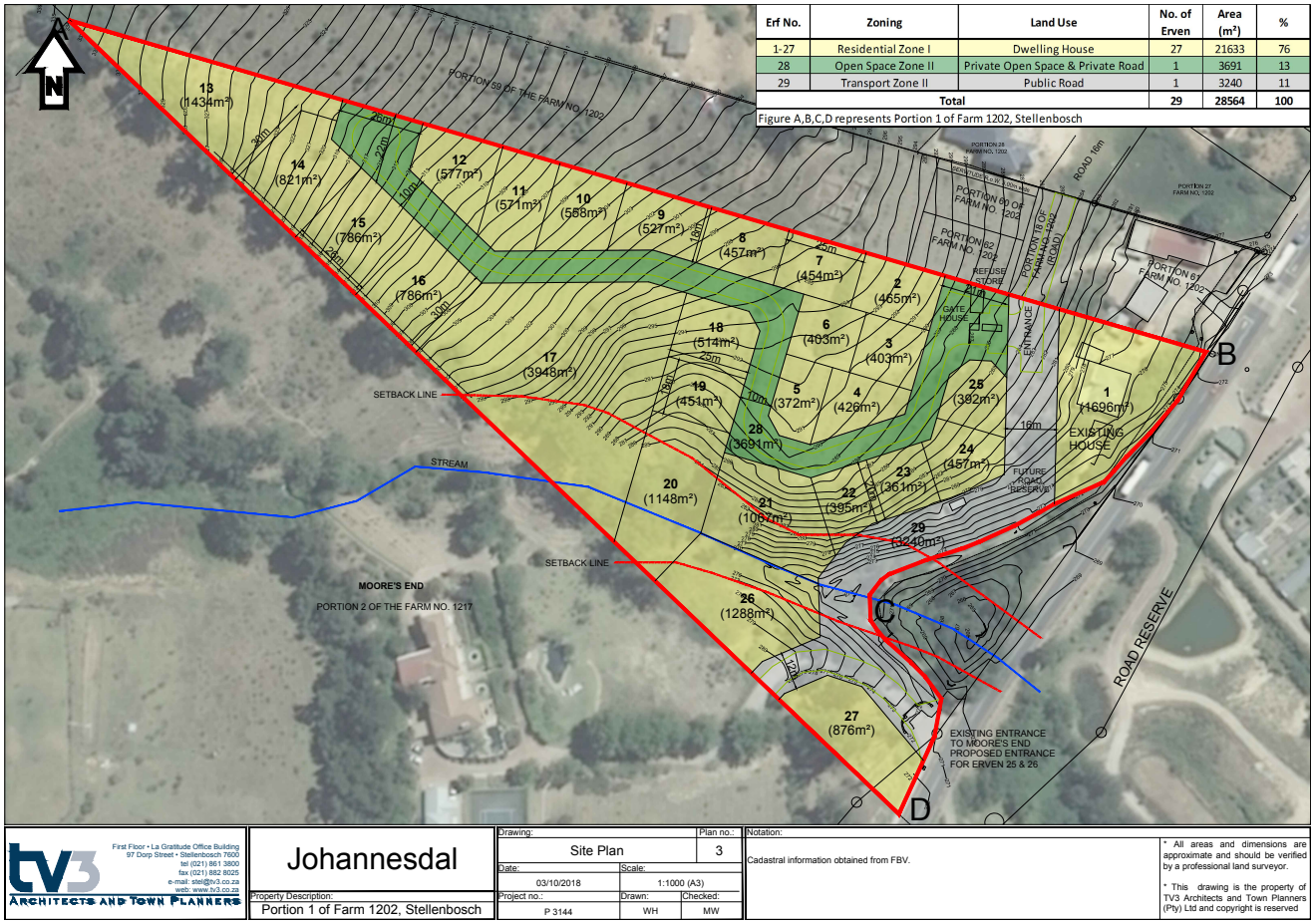


Figure 4: Proposed subdivision into 27 residential erven et al with contours (source: TV3).

4.2.2. Alternative 2 NO-GO OPTION

Currently the property is zoned Agricultural Zone I in terms of the existing Section 8 Scheme Regulations that apply.

Accordingly, the primary use is limited to the main dwelling and structures reasonably related to bona fide agricultural conducted on the property i.e. workers housing, sheds etc. (currently the latter does not apply to the property as it is not utilised for any commercial farming activities)

Any additional dwelling unit would require a consent use application.

Currently there is no limitation on the size of the main dwelling and the size of additional dwelling units are also not prescribed although the Provincial Guideline in the past limited the latter to 120m². That said there are many examples where additional units have been approved with an extent significantly larger than 120m².

4.2.3. Architecture

Architectural design guidelines have been developed with typology sketches. Dwellings will be double storey and land terraced to provide multi level entrances and to reduce the height of the building in the landscape.

The following sketches provide insight into the intent.

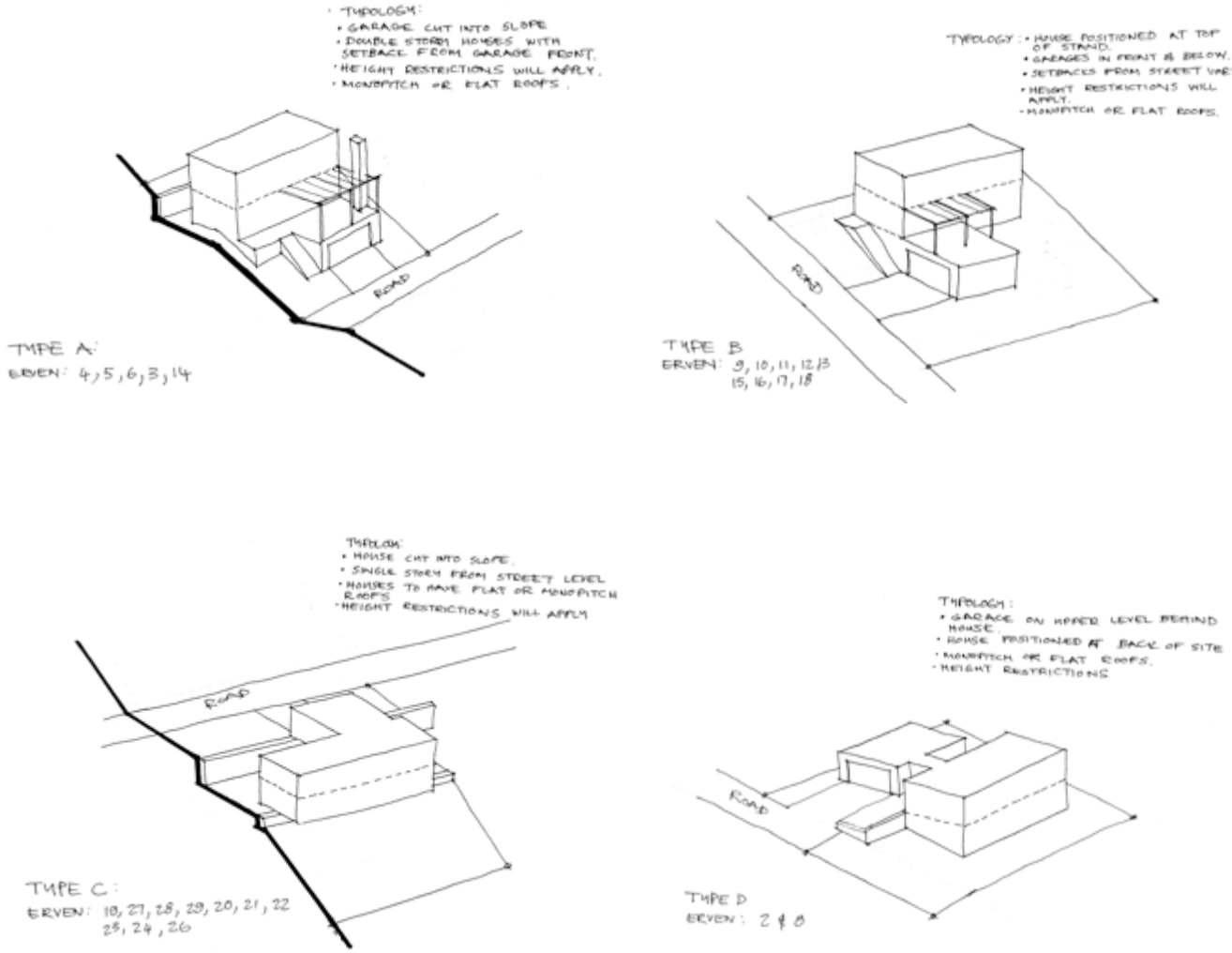


Figure 5: Proposed building typology (source: Green Square).

The Architectural Guidelines are attached as Appendix 11.3.

5. VISUAL ASSESSMENT OF THE SITE AND PROPOSED DEVELOPMENT

5.1. Visual Characteristics of the Site, its Environs and Scenic Resources

5.1.1. The Visual Characteristics of the Environs

The study area and proposed site of development is in the Cape Winelands, an area where historic rural development including vineyards, orchards, farmsteads, tree shelterbelts and rural towns and villages, has added to the spectacular natural mountain and riverine scenic resources. The area is visited by numerous tourists, the wine and fruit industry being particular destinations. The Cape Winelands Cultural Landscape is declared as a Grade I National Heritage Site.

