



LOUW'S BOS MEMORIAL PARK

VISUAL IMPACT ASSESSMENT

NOVEMBER 2018  PHOTOGRAPH 1 VIEW OF THE SITES FROM ANNANDALE ROAD, NORTH SITE (TOP RIGHT), SOUTH SITE (BELOW)

researched and produced by

New World Associates © for CK Rumboll & Vennote



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New World Associates, Landscape Architects—

Email: newworld@telkomsa.net

Visit: new-world-associates.com

**Landscape Architecture | Landscape Management
Landscape Planning | Heritage Planning | Visual Planning**

This report should be printed double-sided if at all.

∞ Reflection

∞ “The term ‘**visual and aesthetic**’ is intended to cover the broad range of visual, scenic, cultural, and spiritual aspects of the landscape. However, for the purpose of brevity, the term ‘**visual**’ is used in the text’ (p 1). **Thus it includes aspects of “the area’s sense of place, ... natural and cultural landscapes, ... the identification of all scenic resources, protected areas and sites of special interest, together with their relative importance in the region, ... the need to include both *quantitative* criteria, such as ‘visibility’, and *qualitative* criteria, such as landscape or townscape ‘character’ (pp 1-2).”**

This report (p 21) from the *PGWC Guideline for Involving Visual and Aesthetic Specialists in EIA Processes (November 2005)*

∞ “**Visual impact. The value of the environment is often under-estimated from a visual perspective.** It is the visual quality of the environment that, to a large degree, generates the attraction for the tourism industry and draws people to certain areas as desired locations for living a lifestyle outside of the large cities and densely developed urban areas. **The visual resources of rural areas, such as scenic landscapes and the cultural streetscapes and farmsteads,** and environments such as the Garden Route [Swartland], constitute major tourist attractions. ...

Each area has its own unique visual character and atmosphere, which plays an important role in the quality of any tourist experience. The diversity of the landscapes makes it essential to consider all development **and more particularly the expansion of urban areas, an issue that requires special consideration.** The intention is to manage urban development in such a way that no development would detract from the visual quality of the environment **and that all development conform to a characteristic style and urban form that suits the character of the area.”**

This report (p 23) from the *PGWC Urban Edge Guideline (December 2005)*

∞ Beauty is in the eye of the beholder.

What the eye doesn't see, the heart doesn't grieve over.

English Proverbs

∞ Do not seek revenge or bear a grudge against one of your people,
but love your neighbour as yourself. I am the LORD.

Mosaic Law, Leviticus 19.18, The Holy Bible (NIV)

NWA

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1 Executive Summary

1.1 Recommendation

The proposed Louw's Bos Memorial Park is a new regional cemetery with an initial concept showing a formal layout. The site and area is an open hillside on the south side of the Bonte River Valley along Annandale Road. Two sites are under consideration, North and South, with the South site being the preferred option. Visibility is moderate to high with the North site being set back 1km from Annandale Road, while the South site is immediately adjacent it, making the South site more visible. The visual and aesthetic sensitivity of the area is moderate and the anticipated impact on scenic resources is moderate. Recommendations are made to minimise visual and aesthetic impacts.

1.2 Project Description (see page 14)

1. The proposed Memorial Park at R502 *Louw's Bos* is one of two regional cemeteries being planned for the Stellenbosch Municipality.
2. The Memorial Park concept plan prepared by OvP Landscape Architects (October 2018) is a first draft only.
3. It shows a formal layout on a larger portion of the site than is now under consideration, so will have to be reworked.
4. Two sites have been considered with the South site being the preferred option.

1.3 Legal and Administrative Requirements (see page 18)

1. There is a long history of environmental protection and management in South Africa rooted in EIA and, later, IEM, which has given rise to the current requirement for VIA. The latest document (November 2005) prepared by the Provincial Government of the Western Cape defines the scope and preparation of VIAs and has now been approved and adopted.

2. Provision in the various Acts is made for special areas and landscapes that have an important effect on the ranking of visual impact in these areas.
3. The SHS&MP (2018)¹ provides graded heritage and landscape character information for the Stellenbosch Municipality. VIA is integral to assessing heritage impact in scenic heritage areas like the winelands.

1.4 Visual Environment Description (see page 36)

1. The sites lie adjacent to Annandale Road, a stretch near the South site being a Grade IIIa scenic route. The route is of mixed scenic value being more rural in its central length, but hard to appreciate at this time due to the road works.
2. The landscape is extensive comprising rolling hills around the Bonte River Valley surrounded by pastures, a variety of new and old homesteads, dams, vineyards and some businesses.
3. The North site is further away from Annandale Road and less prominent than the South site, which is split between old vineyards in the east and pastures in the west. The historic farm *Soverby* and neighbouring *Linquenda* are embedded between the two sites.

1.5 Visual Impact Assessment (see page 54)

1. VISUAL IMPACT: The proposed development will have a high impact on the landscape (both sites) causing noticeable (South site) to some (North site) change to the visual environment.
2. VISIBILITY: The development has moderate (North site) to high (South site) visual exposure, moderate (both sites) visual absorption capacity, medium (both sites) compatibility, and is moderately (North site) to highly visible (South site) along Annandale Road.
3. NATURE OF IMPACT: The development's visual impact has district extent, long term duration, medium intensity, definite probability, and medium significance on the landscape for both sites.
4. COMPARATIVE ASSESSMENT: The South site has a moderate to high impact while the North site has a more-moderate to high impact, particularly a more-moderate-visibility due to not being sited on Annandale Road.

¹ Cape Winelands Professional Practices in Association (2018). *Stellenbosch Heritage Survey & Management Plan*. Stellenbosch Municipality.

1.6 Visual Management and Monitoring Plan (see page 70)

1. Sound Visual Management is the ultimate aim of the VIA process. The Mitigation Recommendations developed in the report need to be implemented.
2. This process of implementation will occur throughout the lifetime of the project, hence, the need for a Monitoring Plan. Institutions, individuals and organisations referred in the Monitoring Plan must develop a means of achieving the monitoring otherwise this report serves no purpose.
3. Once the VIA Report has been approved, the Developers must seek the implementation of the recommendations as soon as possible.

NWA

2 Project Description

2.1 Summary

The proposed Memorial Park at R502 *Louw's Bos* is one of two regional cemeteries being planned for the Stellenbosch Municipality. The Memorial Park concept plan prepared by OvP Landscape Architects (October 2018) is a first draft only. It shows a formal layout on a larger portion of the site than is now under consideration, so will have to be reworked. Two sites have been considered with the South site being the preferred option.

2.2 Introduction

Combined with Section 3, this chapter presents the relevant project data required to develop a Visual Impact Assessment (VIA) of the development for Environmental Impact Assessment (EIA) purposes, in particular, Heritage Impact Assessment (HIA). This chapter reviews the relevant basic aspects of the proposed development and includes plans and diagrams as appropriate to this end.

2.2.1 Background

New World Associates was commissioned by the Town and Regional Planners CK Rumboll & Vennote to prepare the VIA for this project. EnviroAfrica is undertaking the environmental application. Developments of this scale and nature in scenic and historic environments, within or without the Urban Edge, require Visual Assessments in accordance with the PGWC Guideline for Specialist Visual Studies (pp 11-12).

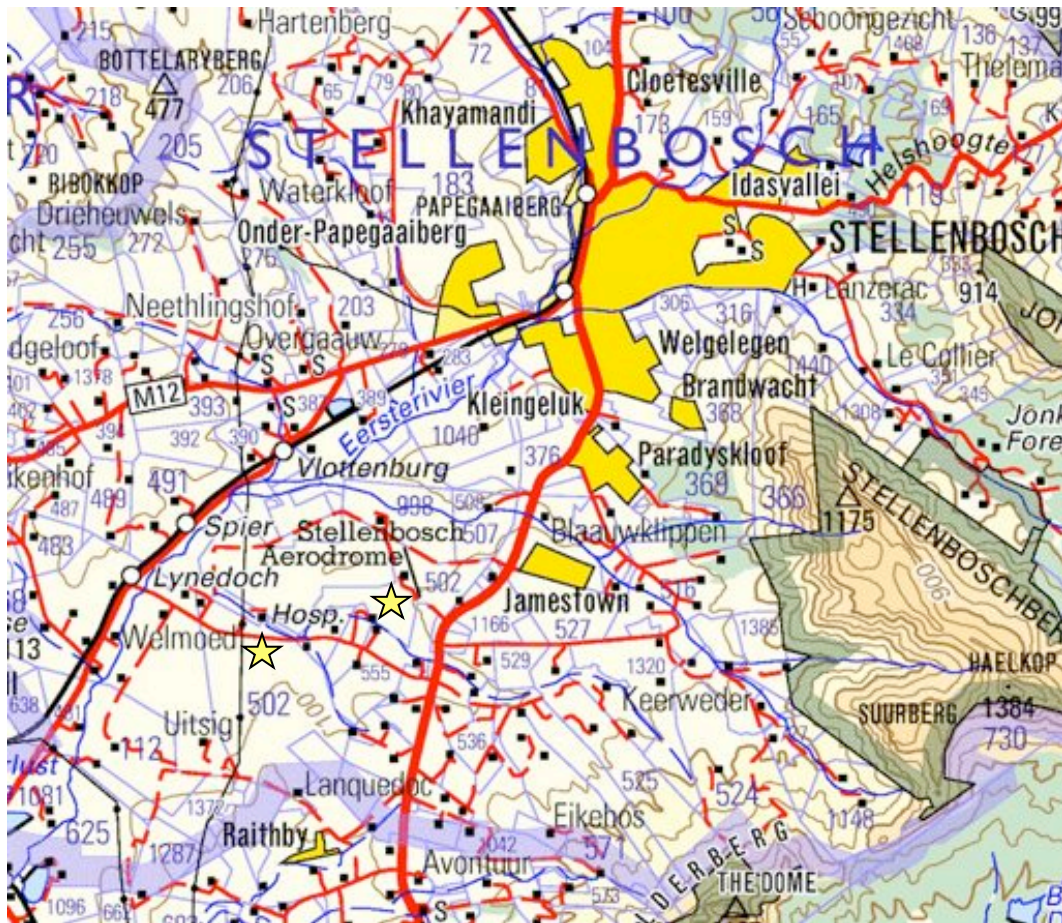
2.2.2 Accreditation

Bruce Eitzen ML BSc PrLArch MEMBER ILASA APHP conducted this assessment. He is a registered Landscape Architect and Environmental Planner with the South African Council of Landscape Architecture Professionals (SACLAP), and Specialist Practitioner in Visual and Landscape Heritage. He has thirty years experience across the board of Landscape Architecture and Environmental Planning and has practised in South Africa, Central Africa and East Africa. He holds a BSc (Botany) from the University of Cape Town and a Masters in Landscape Architecture from

the University of Pretoria. His public service includes serving for three years on the Association of Heritage Practitioners Executive Committee chairing Professional Practice. He also served on the National Executive Committee of the Institute for Landscape Architects in South Africa and was the Chair of ILASA Cape for four years.

2.2.3 Statement of Independence

New World Associates is an independent consulting firm practising in the abovementioned fields. None of its members have any financial interest in the proposed development nor are involved in any other projects being undertaken by the developer.



Source: Reproduced courtesy of the Chief Directorate: Surveys and Mapping, State Copyright 2000.

Figure 2-1: Regional Context.

Portion of a 1:250,000 map of South Africa showing the site locations (3318 Cape Town, 9th Edition 2000). NTS.

2.2.4 Reporting Requirements

This report is generally based on South African environmental management procedures and, more specifically, on the latest provincial guideline was endorsed by the Provincial Government of the Western Cape (PGWC) on 3 November 2005: *Guideline for Involving Visual and Aesthetic Specialists in EIA Processes* (November 2005, PGWC).

2.3 Project Proposal

2.3.5 Location

The site is situated on either side of Annandale Road, SW of Stellenbosch (see Figure 2-1 above).

2.3.6 Town Planning Application

The applicant wishes to develop regional cemetery on the site as indicated in the concept plan. It is one of three such new cemeteries proposed by the Stellenbosch Municipality.

2.3.7 Site Development Plan

An initial First Draft has been prepared by OvP Landscape Architects (see Figure 2-2). However, as the site area has been substantially reduced, it will have to be reworked. Overall, the concept shows a formal layout using much more of the site than is now available.



Source: OvP Landscape Architects.

Figure 2-2: OvP Draft Concept Plan One (1 October 2018).

This first draft is an initial concept only and was not intended for public consumption. No heritage informants were available at the time but the site was walked.² The area of the South site has subsequently been reduced substantially so this concept plan will have to be reworked.

2.3.8 Landscape and Environment

The landscape is detailed in the above plan. Its formal arrangement is a major new type of development in this area of open farm fields and old pastures but further comment is premature

² Johan van Papendorp (OvP), personal communication (7 November 2018).

as the plan is defunct. The very open and undeveloped nature of the site makes its integration into the landscape all the more challenging.

2.4 Alternatives

At Louw's Bos, there are two possible sites under consideration, known as the North and South sites. The North site was the initial location under consideration but the option of the South site arose. Therefore, there information about both sites was provided in the previous chapter and a comparative analysis will be performed.



Source: CK Rumboll & Vennote.

Figure 2-3: Map showing the two sites under consideration (2018).

The purple figures on the attached map were: What was accessible and closest to the road and at least 30ha in extent and approved by council. The southern section has lease areas (for one year at a time) registered across it.³

That is, access is also a prime consideration; however, the leases also need to be considered.

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³ "Although the project manager at Stellenbosch Municipality would like ... to keep what was approved, the marked leased areas (502 – BK, EK, AM, BFNN and BL) have been entertained by various informants – geotech, landscaping, conservation and linking the park to the environment, use of "uitval grond" i.e. the old mine sites BFNN and BL and many more." CK Rumboll & Vennote, email dated 15 November 2018.

3 Legal and Administrative Requirements

3.1 Summary

There is a long history of environmental protection and management in South Africa rooted in EIA and, later, IEM, which has given rise to the current requirement for VIA. The latest document (November 2005) prepared by the Provincial Government of the Western Cape defines the scope and preparation of VIAs and has now been approved and adopted. Provision in the various Acts is made for special areas and landscapes, which has an important effect on the ranking of visual impact in these areas. The SHS&MP⁴ (2018) provides graded heritage and landscape character information for the Stellenbosch Municipality. VIA is integral to assessing heritage impact in scenic heritage areas like the winelands.

3.2 Introduction

This chapter provides the important and necessary policy, legal and administrative background for the visual impact study. A general overview of the relevant documents with specific reference to those applicable to visual planning is included. Particular mention is made of local planning guidelines that have the most direct bearing on the project such as the Spatial Development Framework (SDF) for the given area.

3.2.1 Background

The policy, legal and administrative framework for conservation, EIA and development in South Africa has long roots. Visual Impact Assessment (VIA) is mentioned in the national requirements for EIA under the National Environmental Management Act (NEMA) and the Environmental Conservation Act. Furthermore, the provincial government now endorsed its own guidelines for various EIA processes including VIA (PGWC, November 2005). Specific require-

⁴ Cape Winelands Professional Practices in Association (2018). *Stellenbosch Heritage Survey & Management Plan*. Stellenbosch Municipality.

ments for VIA may also included in local Spatial Development Frameworks (SDF) and Integrated development Plans (IDP).

3.3 Policy Framework

3.3.1 Environment Conservation Act No. 73 of 1989 (ECA), Part I: Policy for Environment Conservation

The policy for environmental protection and management is found in the Environment Conservation Act (ECA) No. 73 of 1989, Part I: Policy for Environment Conservation and is well established in South African environmental policy and law.

3.3.2 IEM Guideline Series (1992)

This Guideline Series issue by the DEA in 1992 is the foundation of the current IEM procedure and contains highly useful information on IEM and EIA in South Africa including the preparation of EIA reports and the typical outline used in this VIA. *IEM Guideline Series: 3 Guidelines for Report Requirements* included “Cultural and historic environment (e.g. site of architectural and cultural interest, visual impact).” This is the first specific reference to Visual Impact in the national legislation and documentation covering EIA.

3.4 Legal Framework

This review of current documentation is made with specific reference to requirements for VIA in the Law and by National Guidelines.

3.4.1 Environmental Impact Management: A National Strategy for IEM in South Africa (April 1998)

This discussion document on Integrated Environmental Management (IEM) defines IEM as: “the coordinated planning and management of all human activities in a defined environmental system, to achieve and balance the broadest possible range of short- and long-term environmental objectives.” Further: “The overarching goal of IEM is to help ensure that South Africa’s developing economy is redirected (or reoriented) from environmentally unsustainable growth and development towards environmental sustainability” (p 14). “Activities that IEM should manage” include: land use zoning plans and schemes, new activities, existing activities, and activities undertaken in terms of a land use zoning plan or scheme that has already been approved through IEM.”

