

Visual Impact Assessment – (Basic Assessment)



**Proposed Van Wyk's River Park Development on
Portion 10, Van Wyks River Farm No. 787,
Paarl**

Drakenstein Municipality

BASIC ASSESSMENT

Prepared for: Guillaume Nel Environmental Consultants

45 Fabriek Street, Paarl, 7646

Tel: 021 870 1874 Fax: 021 870 1873

Prepared by: ARLA Consulting Pty (Ltd)

PO Box 304, Sanlamhof, Bellville, 7532

Tel: 021 981 6104 Fax: 086 668 7666

TABLE OF CONTENTS

TABLE OF CONTENTS	2
EXECUTIVE SUMMARY	5
1. INTRODUCTION	6
1.1 Background to the Study	7
1.2 Legislative Context	8
1.3 Terms of Reference	10
1.4 Methodology	11
1.5 Assumptions and Limitations	12
2. THE PROPOSED DEVELOPMENT	13
2.1 Site Location.....	13
2.2 Development Description.....	14
2.2.1 Prior to development:.....	14
2.2.2 Construction phase	16
2.2.3 Operational phase.....	17
3. RECEIVING ENVIRONMENT.....	18
3.1 Description of the Affected Area and the Scenic Resources	18
3.1.1 Landscape types.....	18
3.1.2 Topography and Landforms	19
3.1.3 Landscape Cover/Vegetation	20
3.1.4 Settlement Patterns.....	21
3.1.5 Views & View Corridors.....	22
3.1.6 Landscape Character.....	22
3.1.6.1 Landscape Character Sensitivity	23
3.1.6.2 Visual Absorption Capacity	23
3.1.7 Synthesis	26
4. IDENTIFICATION OF VISUAL ISSUES	27

4.1 Permit Requirements.....	27
5. VISUAL IMPACT ASSESSMENT OF THE PROPOSED DEVELOPMENT	28
5.1 Impact Assessment Criteria.....	28
5.1.1 Extent of the Impact.....	28
5.1.2 Duration of the Project	28
5.1.3 Probability of the Impact.....	29
5.1.4 Intensity of the Impact	29
5.1.5 Visual Impact Significance	30
5.2 Impact Assessment and Mitigation Measures.....	31
5.2.1 Visibility.....	31
5.2.1.1 View Catchment.....	31
5.2.1.2 Zone of Visual Influence.....	32
5.2.2 Receptors	32
5.2.3 Visual Exposure.....	33
5.2.4 Visual Intrusion	39
5.3 Visual Impacts	40
5.3.1 Change in Landscape Character.....	40
5.3.2 Height and Scale of Development.....	40
5.3.3 Visibility from Sensitive Receptors	40
5.3.4 Glare and Reflection	40
5.3.5 Light Pollution	41
5.3.6 Visual Scarring.....	41
5.3.7 Visibility of Construction Site Camp & Construction Vehicles	41
5.3.8 Cumulative Impacts.....	41
5.4 Mitigation Measures	42
6. CONCLUSIONS AND RECOMMENDATIONS.....	43
7. REFERENCES	44

List of Figures

- Figure 1: The property south-west of Paarl (Kaplan, 2013:3)
- Figure 2: The extent of the property (Phase 1 HIA Report, 2013:8)
- Figure 3: Site Base Plan Rev 2 June 2014 (Refer Drawing HS 362-04 by Jan Hanekom Partnership)
- Figure 4: Google Image of site prior to development, NTS.
- Figure 5: Proposed Site Development Plan Rev 2 June 2014 (Refer Drawing HS 362-07 by Jan Hanekom Partnership)
- Figure 6: Proposed Landscape Concept Plan Rev 2 June 2014 (by Millucia Sampson in association with Ixia Landscape Architects)
- Figure 7: Adjacent Land Uses (Refer Drawing HS 362-03 by Jan Hanekom Partnership).
- Figure 8: Landscape Features
- Figure 9: Swartland Shale Renosterveld (based on The Vegetation of South Africa, Lesotho & Swaziland by Mucina & Rutherford)
- Figure 10: Figure-Ground (Refer to Phase 1 HIA Diagram No. 2; 2013)
- Figure 11: View corridor & Scenic drive
- Figure 12: Degrees of Visual Absorption Capacity (Refer Oberholtzer, 2011:88)
- Figure 13: View Catchment Area
- Figure 14: Viewpoints as determined by heritage architect (Refer HIA Phase 1, Diagram No. 1; 2013)
- Figure 15: Viewpoints determined in consultation with heritage architect for Erf 22

List of Images

- Image 1: Windbreaks at N1 / Suid-Agter-Paarl Rd Intersection
- Image 2: *Casaurina cunninghamiana* (Beefwood) windbreaks along Sandringham Rd (R101)
- Image 3: *Pinus pinaster* (Cluster pine) windbreaks along the N1, south bound.
- Image 4: *Cupressocyparis leylandii* (Leyland cypress) windbreaks along the N1 (in the background), north bound.
- Image 5: Development south of Sandringham Rd / R101
- Image 6: View from Afrikaans Language Monument (taken by Graham Jacobs)
- Image 7: Viewpoint 1 (from N1 travelling towards Paarl)
- Image 8: Viewpoint 2 (from N1 travelling towards Paarl)
- Image 9: Viewpoint 3 (from N1 travelling towards Paarl)
- Image 10: Viewpoint 4 (from Suid-Agter-Paarl Rd)
- Image 11: Viewpoint 5 (from N1 travelling towards Cape Town)
- Image 12: Viewpoint 6 (from Suid-Agter-Paarl Rd)
- Image 13: Viewpoint 7 (from brickfields)
- Image 14: Viewpoint 8 (from R101 travelling towards CT)
- Image 15: Viewpoint 9 (from N1 travelling towards Paarl)
- Image 16: Viewpoint 10 (from N1 travelling towards Paarl)
- Image 17: Viewpoint 11 (from N1 travelling towards Cape Town)
- Image 18: Viewpoint 12 (from Suid-Agter-Paarl Rd bridge looking south)