The Cape Winelands area is described by Oberholzer and Winter, in a study prepared for the Western Cape Spatial Development Framework Heritage and Scenic Resources: Inventory and Policy Framework (2013), as follows:

2.5 The Cape Winelands

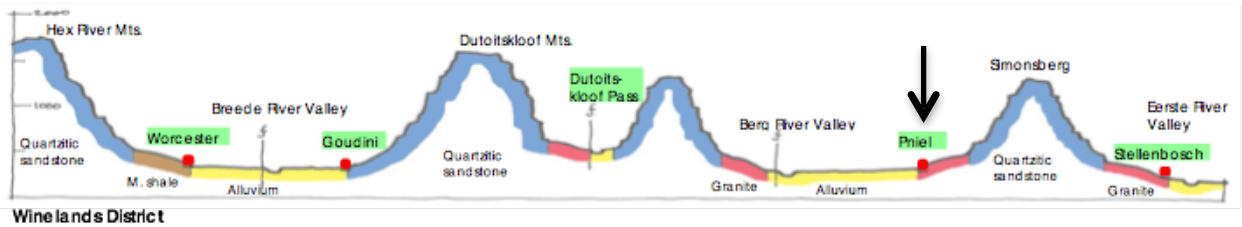
The Cape Winelands is an area of fertile valleys nestled between the Cape Fold Mountains with their rugged sandstone peaks. It is an area high in scenic and heritage significance, its famous vineyards earmarked for declaration as a World Heritage Site.

At the base of the sandstone massifs, the steep scree slopes grade into gently rolling foothills of weathered Cape granites and Malmesbury shales, which have been incised by rivers to form wide alluvial valleys in places, such as those of the Berg and Breede Rivers. Interestingly the pattern of vineyards has a strong correlation with the occurrence of the granites, the unique combination of soil and climate having made this the centre of viticulture and fruit farming.

Towns, villages and farmsteads are strung along the valleys in response to the topography, sources of water and productive agricultural soils, Stellenbosch and Paarl being two of the oldest colonial settlements. Other towns in the District with 'Heritage Areas' include Franschhhoek, Wellington, Montagu, Worcester, McGregor and Tulbagh.

The combination of mountain scenery, rural landscapes, colonial architecture and wine routes make this area a prime tourism destination of critical importance to the economy of the region. The area is however also under great threat of fragmentation through creeping urbanization.

The rugged terrain and tapestry of rural landscapes have given rise a network of scenic routes and mountain passes, many of which began as wagon routes to the interior. Passes such as Bainskloof Pass (a Provincial Heritage Site), Franschhoek Pass, Mitchell's Pass and Cogmanskloof, to name a few, are a legacy from the 1700s and 1800s by road-builders such as Andrew Bain.



Winelands District

The sections illustrate the pronounced topography of the quartzitic sandstones (blue), as well as the location of settlements on the footslopes with access to water and productive soils of the granites, shales and alluvial valleys. River valleys often tend to follow fault lines.

Figure 6 Section through Cape Winelands (Source Oberholzer and Winter). The site is situated the foothills of the Simonsberg near Pneil (arrow)

The study area falls within the Dwarsriver Valley, a smaller valley in the upper section of the Berg River valley. The Dwars River has its origins in the Helshoogte area behind Stellenbosch, more specifically the Simonsberg, Jonkershoekberg and Groot Drakensteinberge. The Dwarsriver supports the adjacent rural area which is predominantly a fruit and wine farming area.

A number of old rural villages are found in the valley, one thereof being Johannesdal in which the proposed site of development is situated. Pneil, a mission village, and Lanquedoc a village built to house farmworkers, are settlements that date back to 1843 and 1902 respectively. While these villages have grown since then, the historic remnants are still visible, providing a layer of cultural history to the area. Kylemore and Johannesdal also date back to the late 1800's when residents of Pneil bought land and plots and started farming.

Johannesdal and the site of development is situated on the east facing, granite foothills of the Simonsberg Mountain. The town overlooks the Dwarsriver towards the Jonkershoek and Groot Drakenstein Mountains.

Figure 7 View east from the foothills of Simonsberg across the Dwarsriver, to the Groot Drakenstein (left) and Jonkershoek (background right) Mountains.

The site falls within the urban edge of the village of Johannesdal, on the southern boundary thereof, bordering the R310, a provincial road as well as a scenic, tourist road.

Figure 8 View south from the R310 scenic route with the existing house on the site visible in the centre of photo (white wall and grey roof, arrow).

To the north and east of the site, the area is partially developed for residential development with plans for further 'infill' development.

Figure 9 View north from the site towards Johannesdal which is mostly unseen. Recent development in Lanquedoc is seen far right (arrow), which is across the Dwarsriver.

Figure 10 View north east from the site towards Johannesdal and Lanquedoc (centre distant mid-background, arrow)

The site borders on rural landscape to the south. The Moores End farm is immediately adjacent to the south of the site.

Figure 11 View south to rural landscape and Moores End homestead.

5.1.2. The Visual Characteristics of the Site

The proposed site of development is a rural plot previously cultivated with fruit trees.
The existing dwelling is on the lower eastern corner of the plot, adjacent to the R310, with the fruit trees on the slopes above.

Figure 12 Views of the dwelling on the lower, eastern corner of the site looking south, east and north respectively.

The site is wedge-shaped and is on south east facing granite slopes, between the 265m and 332m contours in the east and west respectively. The slopes have grades around 1:4 with some being steeper in the south eastern corner adjacent to a non-perennial stream which cuts across that corner of the erf.

There is relatively high (± 3 - 5m), dense vegetation on the lower edge of the site which screens the existing dwelling and site from the R310 road. The vegetation is mixed with indigenous trees along the stream and a mix of indigenous and exotic vegetation around the dwelling.

Figure 13 Mixed vegetation along the eastern edge of the site bordering the R310 road.

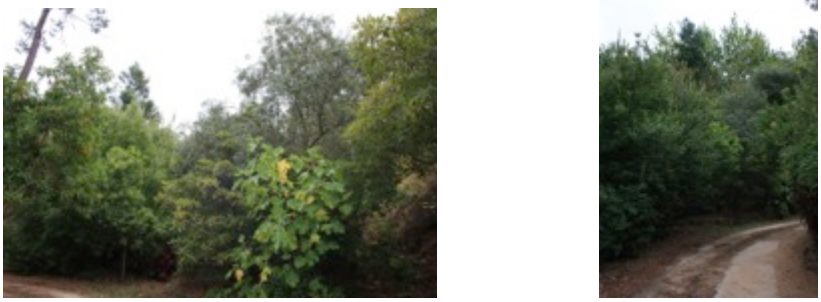


Figure 14 View of mixed but predominantly indigenous vegetation at the stream in the south eastern corner of the site.

A vegetable garden and small cultivated area with fruit trees and vines are on the lower slopes immediately above the existing dwelling.

Figure 15 View of the vegetable garden and recent orchard/vines on the lower slopes just above the existing house.

A gravel track winds up the slope behind the existing dwelling and leaves the site to the north past unused/old implements and a reservoir.

Figure 16 Views of the gravel track and old implements and reservoir.

The old orchard is on manmade terraces for most of the upper area. Invasive grasses now cover the terraces with exotic trees such as Pines and Acacias being found in places on the northern boundary and the upper western edge of the site.

Figure 17 Views north across the old terraced orchard on the supper slopes.

A tall, mixed species tree belt is found along most of the southern boundary of the site.

Figure 18 View south across the orchards to the row of large mixed-species trees on the southern boundary of the site.

From the site, there are good views to the east and south (see Figure 7), across rural lands to the Groot Drakenstein and Jonkershoek Mountains as well as views west and upslope to the Simonsberg.

Figure 19 View west across the site, from lower south eastern portion of the site, to the Simonsberg Mountain.

The **scenic resources** of the site and surrounds can be described as rural and natural and are rated as **MODERATE to HIGH**.

5.2. Visibility of the proposed development

5.2.1. View Catchment

The geographical area from which the project will theoretically be visible, known as the view catchment area, is dictated primarily by topography.

The site is on the south eastern foothills of the Simonsberg Mountains, with the latter mountain forming the western extent of the viewshed, approximately 3km away. The Wemmershoek, Franschoek, Groot Drakenstein and Jonkershoek massive, sandstone mountains, define the viewshed to the north, east and south respectively, approximately 18 – 10 km away.