In terms of Scoping as it relates to the compilation of reports such as this VIA, the Main Aims of Scoping are “to focus the study on reasonable alternatives and relevant issues to ensure that the resulting *Impact Assessment* is useful to the decision-maker and addresses the concerns of interested and affected parties” (p 5, *IEM Guideline Series: 2 Guidelines for Scoping*, 1992).

3.4.2 National Environmental Management Act No. 107 of 1998 (NEMA)

This Act is “To provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; and to provide for matters connected therewith.” Chapter 5: Integrated Environmental Management has among its general objectives: (b) “identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2” (p 34). The Act also allows for Chapter 7: Compliance, Enforcement and Protection of Part 1: Environmental Hazards and the Duty of Care and Remediation of Environmental Damage (28). Chapter 9: Administration of Act allows for Model Environmental Management Bylaws (46), “aimed at establishing measures for the management of environmental impacts of any development with the jurisdiction of a municipality. ... (4) The purpose of the model bylaws...must be to—

1. (a) mitigate adverse environmental impacts;
2. (b) facilitate the implementation of decisions taken, and conditions imposed as a result of the authorisation of new activities and developments, or through the setting of norms and standards in respect of existing activities and developments; and
3. (c) ensure effective environmental management and conservation of resources and impacts within the jurisdiction of a municipality in co-operation with other organs of state.
5. ...must include measures for environmental management, which may include—(a) auditing, monitoring and ensuring compliance; and (b) reporting requirements and the furnishing of information.”

3.4.3 National Environmental Management: Biodiversity Bill, 2003 (BB)

This Bill is: “To provide for the management and conservation of South Africa’s biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources, the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith.” Of particular interest here is Chapter 3: Biodiversity Planning and Monitoring; Chapter 4: Threatened or Protected Ecosystems and

Species; and Chapter 5: Species and Organisms Posing Potential Threats to Biodiversity, notably Part 1: Alien Species and Part 2: Invasive Species.

3.4.4 PGWC Guideline for Involving Visual and Aesthetic Specialists in EIA Processes (Edition 1, June 2005)

This newly endorsed guideline (November 2005) is the most relevant document that now guides VIA in the Western Cape. It is a highly useful document and has been used to guide this report. While lacking a definition of VIA, it states in the Introduction: “This visual guideline document is therefore an attempt to develop a ‘best practice’ approach for visual specialists, EIA practitioners and authorities involved in the EIA process. The term **‘visual and aesthetic’** is intended to cover the broad range of visual, scenic, cultural, and spiritual aspects of the landscape; however, for the purpose of brevity, the term **‘visual’** is used in the text” (p 1). **Thus it includes aspects of “the area’s sense of place, ... natural and cultural landscapes, ... the identification of all scenic resources, protected areas and sites of special interest, together with their relative importance in the region, ... the need to include both *quantitative* criteria, such as ‘visibility’, and *qualitative* criteria, such as landscape or townscape ‘character’** (pp 1-2).

3.4.5 South African National Heritage Resources Act, 1999 (NHRA)

NHRA regulations cover the protection of historic sites, objects, buildings and landscapes. It covers (ii) “archaeological items,” namely, “material remains resulting from human activity... older than 100 years;” rock art, wrecks and “features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found (2 Definitions). The Definitions also include the term “(vi) ‘cultural significance’ [which] means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.” Further, (xxi) “‘living heritage’ means the intangible aspects of inherited culture, and may include: cultural tradition oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships.” (xxxi) “‘Palaeontological’ means any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.” (xxxviii) “Public monuments and memorials” and (xviii) “victims of conflict” relating to wars are also defined. A linear development over 300m long, or a bridge 50m long, or any development over 5,000 square metres (½ Hectare), or rezoning over 10,000 square metres (1 Hectare) requires an HIA to be submitted if a heritage resource is likely to be affected.

A Heritage Impact Assessment is being undertaken in terms of the provisions of Section 38 (8) of the NHRA.

3.4.6 PGWC Guideline for Involving Heritage Specialists in EIA Processes (Edition 1, June 2005)

Continuing on from the NHRA (1999), this now legally adopted Provincial Guideline further records (p 3): “Types of heritage resources as defined in the relevant legislation may include the following:

- Places, buildings, structures and equipment of cultural significance
- Places to which oral traditions are attached or are associated with living heritage
- Historical settlements or townscapes
- Landscape and natural features of cultural significance
- Geological sites of scientific or cultural importance
- Archaeological and palaeontological sites
- Graves and burial grounds
- Sites related to the history of slavery (NHRA).”

These are the so-called “tangibles” of the heritage concept (p 5). Thus the “cultural landscape” is seen as having a range from Archaeology to Palaeontology to Historical Architecture to Social History to Public Memory and Natural Landscape (p 6). Two categories of heritage significance/sensitivity are used: Category 1: Formally protected heritage sites and Category 2: Landscapes of recognised or potential significance or sensitivity (not yet formally protected) (p 18). This extensive list of sites include Grade I-III, National and Provincial Heritage Sites and Protected Areas, as well as Provisionally Protected Sites, Urban Conservation Areas, Nature Reserves, proclaimed Scenic Routes, etc as well as World Heritage Sites e.g. Robben Island and Cradle of Humankind (Sterkfontein). A very large list of landscapes is also included starting with Scenic/Historical Routes or Landscapes, Pristine Natural Areas e.g. Cedarberg and many other types of landscapes including Historic Farm *Werfs* e.g. *Boschendal*, *Morgenster*, *Alphen*, and historical farmlands e.g. Winelands, Swartland, Karoolands, and many more.

This long list has been ordered into twelve types of Heritage Context in Table 1 (pp 21-27), namely:

1. Palaeontological Landscape
2. Archaeological Landscape
3. Historical Built Urban Landscape
- 4. Historical Farmland**
5. Historical Rural Town

- 6. Pristine/Natural Landscape
- 7. Relic Landscape**
- 8. Burial Ground and Grave Site
- 9. Associated Landscape**
- 10. Historical Farm *Werf*
- 11. Historical Institutional Landscape
- 12. Scenic/Visual Amenity Landscape.

Many of these could be grouped under the broad term Regional Cultural Landscapes (p 31). **Thus the Landscape is considered a vital part or domain of Heritage Resources.** As a visual resource, Landscape is very much seen and perceived in every human sense.

3.4.7 Other Documents

Other documents that refer to visual aspects of EIA include *Aide Memoir for the Preparation of Environmental Management Programme Reports for Prospecting and Mining* 5.2.13 Sensitive Landscapes and 5.2.14 Visual Aspects which states: "Describe the impact the project will have when viewed from scenic views, tourist routes and existing residential areas" (pp 17-18). The SAMOAC (South African Manual for Outdoor Advertising Control) controls also specifically define visual impact with particular reference to signage in natural, urban and rural landscapes.

3.5 Administrative Framework

3.5.1 Western Cape Provincial Urban Edge Guideline (DEA&DP December 2005)

This document notes the following on visual impact that has special reference to this and all similar types of development, bold added (p 30):

"Visual impact. The value of the environment is often under-estimated from a visual perspective. It is the visual quality of the environment that, to a large degree, generates the attraction for the tourism industry and draws people to certain areas as desired locations for living a lifestyle outside of the large cities and densely developed urban areas. **The visual resources of rural areas, such as scenic landscapes and the cultural streetscapes and farmsteads,** and environments such as the Garden Route, constitute major tourist attractions. Visual qualities of the environment also forms the backdrop to most other tourist activities, such as 4 x 4 routes, hiking trails, camping and recreational activities and even sporting facilities that sustain local economic activity. The growth of golf resorts in the Garden Route serve as examples of the attraction of the environment and more particularly the visual environment for interest in sporting facilities. Added thereto, the experience of reserves and resorts in the Cedarberg and Karoo are as much in the visual quality of the environment as it is in the attraction of the facilities.

Each area has its own unique visual character and atmosphere, which plays an important role in the quality of any tourist experience. The diversity of the landscapes makes it essential to consider all development **and more particularly the expansion of urban areas, an issue that requires special consideration.** The intention is to manage urban development in such a way that no development would detract from the visual quality of the environment **and that all development conforms to a characteristic style and urban form that suits the character of the area."**

This implies that edge development should not only be limited to certain areas through inclusion or exclusion, **but that edge development should also be subject to urban design guidelines, architectural consideration and general aesthetic treatment.** The visual quality of the environment is not limited to the natural environment. **The built environment has as much of an effect on the aesthetic appeal of an area as has the natural environment."**

3.5.2 Western Cape Provincial Spatial Development Framework

A Draft Interim Report to Council is available on the web dated November 2005 as prepared by CNDV Africa. The Western Cape Provincial SDF (WCPsDF) makes no specific discussion of the area around Hermanus as pertains visual impact, however, the following general issues apply.

The report's section 4.1.4 Topography, Visual Amenity and Architectural Style (Scenery), notes in their introduction (p 4-23): **"The impact of human activity has had a pronounced impact on the natural landscape and the need to manage and control such impacts are key to protecting the scenic qualities and visual resources of the Province."** They further note that visual carrying capacity is higher in undulating landscapes and we could add, in areas with numerous valleys and local ridgelines that screen off one area from the next. However, flat ground, or titled ground that offers a sweeping view is the most visible. Their report goes on to say in the section Visual Impact, Layout and Style (p 4-24):

The visual impact of urban settlements, structures and activities within different environments should enhance and respond to the natural environment and built heritage in which they are located. **This raises the issue of appropriate layout and architectural character within the Province.**

As much as they lament the concern about the impact of globalised styles such as Tuscan that is so foreign to the Cape, the lack of due care to traditional planning forms can also be endorsed. Scenic routes including the N1, N2, N7 and N12 along with mountain passes are broadly accepted as provincial and national assets. In their Spatial Summary they finally note the following:

- The topography and settlement patterns of the Western Cape resulted in a unique matrix of Romantic, Cosmic, Classical and Complex landscapes, ranging from the complex landscape of the City of Cape Town to the cosmic landscape of the Central Karoo. Human settlement needs to be understood in the context of the natural place that 'contains' them and therefore it is important that **more emphasis is put on defining guidelines for the appropriateness of different forms of human settlement within different landscapes;**
- **Areas with exposure to large numbers of people, especially passing tourist traffic, require special consideration; and,**
- **The preparation of guidelines for site planning and choice of building materials and their implementation, including settlement on farms need to be prioritized, especially in areas identified as pure cosmic, romantic or classic landscape areas (for example the Tulbagh Valley) and Scenic Routes.**

3.5.3 Western Cape Provincial Urban Edge Guideline (DEA&DP December 2005)

This document makes wide (14) mention of heritage resources recommending for cultural/heritage resources: **"Wide buffer to allow meaningful experience of the resource."**

3.5.4 Stellenbosch SDF (2007)

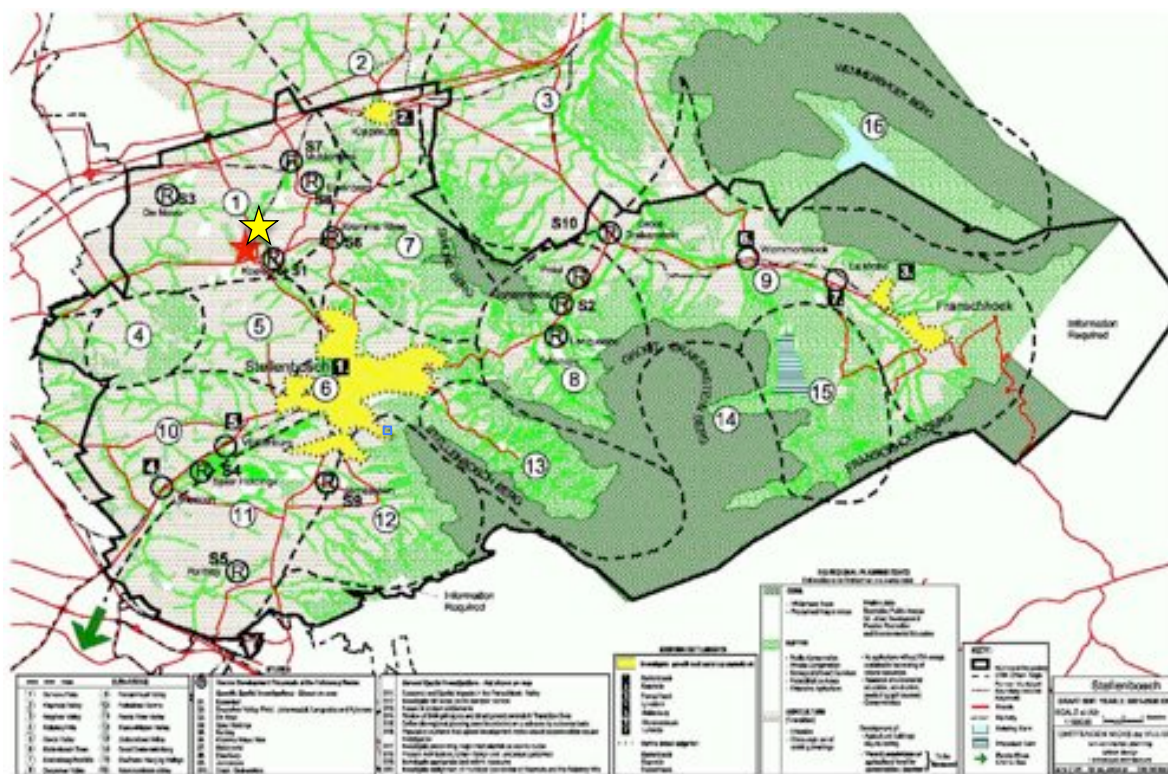


Figure 4.7 Stellenbosch Municipal Spatial Development Framework

CNdV Africa planning and design CC
environmental planning, landscape architecture, urban design

29

Stellenbosch SDF (S.1494)
December 2007

Source: Reproduced courtesy of CNdV Africa Planning and Design CC.

Figure 3-1: Stellenbosch Municipal SDF (2007) showing the site location (yellow star above red star).

An extract of the Stellenbosch SDF is shown below showing the location of the site. It shows the site located on the R304 just above Koelenhof. In the plan of December 2007 the site occurs just outside the northern boundary of the urban edge of Koelenhof.

The Stellenbosch SDF shows that Calcutta 29 occurs in the **hatched tan area = Agriculture (Transition)** Bioregional Planning Zone which covers most of the region in the West and NW of the Stellenbosch municipal area. Numerous **riverine courses** are also indicated as long green lines and one **Buffer Zone = light green hatch** near the Red Star.

The Stellenbosch SDF (p 9) *Synopsis: Heritage* notes the following (**bold added**):

HERITAGE

The sense of place of the Stellenbosch region is derived from a long agricultural and academic history coupled with well-preserved architecture and endemic biodiversity. Uncontrolled expansion of urban areas and industrialised agriculture into indigenous ecosystems threatens the unique fabric of the region, and may diminish the appeal of the area. **Several specific principles are proposed to protect the character of the area, including the use of guidelines for sensitive biodiversity areas, controls over building heights and architectural styles along major roads, and the determination of appropriate land use zoning according to view sheds.** The character of the rural area should be protected via various guidelines such as setting buildings along provincial roads back by at least 100m. Tourism that reinforces the municipality's sense of place should be encouraged and attractions should be developed that remain appropriate to the region's well-established themes.

Following the principles introduced in Section 2, Section 3 considers the 14 nodes that have been identified as the loci of future development in Stellenbosch Municipality in more detail. This includes a summary of the challenges and opportunities faced by each node and maps of the status quo and proposed developments that indicate how this could be translated into more detailed spatial plans. Table 1 on page 12 summarizes the key infrastructure capacity issues that need to be addressed in each of the nodes, and can be used to prioritize infrastructure investments across the municipality in the short term.

Furthermore, *Section 7: Heritage* (pages 32-33) later notes more completely (**bold added**):

7. HERITAGE

Stellenbosch's sense of place is derived primarily from its historic architecture, endemic biodiversity and the views from its main arterial routes. Its main attractions include wine farms, natural areas, historic sites and museums, sports and recreational facilities, and tight-knit urban street character in many of the historic urban cores (e.g. Stellenbosch, Franschhoek). Approximately 169,000 tourists visited the municipality's tourism bureau in 2005, of which over 80% were foreign. Growth in domestic tourism is seen as an opportunity to expand the tourism

economy. The establishment of Stellenbosch 360 in 2012 clearly marks the start of a new era in tourism promotion and business involvement in development in general.