EXECUTIVE SUMMARY

ARLA Consulting was commissioned to conduct a Visual Impact Assessment (VIA) for the proposed development of Portion 10 of Farm 787 Van Wyks River near Paarl, in the Western Cape.

The property is located in a transition zone: from agricultural to light industrial and forms part of a gateway to Paarl and the Suid-Agter-Paarl scenic drive. There are a couple of scenic resources that needs to be taken into consideration when developing this property:

- The N1 view corridor,
- The Suid-Agter-Paarl Rd scenic drive, and
- The cultivated landscape north of the property.

The Drakenstein SDF confirms that the property falls within the urban edge and it has been earmarked as “Special Area B” for residential, commercial, tourism or light industrial use (or a combination thereof).

The impact of the development will be limited to the immediate surroundings, will be permanent and have a moderate impact, on the surrounding scenic resources.

The proposed development will fit in with the existing development on the southern edge of the property and it has the ability to mitigate views and to improve the visual experience travelling to and from Paarl on the N1 however, it will need significant screening and strict landscape and architectural guidelines, especially on the northern boundary, to achieve this.

Due to the fact that the endemic Swartland Shale Renosterveld vegetation has a low absorption / screening capacity it is important to include windbreaks, similar in scale to those in the vicinity, to not only give the necessary screening towards sensitive receptors (as listed above) but also to tie in with the existing cultural winelands landscape.

The results of this study indicate that the proposed development will a moderate to low visual impact if the necessary mitigation measures are adhered to and in addition has the ability / opportunity to improve the overall visual experience of this part of Paarl.

Antoinette Raimond

Professional Landscape Architect (UCT)

Registered with the South African Council for the Landscape Architectural Profession

Professional Registration # 20218

1. INTRODUCTION

This report was done by Antoinette Raimond Landscape Architectural Consulting, ARLA Consulting, who was appointed by Guillaume Nel Environmental Consultants to conduct a Visual Impact Assessment (VIA) for the proposed development of Portion 10 of Farm 787 Van Wyks River near Paarl, in the Western Cape.

The property, measuring 12,6924ha in total, is situated approximately 2km south-west of Paarl, between the N1 and Old Paarl Road/R101 (Figure 1). The bridge across the N1, that connects the R101 via the Suid-Agter-Paarl road to the R44, traverses the eastern end of the site. The site is currently vacant and has never been developed. The proposal entails a commercial, light industrial and office space development. Associated infrastructure includes internal roads and engineering services.

A notification of Intent to Develop (NID) was completed by Guillaume Nel Environmental Consultants and submitted to Heritage Western Cape (HWC) for comment. In a letter dated 28 November 2012 (Case No. 120508SD11E) HWC requested that a Heritage Impact Assessment (HIA), including a VIA, be done to assess the impact of the development proposal on the cultural landscape and gateway aspects of the site.

This basic visual assessment document needs to be read in context of the HIA process and in conjunction with all specialists reports associated with this development proposal. Whereas this report focuses primarily on visual and aesthetic criteria cognizance of other factors are acknowledged.



Figure 1 The property south-west of Paarl (Kaplan, 2013:3)

1.1 Background to the Study

According to the Phase 1 HIA Report (2013:7) the property was set aside for development in the past during which time, according to the archaeological report (Kaplan, 2013:5), *“extensive landscape modification took place”*. According to Harding (2011:1), *“Building material was imported onto the site, and the course of the Van Wyks River, which drains the site from the N1”, was “severely altered”*.

The Phase 1 HIA Report further states that *“portion 10 was subdivided in 1993, and acquired by the Imperial Group Pty Ltd in 2007”* (2013:14).

The Site Context

Currently light industrial development occurs to the south of the property, the Benbernard Industrial area (on the opposite side of the R101) and includes the newly developed Zandwyk Industrial Estate (Phase 1 HIA, 2013:7). The property forms a buffer between the rather unattractive industrial developments (Phase 1 HIA, 2013:16) and has the potential to improve the current situation through integrated development and appropriate landscaping that can mitigate views and improve the experience of this part of Paarl as a whole as viewed from the N1 and Suid-Agter-Paarl Road onto the industrial areas (Phase 1 HIA, 2013:17).

A large clay quarry and brick works is located beyond these light industrial areas to the southeast along the R45 towards Franschoek. The Simonsvlei Wine Cellar is located to the south-west of the site further along the R101 towards Klapmuts. The land immediately to the east and west of the site is vacant. The land to the north (immediately opposite the site) is planted with vineyards and forms part of the Suid-Agter-Paarl Road cultivated landscape (Phase 1 HIA, 2013:7).

The Drakenstein Municipality has identified / earmarked the area, in which the property is located, as a future light industrial and commercial node and development patterns in these areas reveals a clear shift in land use from agricultural to commercial and industrial. Increased development densities are clearly apparent to the south, south-east and south-west of the property (Phase 1 HIA, 2013:11).