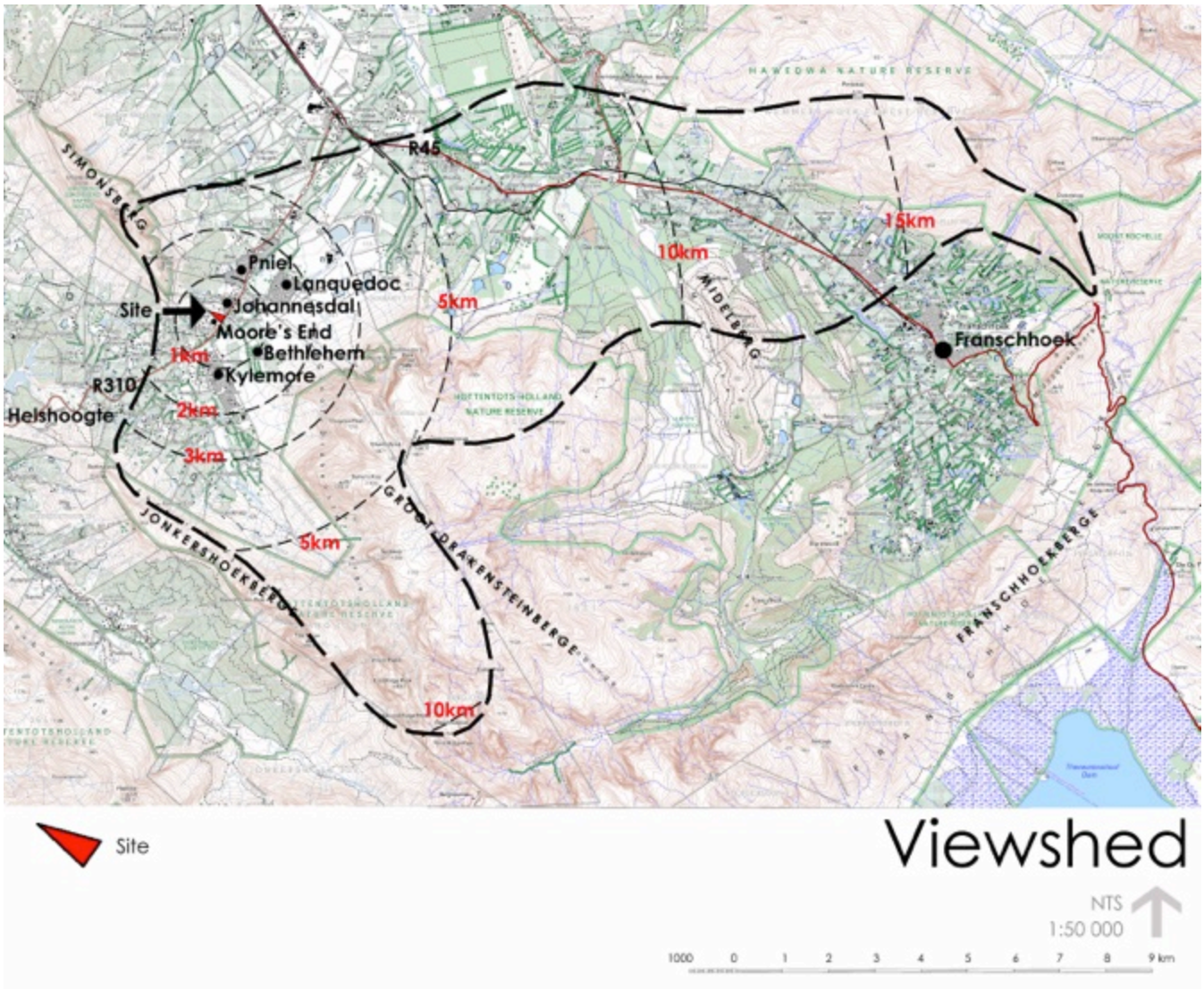


Figure 20: Viewshed of the proposed development.

5.2.2. Zone of Visual Influence

Distance, vegetation, landforms and buildings will reduce the area from which the site will be seen.
Because the site is on the eastern aspect of Simonsberg, the ZVI is predominantly to the east.

A minor ridgeline and residential buildings reduce the ZVI from the north. A large rural windbreak, and other, trees, will screen the site from the south.

To the east, the land rises from the Drakenstein River up the slopes of the Groot-Drakenstein Mountain, with these areas having views of the site, albeit at a distance of approximately 2 – 5.5 km.

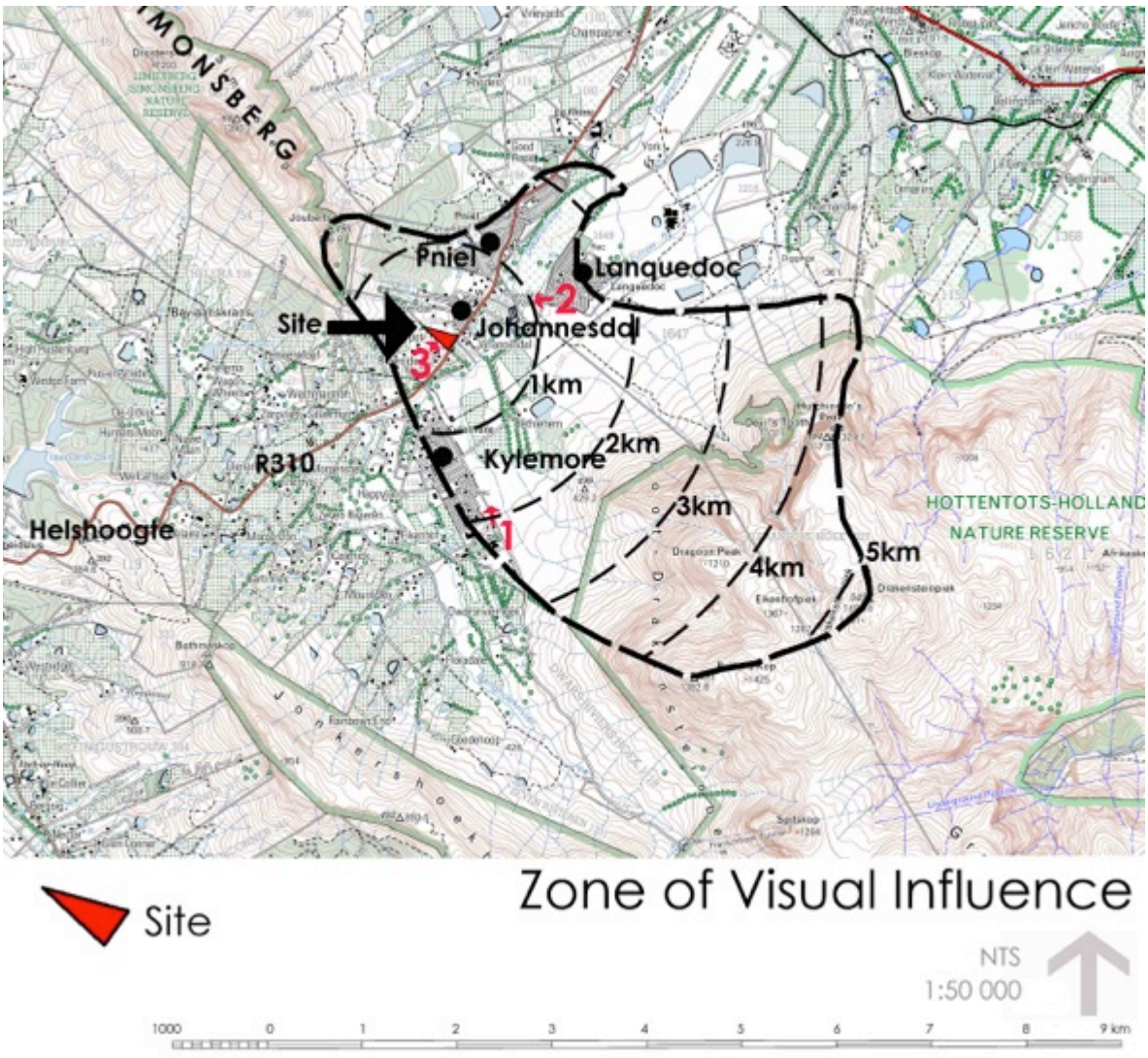


Figure 21: ZVI of the proposed development.

The extent of the ZVI of the proposed development can be described as **LOCAL.**

5.3. Receptors

The level of visual impact considered acceptable is dependent on the type of receptors.

- ***High sensitivity – e.g. residential areas, nature reserves and scenic routes or trails;***
- ***Moderate sensitivity – e.g. sporting or recreational areas, or places of work;***
- ***Low sensitivity – e.g. industrial or degraded areas.***

The following receptors have been identified. (Refer to Figures 20 and 21)

5.3.1. Highly sensitive receptors

Highly sensitive receptors include:

- The Limietberg (Simonsberg) Nature Reserve to the north west approximately 1km away and the Hottentots Holland Nature Reserve to the south east, approximately 5km plus away;
- The immediate Residential areas of Johannesdal to the north, Lanquedoc to the north east, areas of Kylemore to the south.
- Farmsteads of Bethlehem to the south east, and, Moores End to the south west.

5.3.2. Moderate sensitivity receptors

Moderate sensitivity receptors include:

- Areas of work within the settlements of Johannesdal, Pniel, Lanquedoc, areas of Kylemore, Bethlehem and Moores End, including farmed areas.

5.3.3. Low sensitivity receptors

Low sensitivity receptors include:

- The Sewerage Works to the north east of the site approximately 1km away.

The **receptors** within the ZVI are rated as **LOW to HIGHLY sensitive.**

5.4. Visual Sensitivity

The inherent visibility of the sites' landscape is usually determined by a combination of topography, landform, vegetation cover, settlement pattern and special features. This translates into visual sensitivity.

- ***High visual sensitivity – highly visible and potentially sensitive areas in the landscape,***
- ***Moderate visual sensitivity – moderately visible areas in the landscape,***
- ***Low visual sensitivity – minimally visible areas in the landscape***

The location of the site, I.e. in the Cape Winelands Cultural Landscape Grade I National Heritage Site, renders the visual environment sensitive to development, where development is eroding the scenic qualities that make this area so sought after by tourists and developers.

The inherent visual sensitivity of the site itself is determined by a combination of topography, landform, vegetation cover and settlement pattern (landuse).

5.4.1. Topography

The site is located between the 265 m and 332 m contours where the adjacent valley bottom is at 240 m and the Joubertspiek, the highest peak of the Simonsberg adjacent to the site, is at 998 m. The site is on the lower lying portion of the mountain yet slightly raised in relation to the valley bottom, and the resultant visual sensitivity of the site is moderate.

The site is moderately visible in the area as a result of Topography i.e. **moderate visual sensitivity**.

The slope analysis of the site (see Figure 22 below) indicates that the slopes to the north of the site are predominantly **moderately** sensitive with slopes flatter than 1:4 up to 1:10. The slopes to the south and south east of the site are predominantly equal to and less than 1:4, which rates these areas **highly** sensitive as development on these steeper slopes results in cut and fill slopes which are highly visible in the study area.

There are three isolated areas on the site where the slope is flatter than 1:10, these areas have a **low** visual sensitivity.