Stellenbosch is home to some of the rarest and most diverse vegetation on earth, but this is coming under pressure from the uncontrolled expansion of urban areas and industrialized agriculture into indigenous ecosystems. As pockets of untouched ecosystems get smaller and the spaces between them get wider, they lose their ability to function and reproduce, and species become extinct. Combined with climate change, uncontrolled conversion of rare ecosystems could result in the loss of beneficial ecosystem services and significantly diminish the appeal of the area unless decisive action is taken to protect and nurture endemic biodiversity.

There is increasing importance of telecommunications to the growth of the economy. This is especially the case in Stellenbosch that has a strong emphasis on business services and information communication technology. Rapid expansion of the telecommunications industry in recent years has resulted in an increasing demand for radio telecommunication services, and new technologies in the cellular phone industry. The location, siting and development of TMI continues to be an issue of particular interest to both local communities and local government alike, with debate focusing on adequate availability of connectivity, visual amenity and public health. With the nature of technology it must be accepted that the future need for TMI sites will increase in the short to medium term.

PRINCIPLES

- Sensitive biodiversity areas should be mapped, and clear and appropriate guidelines introduced to conserve them.
- **Crest lines should be kept free of buildings and intensive agriculture to protect biodiversity.**
- **Ridge lines should be used for properly managed walking trails to increase recreational potential, tourism and income.**
- **The boundaries of view sheds along major routes should be determined by a visual resource management exercise.**
- **Land within these view sheds and outside of existing or proposed settlement nodes should be classified as either "Buffer" or "Intensive Agriculture" Spatial Planning Categories (SPCs) depending on the underlying land's suitability and use.**
- Development for agricultural or agri-tourism activities within these view sheds and outside of existing or proposed settlement nodes should be limited to 1 du per 10 ha (or equivalent).
- Buildings along provincial roads should be set back at least 100m from these roads to preserve the character of rural areas.
- **Building heights and architectural styles should be controlled within 200m of any prominent road so as to preserve the heritage of the built environment.**

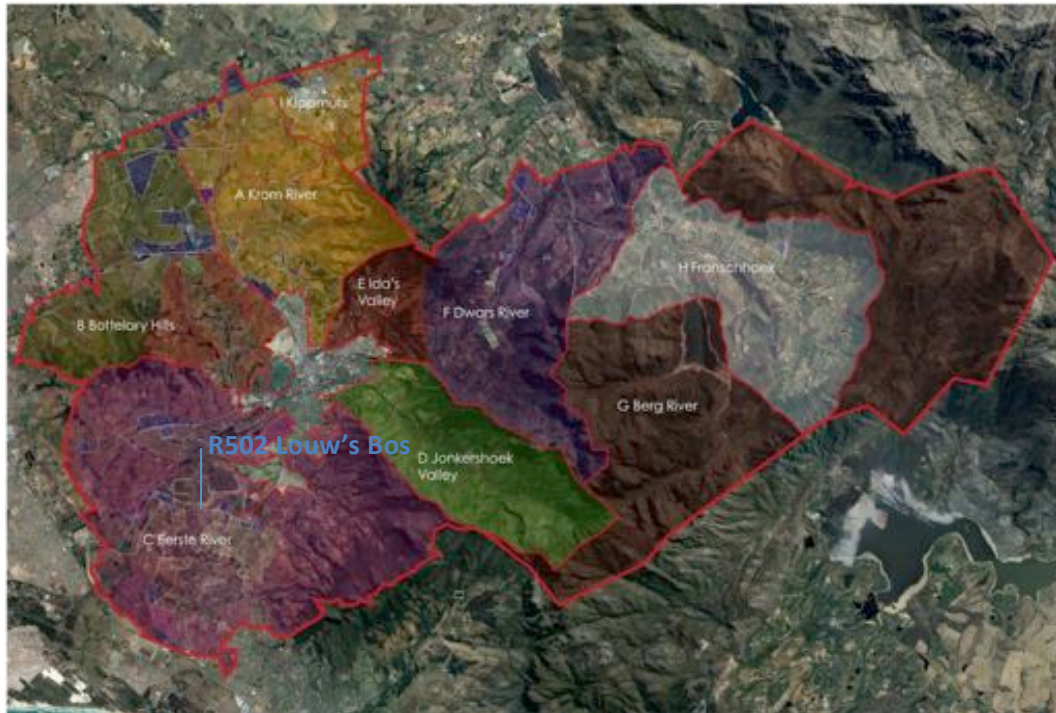
- Outside of formal conservation areas, land owners should be encouraged to conserve vegetation classified by SANBI as Endangered or Critically Endangered (particularly along ridge lines) and to link to existing conservancies (e.g. through the Cape Nature Stewardship Program). These land uses should be classified in the Core SPC.
- Adopt a telecommunication mast infrastructure policy that will facilitate the growth of new and existing telecommunications systems and facilitate the provision of TMI in an efficient, cost-effective, environmentally appropriate and sustainable way.
- Tourism that reinforces the municipality's sense of place (e.g. agri-tourism, wine tourism and eco-tourism) should be encouraged in the settlements and on rural land outside the urban edge.
- Variety in the region's tourism offerings should be preserved rather than focused on one unique resource (e.g. wine tourism), but attractions must remain appropriate to the region's tourism themes.
- Restaurants, wine tasting and holiday accommodation should be encouraged, but must be within the parameters of the rural housing guidelines and provincial resort guidelines.

3.5.5 Stellenbosch Heritage Survey and Management Plan (SHS&MP) (2018)

Further information about the area generally can now be gleaned from this excellent survey recently completed and published online. It is referred to by abbreviation SHS&MP in this report. This is powerful and invaluable resource provides at long last an authoritative and comprehensive survey of heritage resources in this heritage rich municipality, making it easier to determine the heritage context of developments.

Landscape Character Zones

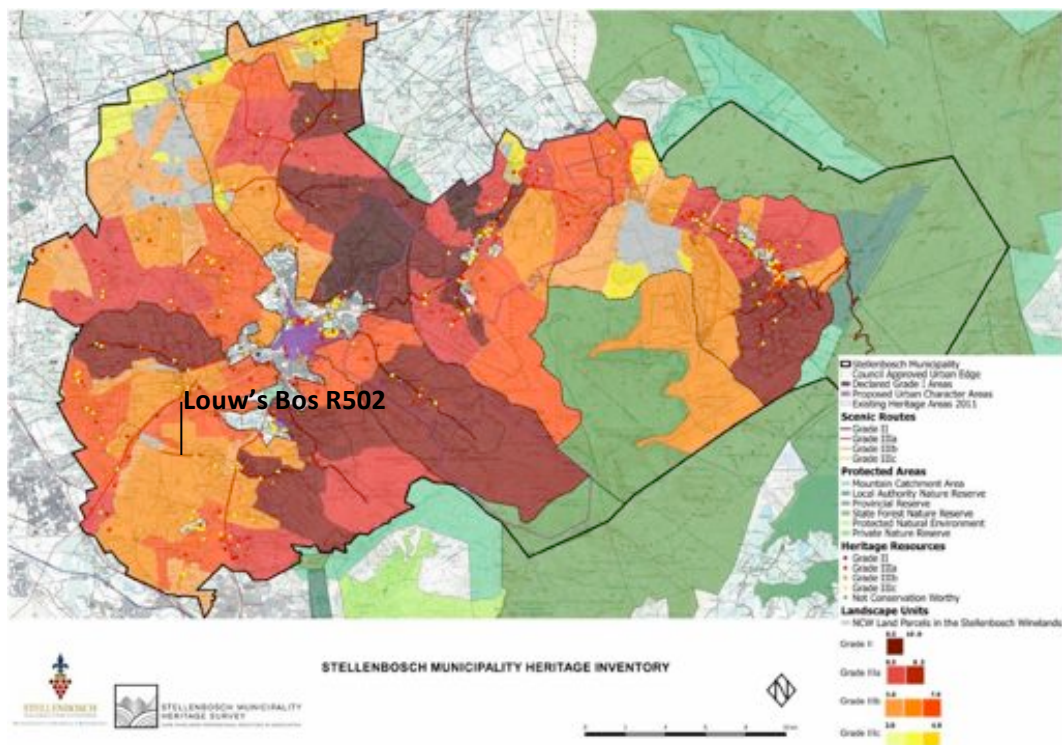
SHS&MP's *Appendix 5: Landscape Character Study* is invaluable to appreciating the heritage significance of landscape sites such as that at *R502 Louw's Bos*. The Stellenbosch Inventory divides the region up into various zones (see Figure 3-2). *R502 Louw's Bos* occurs in the SW Landscape Character zone **C Eerste River**. The site lies in the heart of this area as per the Stellenbosch Municipality Heritage Inventory Map shown in Figure 3-3 below. Landscapes in this area are generally graded **Grade IIIb**.



Source: Appendix 5 in SHS&MP (2018).

Figure 3-2: Landscape Character Zones of Stellenbosch Municipality.

R502 Louw's Bos occurs in the heart of C Eerste River zone.



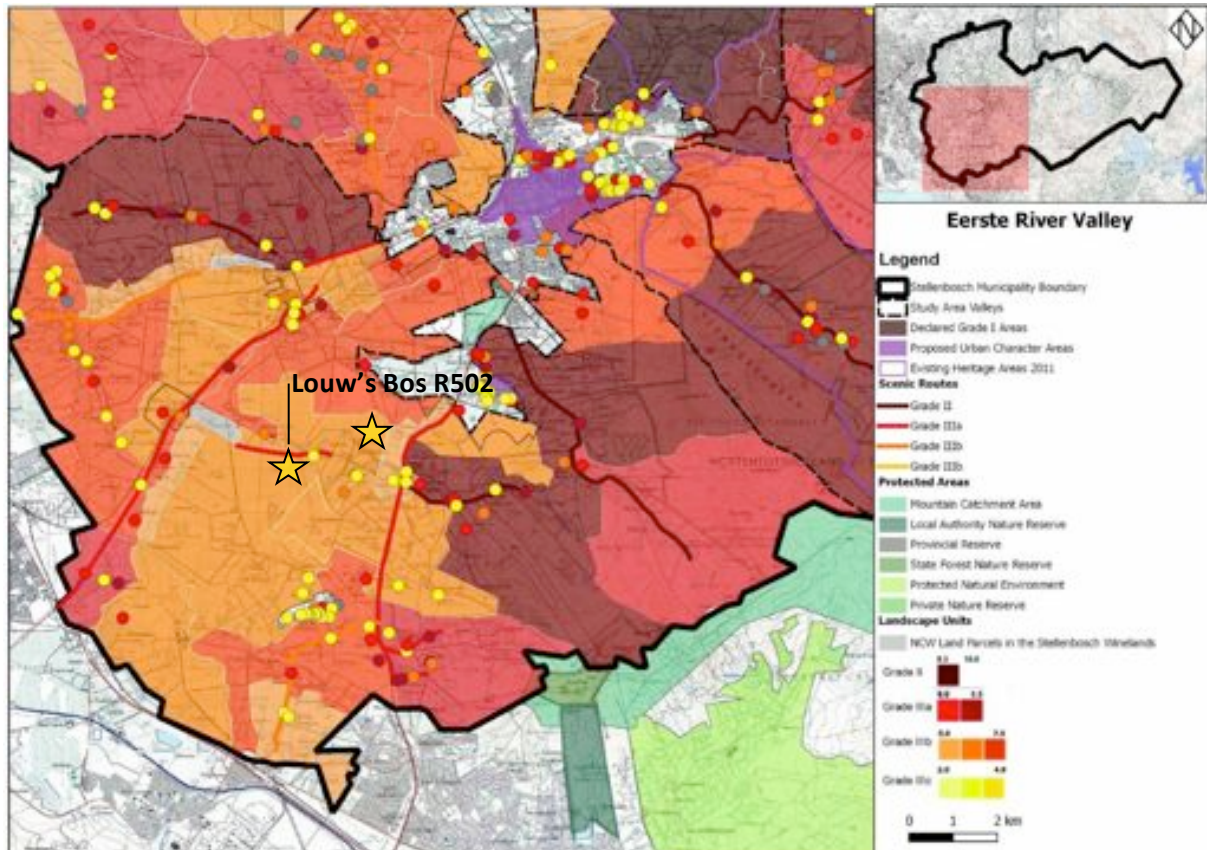
Source: Appendix 5 in SHS&MP (2018).

Figure 3-3: Stellenbosch Municipality Heritage Inventory Map (2018).

This map shows the overall context of heritage sites and landscapes and their grading. **R502 north and south and the general area are ranked Grade IIIb.**

Landscape Unit: Eerste River Valley

The grading of this area, on Landscape Units **C17 Annandale Road** (6.4 points) and **C19 Central Commonage** (6.25 points) is **Grade IIIb**. They occur in an area generally designated Grade IIIb but to the north they abut onto the slightly higher ranked but still **Grade IIIb C11 Spier and Welmoed** (7.55 points) and **C12 Commonage and Renosterveld with Archaeological Sites** (7.5 points).



Source: Appendix 5 in SHS&MP (2018).

Figure 3-4: Stellenbosch Municipality Heritage Inventory Map: C Eerste River Valley (2018).

This map shows the overall context of heritage sites and landscapes in the Krom River zone and their grading. **R502 Louw's Bos** is zoned as a **Grade IIIb Landscape**. Both areas north and south of R502 are ranked as 6 (medium orange), the mid Grade IIIb forming part of the grading of that area. The section of Annandale Road between the sites, particularly along the southern site is designated **Grade IIIa Scenic Route**.

Graded Heritage Sites

While there are numerous **Grade IIIc** ● and **Grade IIIb** ● sites in the general vicinity of R502, and several **Grade IIIa sites** ● further afield, the nearest to it on the scenic stretch of Annandale Road are Grade IIIc ● *Soverby* on the south side of the road, and Grade IIIb ● *Mon Villa (Eureka)* on the north side. The nearest **Grade II site** ● is at *Groot Zalze* just north of the Aero-drome. These are not named on the maps but have to be found on the interactive online map.⁵

⁵ <http://stellenboschheritage.co.za/smhs/map/#13/-33.8508/18.8097>. Rather confusingly, the online site proposes a Grade IIIa ● site to *Groot Zalze*.

Graded Scenic Routes

The section of Annandale Road that runs between the western sides of the R502 have been graded IIIa.

Landscape Character Areas

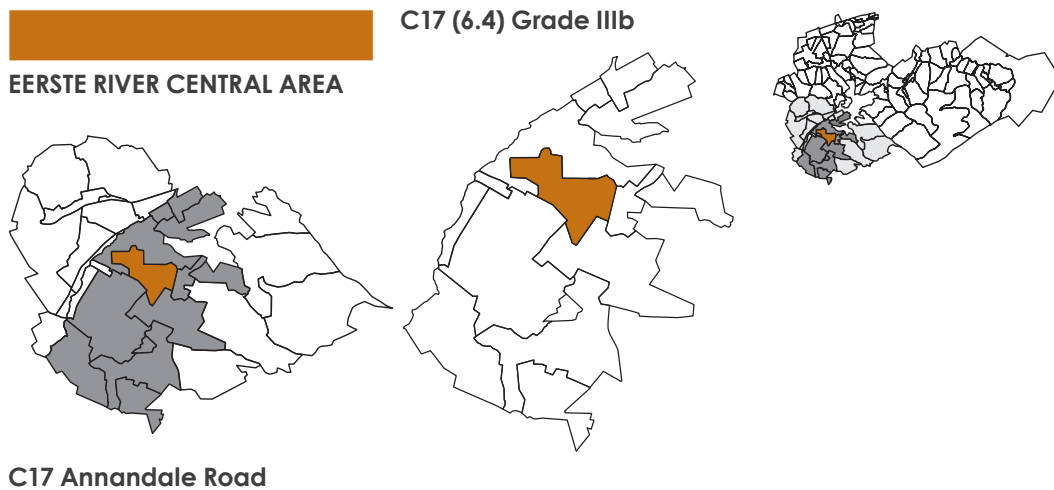
Eerste River Valley: Central Rolling Area

The Landscape Character Zones of the SHS&MP are further divided into **Landscape Character Areas**. *R502 Louw's Bos* falls into **Central Rolling Area C15-24**. They are described in the following extract from Appendix 5 (see Figure 3-5). The North site falls into **C17 Annandale Road** while the South site falls into **C19 Central Commonage**.