1.2 Legislative Context

Although this study forms part of a Basic Assessment process undertaken in terms of the National Environmental Management Act, the requirements of the National Heritage Resources Act (Act 25 of 1999) have to be met.

Following the submission of a notification of Intent to Develop (NID) Heritage Western Cape (HWC) requested a Heritage Impact Assessment (HIA) that consists of a Visual Impact Assessment (VIA) that measures the impact of the proposal on the cultural landscape and gateway aspects of the site.

Cultural Landscape:

According to the Operational Guidelines for the Implementation of the World Heritage Convention, cultural landscapes are cultural properties that represent the "*combined works of nature and man*" designated in Article I of the Convention; are:

- *illustrative of the evolution of human society and settlement over time,*
- *under the influence of the physical constraints and/or opportunities presented by their natural environment, and*
- *of successive social, economic, and cultural forces, both external and internal (ICOMOS 2009).*

Gateway:

Dee (2001:172) refers to gateways as "*threshold structures commonly associated with entry spaces. Gateways may be actual (gated) or symbolic and mark the transition from one type of landscape or space to another. They signal arrival and, for this reason, can become focal places, particularly if the gateway structure has popular cultural meanings. Gateway structures may be architectural (buildings), sculptural, topographic or formed on a smaller scale with vegetation.*"

Existing Policies & Frameworks:

1. Provincial Spatial Development Framework: was approved as Structure Plan in terms of Section 4 (6) of LUPO in 2009 by the PG:WC. Policy HR25 states that a Visual Resource Management Plan should be prepared for the N1 for the section between the Du Toits Kloof tunnel and Cape Town. This route is regarded as an important gateway to Cape Town. The PSDF states that all developments along this route should be subject to heritage, environmental and visual analysis before they are evaluated (PGWC: 2009).
2. Drakenstein Spatial Development Framework: was approved by the Drakenstein Council in November 2010 in terms of the Municipal Systems Act (Act 32 of 2000). According to this document the site falls within the urban edge for Paarl, in an area indicated as Special Area B and earmarked for residential / commercial / tourism &

related or light industrial use. The SDF includes the following statements regarding development proposals for this area:

- The area should contribute to residential, mixed use and tourism opportunities,
 - Opportunities should be exploited, created by existing movement patterns,
 - The form and scale of development must contribute to enhancing the rural character of the area,
 - Visual management plans to be implemented for the area along the N1, and
 - Development application will be subject to various studies.
3. Drakenstein Heritage Survey: although the site does not fall into a declared conservation area it does fall within a heritage overlay zone (which has been formally adopted by HWC) and identifies the Suid-Agter-Paarl Road as a scenic route and the Suid-Agter-Paarl Road bridge as a gateway to Paarl.

1.3 Terms of Reference

The DEA&DP Guidelines (Oberholtzer, 2005:11) determines the level of assessment according to:

- a. The type of environment where development is proposed, and
- b. The type of development that is proposed.

The type of development proposed falls within Category 4 of the Guidelines which includes, “*small-scale commercial facilities, office parks and light industry*”. The type of environment is categorised as “*areas or routes of medium scenic, cultural or historical significance*”. According to the Guidelines because of the above one can expect a high visual impact however, due to the fact that:

- a. The property has no historical significance (refer HIA), and
- b. The area has been earmarked as a light industrial node (refer Drakenstein SDF),

it is our opinion that the proposed development will only have a moderate visual impact.

Moderate visual impact is characterised as having:

- a. *Potentially some affect on scenic resources,*
- b. *Some change in the visual character of the area, and*
- c. *Adding to existing development in the area (Oberholtzer, 2005:12).*

Due to the above it is our opinion that a Level 3 Assessment will be sufficient to evaluate the visual impact of the proposed development on the cultural landscape and gateway aspects to Paarl.

1.4 Methodology

The Basic Visual Assessment will be compiled as per the criteria, definitions and terminology as set out in the reference document: Oberholzer, B. 2005: ***Guideline for involving Visual & Aesthetic Specialists in EIA processes***: Edition 1. CSIR Report No ENV-S-C 2005 053 F. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town; as per our standard practice.

The method followed to produce this report has been to:

- a) A revision of information received from Guillaume Nel Environmental Consultants,
- b) A field survey was undertaken on 6 May, 11 & 30 June and 9 July 2014. This allowed for the opportunity to:
 - Assess the scenic resources within the vicinity of the site, including its contexts and visual sensitivity,
 - Determine the actual or practical extent of potential visibility of the proposed development, by assessing the screening effect of landscape features;
 - Conduct a photographic survey of the landscape surrounding the development;
 - Identify sensitive landscape and visual receptors.
- c) A revision of relevant studies available that contribute to the understanding of the visual resources on site, namely:
 - Archaeological Impact Assessment (February 2013) prepared by Jonathan Kaplan, from the Agency of Cultural Resource Management,
 - Phase 1 Heritage Impact Assessment (March 2013) prepared by Lize Malan,
 - Application for Re-zoning (May 2013) prepared by Jan Hanekom Partners, Reference No. HS 100 362,
- d) A revision of the relevant legislation that informs this study,
- e) Review photomontages, prepared by Jan Hanekom Partners (development architects) from viewpoints identified by Lize Malan (heritage consultant), of the proposed development,
- f) Assess the proposed project against the visual impact criteria (visibility, visual exposure, sensitivity of site and receptors, visual absorption capacity and visual intrusion).
- g) Assess impacts based on a synthesis of criteria (nature of impact, extent, duration, intensity, probability and significance).
- h) Make mitigation recommendations.