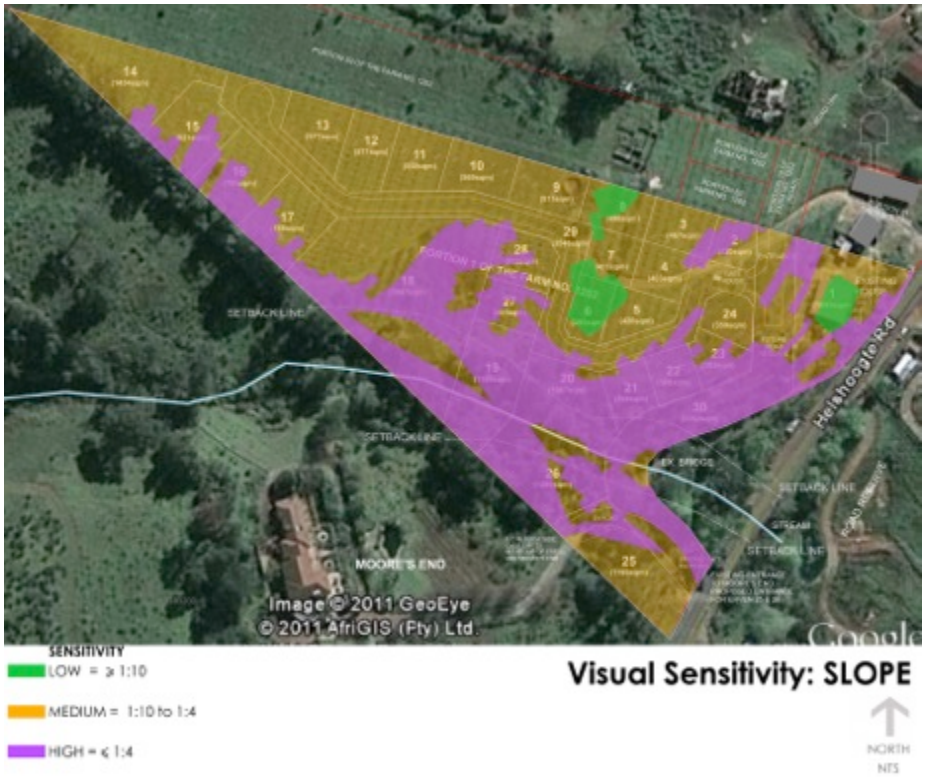


Figure 22: Visual sensitivity as a result of slope gradients.

The site is minimally to highly visible in the area as a result of slope gradients i.e. **LOW to HIGH visual sensitivity**.

5.4.2. Landform

The site is a south-east facing hillslope, with some south facing and some north facing slopes in the south eastern area of the site.

Towards the lower eastern slopes, the slopes become convex in form. The convex slopes are visually prominent and therefore have a high visual sensitivity.

The slopes in the southern and central section of the site (Erf 18, 19, 27, 28) are concave in form. Concave slopes are visually recessive and therefore have a low visual sensitivity.

A non-perennial stream with narrow, but high, valley sides cuts across the south eastern corner of the site. This valley is also visually enclosed so will have a low visual sensitivity.

The landforms on the site are predominantly less to moderately visually sensitive with a limited area being highly visually sensitive.

The site is minimally to highly visible as a result of landforms i.e. **LOW to HIGH visual sensitivity**.

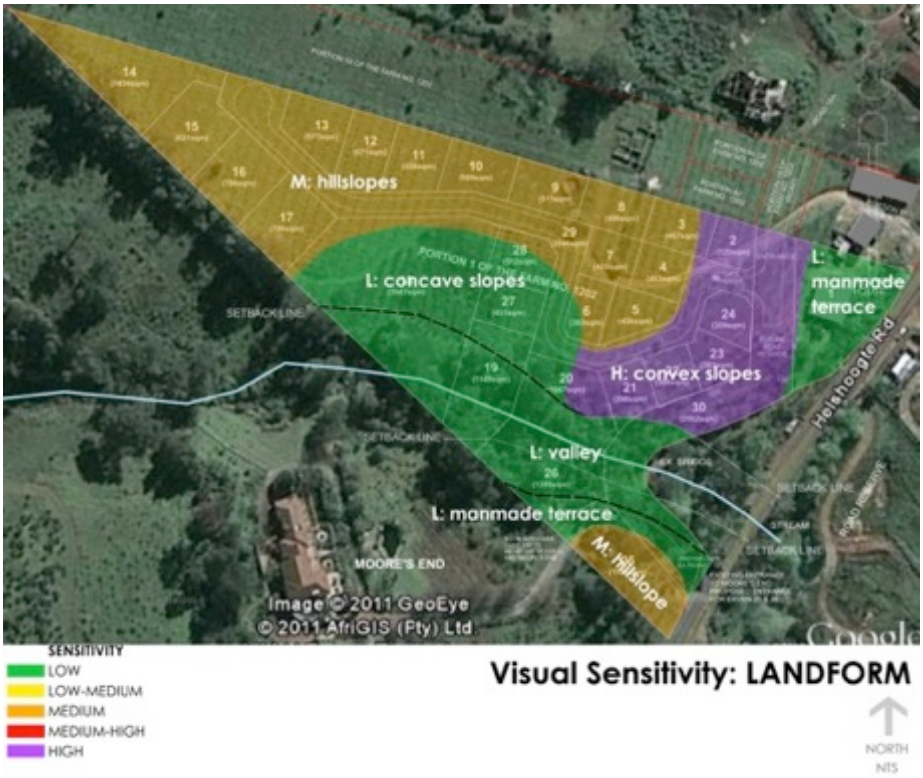


Figure 23: Visual sensitivity of the site as a result of existing Landforms.

5.4.3. Vegetation Cover

For the purpose of assessing visual sensitivity, vegetation is evaluated for its ability to screen development and not for its ecological attributes.

The predominantly low growing vegetation (grass and remnant orchard trees), on the upper slopes, result in the site being visible and highly visually sensitive, as there will be little screening for development provided by this low growth.

The higher growing vegetation (trees and shrubs) on the lower, south eastern portion of the site, result in the site being less visible and less visually sensitive, as there will be some screening of development offered by this vegetation.

The row of large trees along the south western corner of the site provides screening to that portion of the site, closest to these trees.

The site is minimally to highly visible as a result of vegetation cover i.e. **LOW to HIGH visual sensitivity**.

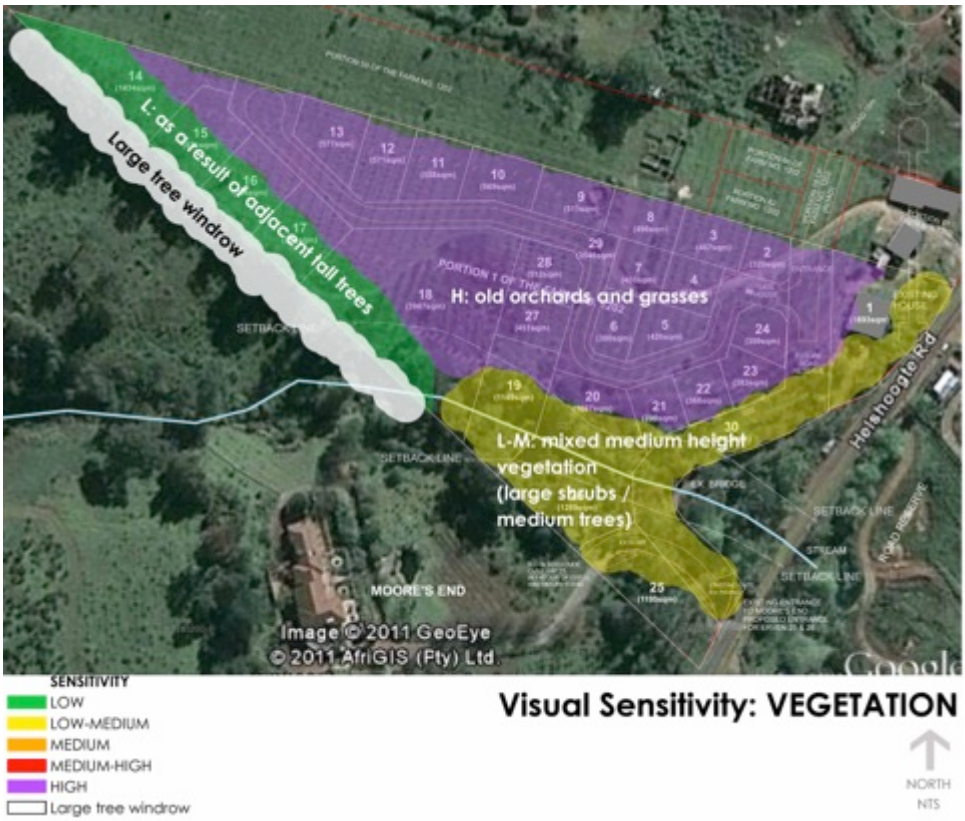


Figure 24: Visual sensitivity of site as a result of Vegetation screening ability.

5.4.4. Landuse

The existing residential development to the north and east of the site provides some form of visual enclosure. Proposed development in the northern portion of the site will be rendered less visible.

Rural areas are located west and south of the site, rendering proposed development in the western, southern and eastern portion of the site, more visible.

The R310 is a scenic tourist route, which makes the adjacent area of the site highly visible and visually sensitive.

Areas adjacent to the site are minimally to highly visible i.e. **LOW** to **HIGH** visual sensitivity.

The site itself is minimally-moderately to moderately-highly visible as a result of adjacent landuse i.e. **LOW-MODERATE to MODERATE-HIGH visual sensitivity**.