The central rolling hills of the Eerste River, associated with gradients of less than 1:10, are divided into smaller segments by three small streams that find their origin in the Helderberg and run into the Eerste River: the Blouklip, Bonte and Moddergats River. It is along these streams that we find the first freehold farms. **Large areas of historic commonage (C16 and C19) correlate with some of the critical biodiversity areas which adds to the significance and potential of this central area.** The historic mission town of Raithby (C23) is a special node within this landscape with a number of other historic features in this vicinity. The historic werf of *Happy Vale (Verdruk-My-Niet)* (C23) has special landmark significance. Annandale Road has intrusive infrastructure associated with the production of strawberries (C16 and C20). Another set of important land units are those defending the southern border of the Stellenbosch Municipality against further urban creep.

C17 Annandale Road (Louw's Bos North)

The following diagrams indicate the location of C17 at varying scales and contexts (see Figure 3-5).

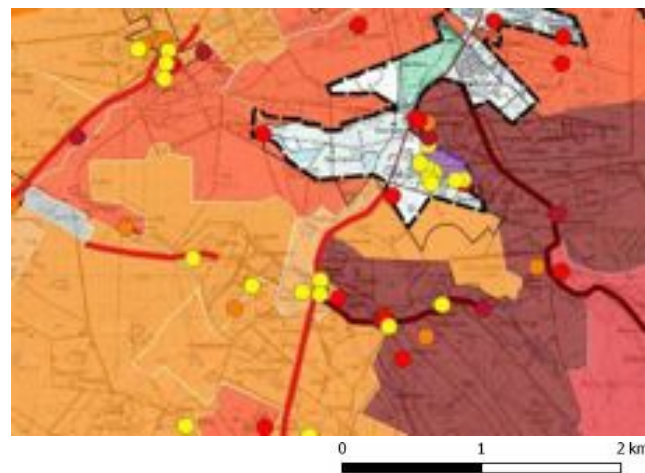


Source: Appendix 5 in SHS&MP (2018).

Figure 3-5: Stellenbosch Municipality Heritage Inventory Map: C17 Annandale Road Location (2018).

This area occurs to the north of Annandale Road and contains the north site. **C17 is ranked Grade IIIb scoring 6.4.**

The layout of the nearest graded heritage sites can be more easily seen in the following diagram. The specific detail for Louw's Bos North is noted in unit C17 as shown below (see Figure 3-6).



Source: Appendix 5 in SHS&MP (2018).

Figure 3-6: Stellenbosch Municipality Heritage Inventory Map: C17 Annandale Road Grading (2018).

Grade IIIc ● *Soverby* is on the south side of the road, and Grade IIIb ● *Mon Villa (Eureka)* on the north side. The nearest Grade II site ● is at *Groot Zalze*.

C17 Annandale Road scores 6.4 points = Grade IIIb. The description of the unit is as follows (**bold added, ibid**):

C17 Annandale Road

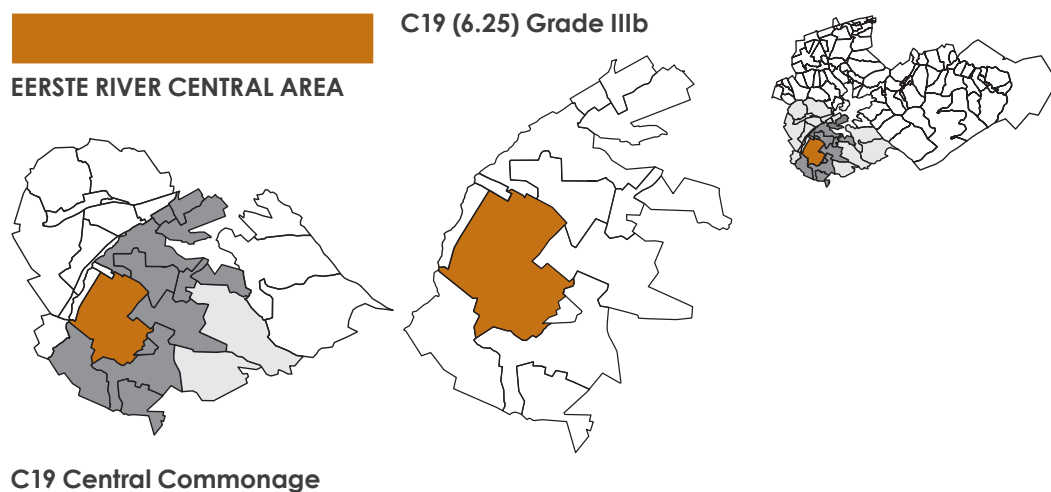
This landscape unit is defined by a rolling landscape with distant views towards the Stellenbosch mountains through a highly articulated agricultural environment. **Annandale Road cuts through this landscape unit, with the northern section sloping up and continuing down towards**

the Bonte River where the early freehold land grants were allocated. The southern section of the unit is bound by the Bontevlei Stream and features a number of dams. Farm werfs, workers' housing, dams and rows of trees punctuate this rolling landscape next to the Annandale Road, but devoid of regular pattern. The north-western section of the unit has a rectangular pattern of vineyards and field crops, on medium suitable soils. Workers' cottages in the cultural landscape add to its significance. **A large area of commonage is found in this land unit.**

This landscape shows a highly articulated agricultural environment, enclosed by rolling hills on all sides, and far views towards the Helderberg Mountains. It has scenic and contextual significance.

C19 Central Commonage (Louw's Bos South)

The following diagrams indicate the location of C19 at varying scales and contexts (see Figure 3-7).



Source: Appendix 5 in SHS&MP (2018).

Figure 3-7: Stellenbosch Municipality Heritage Inventory Map: C19 Central Commonage Location (2018).

This area occurs to the south of Annandale Road and contains the south site. **C19 is ranked Grade IIIb scoring 6.25.**

The layout of the nearest graded heritage sites can be more easily seen in the following diagram. The specific detail for Louw's Bos South is noted in unit C19 as mapped in Figure 3-8.



Source: Appendix 5 in SHS&MP (2018).

Figure 3-8: Stellenbosch Municipality Heritage Inventory Map: C19 Central Commonage Grading (2018).

Grade IIIc ● *Soverby* is on the south side of the road, and Grade IIIb ● *Mon Villa (Eureka)* on the north side. The nearest Grade II site ● is at *Groot Zalze*.

C19 Central Commonage scores 6.25 points = Grade IIIb. The rock cairn by the old outspan to the south is significant. The description of the unit is as follows (**bold added, ibid**):

C19 Central Commonage

This rather hidden landscape is rich in texture with expansive 360-degree views over the Helderberg, Bottelary Hills and False Bay. **The combination of wilderness and cultivated landscape that varies in use from vineyards to field crops and open fallow land are the building blocks of this rural landscape.** The central rolling foothills directs the structure of this land unit with streams flowing from the mostly convex bulging of the land. Ecological support areas are found around these drainage lines, and north of Raithby areas of critical biodiversity are found in the intact Renosterveld pockets. **The only access to this land unit is via a gravel road from Annandale.** The highest point of the central rolling hills has good quality soil, while the rest of the rolling landscape is of medium quality with the concave folds around drainage lines of low quality. A small area of early freehold land grants is seen in the southwestern corner close to Raithby. **A large area of commonage on the northern border next to Annandale Road, features small plots of different agricultural use, some with dilapidated greenhouse structures.** An outspan ('Lot no 1') is situated directly next to the commonage, and at that intersection, a cairn of rocks is a landmark feature in the fork of the road. The 'Compagnies drift' outspan starts as a small unit next to the Eerste River and stretches up the slope. **These outspan areas were placed in close proximity to an old wagon route that used to traverse this central area.**

This land unit has significance for its historic layering of commonage and outspan areas and the secluded character from the rest of the Stellenbosch Municipal area. Therefore it has a high degree of historic, scenic, aesthetic and associated cultural significance. The commonage has the potential to address some of the social needs of access to land for crop production, recreational areas and access to medicinal plants.

Mixed agricultural landscape and pattern, single access, large commonage and outspans near to the old wagon trail or trekpath are the key features of this extensive open area. **The most historic features in this open landscape is the old commonage along Annandale Road** – although the entire area was commonage in the nineteenth century – **the old trekpath/s and outspan points (see the cairn in Figure 3-8)**, if the old trekpath/s are even intact anymore, and the general pattern of farm fields and open spaces. Research into historic aerial photos from the mid twentieth century may help determine the land use patterns at that time and how they compare to today's use.

3.6 Strategic Issues

3.6.6 Strategic Assessment

One of the difficulties of assessing visual impact at present is the lack of strategic Provincial or Municipal EIA, VIA or HIA studies which provide guidance on how the individual project fits into the overall context of development in any region. While an individual project seems to have an acceptable level of mitigatable impact, when viewed collectively, their sum total can well exceed the sum of the parts. That is, the impact of a single scheme such as this development may seem to be minimal when considered in isolation; however, when seen collectively with other developments also proposed in the area or region but as unknown to the assessor, or as not considered over the long term, the overall impact can become unsustainable. These are cumulative impacts.

There are no strategic visual studies done of the area that we are aware of but the SHS&MP's *Appendix 5: Landscape Character Study* (2018) (see section 3.5.5 above) has gone some way to informing the value of the landscape from a scenic and heritage perspective. However, it is not possible to consider strategic issues in detail at the project level as the information is generally not available and it is outside the scope of project assessments to do so.

NWA

4 Visual Environment Description

4.1 Summary

The sites lie adjacent to Annandale Road, a stretch near the South site being a Grade IIIa scenic route. The route is of mixed scenic value being more rural in its central length, but hard to appreciate at this time due to the road works. The landscape is extensive comprising rolling hills around the Bonte River Valley surrounded by pastures, a variety of new and old homesteads, dams, vineyards and some businesses. The North site is further away from Annandale Road and less prominent than the South site, which is split between old vineyards in the east and pastures in the west. The historic farm *Soverby* and neighbouring *Linquenda* are embedded between the two sites.

4.2 Introduction

Combined with Section 2, this chapter presents the relevant visual data required to develop a Visual Impact Assessment. This is a strongly visual chapter well illustrated with site and regional photographs. Visual impact is all about what can we see and how this affects us. This chapter shows us what we can see.

4.2.1 Background

The description of the environment is undertaken with a view to presenting basic data for the VIA. A full presentation is made of the visual information collected and analysed as required for a Level 4 VIA.

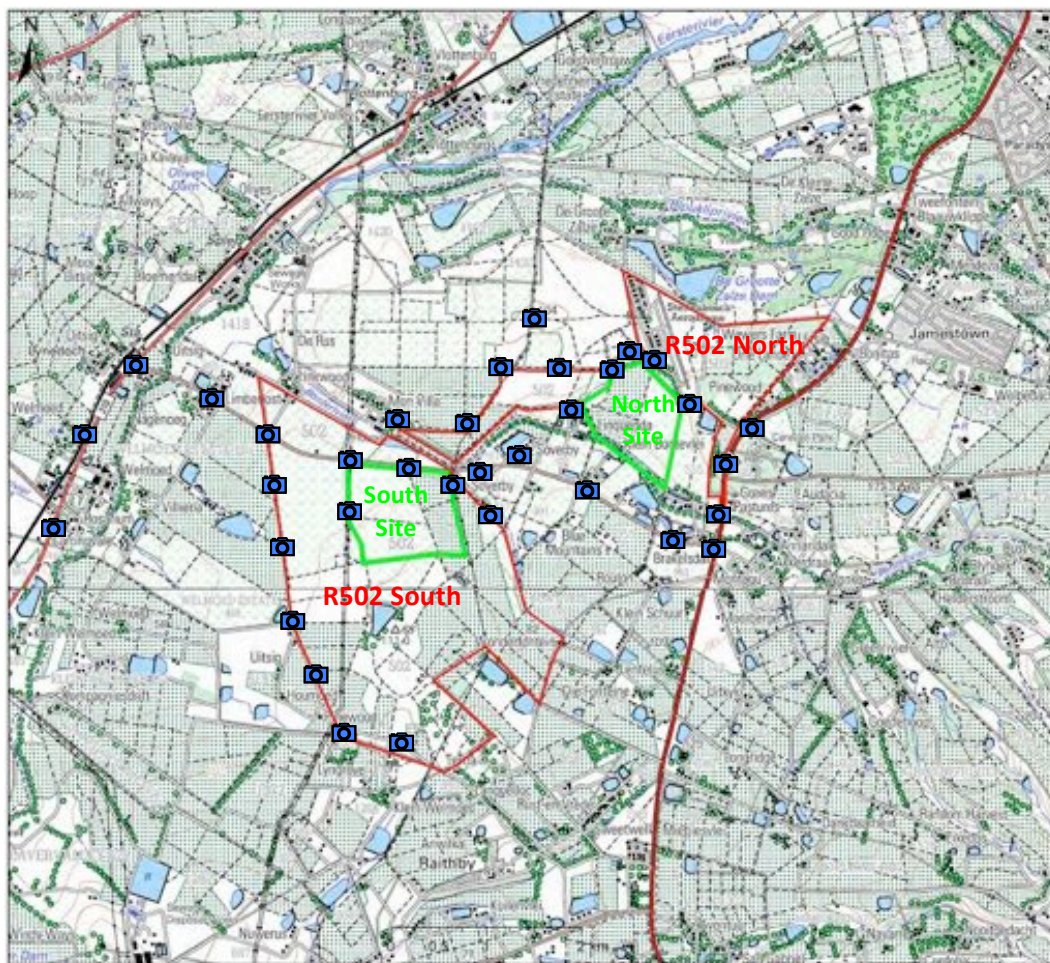
4.2.2 Key Issues

1. Annandale is a semi-scenic, partially graded IIIa route between Lynedoch and the R44/*Brakelsdal*.
2. There are 2 sites, North site set back/north of Annandale Road and less easy to see, and South site west of *Soverby* on a prominent hill.

3. The vegetation of both sites is highly transformed; the North site is pasture today but formerly vineyard and vegetable farms; the South site has old vineyards next to *Soverby* in the east, and pasture in the west.
4. The South site is highly prominent from Annandale Road while the North site is set back and obscured from Annandale Road from the east and scenic R44.
5. The sites are very large at around 30 hectares each having a large footprint in the remaining farmland/open space of R502.

4.3 Physical Environment

4.3.1 Location



Source: CK Rumboll & Vennote / WC Government Agriculture / New World Associates

Figure 4-1: Site and Photographic Locations 1:50,000.

Portion of a 1:50,000 map of South Africa showing the site locations and viewpoints [📷]. (3318 DD Stellenbosch, 5th Edition 2000). NTS. **R502 is marked in red while the two options under consideration are indicated in green labelled North Site and South Site.**

The site lies in an extensive area of open space and leased farmland in the SW region of the Stellenbosch Winelands. It is surrounded by numerous well-known and historic wine farms, *Spi-er* and *Welmoed* to the west, *Brakelsdal* and others to the east, *Groot Zalze* to the north.

4.3.2 Landform

The landform on the North site is rolling hillside stretching down from its high point next to the Aerodrome. The South site covers more of a convex bulge that it crosses from east to west and further south.

4.4 Biological Environment

4.4.1 Vegetation, Wildlife and Ecology



Source: VEGMAP 2012 (SANBI, 2006-).

Figure 2: Vegetation Map of the R502, Stellenbosch area (NTS).

The vegetation on site is classified as FRs 9 **Swartland Granite Renosterveld** with over 80% transformed or lost due to agriculture and urban sprawl.⁶ Some semi-natural patches remain in the south of R502. There is invasive *Acacia saligna* in places, particularly in R502 south.

4.4.2 Conservation and Management

Swartland Granite Renosterveld is ranked as Critically Endangered.⁷ Therefore any remaining areas need to be conserved.

⁶ **Conservation:** This is a critically endangered vegetation unit of which almost 80% has already been transformed due to prime quality of the land for agriculture (vineyards, olive orchards, pastures) and also by urban sprawl. Hence the conservation target of 26% remains unattainable. Only very small portions (0.5%) enjoy statutory protection in the Paarl Mountain Nature Reserve and Pella Research Site, and also (2%) in the Paardenberg, Tienie Versveld Flower Reserve near Darling and in the Duthie Nature Reserve in Stellenbosch. **Alien grasses are particularly pervasive, the most important being *Lolium multiflorum*, *Avena fatua* and *Bromus diandrus* (Musil et al. 2005). Alien woody species include *Acacia saligna*, *Pinus pinaster* as well as various species of *Eucalyptus*. Erosion very low, low and moderate.**

⁷ South African National Biodiversity Institute (2006-). *The Vegetation Map of South Africa, Lesotho and Swaziland*, Mucina, L., Rutherford, M.C. and Powrie, L.W. (Editors), Online, <http://bgis.sanbi.org/SpatialDataset/Detail/18>, Version 2012.