1.5 Assumptions and Limitations

- This report assumes that the information provided by others is correct.
- This report is based on the information that was available at the time of writing.
- The perception of visual impact can be highly subjective.
- The report relies on a combination of 1:50 000 Topo-cadastral (3318 DD Stellenbosch), 1:10 000 Orthophotos (3318 DD 4 Van Wyksrivier & 3318 DD 5 Suider Paarl) and Google Earth Images.

2. THE PROPOSED DEVELOPMENT

2.1 Site Location

As per the introduction, the property, measuring 12,6924ha in total, is situated approximately 2km south-west of Paarl, between the N1 and Old Paarl Road/R101 (Figure 2). The bridge across the N1, that connects the R101 via the Suid-Agter-Paarl road to the R44, traverses the eastern end of the site. The proposed development entails a commercial, light industrial and office development. Associated infrastructure includes internal roads and engineering services.

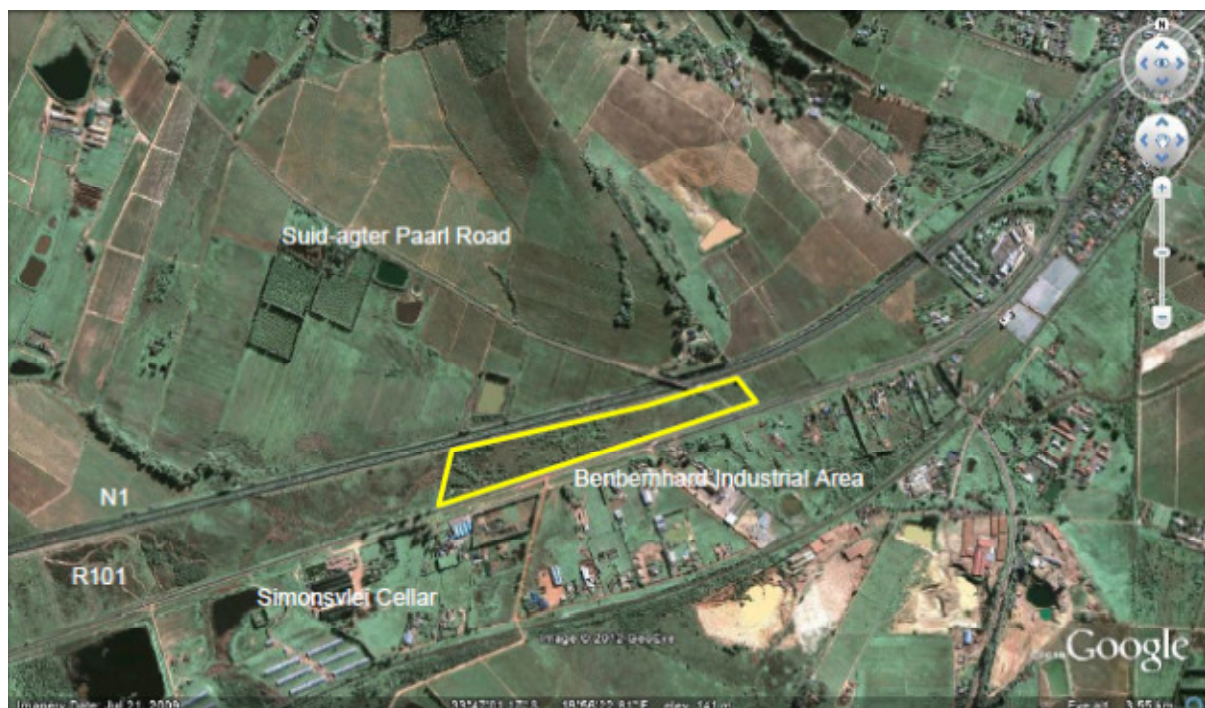


Figure 2: Extent of property (Phase 1 HIA Report, 2013:8)

2.2 Development Description

2.2.1 Prior to development:

The site is currently vacant and has never been developed. The site is fairly level, however the course of the Van Wyks River, which drains the site from the N1 towards the R101, has been severely altered (Harding, 2010:1).