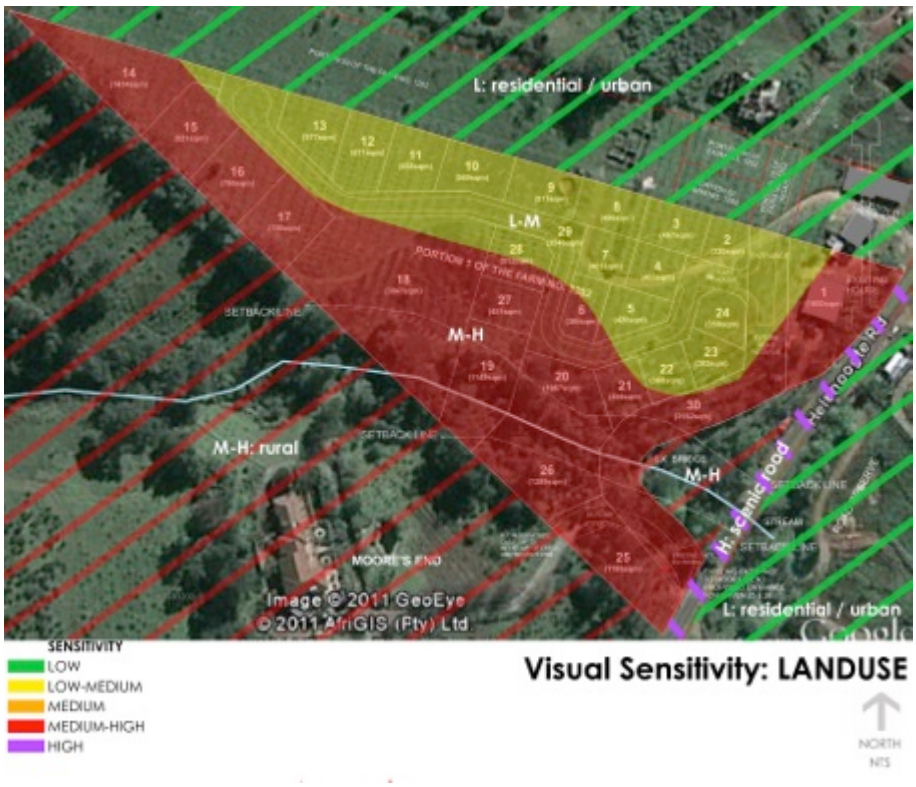


Figure 25: Visual sensitivity of the site as a result of adjacent landuse.

5.4.5. Visual Sensitivity

The above sensitivity maps are overlaid to produce the overall visual sensitivity of the site. As can be seen in Figure 26 below, the visual sensitivity ranks from moderate to high.

The highly and moderately - highly sensitive areas are the areas that have steep (≤1:4) and convex slopes, are visually exposed to the adjacent rural landscape and have special features (stream).
The remainder of the site is moderately sensitive, i.e areas along the northern section of the site adjacent to existing development, on slopes less steep than 1:4 and areas screened by vegetation.
There are no areas that have a low or low-moderate visual sensitivity.
The overall visual sensitivity of the site can be described as moderate to high.

The site is MODERATELY to HIGHLY visually sensitive.

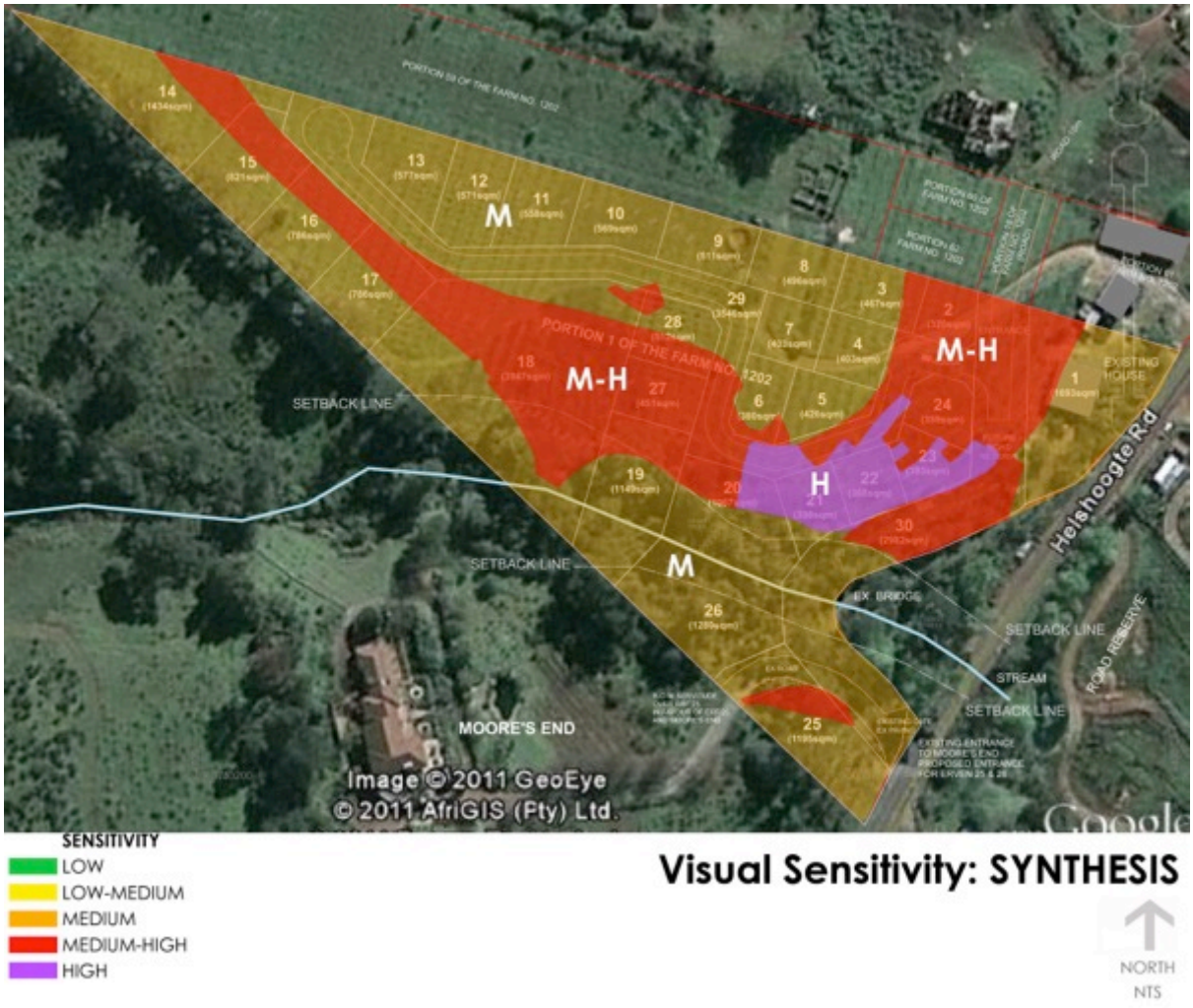


Figure 27: Overall sensitivity of site.

5.5. Visual Absorption Capacity

Visual Absorption Capacity is the potential of the landscape to conceal the proposed project

- ***High VAC* – e.g. effective screening by topography and vegetation;**
- ***Moderate VAC* - e.g. partial screening by topography and vegetation;**
- ***Low VAC* - e.g. little screening by topography or vegetation.**

The proposed site of development is situated between two ridgelines, one major ridgeline to the south and another minor ridgeline to the north. These ridgelines, which form the northern and southern extent of the ZVI, effectively screen the development from the south and north.

To the south there is also good screening provided by large Eucalyptus and Pine trees on the adjacent farms.

On the eastern portion of the site (and to the east of the site), there is vegetation, which will screen the proposed development from areas immediately adjacent to this eastern section, such as the current R310 scenic tourist route. This screening will not be effective across the Drakenstein River from where the site will be visually exposed.

The VAC of the site is MODERATE - e.g. partial screening by topography and vegetation.

5.6. Visual Intrusion

Visual Intrusion is defined as the level of compatibility or congruence of the project with the particular qualities of the area, or its 'sense of place'. This is related to the idea of context and maintaining the integrity of the landscape or townscape.

- ***High visual intrusion* – results in a noticeable change or is discordant with the surroundings;**
- ***Moderate visual intrusion* – partially fits into the surroundings, but clearly noticeable;**
- ***Low visual intrusion* – minimal change or blends in well with the surroundings.**

The proposed residential development is in keeping with the surrounding residential development to the north and east. The proposed development would blend in well in these areas.

To the south, the area becomes rural. Being close to the urban edge, this property is more noticeable and becomes more visible, therefore the proposed development would partially fit into the area. To the west, the area is undeveloped with proposed development here being more noticeable.

The visual intrusion of the proposed development will be MODERATE – partially fitting into the surroundings, but clearly noticeable.

6. POTENTIAL VISUAL IMPACTS OF THE PROPOSED DEVELOPMENT

The potential visual impacts would occur during the construction and operation phase of the development of the preferred alternative 1. The nature of the visual impacts will be the visual effect the activity would have on the receiving environment. These potential visual impacts would be:

Construction phase:

- Visual scarring when vegetation is cleared and 'cut and fill' platforms are prepared for development and building works are highly visible.

Operation Phase:

- Change from a vegetated, rural site to built residential site;
- Visibility from sensitive receptors;
- Visual intrusion of night lighting on the rural landscape.

The impacts are evaluated in terms of criteria, which are explained in Appendix 11.2.

6.1. Construction Phase

6.1.1. Visual scarring as a result of clearing vegetation and construction works

In order to build roads and dwellings the vegetation will be cleared and platforms will be excavated and levelled. This will result in the vegetated site becoming bare earth, which will be a visual scar on the landscape. The development will be a phased development with roads and services being installed and dwellings being built when sold so the visual impact may not be all at once, it may occur over time.