4.5 Social Environment

4.5.1 Heritage

The Cape Winelands are world renown and are a UNESCO World Heritage Site. The development of the Winelands into a cultural landscape occurred historically during the colonial period of South Africa from the seventeenth to nineteenth centuries. The twentieth century saw expansion and further development of the winelands and the development of the region's famous Wine Routes. There are numerous well-known Stellenbosch wine farms in the area including *Spier* and *Groot Zalze*. As such this rural landscape is highly transformed with historical farms mostly given over to extensive vineyards. R502 being old commonage is mostly pasturage with some areas of vegetable farming and some vineyards. There are also numerous farm dams.

4.5.2 Land Use

As noted in the WCPSDF previously, the site falls is zoned rural Agricultural.

4.5.3 Rural Context

The site occurs in the rural landscape of SW Stellenbosch Municipality, an area of intensive winelands.

4.6 Cultural Environment

4.6.1 Aesthetics

The area's aesthetic is mixed agricultural with a combination of vineyards, dams, pasture and vegetable farming. The surrounding landscape is primarily vineyards bordering onto the peri-urban area of Stellenbosch.

4.6.2 Visual

The site has been the subject of a photographic survey that looks at the site itself, the local area and views from local roads. The bulk of the visual description is to be found in the photographs that are self explanatory and accompanied by descriptions. **According to the PGWC Guidelines "the term 'visual and aesthetic' is intended to cover the broad range of visual, scenic, cultural and spiritual aspects of the landscape; however, for the purpose of brevity, the term 'visual' is used in the text" (p 1).** Thus it is within the technical gambit of VIA to comment on all the varied aspects that make up the visual environment which is the aim of this study. The photographic survey is presented as if one were to visit the site for the first time, covering views from the approach road, scenic routes, local roads, views of and from the site then views from the neighbourhood.

The following reconnaissance photographs show the sites and general area (taken 30 October 2018).



Source: All photographs in this report by Bruce Eitzen © 2018

Photograph 2: Panorama on Annandale Road with North site (left) and South site (right).

The above panorama taken from Annandale Road looking east towards the Stellenbosch Mountains shows the North site to the left, further in the distance, and the South site to the right.



Photograph 3: View of R502 South site from Annandale Road showing old pasture and alien *Acacia* (right).

The above view shows the west side of the South site only with vineyards on the left horizon crossing over to the east part of the site at *Soverby*. The area is old lands and pastures invaded by alien *Acacia* at right. The power pylon at far right is the west boundary of the South site.



Photograph 4: View of R502 North site from Annandale Road showing *Linqenda* and vineyards behind (left) and *Klein Bontevelei*/cultivated lands (right).

The above view of the North site shows its relationship to *Linqenda* and vineyards, which occur on the west side of the north site, the remainder being old fields, now pasture.



Photograph 5: Panorama of R502 North across its central pasture north/behind *Soverby*.



Photograph 6: Panorama of R502 North looking north across *Soverby* and pasture behind.



Photograph 7: Panorama of R502 South showing the vineyard behind/west of *Soverby* (right); *Soverby* workers cottages (left).



Photograph 8: Panorama of R502 North behind *Soverby* (left) and North site behind *Linqenda* (right).



Photograph 9: Panorama of R502 South showing semi-natural pasture.



Photograph 10: Panorama of R502 South showing cultivated fields.



Photograph 11: Panorama of R502 South showing cultivated fields.



Photograph 12: Panorama of R502 South showing bush vines.



Photograph 13: Panorama of R502 South showing semi-natural renosterveld.



Photograph 14: Panorama of R502 South showing bush vines (left) and semi-natural renosterveld (right).



Photograph 15: Panorama of R502 South along power line on west boundary of South site showing old cultivated lands.



Photograph 16: Panorama of R502 South site (left) and cattle grazing (right).



Photograph 17: View of R502 South site showing cultivated lands.

A more detailed study was undertaken on 23 November 2018 as follows.

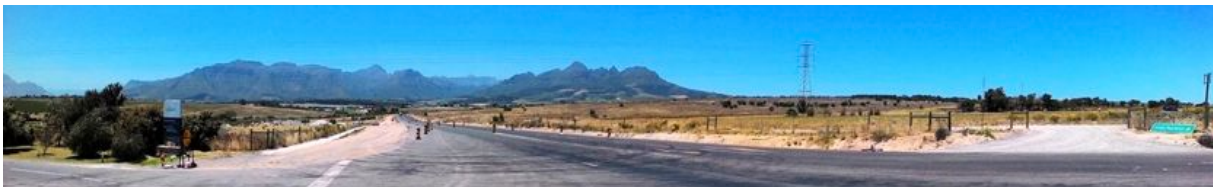
4.6.3 Views from Annandale Road – Part Scenic Route

The following view sequence is taken travelling west to east from *Lynedoch/Spier* to *Brakelsdal/R44*. Where possible a view left/north and right/south opposite is shown. The South site occurs in the west and is seen first and nearer from this direction.

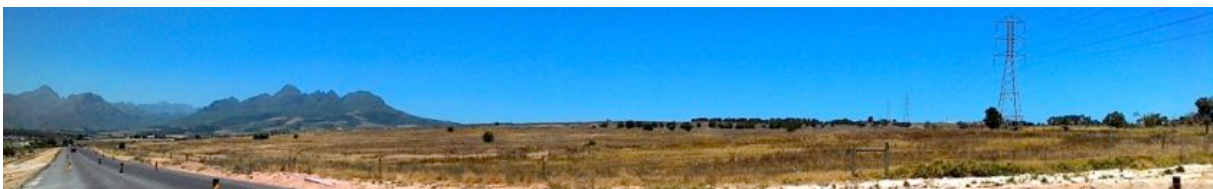
These views approach the South site from the west to its boundary on the power lines. There are various ridgelines that segment the view.



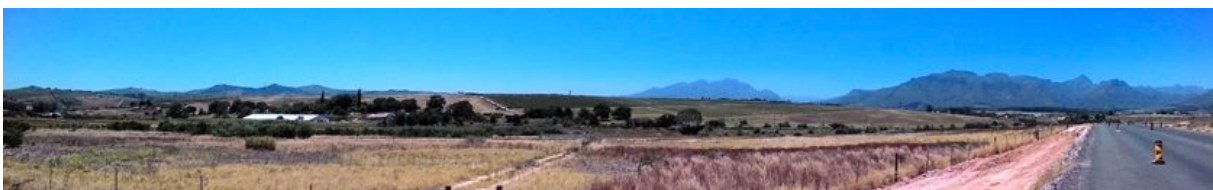
Photograph 4-18: Westbound on Annandale Road: passing *Nagenoeg's* orchards/vineyards on the right.



Photograph 4-19: Westbound on Annandale Road: Panorama to North site (far left) and South site (right).



Photograph 4-20: Westbound on Annandale Road: Panorama of South site from boundary power lines.



Photograph 4-21: Westbound on Annandale Road: Panorama to North site opposite above view.

The following views are across the mid section of R502 and the east end of the South site.



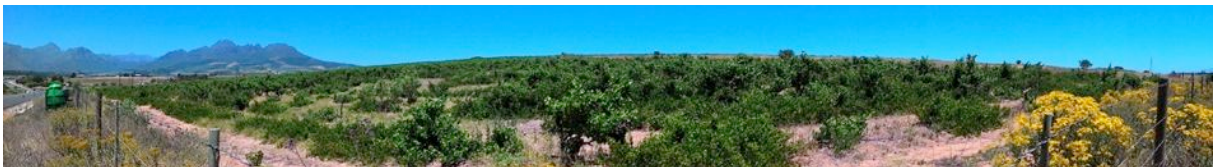
Photograph 4-22: Westbound on Annandale Road: Panorama across the South site's midline.



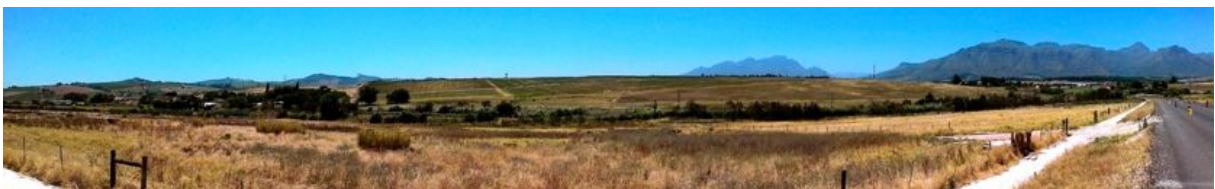
Photograph 4-23: Westbound on Annandale Road: Panorama across *Mon Villa* to North site.



Photograph 4-24: Westbound on Annandale Road: Panorama across South site near east vineyard.



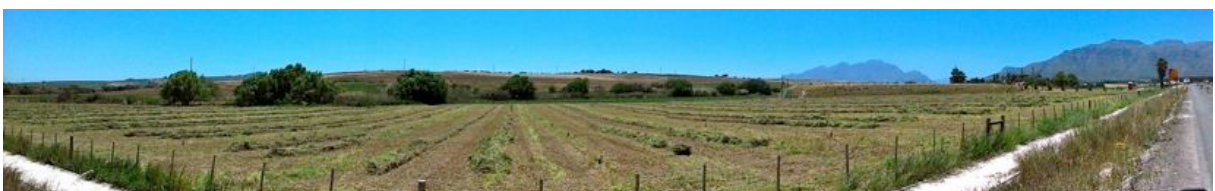
Photograph 4-25: Westbound on Annandale Road: Panorama across South site over east vineyard.



Photograph 4-26: Westbound on Annandale Road: Panorama across North site (across the river) opposite above view.



Photograph 4-27: Westbound on Annandale Road: *Soverby Guest Lodge* and South site vineyards (right).



Photograph 4-28: Westbound on Annandale Road: Panorama opposite above view across *Soverby* to North site on the hill.

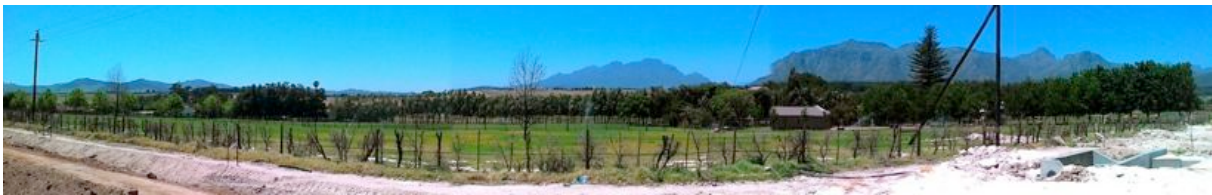
These views continue towards *Brakelsdal*, which straddles Annandale Road, and look towards the North site, not easily visible generally being obscured by vegetation and construction. The North site occurs on a high point just below the Aerodrome and can be identified as the field on the edge of the Aerodrome's boundary trees on the mid-horizon.



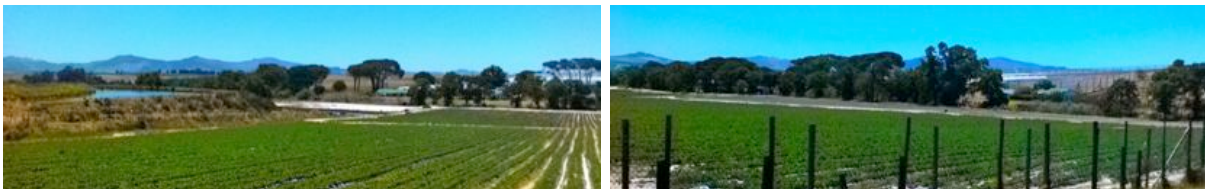
Photograph 4-29: Westbound on Annandale Road: eastbound towards/past *Brakelsdal*.



Photograph 4-30: Westbound on Annandale Road: views across *Brakelsdal* to the North site.



Photograph 4-31: Westbound on Annandale Road: Panorama across *Brakelsdal* east to North site.



Photograph 4-32: Westbound on Annandale Road: Panorama across *Brakelsdal's* strawberry fields to North site.

Overall, the South site is most prominent from Annandale Road as it lies right next to it and views are completely open into it. The North site is further away from Annandale Road across the Bonte River and is often obscured by trees and structures on *Brakelsdal* making it less obvious and visible.

The following views are taken westbound on Annandale Road. The North site is not really in view being off to the right. The South site only comes in view as one approaches *Soverby*. Due to the road works it was hard to get a normal perception of this drive, as there were large cuttings and barriers all along. When construction is over views will be easier.



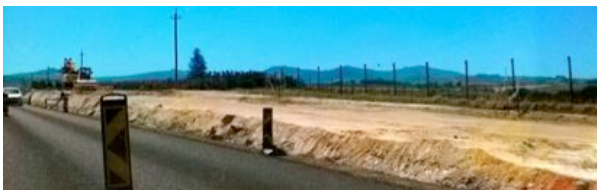
Photograph 4-33: Eastbound on Annandale Road: passing the visual clutter around *Brakelsdal* to *Soverby*.



Photograph 4-34: Eastbound on Annandale Road: looking across *Brakelsdal* to the North site.



Photograph 4-35: Eastbound on Annandale Road: still passing *Brakelsdal* and a group of houses.



Photograph 4-36: Eastbound on Annandale Road: passing *Blue Mountains* to the left, no sites in view.



Photograph 4-37: Eastbound on Annandale Road: approaching *Soverby* and the first glimpse of the South site (right).



Photograph 4-38: Eastbound on Annandale Road: passing *Soverby Guest House* (left), South site vineyards ahead (right).



Photograph 4-39: Eastbound on Annandale Road: passing the South site's eastern vineyards.

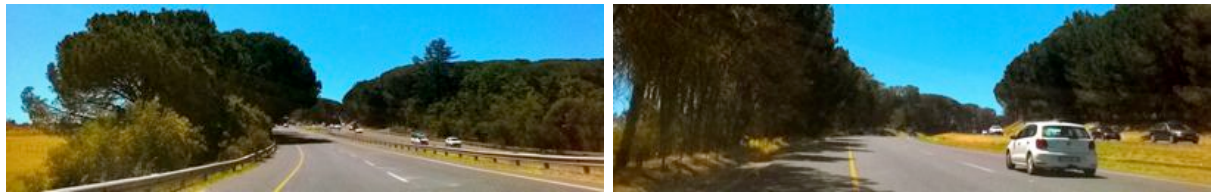


4.6.4 Views from the R44 Scenic Route

The following mini-sequence is taken northbound on the R44, the only direction in which the North site might be seen. The Aerodrome is off to the left at the top of the R44 in the trees.

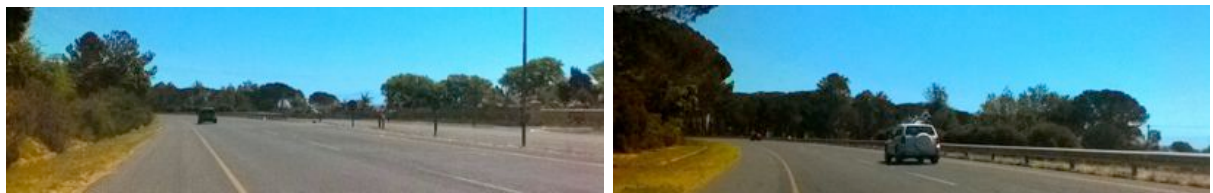


Photograph 4-40: Northbound on the R44: Panorama with the site obscured to the left by the trees.

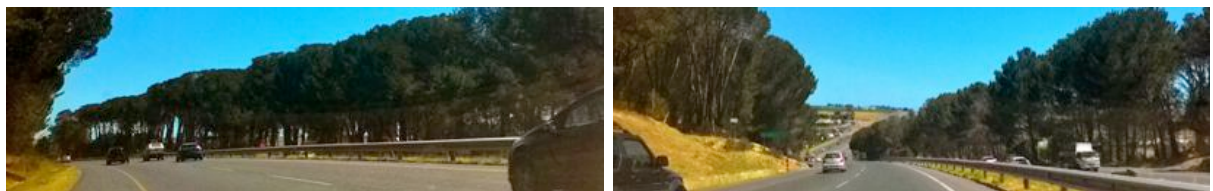


Photograph 4-41: Northbound on the R44: The site is not visible once you enter the trees.

The next mini-sequence is taken southbound on the R44. The North site cannot be seen to the right due to obscuring landforms, structures and heavy vegetation.