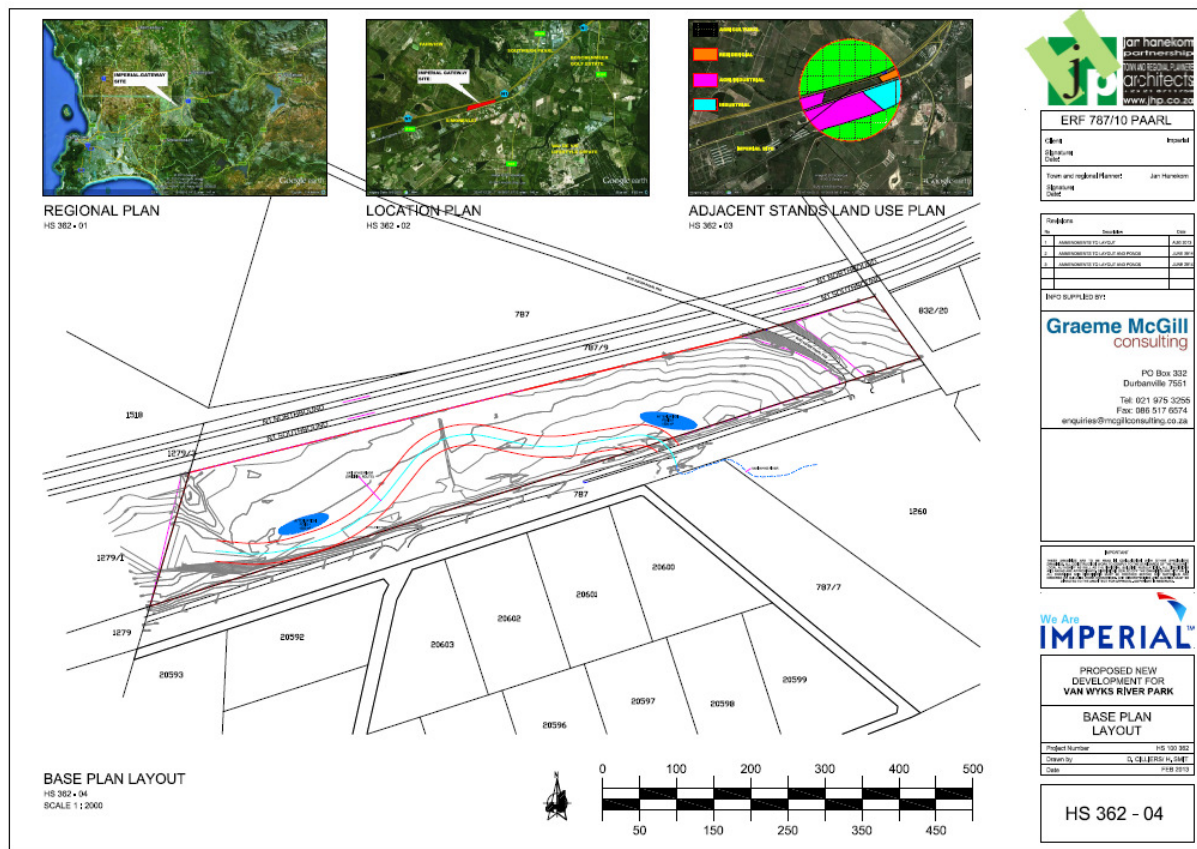


Figure 3: Site Base Plan Rev 2 June 2014 (Refer Drawing HS 362-04 by Jan Hanekom Partnership)



Figure 4: Google Image of site prior to development, NTS.

2.2.2 Construction phase

The proposal includes a light industrial, commercial and office space development with a large green buffer area protecting the re-aligned river is proposed for the site. The development will be implemented in phases i.e. the first phase will be to construct the perimeter fence and internal roads with associated services and landscaping. Because erven will be sold individually construction of commercial, office or light industrial space will probably occur over a couple of years.

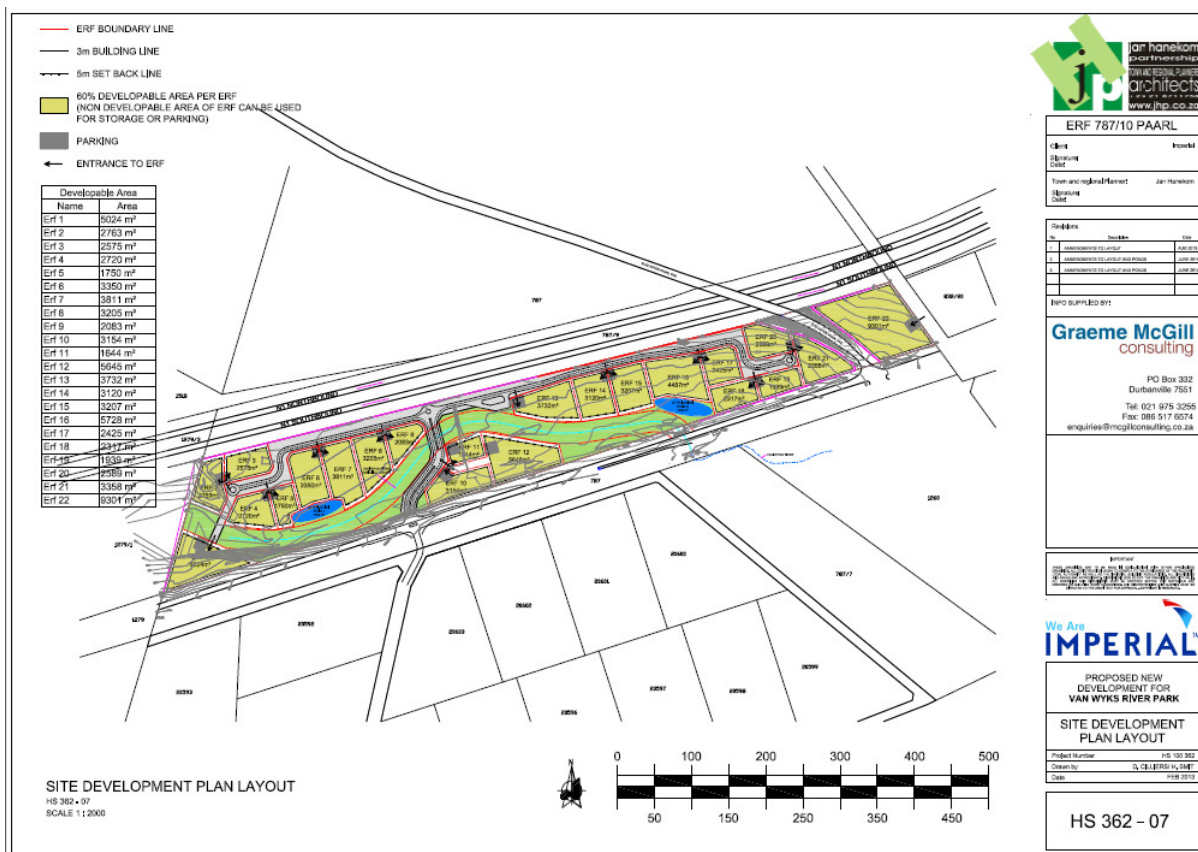


Figure 5: Proposed Site Development Plan Rev 2 June 2014 (Refer Drawing HS 362-07 by Jan Hanekom Partnership)