PROJECT ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACT / NATURE OF IMPACT	ENVIRONMENTAL SIGNIFICANCE																		MITIGATION
		BEFORE MITIGATION									AFTER MITIGATION									
		M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	
	Potential impacts on visual aspects of the environment.																			
Project activity:	**Construction phase.**																			
Preferred Alternative	Visual scarring as a result of vegetation clearing and construction works	6	2	2	2	1	5	65	**(M) (-)**	M	2	2	2	0	0	1	6	**L (-)**	M	Limit extent of damage/clearing - use fence to restrict activity Keep cut and fill to a minimum Note: additional mitigation should be implemented during the operational phase: landscape cut/fill slopes/terraces/retaining walls and use natural finishes and/or colours on retaining walls
"No - Go" alternative	Visual scarring as a result of vegetation clearing and construction works	2	2	1	1	1	2	14	**L (-)**	L	1	2	1	0	0	1	4	**L (-)**	N	Limit extent of damage/clearing - use fence to restrict activity Keep cut and fill to a minimum Note: additional mitigation should be implemented during the operational phase: landscape cut/fill slopes/terraces/retaining walls and use natural finishes and/or colours on retaining walls

6.2. Operation Phase

6.2.1. Change from vegetated, rural site to built residential site

The proposed development will result in the vegetated erf with its old and new orchards, grass covered slopes and existing single dwelling becoming a built residential area.

PROJECT ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACT / NATURE OF IMPACT	ENVIRONMENTAL SIGNIFICANCE																		MITIGATION
		BEFORE MITIGATION									AFTER MITIGATION									
		M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	
	Potential impacts on visual aspects of the environment.																			
Project activity:	**Operation Phase**																			
Preferred Alternative	Change from vegetated to built site	4	5	2	3	4	5	90	**MH (-)**	M	2	3	2	0	0	1	7	**L (-)**	L	• Keep buildings low to the site - split level with flat roofs • Landscape gardens and streets with tree rows and hedges to re-vegetate the site. • All plant species should reflect the cultural and indigenous plant species typical of the surrounding landscape; • Boundary treatments (fencing/walls) must be visually permeable for the most part.
"No - Go"	Change from vegetated to possible second building	2	2	1	1	1	2	14	**L (-)**	L	2	2	2	0	0	1	6	**L (-)**	None	• Keep building low to the site - split level with flat roof • Plant tree rows and hedges. • All plant species should reflect the cultural and indigenous plant species typical of the surrounding landscape; • Manage invasive alien vegetation and plant orchards/vineyards/grazing or revegetatet indigenous vegetation

6.2.2. Visibility from sensitive receptors

Neighbouring farms, villages and residences including Moores End farm to the south, parts of Kylemore and Lanquedoc and the immediate residential houses to the north, will see the development.

PROJECT ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACT / NATURE OF IMPACT	ENVIRONMENTAL SIGNIFICANCE																		MITIGATION
		BEFORE MITIGATION									AFTER MITIGATION									
		M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	
	Potential impacts on visual aspects of the environment.																			
Project activity:	**Operation Phase**																			
Preferred Alternative	Visibility from sensitive receptors	4	5	2	2	3	5	80	**MH (-)**	M	2	3	2	0	0	1	7	**L (-)**	None	• Draft and implement architectural guidelines to ensure style and form including natural finishes and/or colours. • Landscape gardens and streets with tree rows and hedges to screen buildings.
"No - Go"	Visibility from sensitive receptors	2	2	2	1	2	2	18	**L (-)**	L	2	2	2	0	0	1	6	**L (-)**	None	• Keep building low to the site - split level with flat roofs • Plant around building and access road with tree rows and hedges. • All plant species should reflect the cultural and indigenous plant species typical of the surrounding landscape; • Boundary treatments (fencing/ walls) must be visually permeable for the most part. • Manage invasive alien vegetation and plant orchards/vineyards/grazing or revegetatete indigenous vegetation

Figure 28: View of the proposed development from Kylemore, approximately 2.2km away (see Figure 21, viewpoint 1), before mitigation (left) and after mitigation (right). Note: mitigation seen here is in the form of grey wall colour and tree planting.

Figure 29: View of the proposed development from Lanquedoc, approximately 1.2km away (see Figure 21, viewpoint 2), before mitigation (above) and after mitigation (below). Note: mitigation seen here is in the form of grey wall colour and tree planting.

Figure 30: View of the proposed development from Moores End main homestead, approximately 200 meters away (see Figure 21, viewpoint 3), before mitigation (above) and after mitigation (below). Note: mitigation seen here is in the form of grey wall colour and tree planting.

6.2.3. Visual Intrusion of lighting at night on the rural landscape

The additional dwellings will have lighting, which will be additional lighting at night, which would be visible from the surrounding rural landscape.

PROJECT ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACT / NATURE OF IMPACT	ENVIRONMENTAL SIGNIFICANCE																		MITIGATION
		BEFORE MITIGATION									AFTER MITIGATION									
		M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	M	D	E	I	R	P	TOTAL (SP)	S	CUMULATIVE	
	Potential impacts on visual aspects of the environment.																			
Project activity:	**Operation Phase**																			
Pre-ferred Alter-native	Visual Intrusion of night lighting on the rural land-scape	4	5	4	2	3	4	76	**M H (-)**	M	2	3	1	0	0	1	6	**L (-)**	None	• Ensure low spill lighting. • Landscape gardens and streets with tree rows and hedges to screen lights. • Minimise street lighting and use low bollard lights
"No - Go"	Visual Intrusion of night lighting on the rural land-scape	2	5	2	1	2	3	36	**L (-)**	L	2	1	1	0	0	1	4	**L (-)**	None	• Ensure low spill lighting. • Landscape gardens and streets with tree rows and hedges to screen lights. • Minimise street lighting and use low bollard lights

7. MITIGATION MEASURES

The visibility and visual impact of the development may be reduced through the implementation of mitigation measures which would reduce negative visual impacts and enhance positive visual impacts.

Mitigation measures that will assist in minimising visual impacts are:

7.1. Pre-construction

- Survey and demarcate no-go areas (e.g. large trees along south western boundary and vegetation along stream and R310) to restrict earthworks and minimize disturbance and visual scarring;
- Site buildings on less visually sensitive slopes;
- Preferably design dwellings to be terraced/split-level rather than double storey buildings, which are more visible;
- Where double storey buildings are desired, look to break up the double storey facade with pergolas and plant trees to screen/soften part of the double storey facade;
- Implement architectural guidelines to ensure architectural style and form including natural finishes and/or colours and compliment the Cape Winelands Cultural Heritage Landscape.

7.2. During Construction

- Limit extent of damage, keeping cut and fill to a minimum. Minimise disturbance through fencing off construction areas, thereby protecting and retaining grass and vegetation in the areas that will not be built on;
- Additional mitigation should be implemented during the operational phase: landscape cut/fill slopes/terraces/retaining walls and use natural finishes and/or colours on retaining walls.

7.3. During Operation

- Plant screening vegetation in typical Winelands patterns - trees rows and hedges in such a way that the buildings/development is screened from sensitive receptors but the views from the buildings are not lost;
- Plant in typical Winelands patterns - trees rows and hedges;
- Tree, shrub and all plant species should, as far as possible, reflect the cultural and indigenous plant species typical of the surrounding landscape;
- Boundary treatments (fencing/walls) must be visually permeable for the most part. This should rather be achieved by a combined fence and hedge as opposed to a solid wall;
- Implement architectural guidelines to ensure recessive architectural style and form including natural finishes and/or colours;
- Street lighting should be minimized. Where possible outdoor lighting should be bollard lighting, which will light up the local streets, paths and parking areas sufficiently but will not be visible from other areas beyond the site. All luminaires must be top covered, low spill type lights to minimize light spill and pollution.

8. DISCUSSION

The proposed development is within the urban edge of Johannesdal and Pneil and is in line with the Local SDF as it has larger erven on the boundary. The SDF requires that developments on the edge of the settlement should be less dense. To this end, the Preferred Alternative 1, by virtue of the fact that it has larger erven on the southern boundary, meets these requirements.

A summary of the potential impacts is provided below:

Potential Visual Impacts	Mitigation	Alternative 1	Alternative 2
Visual scarring as a result of vegetation clearing and construction works	BEFORE	MEDIUM	LOW
	AFTER	LOW	LOW
Change from vegetated to built site	BEFORE	MEDIUM - HIGH	LOW
	AFTER	LOW	LOW
Visibility from sensitive receptors	BEFORE	MEDIUM-HIGH	LOW
	AFTER	LOW	LOW
Visual Intrusion of night lighting on the rural landscape	BEFORE	MEDIUM-HIGH	LOW
	AFTER	LOW	LOW

Overall, for Alternative 1, the Preferred Alternative, before mitigation significance ranges from Medium to Medium - High, and after mitigation significance is Low .

9. CONCLUSIONS

The significance of the potential visual impacts of the proposed preferred Alternative 1 would be low if the mitigation measures were implemented.

10. REFERENCES

Oberholzer, B., 2005. Guidelines for involving visual and aesthetic specialists in EIA processes: Edition 1. CSIR Report No ENV-S-C 2005 053 F. Republic of South Africa, Provincial Department of the Western Cape, Department of Environmental Affairs and Development Planning, Cape Town.

Oberholzer, B. and Winter, S. 2013 (ver 5). Heritage and Scenic Resources, Inventory and Policy Framework for the Western Cape.

Fransen, H. 2006. Old Towns and Villages of the Cape.

Stellenbosch, Spatial Development Framework, 2012.

Western Cape Provincial Spatial Development Framework, Draft for Public Comment. 2013.

11. APPENDICES

11.1. Expertise – list of projects

SELECTED PROJECT LIST SPECIFIC TO VISUAL IMPACT ASSESSMENTS

Visual Impact Assessments undertaken include for a variety of developments including industrial, energy (wind and solar farms), residential and mixed use at different scales and predominantly in the Western Cape with some projects in Mozambique and Uganda.