Photograph 4-42: Southbound on the R44: approaching the corner near the Aerodrome exit to right.



Photograph 4-43: Southbound on the R44: descending into the Bonte River Valley, site obscured to right.



Photograph 4-44: Southbound on the R44: descending to Annandale Road intersection, site obscured to right.

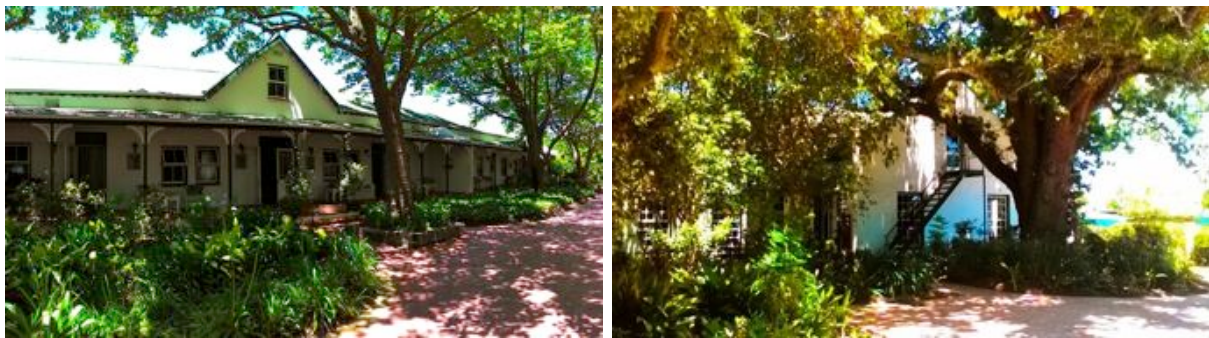
Only the North site can be seen from the R44 but only for a brief glimpse near the Annandale intersection. Mostly the R44 is not oriented towards the site and is obscured in most places where you can see it.

4.6.5 Views from Heritage Sites on Annandale Road

While Annandale Road drives through some extensive hill-valley terrain with a wide variety of agricultural practices including old pastures, vegetable fields, historic homesteads and vineyards wrapped around the Bonte River Valley, it is very much a landscape that one moves through with few places for pause.

Soverby

The notable exceptions to this rather closed farming landscape are in its mid-section at *Soverby*, particularly *Soverby Guest House*, a remarkable gem of early nineteenth century homestead and lush oasis garden surrounds.



Photograph 4-45: *Soverby*: Soverby Guest House 1907 (left) and 1901 (right).



Photograph 4-46: *Soverby*: This shady oasis is a traveller's joy with a huge oak tree at right.

By contrast, *Soverby* homesteads to the north are equally striking but not open to the public on a drive-in basis. Set on a brilliant dam, these open landscaped gardens with vivid green lawns surrounding a lengthy dam are quite striking. The following panoramas are taken from their stunning lengthy driveway along the dam.



Photograph 4-47: *Soverby*: panorama from the driveway looking towards Soverby Guest House and South site right.⁸

⁸ This panorama is slightly distorted but it shows well the high terrain rising to the south of the Bonte River where the South site lies off to the right/west.



Photograph 4-48: *Soverby*: the stunning view across the dame to the North site on the hill.



Photograph 4-49: *Soverby*: nearer the homesteads set between lucerne fields and the dam on the Bonte River.⁹

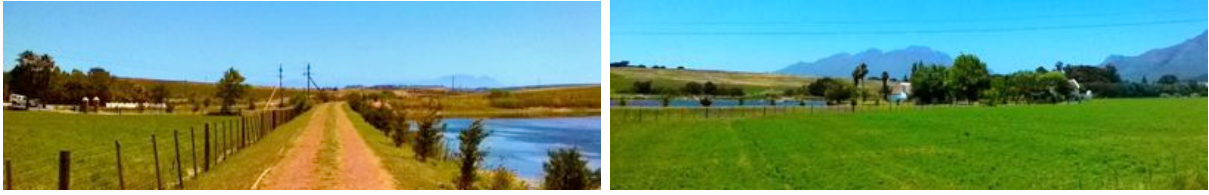
Soverby Guest House being on the south side of Annandale Road is near the eastern side of the South site and connected to it by a vineyard, part of which is on the South site. It does not really look out onto it so much as its arrangement is inward looking around its shady werf.



Photograph 4-50: *Soverby*: The guesthouse looks onto Annandale Road through a screen of trees.

Soverby on the North's houses look out towards the North site but not directly as it lies over the Bonte River.

⁹ As the driveway gate was being repaired I walked in and along the 100m driveway to be greeted a long way in by a barking Alsatian and Rottweiler; fortunately, they were friendly as I only had an A4 piece of paper to defend myself!



Photograph 4-51: *Soverby*: driveway looking west to South site (left) and across pasture to North site (right).



Photograph 4-52: *Soverby*: 180° panorama across the dam from the South site (left) to the North site (right).

Linquenda

The next named site is *Linquenda*, which is inaccessible to the public being gated, is situated just across the Bonte River and looks out directly onto the North site. It is a bushy property and we did not gain access so how much of a view it has could not be ascertained but it is probably a full view of the North site. This is the most remote of the riverside properties visited.



Photograph 4-53: *Linquenda*: twin driveway, left to *Soverby*, right to *Linquenda*, North site on the hill.



Photograph 4-54: *Linquenda*: the densely bushy Bonte River crossing is surrounded by reeds, South site mostly obscured.



Photograph 4-55: *Linquenda*: dense reeds (left) and towering hedge of cannas (right) line the drive.



Photograph 4-56: *Linquenda*: paddocks and trees surround the homestead.

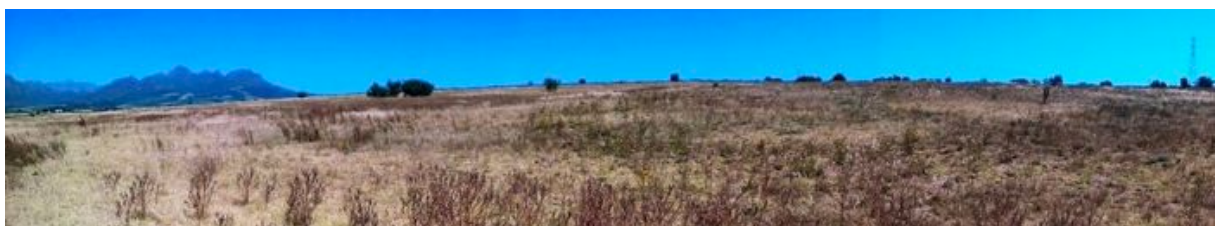
***Soverby* has varying degrees of exposure to both North and South sites as it has both north and south locations. *Soverby* south is nearest to South site but is less outward looking, while *Soverby* north is very open with wide panoramic views of both but much near the North site. *Linquenda*, their northern neighbour is most exposed to the North site.**

4.6.6 Views of the Site

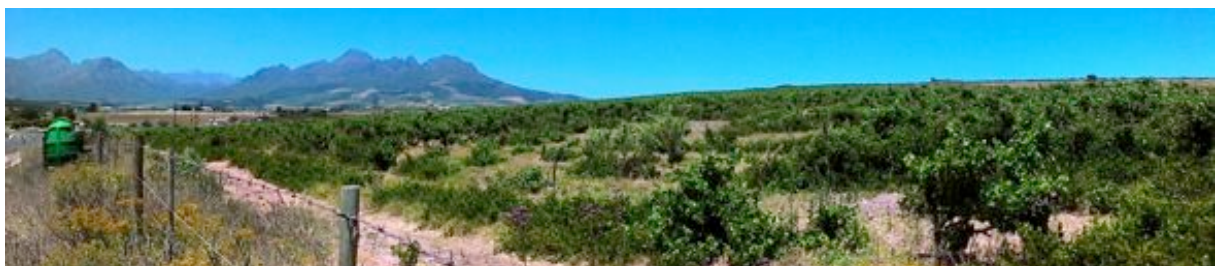
The following few views are taken adjacent to the site from near Annandale Road. Only views of the South site were accessed, as it is most exposed and accessible.



Photograph 4-57: Panorama of the northern edge of the South site showing its open, grassy rolling slopes.



Photograph 4-58: Panorama of the drier central portion of the South site showing its convex hilltop.



Photograph 4-59: Panorama of the eastern portion of the South site showing its old vineyards.

Louw's Bos South site is extensive along Annandale Road with old vineyards in the east and pasture in the west; vegetable fields occur deeper within the site. Louw's Bos North site is all pasture today. In the 1970s both sites that are grassy today had extensive gum plantations on them of which no traces remain.



Source: Chief Directorate: National Geo-spatial Information – Image 794-002-00119.

Figure 4-3: Aerial Photograph of R502, Stellenbosch (1977).

Remarkable to see the massive change in the landscape in 40 years. The area was even more extensively farmed but with heavy gum plantations in the heart of the R502 south and all over R502 north – the *bos* of Louw's Bos. The vineyards at Soverby were not even planted; today they are old. There were also far fewer vineyards than there are today.

This concludes the visual description of the study area. A visual assessment of the site follows in the next chapter.

NWA

5 Visual Impact Assessment

5.1 Summary

VISUAL IMPACT: The proposed development will have a high impact on the landscape (both sites) causing noticeable (South site) to some (North site) change to the visual environment. **VISIBILITY:** The development has moderate (North site) to high (South site) visual exposure, moderate (both sites) visual absorption capacity, medium (both sites) compatibility, and is moderately (North site) to highly visible (South site) along Annandale Road. **NATURE OF IMPACT:** The development's visual impact has district extent, long term duration, medium intensity, definite probability, and medium significance on the landscape for both sites. **COMPARATIVE ASSESSMENT:** The South site has a moderate to high impact while the North site has a more-moderate to high impact, particularly a more-moderate-visibility due to not being sited on Annandale Road. Recommendations are made to minimise visual and aesthetic impact.

5.2 Introduction

This chapter uses the information collected in the previous chapters in an analysis that identifies and then describes the preliminary visual and aesthetic impacts of the project on the environment presented in tabular form due to the extent of the project.

DEFINITION: “Visual impact is defined as a change in the appearance of the landscape as a result of development which can be positive (improvement) or negative (de-traction)” (IEA and the Landscape Institute, 1995).

5.2.1 Key Issues

1. *Louw's Bos* R502, Stellenbosch is an extensive property covering hundreds of hectares of former commonage, now leased out for farming: pasture, vegetables and vineyards.
2. The Bonte River Valley is a scenic agricultural and viticultural landscape today although there was more gum plantation in the past.

3. The landform of both sites is hilly with sloping faces; the South site covers a convex hill and is visually split around its dome and ridgelines.
4. The South site occurs right on Annandale Road while the North site is over one kilometre distant from it in a more setback and obscured location on the Bonte River.

5.3 Methodology

A table is being used to scope the issues relating to visual and aesthetic impact of the wind turbines on the landscape.

5.3.1 The Visual Assessment

The visual environment can be structured into the following components:

1. **Natural Environment:** comprising the *Geomorphology* (geology, soil, land form), *Climate* (atmosphere and water), and *Nature* (vegetation and wildlife).
2. **Cultural Environment:** comprising *Land Use* (urban, rural, agricultural, recreational, etc), the *Structures* (architecture, engineering, lighting, services), and *History* (ancient, colonial, modern, contemporary).
3. **Visual Environment:** comprising *Views* (aesthetics), *Routes* (scenic, transport), and *Landscapes* (town, country, cultural, natural, mountainous, coastal, etc).

5.3.2 Triggers for Visual Assessment

These have been extracted from the PGWC (November 2005) list of triggers (p 5) with potential aspects relevant to this project noted in **bold**:

The nature of the receiving environment:

1. Areas with protection status, such as national parks or nature reserves;
2. **Areas with proclaimed heritage sites or scenic routes;**
3. Areas with intact wilderness qualities, or pristine ecosystems;
4. **Areas with intact or outstanding rural or townscape qualities;**
5. **Areas with a recognized special character or sense of place;**
6. **Areas lying outside a defined urban edge line;**
7. **Areas with sites of cultural or religious significance;**
8. **Areas of important tourism or recreation value;**
9. **Areas with important vistas or scenic corridors;**
10. **Areas with visually prominent ridgelines or skylines.**

The nature of the project:

1. High intensity type projects including large-scale infrastructure;
2. **A change in land use from the prevailing use;**
3. A use that is in conflict with an adopted plan or vision for the area;
4. **A significant change to the fabric and character of the area;**
5. A significant change to the townscape or streetscape;
6. **Possible visual intrusion in the landscape;**
7. Obstruction of views of others in the area.

As can be seen, the various sites could be described as falling within at least 8 of the 10 listed receiving environments (80%), and 3 out of 7 project types (43%) that may cause visual impact giving a combined total of 62%; the receiving environment is highly sensitive while the project character is moderate impact. **Thus the factors triggering potential impact suggest that impact will be high while their scope suggests moderate.** Regarding “the nature of the receiving environment,” categories apply to both the site and the area generally.

5.3.3 Key Issues Requiring Specialist Input

The following table helps identify the likely level of impact:

TYPE OF ENVIRONMENT: High to Low Sensitivity	TYPE OF DEVELOPMENT: Low to High Intensity				
	Category 1 development	Category 2 development	Category 3 development	Category 4 development	Category 5 development
Protected/wild areas of international, national, or regional significance	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected	Very high visual impact expected
Areas or routes of high scenic, cultural, historical significance	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected
Areas or routes of medium scenic, cultural or historical significance	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected	High visual impact expected
Areas or routes of low scenic, cultural, historical significance / disturbed	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected
Disturbed or degraded sites / run-down urban areas / wasteland	Little or no visual impact expected. Possible benefits	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected

Figure 4: Table of Visual Impacts ex DEA&DP Guidelines.

Furthermore, the PGWC “Categorisation of issues to be addressed by the visual assessment” (Table 1, p 6) identifies the project as **Category 3 development**: e.g. low density resort / residential type development, golf or polo estates, **low to medium-scale infrastructure**.¹⁰

¹⁰ **Category 1 development**: e.g. nature reserves, nature-related recreation, camping, picnicking, trails and minimal visitor facilities.

Category 2 development: e.g. low-key recreation / resort / residential type development, small-scale agriculture / nurseries, narrow roads and small-scale infrastructure.

Category 3 development: e.g. low density resort / residential type development, golf or polo estates, low to medium-scale infrastructure.

Terms are defined as follows (p 7): *Medium density development* – generally 1 to 3-storey structures, including cluster development, usually with more than 25% of the area retained as green open space.¹¹ In the list of “Type of environment” this would be defined as a mix of “**areas or routes of medium scenic, cultural, historical significance.**” This would result in a theoretical possible outcome: **moderate visual impact** expected. When considering the following descriptions, we find that the visual impact is perhaps best described as **moderate**:

“High visual impact expected:¹²

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

“Moderate visual impact expected:

1. Potentially some affect on protected landscapes or scenic resources;
2. Some change in the visual character of the area;
3. Introduces new development or adds to existing development in the area.

“Minimal visual impact expected:

1. Potentially low level of intrusion on landscapes or scenic resources;
2. Limited change in the visual character of the area;
3. Low-key development, similar in nature to existing development.”

“Little or no visual impact expected:

1. Potentially little influence on scenic resources or visual character of the area;
2. Generally compatible with existing development in the area;
3. Possible scope for enhancement of the area.”

The following terms are used in the above assessments (p 8):

Category 4 development: e.g. medium density residential development, sports facilities, small-scale commercial facilities / office parks, one-stop petrol stations, light industry, medium-scale infrastructure.

Category 5 development e.g. high density township / residential development, retail and office complexes, industrial facilities, refineries, treatment plants, power stations, wind energy farms, power lines, freeways, toll roads, large-scale infrastructure generally. Large-scale development of agricultural land and commercial tree plantations. Quarrying and mining activities with related processing plants.

¹¹ *Low-key development* – generally small-scale, single-storey domestic structures, usually with more than 75% of the area retained as natural (undisturbed) open space.

Low density development – generally single or double-storey domestic structures, usually with more than 50% of the area retained as natural (undisturbed) open space.

Medium density development – generally 1 to 3-storey structures, including cluster development, usually with more than 25% of the area retained as green open space.

High density development – generally multi-storey structures, or low-rise high density residential development.

¹² North and South sites.

1. *Fundamental change* – dominates the view frame and experience of the receptor;
2. **Noticeable change** – clearly visible within the view frame and experience of the receptor;¹³
3. **Some change** – recognisable feature within the view frame and experience of the receptor;¹⁴
4. *Limited change* – not particularly noticeable within the view frame and experience of the receptor;
5. *Generally compatible* – Practically not visible, or blends in with the surroundings.”