2.2.3 Operational phase

On completion the proposed development will have a 75% coverage rate with a general set back of 5m on either side. Buildings will be a maximum of two storeys high and architecture will remain sensitive to the character of the surrounding landscape and entrance to Paarl. Parking should be screened with berms where possible from the N1.

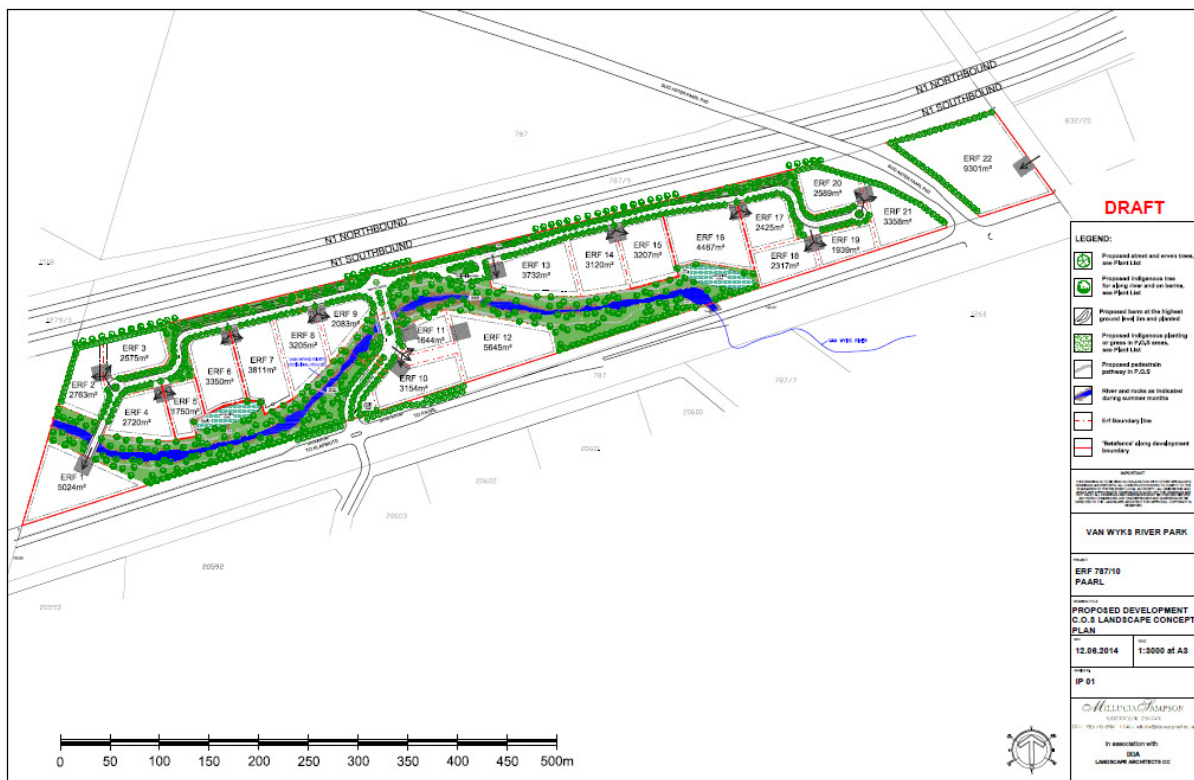


Figure 6: Proposed Landscape Concept Plan Rev 2 June 2014 (by Millucia Sampson in association with Ixia Landscape Architects)

3. RECEIVING ENVIRONMENT

3.1 Description of the Affected Area and the Scenic Resources

This section is a description of the existing visual environment that will be affected by the proposed commercial, light industrial and office development. It involves the identification of landscape types, landscape character and sense of place, generally based on geology, landforms, vegetation cover and land use patterns.

3.1.1 Landscape types

Landscape types are a generic classification for landscape character and may occur anywhere in the country where the same combinations of physical and cultural landscape attributes are found.

The property is mostly flat, situated at the foot south of Paarl Mountain with views towards the east (Hottentots Holland Mountains) and west (Simonsberg). The van Wyk's River with its riparian zone meanders through the property parallel with the R101 (south of property) and continues towards the Simonsvlei Wetland towards the west.