Capetel, Wemmershoek Mast, Level 2 VIA for Municipal authority.
La Motte Affordable Housing, Franschhoek, VIA for HIA, 2015
Elandskloof Community Re-settlement VIA for HIA, 2015
La Motte, S24 Visual Statement, 2014
Zanddrift Residential Development, South Paarl, VIA, 2014.
Cedar Park Residential Development, Sir Lowry's Pass, 2014
R44 between Somerset West and Stellenbosch, Upgrade of 3 Intersection, 2014
Philippi Urban Edge Amendment, Visual Statement, 2014
Val De Vie, Paarl, Residential Development, 2014
Preekstoel Residential development, Stilbaai, 2014
Zandrif Residential Development, Paarl, 2014
Philippi Urban Edge Amendment, Cape Town, 2014
Louisvale Winery, Stellenbosch, 2014
Elandskloof Historic settlement, Citrusdal, 2014
NBG: Bettys Bay, Worcester, Kirstenbosch and Niewoudtville – New Admin Buildings, 2014
Vredenheim Mixed Use Development, Stellenbosch, 2014
Proposed Boutique Lifestyle Centre, Stellenbosch, 2013
Namaqualand Mall, Springbok, 2013
Stellenbosch Mediclinic Development, Extension to building, 2013
Bosjesmansdam Valley, Worcester, Accommodation, chapel and wine tasting facility, 2013
Natures Path Lifestyle Village, Keurboomstrand, 2013
Brakkekloof and Donkergats Rivier Solar Farms, Atlantis, West Coast (2012)
Erf 2003 Melkbosstrand, Cape Town Mixed use development, 2011
Proposed wind energy farm at Clover Valley Farm, Darling on West Coast Plain (2011)
Jacobsbaai Tortoise Reserve – residential resort development on the west coast of West Cape (2011)
Proposed Development of a Wind Energy Project at Langefontein Farm near Saldanha Bay (2011)

Four proposed windfarms in the Garden Route area (2010 – 2011)
The Hill, Sedgefield – VIA of proposed housing development on dunes north of N2, Sedgefield (2009)
Leukenberg, Gordons Bay - VIA of proposed mixed use development on urban edge (2009)
Seawinds, Saldanha Bay – VIS of proposed new industrial Area at Blouwaterbaai, Saldanha (2008)
Skoongesig, St Helena Bay – VIA of proposed new electricity line and sub-station (2008)
Tullow Oil, Uganda, 2007
The Point, Kalk Bay – Visual sensitivity assessment to inform development (2001)
Erf 24, St Helena Bay – VIA of proposed housing development on hillside above west coast town (2005)

2012 VIAs

Paarl Boys High School, Paarl – sport fields development
Plattebosch, Stilbaai – residential development – VIA review
Rheeboksklof Farm, Paarl – proposed residential development
Groot Parys, Paarl - Residential development

2011 VIAs

Proposed Overberg Windfarm (2010 – 2011)
County fair chicken farm, Fisherhaven – (2011)
Visual statement for Kalbaskraal Solar Project
Somerset College, Somerset West – new sports facilities

2010 VIAs

Ascot Residential Development, Port Elizabeth
Caledon Residential Development
Constantia Nek Residential Development
Erf 29 + 30, Clifton, apartments development
3 Vodacom masts – Hermanus, Villiersdorp and Klipdale
De Hoek, power transmission lines

2009 VIAs

Klipland, Paarl – VIA of proposed housing development on N1 adjacent to Paarl
Salmonsvlei, Paarl – VIA of proposed housing development on N1 adjacent to Paarl
Swartland Mall – VIA of proposed mixed use development on urban edge of country town of Malmesbury

2008 VIAs

Dassenberg, Noordhoek – VIA of proposed housing development on hillside adjacent to Ou Kaapse Weg and TMNP

Dewaldorf, Stellenbosch – VIA of proposed mixed use development along R44 and on urban edge

Gevonden, Stellenbosch - VIA of proposed mixed use development on urban edge

Gordons Bay Mall – VIA of proposed commercial development outside urban edge

Klapmuts, Winelands – VIA of proposed mixed use development on urban edge

Stellenbosch Wine and Country Estate – VIA of proposed upgrading of an agricultural unit to create a Wine Estate development with residential and tourism opportunities

Paarl Waterfront - VIA of proposed mixed use development on Berg River, Paarl

The Estates, Stellenbosch – VIA of proposed wine tasting and restaurant facility on the R44

Voelklip, *Hermanus – VIA of housing development on Main Road, Hermanus*

Voortrekker Camp, Wemmershoek – VIA of proposed conference and camp facility development

Oudemolen Development – VIA of redevelopment for mixed use purposes, Pinelands

McGregor, WC - VIA of proposed housing development

2007 VIAs

Glencairn Erf 1 – residential development

Glencairn Erf 3410 – residential development

Herolds Bay – residential development

Rheebokskloof – resort development

Hawston – Afdaksrivier – residential development

2006 VIAs

Brandwacht farm No. 1049, Stellenbosch – Visual spatial analysis of historic farm 'werf' and proposed development

Proposed Eskom Mast, Perdekop, Farm 215, Baardskeerdersbos – Visual Impact Assessment of proposed Eskom Mast

Flaminkberg Vodacom Tower – VIA of proposed tower adjacent to N7 on mountain top in Knersvlakte

2000 – 2005 VIAs

Berg River Farm 913 - Visual impact assessment of proposed development of farm on Berg River, (2005)

La Cotte – Visual impact assessment of proposed development of historic farm, Franschhoek (2003)

Xai Xai Export Facility (harbour) visual Assessment, Mozambique (2003)
Linden Farm, Hout Bay – VIA of proposed development on historic farm (2003)
Siemens Communication mast – Kirstenbosch (2003)
Somerset West Vodacom Tower – Visual assessment of three options (2001)
Bloubergstrand East-West Arterial Road – VIA of four alternative proposed routes. (1999)
Blaauberg City - roads and housing development, 2000
Sonop Winery, Paardeberg – Visual Review of Development (2000)
'Die Dam' Vodacom tower – visual impact assessment (2000)
Versfeld Park, Piketberg – visual impact assessment of conference facility and housing development (2000)
Worcester Casino – Visual Impact Assessment of Proposed Development (2000)
Hout Bay Main Road – Visual Scoping of proposed alternative routes (2000)
R300 Ring Road – Visual sensitivity of proposed route (2000)
Die Dam - Vodacom mast along Overberg coastline, West Cape (2000)
Paapekuilsfontein – Struisbaai, Visual Impact Assessment of Proposed residential and commercial development in this coastal Village in Western Cape (2000),
Dido Park, Simonstown, Cape Town - VIAs for further development of this coastal area (2000)
Pringle Cove Abalone Farm – Visual Assessment for scoping phase of proposed development (2000)

Pre 2000 VIAs

Cape Metropolitan Area - visual sensitivity/significance mapping, 1999 – 2000, 2002
Coega IDZ, Port Elizabeth - supplementary VIA of Coega harbour, 1998
Soetwater and Millers Point – visual resource mapping for development opportunities, 1999
Blaaumountain - tourist development, 1998 – visual sensitivity mapping of the area to inform development
Capricorn Landmark - proposed landmark, 1998
Kenilworth Race Course housing developments (1998)
Milnerton Golf Hotel - proposed hotel development on Woodbridge Island, 1998
Vredekloof – Vodacom mast VIA of proposed mast (1998)
Farm 234 – Milnerton, VIA of the proposed housing development on Diep River (1997)
Fish Hoek By-Pass – Visual Assessment of proposed road (1990)
Outeniqua Pass Road – visual assessment of proposed upgrade (1990)
Du Toit's Kloof – Visual Assessment of Proposed upgrade (1989)

11.2. Impact Assessment Criteria

CRITERIA FOR ASSESSMENT

The criteria is based on the EIA Regulations, published by the Department of Environmental Affairs and Tourism (April 1998) in terms of the Environmental Conservation Act No. 73 of 1989 and the Department of Environmental Affairs and Development Planning, Guidelines for involving Biodiversity Specialists in EIA Processes, 2005.

These criteria include:

Nature of the impact

This is an appraisal of the type of effect the construction, operation and maintenance of a development would have on the affected environment. This description should include what is to be affected and how.

Extent of the impact

Describe whether the impact will be: local extending only as far as the development site area; or limited to the site and its immediate surroundings; or will have an impact on the region, or will have an impact on a national scale or across international borders.

Duration of the impact

The specialist should indicate whether the lifespan of the impact would be short term (0-5 years), medium term (5-15 years), long term (16-30 years) or permanent.

Intensity

The specialist should establish whether the impact is destructive or benign and should be qualified as low, medium or high. The specialist study must attempt to quantify the magnitude of the impacts and outline the rationale used.

Probability of occurrence

The specialist should describe the probability of the impact actually occurring and should be described as improbable/unlikely (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of any prevention measures).

Reversibility

- Completely reversible – the impact can be reversed with the implementation of minor mitigation measures.
- Partly reversible – the impact is reversible but more intense mitigation measures are required
- Barely reversible – the impact is unlikely to be reversed even with intense mitigation measures
- Irreversible – the impact is irreversible and no mitigation measures exist
- Irreplaceable loss of resources

Describes the degree to which resources will be irreplaceably lost due to the proposed activity. It can be no loss of resources, marginal loss, significant loss or complete loss of resources.

Cumulative effect

An effect, which in itself may not be significant but may become significant if added to other existing or potential impacts that may result from activities associated with the proposed development.