SUMMARY ASSESSMENT—VISUAL IMPACT: The proposed development will have a high impact on the landscape (both sites) causing noticeable (South site) to some (North site) change to the visual environment.

This assessment of the impact is confirmed by the following descriptions of the categories of issues:

5.3.4 Level of Assessment

PGWC (November 2005) defines the selection of the appropriate approach to VIA for a moderate visual impact expected as a **Level 3** Visual Assessment (p 13). This is defined as follows:

Approach Type A Assessment: which are relatively large in extent, and involve natural or rural landscapes.

Visual impact assessment report by visual specialist qualified in landscape architecture or environmental planning; preferably affiliated to SACLAP.

Method:

1. Identification of issues raised in scoping phase, and site visit;
2. Description of the receiving environment and the proposed project;
3. Establishment of view catchment area, view corridors, viewpoints and receptors;
4. Indication of potential visual impacts using established criteria;
5. Inclusion of potential lighting impacts at night;
6. Description of alternatives, mitigation measures and monitoring programmes;
7. Review by independent, experienced visual specialist (if required);

¹³ South site.

¹⁴ North site.

A Level 4 VIA for High Impact would require “Complete 3D modelling and simulations, with and without mitigation” in addition to the above.

5.4 Visual Analysis

5.4.1 Visual Mapping

This has been mapped in Figure 5 and shows the site's visibility as defined by its Viewshed, Zones of Visual Influence and Viewpoint Analysis. Visual Absorption Capacity (or Visual Sensitivity) is not mapped but discussed below. The mapping technique is a traditional, *reflective* mapping or viewshed mapping, which shows where, and to what extent, the site is visible from its surroundings. *Projective* mapping, that is, from viewpoints within the site (inside out) is not required but site views can be seen in the photographs.

5.4.2 Key to the Visual Analysis Map

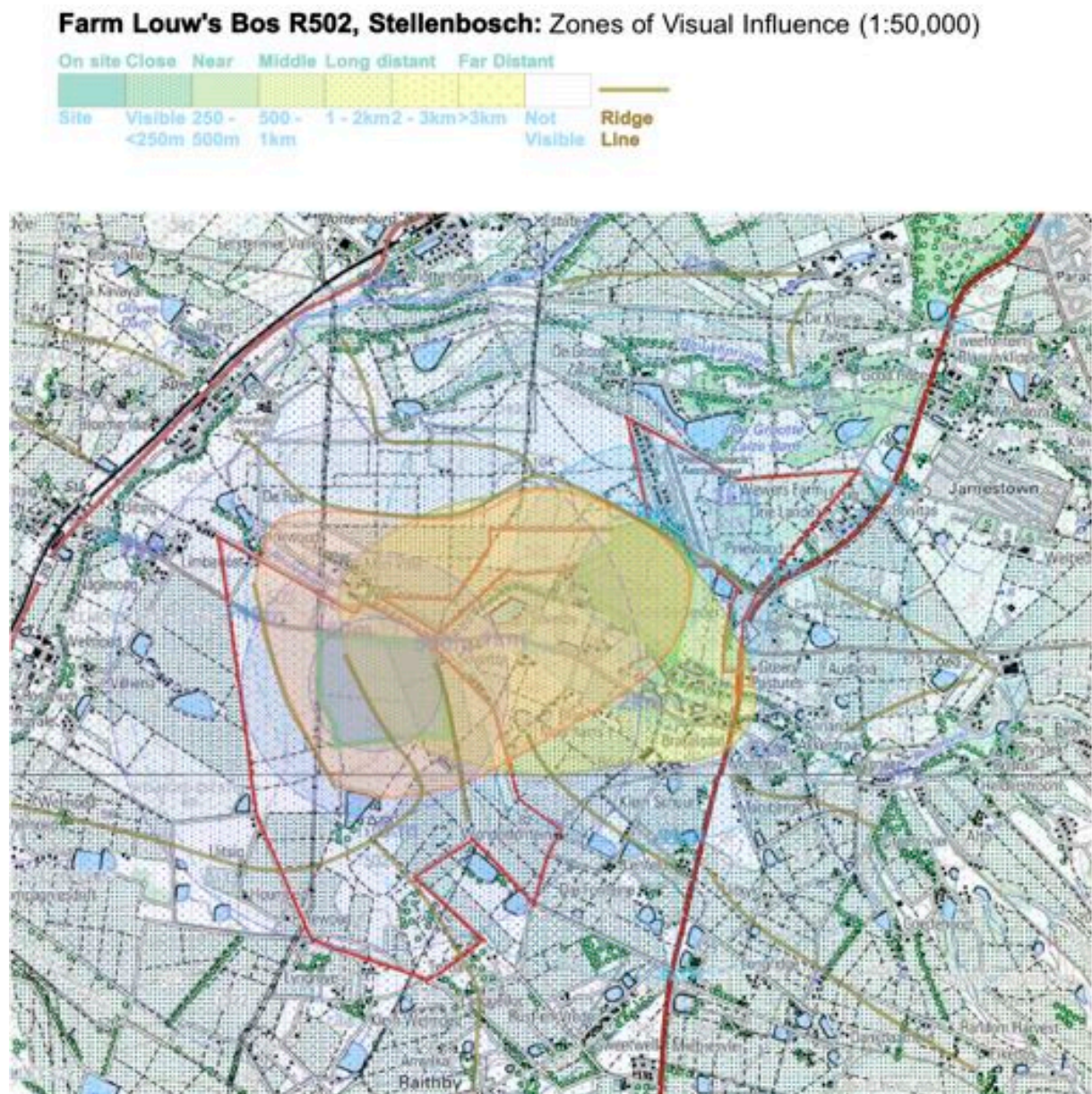
The Visual Catchment is shown as thick brown lines and approximately follows the ridgelines of the mountains and hills. Areas *theoretically* visible to the site (Zone of Visual Influence or ZVI) are indicated in **yellow** overlain on a radiating circle centred on the site graded from **solid blue** on the site being most visible to no shading beyond 5km visibility. Combined with the yellow ZVI this produces a **blue-green** to **yellow** colour where the site is visible. Areas with no yellow colouring are those where the site is not visible (the view shadow). **It should be noted that the term *theoretically* is significant as it is neither possible nor necessary to physically check all these locations. However, strategic views have been checked according to site inspection and analysis.** Some views that would theoretically be possible are not possible due to ground level screening and the hilly terrain. Urban and suburban buildings and orientation are also important factors in visibility. Radiating circles of concentric rings encompass the site at 1km intervals but including a 250m and 500m circle.

As there are two sites being assessed, one has its ZVI in **peach** with radii of **lilac**.

5.4.3 Viewshed

The **viewshed** is indicated by the edge of the yellow zones on the map and either is terminated by **ridgelines** shown in brown or diminishes with distance.¹⁵ The viewshed of both sites is similar being approximately contained in this central region of the Bonte River Valley. The river valley is surrounded by quite high hills on both sides containing the view to a few kilometres along Annandale Road and surrounds. Within this broader viewshed there are minor ridgelines fanning into the valley that have more local effects on visibility.

¹⁵ It was difficult to clearly read the contours on this map due to the vineyards over them so positions shown are approximate only; this has particular reference to the South site, which has a ridge line through it.



Source: New World Associates.

Figure 5: Zone of Visual Influence.

Portion of a 1:50,000 map of South Africa (3318 DD Stellenbosch, 5th Edition 2000) showing the approximate Zone of Visual Influence (ZVI). As there are two sites being assessed, the **North** site has **yellow** ZVI on **blue radii** while the **South** site has its ZVI in **peach** with **lilac radii**.

5.4.4 Zone of Visual Influence

The **Zone of Visual Influence (ZVI)** is shown in various shades of **blue-green** for the North site and **lilac-peach** for the South site, revealing a moderately large area of visibility for both sites. The North site's ZVI falls more in the east of the Bonte River Valley, while the South site's ZVI falls more in the west. However, significant boundary/river plantings of trees in the east tend to block views to the North site while the South site is generally open to view. The corners of the site fall approximately within about 500m of the site's centre so views up to 1km from the boundary are on the 1.5km radius approximately.

5.4.5 Visual Absorption Capacity

The Visual Absorption Capacity (VAC) of the landscape is typically defined by landform, land use and vegetation. In this case, landform applies locally while local vegetation also is a factor.

VAC of the Land Form

Landform is highly significant in containing views in the Bonte River Valley creating a well-defined edge to the ZVI.

VAC of the Land Use

Land Use VAC is a factor in places due to building orientations e.g. *Soverby Guest House*, and dams at *Soverby* and *Linquenda*, particularly along Annandale Road, and structures at *Brakelsdal*.

VAC of the Vegetation

The area has some significant vegetation VAC to heavy planting of boundary and riverine trees/reeds, as well as some heavy forestry in the east around the R44.

5.4.6 Visual Sensitivity

The area has mixed sensitivity as there are varying types of agricultural practice and intensity in and around the sites from grass pastures to vineyards, strawberry fields and tunnels, landscaped homesteads and industrial buildings. The central section around *Soverby-Linquenda* and *Mon Villa* is probably the most sensitive and scenic.

5.4.7 VIA Criteria and Assessment

The PGWC Guideline (June 2005, pp 18-19) defines Visual Impact Assessment Criteria as outlined following. We have included our assessment of the visual impact here along with the assessment criteria for ease of relating to the complex of terminology:

Specific Criteria for VIAs¹⁶—Visibility

The following analysis presents the specific criteria findings in bold for the project.

Visual exposure of the area: the geographic area from which the project will be visible, or view catchment area.

1. **High visual exposure – covers a large area (e.g. several square kilometres).**¹⁷
2. **Moderate visual exposure – covers an intermediate area (e.g. several hectares).**
3. **Low visual exposure – covers a small area around the project site.**

¹⁶ Note 1: These, as well as any additional criteria, need to be customised for different project assessments. Note 2: Various components of the project, such as the structures, lighting or power lines, may have to be rated separately, as one component may have fewer visual impacts than another. This could have implications when formulating alternatives and mitigations.

¹⁷ Both sites.

Visual absorption capacity (VAC): the potential of the landscape to conceal the proposed project, i.e.

1. *High VAC* – e.g. effective screening by topography and vegetation;
2. ***Moderate VAC*** – e.g. **partial screening by topography (and vegetation);**¹⁸
3. ***Low VAC*** – e.g. **little screening by topography (or vegetation).**¹⁹

Landscape integrity: the compatibility or congruence of the project with the qualities of the existing landscape or townscape, or the 'sense of place.'

1. *Low compatibility* – visually intrudes, or is discordant with the surroundings;
2. ***Medium compatibility*** – **partially fits into the surroundings, but clearly noticeable;**²⁰
3. *High compatibility* – blends in well with the surroundings.

Visibility of the project: based on distance from the project to selected viewpoints i.e.:

1. ***Highly visible*** – **dominant or clearly noticeable (e.g. 0 to 1km)**²¹
2. ***Moderately visible*** – **recognisable to the viewer (e.g. 1 to 2km);**²²
3. *Marginally visible* – not particularly noticeable to the viewer (e.g. 2km+);

SUMMARY ASSESSMENT—VISIBILITY: The development has moderate (North site) to high (South site) visual exposure, moderate (both sites) visual absorption capacity, medium (both sites) compatibility, and is moderately (North site) to highly visible (South site) along Annandale Road.

The PGWC Guideline further notes: "To aid decision-making, the assessment and reporting of possible impacts requires consistency in the interpretation of impact assessment criteria. Various criteria are defined in the EIA Regulations, such as 'nature', 'extent', 'duration', etc. The interpretation of these criteria for visual assessments is given in Box 11" repeated below:

Criteria Used for the Assessment of Visual Impacts—Visual Impact Assessment

Once again, the following analysis presents the specific criteria findings in bold for the project.

Nature of the impact: an appraisal of the visual effect the activity would have on the receiving environment. This description should include visual and scenic resources that are affected, and the manner in which they are affected, (both positive and negative effects).

¹⁸ North site.

¹⁹ South site.

²⁰ Both sites.

²¹ South site.

²² North site.

Extent: the spatial or geographic area of influence of the visual impact, i.e.:

1. *site-related*: extending only as far as the activity;
2. *local*: limited to the immediate surroundings;
3. ***district*: affecting a smaller urban/rural area;**²³²⁴
4. *regional*: affecting a larger metropolitan or regional area;
5. *national*: affecting large parts of the country;
6. *international*: affecting areas across international boundaries.

Duration: the predicted life-span of the visual impact:

1. *short term*, (e.g. duration of the construction phase);
2. *medium term*, (e.g. duration for screening vegetation to mature);
3. ***long term*, (e.g. lifespan of the project);**²⁵
4. *permanent*, where time will not mitigate the visual impact.

Intensity: the magnitude of the impact on views, scenic or cultural resources.

1. *low*, where visual and scenic resources are not affected;
2. ***medium*, where visual and scenic resources are affected to a limited extent;**²⁶
3. *high*, where scenic and cultural resources are significantly affected.

Probability: the degree of possibility of the visual impact occurring:

1. *improbable*, where the possibility of the impact occurring is very low;
2. *probable*, where there is a distinct possibility that the impact will occur;
3. *highly probable*, where it is most likely that the impact will occur; or
4. ***definite*, where the impact will occur regardless of any prevention measures.**²⁷

Significance: The significance of impacts can be determined through a synthesis of the aspects produced in terms of their nature, extent, duration, intensity and probability, and be described as:

1. *low*, where it will not have an influence on the decision;
2. ***medium*, where it should have an influence on the decision unless it is mitigated; or**²⁸
3. *high*, where it would influence the decision regardless of any possible mitigation.

²³ We have added the term "*district*" as it better describes the range of most visual impacts.

²⁴ Both sites.

²⁵ Both sites.

²⁶ Both sites.

²⁷ Both sites.

²⁸ Both sites.

SUMMARY ASSESSMENT—NATURE OF IMPACT: The development's visual impact has district extent, long term duration, medium intensity, definite probability, and medium significance on the landscape for both sites.

	North Site	South Site
VISUAL IMPACT		
Impact	High	High
Change	Some	Noticeable
VISIBILITY		
Visual Exposure	Moderate	High
Visual Absorption Capacity	Moderate	Moderate
Compatibility	Medium	Medium
Visibility	Moderate	High
NATURE OF IMPACT		
Extent	District	District
Duration	Long Term	Long Term
Intensity	Medium	Medium
Probability	Definite	Definite
Significance	Medium	Medium

Figure 6: Comparative Assessment of the Sites.

COMPARATIVE ASSESSMENT: The South site has a moderate to high impact while the North site has a more-moderate to high impact, particularly a more-moderate-visibility due to not being sited on Annandale Road.

5.4.8 Plomp Methodology

Visual impact assessment using the Plomp (2004) methodology (see Appendix for key):

Activity	Impact	Phase	Probability		Duration		Scale		Magnitude / Severity		Significance ²⁹		
			Score	Magnitude	Score	Magnitude	Score	Magnitude	Score	Magnitude	Score	WOM	WM
Visual Significance Score Calculation = Probability x (Duration + Scale + Magnitude) = 5 x (4 + 1.5 + 6) = 5 x 11.5 = 57.5													
Construction activities, operational infrastructure and lighting, decommissioning of infrastructure	Visual impact of development on surrounding landscape	Construction, operations and closure	5	Definite	4	Long Term	1.5	Local	6	Medium	57.5	Moderate	Low

Figure 7: Plomp Methodology Assessment for both sites.

²⁹ **Significance:** Score calculation = Probability x (Duration + Scale + Magnitude); WOM Without Mitigation; WM With Mitigation.

5.4.9 Distribution of Impacts

"Beneficiaries and losers"³⁰ (PGWC, p 21) of the project's visual impacts are mainly local as the development will only have high visual impact to the local environment.

5.4.10 Photomontages

Photomontages were not prepared as they are not necessary in a Level 3 VIA.

5.5 Analysis of Alternatives

An analysis of alternatives was by others but not in the visual assessment. Only one site is under consideration here.

5.6 Planning Phase Impacts

This is potentially the most significant phase of a Project as it is here that crucial planning and design decisions are taken. **Critical Mitigation Recommendations are noted in bold.**

5.6.1 Planning and Design

While there is a conflict between the need to densify urban areas within the urban edge at the same time as maintaining rural character along the urban edge, there is a similar conflict in rural areas in the need to locate industrial type activities that are often unsightly. This has to be managed and mitigated.