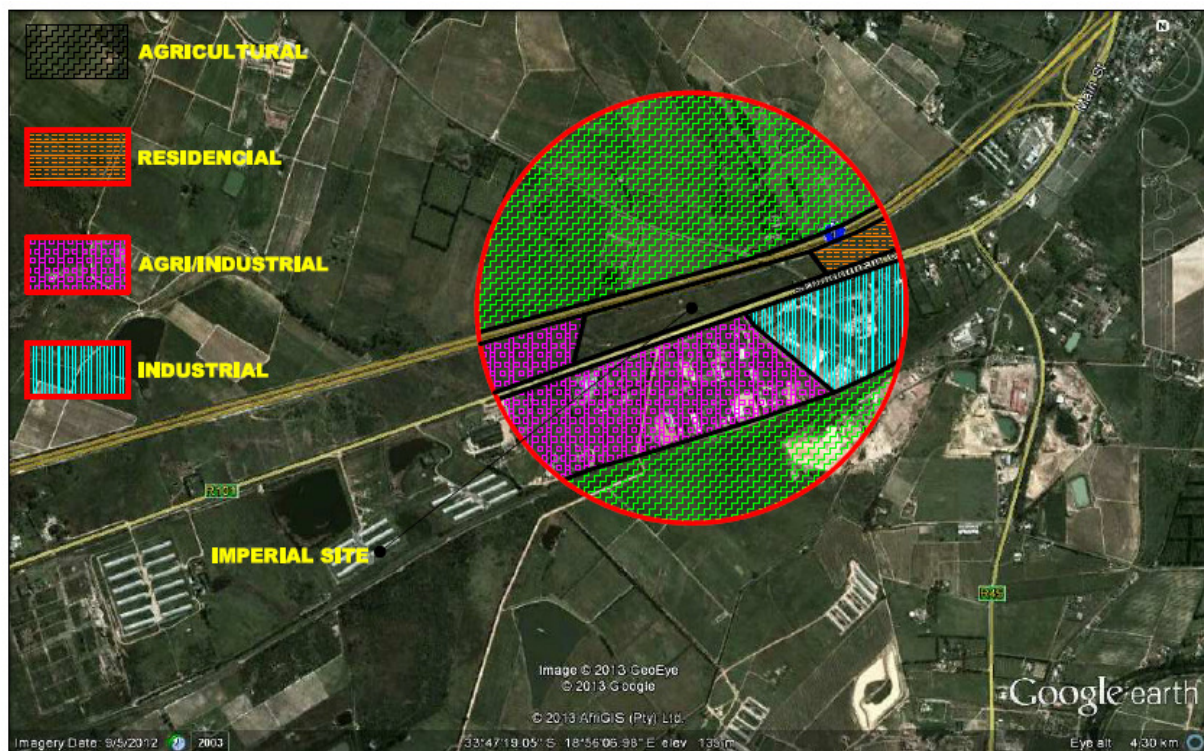
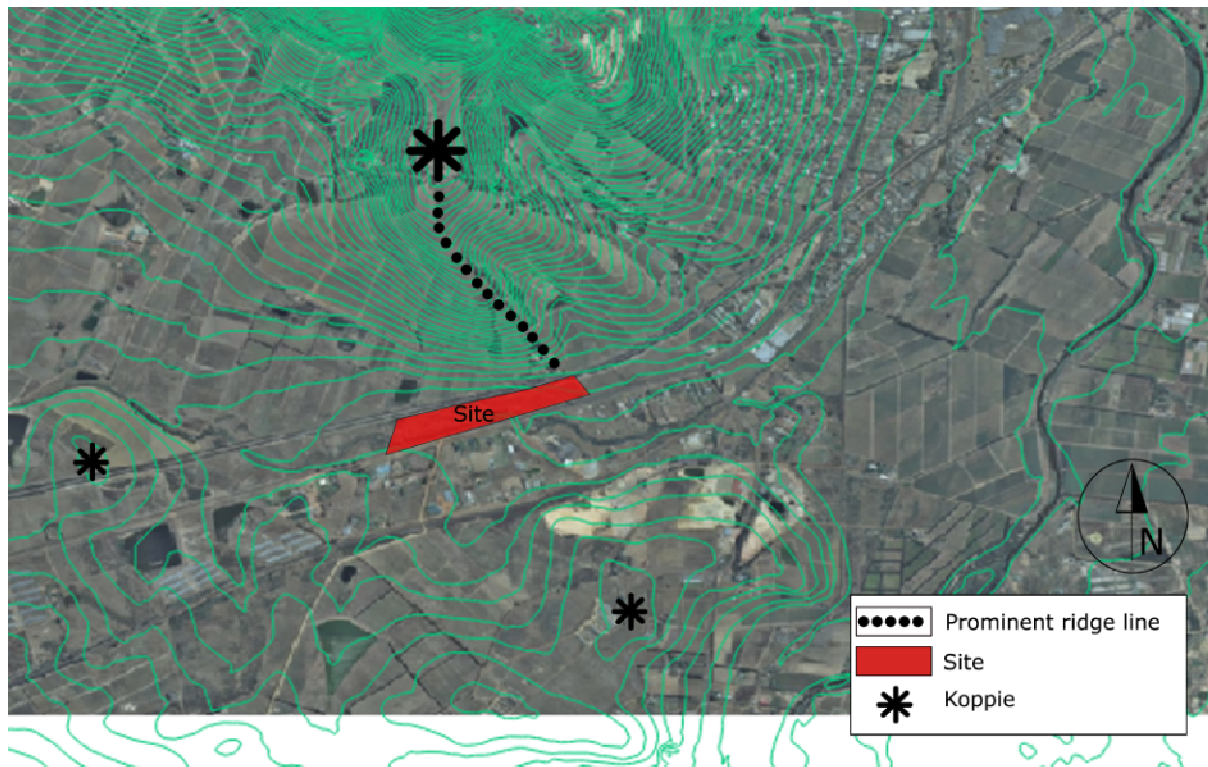


Figure 7: Adjacent Land Uses (Refer Drawing HS 362-03 by Jan Hanekom Partnership).