The cumulative effect can be:

· Negligible – the impact would result in negligible to no cumulative effect

· Low – the impact would result in insignificant cumulative effects

· Medium – the impact would result in minor cumulative effects

· High – the impact would result in significant cumulative effects

Significance

Significance of impacts are determined through a synthesis of the assessment criteria and is described as –

· Low negative– where it would have negligible effects and would require little or no mitigation

· Low positive – the impact will have minor positive effects

· Medium negative – the impact will have moderate negative effects and will require moderate mitigation

· Medium positive – the impact will have moderate positive effects

· High negative – the impact will have significant effects and will require significant mitigation measures to achieve an accepted level of impact

· High positive – the impact will have significant positive effects

· Very high negative – the impact will have highly significant effects and are unlikely to be able to be mitigated adequately

· High positive – the impact will have highly significant positive effects

JOHANNESDAL VILLAGE - ARCHITECTURAL GUIDELINES:

2019-01-14

1. CONCEPT AND CONTEXT:

- DESIGN APPROACH

  The natural environment and the integration of buildings therein were major considerations in the planning of the estate. The objective was to create a built environment which meets the natural environment seamlessly, in its colour, texture and materiality.

2. SITE:

- TOPOGRAPHY

  The site is situated on the eastern slopes of the Simonsberg, with a gradual fall from the west to the east. The fall gets steeper towards the south eastern boundary.

  A small non-perennial stream cuts through the southern portion.

- ORIENTATION

  Each erf will present its own unique site opportunities due to its location within the estate. Although the ideal orientation, fractionally east of north, can be achieved, the views from each site will probably be the main consideration. Passive sun control devices such as deep eaves projections, deep door and window reveals and pergolas with timber slats or deciduous climbing vegetation are encouraged.

- VIEWS

  The topography and layout of the estate are such that most erven will have views, either across the Dwars River valley, or of the Simonsberg.

  The massing and scale of the buildings are to be such as to create view corridors.

- ZONING

  Erven 1-27 are zoned Single Residential.
  Erven 28-29 are zoned for Roads.

- COVERAGE

  Maximum coverage on all erven will be 50% of the erven area, inclusive of all covered areas i.e. Garaging, covered entrances, terraces and balconies.

- FLOOR AREA RATIO

  The FAR for all Single Residential erven will be 0.7.

- SECOND DWELLINGS

  No second dwellings except for Erven 1 and 17 will be allowed.

- BUILDING HEIGHTS

  All buildings are limited to two storeys of living space. The vertical dimension of a storey is limited to a maximum of 3200mm.

- BUILDING LINES

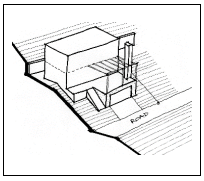
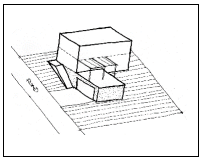
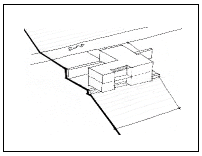
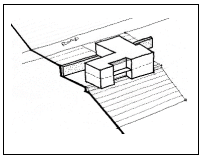
  STREET: 3m for buildings.
  5m for garages, 3m when not street facing.

  COMMON: 1.5m for all structures.

3. ARCHITECTURAL ELEMENTS:

- BUILDING FORMS

Buildings should consist of simple, rectilinear forms with simple, low mono or double pitched, or flat concrete roofs. Flat concrete roofs should be landscaped, except where connecting secondary elements such as walkways, terraces and entrances. The emphasis in the architecture should be on horizontality, acknowledging the landscape.

TYPE	BUILDING TYPOLOGY	
Type A:	• Garage cut into slope. • Double storey houses with setback from garage front. • Façade to be broken with pergola, sunscreens, chimneys and other architectural elements.	
Type B:	• Building to be positioned at top of site. • Garage in front and below. • Façade to be broken with pergola, sunscreens, chimneys and other architectural elements.	
Type C:	• Building cut into slope. • Single storey from street level. • Buildings to have flat or mono-pitch roofs. • Façade to be broken with pergola, sunscreens, chimneys and other architectural elements.	
Type D:	• Garage on higher part of property with double storey house on lower level. • Building positioned at top end of site.	

- BUILDING MATERIALS

Natural materials and earth colours are the predominant palette for the estate. Other materials like off-shutter concrete and accent panels in stone, face brick, etc. are encouraged. No artificial stone will be permitted.

Permissible construction materials and finishes:

Walls:	Natural dry-packed stone. Off-shutter concrete. Textured or smoot plaster and paint. Specialised wall coatings. Bag wash and paint. Plaster and cementitious paint. Face brick (no more than 25% of external wall surface). Painted galvanized steel profiled sheeting.
Roofs:	Painted galvanized steel profiled sheeting. Concrete flat roof. Timber or steel for pergolas.
Openings:	Doors and windows to be powder coated or anodized aluminum or from natural hardwood.

- BUILDING LEVELS

In keeping with the sensitive, integrated approach to the relationship between the architecture and the natural environment, the intention is that all design responds to the specific contours of the site, and for the houses to step down with the fall of the land to maintain the lowest visual impact possible. Retaining walls necessitated by excavations into the sites to be of off-shutter concrete, or cladded with natural stone, finished in an earthy colour and planted with evergreen climbing vegetation. No excessive fill will be allowed.

- ROOFS

Predominant plan forms to have simple low-pitched mono or double pitched metal roofs, 20 degrees or less. Flat roof to be of concrete with landscaping on top. Simple roof junctions are encouraged. Secondary roofs (verandah's, lean-to's, connecting elements) are encouraged where appropriate to break down vertical scale.

- OPENINGS

  The articulation of openings creates a contextual and climatic appropriate architecture. Openings should be carefully considered in terms of their ability to connect the architecture with the natural environment and articulate light into the building.

  Given the South African climatic conditions, deep recessed reveals are encouraged to provide as much shading to the glazing as possible and articulate the elevations of buildings in terms of light and shadow. Subtle projections, deep overhangs, covered patios, verandah's or pergolas should be used to moderate scale, create depth in elevations and protect glazed areas from the sun.

  Garage doors may be of single or double door configuration. Only horizontal slatted hardwood doors will be permitted.

4. SECONDARY ARCHITECTURAL ELEMENTS:

- OPENING TREATMENT

  The use of timber or aluminum shutters is recommended as a mechanism to screen the sun and create outdoor spaces. Shutters also provide privacy while at the same time allowing some light and ventilation.

  Shutters must be of the same material and finished to match the door and window frames. Shutters should generally be external sliding, or cavity sliding into a masonry wall. All shutters are to be louvred, fake shutters will not be permitted.

- PERGOLA'S AND VERANDAH'S

  The use of these elements is encouraged, as they break down the scale of the building.

  Timber and/or painted steel pergolas are allowed.

- PARAPETS

  All concrete flat roofs to have concrete/masonry parapets finished with a prefabricated concrete coping.

- EAVES

  Deep eaves are encouraged in order to screen glazing, create depth and shadow to articulate elevations.

- ROOF LIGHTS

  Roof lights to be in clear glazing and in the same plane as the roof. Tinted or reflective roof lights are prohibited.

- SOLAR PANELS

  Solar panels are encouraged. The solar panel installation to form an integral part of the design of the building.

- SOIL AND WASTE PIPES

  All soil and waste pipes to be concealed in ducts, their location integrated into the design of the house. No fibre cement boards may be used to conceal pipes.

- RAINWATER GUTTERS AND DOWNPIPES

  Rainwater harvesting is encouraged. Gutters and downpipes should be unobtrusive and integrated into the design of the house.

- BOUNDARY, SCREEN AND RETAINING WALL TREATMENT

BOUNDARY WALL STREET:	1200mm High.
BOUNDARY WALL COMMON:	1200mm High for the first 3000mm from street boundary, thereafter 1800mm high.

  Masonry walls to be capped by a precast concrete coping.

  Softer, semi-permeable screening treatment such as a simple painted galvanized steel palisade, hardwood slatting or laths are encouraged.

  No 'Vibracrete'or any other precast type walls will be permitted. No picket fencing, spikes on top of walls, artificial stone or sculptures of any description will be allowed.

- TIMBER DECKS

  The use of timber decks is encouraged as they appear to sit lighter in the landscape, providing a much softer transition between the built and natural environments.

5. SITE CONSIDERATIONS:

- LAUNDRY, REFUSE AND GAS ENCLOSURES

  All areas for laundry, refuse and gas storage must be completely concealed from view, enclosed by solid screen walls constructed in a material, colour and design appropriate to the design of the home.

- DRIVEWAYS AND PAVING

  All driveways and paving to be designed, surfaced and finished to fit in with the estate colour and finishing palette of earthy materials.

- SWIMMING POOLS

  All swimming pools to have a setback of 2000mm from any boundary. Each individual resident is responsible for the necessary safety precautions to be taken around swimming pools and any other water features.

- STORMWATER

  Each property owner to take responsibility for all stormwater entering or originating in his property.

- TELEVISION AERIALS AND SATELLITE DISHES

  No external antennae's or satellite dishes of any nature will be permitted. All signal distribution will be catered for over a fibre network.

- AIR-CONDITIONING UNITS

  All air-conditioning units must be concealed from view from the street, green open spaces and adjoining properties.

- BOATS, TRAILERS AND CARAVANS

  None of the above may be kept on any public spaces or public roads. Stored on private property these items must be concealed from the road, open spaces and adjacent properties.

- SIGNAGE AND LIGHTING

  The position and design of all external light fittings to be considered in terms of effectiveness. No coloured lights will be permitted. Light fittings used must be of the cut-off type which push light down and avoid glare.

  House number signage to be uniform.

  No post boxes will be allowed, boxes will be provided at gate house.

- SECURITY

  The principle behind security in this estate is that it is managed at the estate perimeter to give residents complete peace of mind without having to secure their stand boundary or home with unsightly security devices.

  Burglar proofing should be one of the initial design considerations in the design of the home and consideration is given to the design, colour and position thereof.

  All burglar proofing to be internal and as visually unobtrusive as possible.

- TEMPORARY STRUCTURES

  No temporary structures including Zozo huts, Wendy houses, garden sheds, vegetable enclosures or similar structures will be permitted.