As the WC Provincial Urban Edge Guideline has referred to the need **"to manage urban development in such a way that no development would detract from the visual quality of the environment and that all development conform to a characteristic style and urban form that suits the character of the area,"** further stating that **"this implies that edge development should not only be limited to certain areas through inclusion or exclusion, but that edge development should also be subject to urban design guidelines, architectural consideration and general aesthetic treatment"** for both natural and built environment (see section 3.5.1).

Furthermore, the WC Provincial SDF noted *inter alia* the following (see section 3.5.2):

- It also proposes "to ensure effective management of all municipal functions and facets to ensure equitable and affordable services and amenities and a safe **and aesthetically pleasing urban environment...."**
- **Cultural resources acknowledged and protected as the fundamental link with the historical past and a basis for planning and shaping of future urban and rural environments.**

³⁰ Possible better designations are "winners and losers" or "beneficiaries and adversaries" as, so often objectors become opponents in environmental and visual impact.

- **A safe, healthy and aesthetically pleasing urban environment, with the architectural and spatial character depicting the historical and cultural background of the habitat community.**

Many of these components such as the mountains, farms and historical structures are irreplaceable national assets and accentuate the region's unique character. For this reason, policy guidelines and actions must be formulated to emphasize, protect and promote these components. **The character, the detail of the towns and any planned changes should thus be carefully considered."**

As in any development, it is the character and layout determined by the visual-aesthetic-landscape analysis that will achieve the balance as best as possible.

Mitigation Recommendation: Planning and Design

The plan presented to date is an initial concept only. Therefore it is well able to take on any mitigation recommendations.

1. **Site Development Plan:** As noted previously, the concept plan is very preliminary and covers a wider area than the final extent of the South site:
 - 1.1 Taller structures such as the central facilities should be set back from the road as they are currently indicated and should not be moved to the edges of the site or nearer Annandale Road.
 - 1.2 A landscape buffer along the edges is important and should be well planted to prevent views into the site except at strategic locations such as on-axis.
 - 1.3 The western boundary's relationship with the power lines needs to be carefully handled and pulled away from it if possible due to restrictions on tree planting and the aesthetic impact of the power lines themselves.
 - 1.4 As this area has a history of mixed agricultural-viticultural practices, historically being planted to gum trees, more recently in part to vineyards, either are acceptable practices in and around the site/s.
 - 1.5 As there are already old vineyards near *Soverby* it may be feasible to maintain them in part or integrate new vineyards to maintain the vineyard buffer to *Soverby Guest House*.³¹
 - 1.6 The choice of planting is more open to the wide range of historical agricultural, viticultural and silvicultural practices. These could, perhaps, be negotiated with local landowners and the municipality to create the best mix.

³¹ This would keep the cemetery within one visual catchment zone i.e. without crossing a ridgeline.

- 1.7 Sustainable site development and Green Building principles or standards should be employed to enhance the environmental aesthetic.
- 1.8 Lighting must be carefully managed to minimise excessive lighting wherever possible (see Operation Phase below).
2. **Colouration:** Careful colouration of fences in particular needs to be made, as well as any other landscape furniture such as lighting, benches and water features. These should preferably be in a natural colour palette that will not stand out from the agricultural landscape nor draw attention to itself with bright colouration. Likewise, building colours, walls and roofs, should be subtle.
3. **Landscape Plan:** The Landscape Plan should retain its existing features overall and not be changed to something completely different such as a freeform design. The traditional arrangement of cemeteries, the avenues and bounding walls will fit well into both the historical and cultural landscape.
 - 3.1 Wherever possible the greening/planting of the scheme needs to be maximised.
 - 3.2 Permeable paving and other sustainable practices should be incorporated into the landscape plan.
 - 3.3 Planting using indigenous and preferably endemic species from the area should be planned from the beginning; traditional exotic trees are acceptable.
 - 3.4 Planting of harvestable flowers and/or herbs in and around the cemetery may be a productive way of incorporating useful planting into the heritage matrix.
 - 3.5 Large trees should be incorporated into the Landscape Plan to screen tall buildings or unsightly areas such as the nursery/maintenance yard.
 - 3.6 Gum trees, pines and oaks, while not indigenous, are typically the only major trees that can survive the rugged environment and achieve the necessary scale. They are also traditional cultural elements and not out of place as a result.
 - 3.7 Indigenous/endemic trees can also be used but are not as tall or traditional as gums.
4. **Perimeter Treatment:** As described above this may incorporate screening trees or fences. The treatment of perimeter fencing and any signage needs to be carefully considered.
 - 4.1 Unsightly massive walls are not appropriate but the traditional low Cape farm werf wall may suffice well on the boundary and help locate the site on Annandale Road.

- 4.2 Should fencing be required use clear-view fencing or similar is preferred, not palisade. It should be coloured a dull green to match the local environment and not black, silver, brown or other unnatural, standard commercial colours.
5. **Biodiversity:** As noted above, where possible, endemic planting schemes should be used with the exception of traditionally planted trees, which are permissible for practical and cultural landscape reasons.
6. **Maintenance:** Scheme maintenance both of buildings and landscape need to be undertaken with commercial maintenance projects with this intention from the outset for the duration of the project. Good site tidiness should be maintained at all times.
7. **Visual Assessor Review:** The proposed Landscape Plan should be referred to the visual impact assessor, namely, New World Associates, for review before it is approved, to ensure that it meets the recommendations of this report.

5.7 Construction Phase Impacts

Construction Phase visual impacts are no more than normal for an urban site although they will be extensive.

5.7.1 Construction

Construction inevitably gives rise to noise, disruption and dust, amongst others. These are well covered by Municipal Bylaws. Site destruction and damage is also coincident with quarrying especially to water, soil and vegetation. Changes to the water table by excavations can also have a heavy impact on the trees with deaths occurring a few years later.

Mitigation Recommendation: Construction

1. **Damage Control:** All parties must make every effort to control the destruction of soils and vegetation on site, especially any remnants of natural vegetation. These must not be damaged under any circumstances.
2. **Pollution:** Chemical damage by cement mixing directly on the ground and by diesel, etc spills must also be prevented at all costs, as should vandalism of the plants and accidental damage to limbs by workers and machinery. Fires must be prevented also at all costs in all areas. Penalties and incentives should be implemented as can fencing off areas.
3. **Monitoring:** Monitoring of the landscape, soils and vegetation during construction is very important and must be attended to regularly. Damage to some is all too inevitable and often irreversible. Adequate indigenous (preferably endemic) vegetation must be planted.

5.8 Operation Phase Impacts

Lighting, landscape maintenance and conservation management are discussed.

5.8.1 Lighting

The Architectural and Landscape Guidelines need to consider lighting in their specific guidelines. Security lighting, while necessary, can be handled with care.

Mitigation Recommendation: Lighting

1. **Lighting:** Lighting should be minimised and carefully controlled as part of the project's management plan. The use of green energy fittings and concepts should be encouraged and lighting developed with sensitivity to the rural landscape.

5.8.1 Conservation Management and Landscape Maintenance

Waterwise landscaping should be used wherever possible and green star building practices.

Mitigation Recommendation: Conservation Management and Landscape Maintenance

1. **Landscape Maintenance:** must be carried out at all times in line with these recommendations to help keep the scheme green and encouraging local biodiversity.

5.9 Decommissioning Phase Impacts

On-going landscape maintenance and conservation management remains necessary.

5.9.1 Refurbishment and Resale

This is a continuing aspect of the property ownership cycle.

Mitigation Recommendation: Refurbishment and Resale

1. **Refurbishment and Resale:** The previous recommendations regarding Planning, Construction and Operation all apply to this process. The entire site can be dismantled and rehabilitated if no longer needed and restored to an appropriate land use.

This concludes the analysis of impacts and detailed recommendations for their mitigation. The chapter, Visual Management and Monitoring Plan follows. It gives recommendations for the management and monitoring of the environment and the given VIA recommendations.

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6 Visual Management and Monitoring Plan

Sound Visual Management is the ultimate aim of the VIA process. The Mitigation Recommendations developed in the report need to be implemented. This process of implementation will occur throughout the lifetime of the project, hence, the need for a Monitoring Plan. Institutions, individuals and organisations referred in the Monitoring Plan must develop a means of achieving the monitoring otherwise this report serves no purpose. Once the VIA Report has been approved, the Developers must seek the implementation of the recommendations as soon as possible.

6.1 Introduction

This chapter uses the information developed in the previous section. It sets out a basic plan for the implementation of both site management and the VIA recommendations.

6.1.1 Background

Site management in this case refers to that aspect of project management needed to control visual impact. The tools for visual management developed in the VIA Report are the *Mitigation Recommendations*. Their implementation also needs to be managed as part of the on-going site and impact management. A particular aspect of site management is monitoring. Monitoring is the routine inspection, recording and reporting of visual issues pertaining to visual impact aimed at mitigating impact by timely correction of problems as they arise.

6.1.2 Key Issues

1. Monitoring is typically routine inspection with physical analysis and recommendation, or routine reporting by various combinations of parties as outlined. The on-going monitoring of various aspects of the project are critical to its success. Long term management of visual issues is a more challenging issue that comes down to what individuals do over time as allowed to by their local authority.

2. With the identification of monitoring method, analysis and reporting, is the identification of the responsible party as indicated in Figure 8: Visual Monitoring Plan. This figure is crucial in the successful implementation of the Mitigation Recommendations and consequently, a visually-friendly (or visually responsible) project. The key parties referred to in the Monitoring Plan are largely the Developers/Owners, the Designers, and the Planning Authorities.
3. **Once the VIA Report has been approved, the Developer must seek the implementation of the recommendations as soon as possible. The Developer and Designers need to take this document and embody it in their day-to-day operations and long-term plans. Mitigation Recommendations are all written specifically around the subject of project and site management for impact mitigation; it is their incorporation into overall project management policy and practice that is required.**

6.2 Visual Management

6.2.1 Project and Site Management

The management of the project and site with particular reference to visual concerns is the subject of the Mitigation Recommendations and, indeed, the whole VIA study. As the Mitigation Recommendations are all written specifically around the subject of project and site management for impact mitigation; it is their incorporation into overall project management policy and practice that is required. The information contained in the VIA Report effectively provides the necessary information for the project management to implement their project in a visually responsible manner.

6.2.2 Implementing the VIA Recommendations

The Mitigation Recommendations have been written as broad guidelines to identify principles for minimising visual impact. The recommendations are by no means specifications. **There is a tendency in the construction industry to damage and repair later, which, while possible in construction, is not always possible in the environment. A need for care towards the environment should be developed by the Contractors.** The Development Team needs to take this document and embody it in their planning and design, day-to-day operations and long-term plans.

6.3 Environmental Monitoring

6.3.1 Monitoring Methodology

The framework for administering the implementation of mitigation guidelines is presented in the monitoring plan on the following page (see Figure 8: Visual Monitoring Plan). The table comprises the list of project activities numbered in the same sequence as those in the Mitigation

Plan. For each project activity, recommendations are made from the following standardised monitoring activities:

6.3.2 Monitoring

The following types and timing of monitoring are suggested:

1. **Inspection:** site inspection (random, at completion), routine inspection (possibly annually), clean-up inspection (after completion of clean up of the accident incident).
2. **Monitoring:** observation (and photography).
3. **Review:** review of reports, plans and design.

6.3.3 Monitoring Plan

The Monitoring Plan has been tabulated for easy reference in the figure below.

Item	Project Component and Activity	Monitoring	Investigation	Reporting	Responsible Party
5.6	PLANNING PHASE				
5.6.0	VIA Report	Review	Physical and Recommendation	Recommendation	Planning Authorities
5.6.1	Planning and Design	Review	Physical and Recommendation	Recommendation	Authorities, Developers and Designers
5.7	CONSTRUCTION PHASE				
5.7.1	Construction	Site and Routine Inspection	Physical and Recommendation	Recommendation	ALL
5.8	OPERATION PHASE				
5.8.1	Lighting	Routine Inspection	Physical and Recommendation	Routine, <i>Ad hoc</i> Meeting	Owners, Authorities
5.8.2	Conservation Management and Landscape Maintenance	Routine Inspection	Physical and Recommendation	Routine, <i>Ad hoc</i> Meeting	Owners, Authorities
5.9	DECOMMISSIONING				
5.9.1	Refurbishment	Site Inspection	Physical and Recommendation	Routine, <i>Ad hoc</i>	Owner, Authorities

Figure 8: Visual Monitoring Plan.

6.3.4 Analysis

The following types of analyses are recommended:

1. **Physical:** on site and by photography.
2. **Recommendation:** check against VIA recommendation.

6.3.5 Reporting

The following methods of recording and reporting are recommended:

1. **Recommendation:** report or design recommendation.
2. **Routine:** log (daily, monthly, activity), report (quarterly), certificate, minutes.
3. **Ad hoc:** report (incident, closing).
4. **Meetings:** routine meeting (weekly), follow-up (incident), pro-active meeting (*ad hoc*).

6.3.6 Responsible Party

The following principal responsible parties have been identified as key during the monitoring process:

1. The Planning Authorities
2. The Developers and Owners
3. The Designers: Architects and Landscape Architects
4. The Contractors.

The above monitoring plan identifies who is conducting the prescribed monitoring activities. In cases where certification for compliance or approval are indicated the responsible certifying or approving authority is noted. Many building activities are strictly controlled by local by-laws.

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Appendices

Appendix A – Plomp Assessment Methodology (2004)

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Appendix A: Plomp Assessment Methodology

An impact can be defined as any change in the physical-chemical, biological, cultural and/or socio-economic environmental system that can be attributed to human activities related to alternatives under study for meeting a project need.

The significance of the aspects/impacts of the process was rated by using a matrix derived from Plomp (2004) and adapted to some extent to fit this process.³² These matrices use the consequence and the likelihood of the different aspects and associated impacts to determine the significance of the impacts.

The significances of the impacts were determined through a synthesis of the criteria below:

Probability	This describes the likelihood of the impact actually occurring.
Improbable	The possibility of the impact occurring is very low, due to the circumstances, design or experience.
Probable	There is a probability that the impact will occur to the extent that provision must be made therefor.
Highly Probable	It is most likely that the impact will occur at some stage of the development.
Definite	The impact will take place regardless of any prevention plans, and there can only be relied on mitigatory actions or contingency plans to contain the effect.
Duration	The lifetime of the impact.
Short term	The impact will either disappear with mitigation or will be mitigated through natural processes in a time span shorter than any of the phases.
Medium term	The impact will last up to the end of the phases, where after it will be negated.
Long term	The impact will last for the entire operational phase of the project but will be mitigated by direct human action or by natural processes thereafter.
Permanent	Impact that will be non-transitory. Mitigation either by man or natural processes will not occur in such a way or in such a time span that the impact can be considered transient.
Scale	The physical and spatial size of the impact.
Local	The impacted area extends only as far as the activity, e.g. footprint.
Site	The impact could affect the whole, or a measurable portion of the above-mentioned properties.
Regional	The impact could affect the area including the neighbouring residential areas.
Magnitude/ Severity	Does the impact destroy the environment, or alter its function.
Low	The impact alters the affected environment in such a way that natural processes are not affected.
Medium	The affected environment is altered, but functions and processes continue in a modified way.
High	Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.
Significance	This is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.
Negligible	The impact is non-existent or unsubstantial and is of no or little importance to any stakeholder and can be ignored.
Low	The impact is limited in extent, has low to medium intensity; whatever its probability of occurrence is, the impact will not have a material effect on the decision and is likely to require management intervention with increased costs.
Moderate	The impact is of importance to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.
High	The impact could render development options controversial or the project unacceptable if it cannot be reduced to acceptable levels; and/or the cost of management intervention will be a significant factor in mitigation.

Figure A-9: Impact Significance Criteria.

³² Plomp, H. (2004). *A Process for Assessing and Evaluating Environmental Management Risk and Significance in a Gold Mining Company*. Conference Papers – Annual National Conference of the International Association for Impact Assessment: South African Affiliate.

The following weights were assigned to each attribute:

Aspect	Description	Weight
Probability	Improbable	1
	Probable	2
	Highly Probable	4
	Definite	5
Duration	Short term	1
	Medium term	3
	Long term	4
	Permanent	5
Scale	Local	1
	Site	2
	Regional	3
Magnitude/Severity	Low	2
	Medium	6
	High	8
Significance	Sum (Duration, Scale, Magnitude) x Probability	
	Negligible	<20
	Low	<40
	Moderate	<60
	High	>60

Figure A-10: Attribute Weighting.

The significance of each activity is rated without mitigation measures and with mitigation measures for both construction and operational phases of the development.

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