3.1.2 Topography and Landforms

The property is situated at the foot of Paarl Mountain and run-off is towards the Van Wyk's River which flows towards the west towards the Simonsvlei wetland which connects to the Bottelary and Kuilsrivers and into False Bay thus, the property slopes south-west. The site is currently vacant and fairly level, however the course of the Van Wyks River, which drains the site from the N1 towards the R101, has been severely altered (Harding, 2010:1). The river which is fairly narrow with very steep sides is clogged with reeds (Kaplan 2013:5).



3.1.3 Landscape Cover/Vegetation

The mostly flat plain on which the property is situated is flanked by vineyards towards the north (which is a valuable scenic resource), commercial and light industrial industry towards the south, and vacant lots towards the east and the Simonsvlei Wetland towards the west. The property itself has been completely transformed by a combination of agriculture, grazing and infill. Clay soils derived from the Malmesbury Shale group are found on the property but due to extensive landscape modification, mentioned above, the soil structure has been damaged to such an extent that agriculture is no longer viable.

The area falls within the Fynbos biome, the Shale Renosterveld Group and the West Coast Renosterveld Bioregion. It is critically endangered and is hardly protected anywhere. Due to the extensive landscape modification, the site has no Renosterveld left to protect. It is advised that some endemic plants are introduced into the landscape plan to support and visually tie in with the local ecosystem.

Windbreaks form part of this cultural landscape and could be used to further screen the development because the indigenous flora is low growing and has limited screening potential.

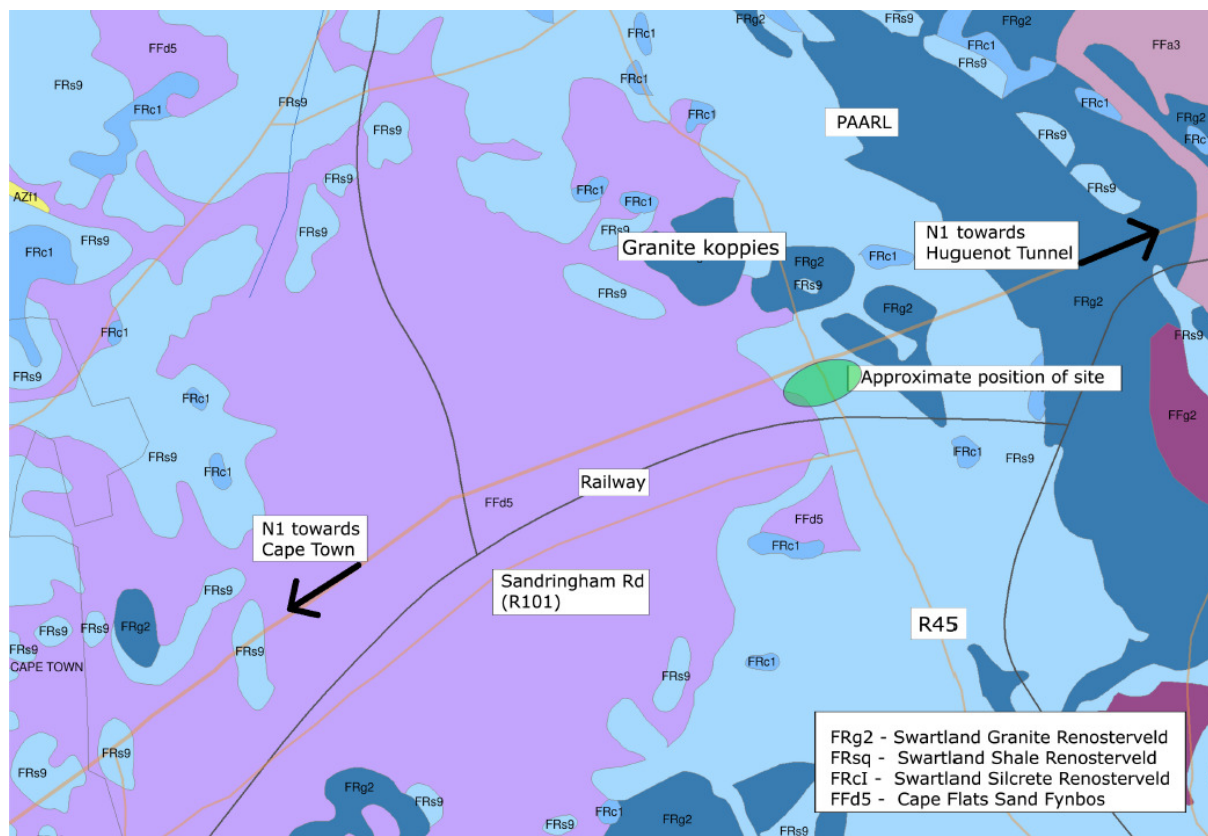


Figure 9: Swartland Shale Renosterveld (based on The Vegetation of South Africa, Lesotho & Swaziland by Mucina & Rutherford)



Image 1: Windbreaks at N1 / Suid-Agter-Paarl Rd Intersection

3.1.4 Settlement Patterns

The property falls within a landscape in transition: although predominantly an agricultural landscape, this is fast changing as Paarl is expanding i.e. from rural to urban. The property falls within the Drakenstein Municipality's urban edge and has been identified as a light industrial and commercial node.

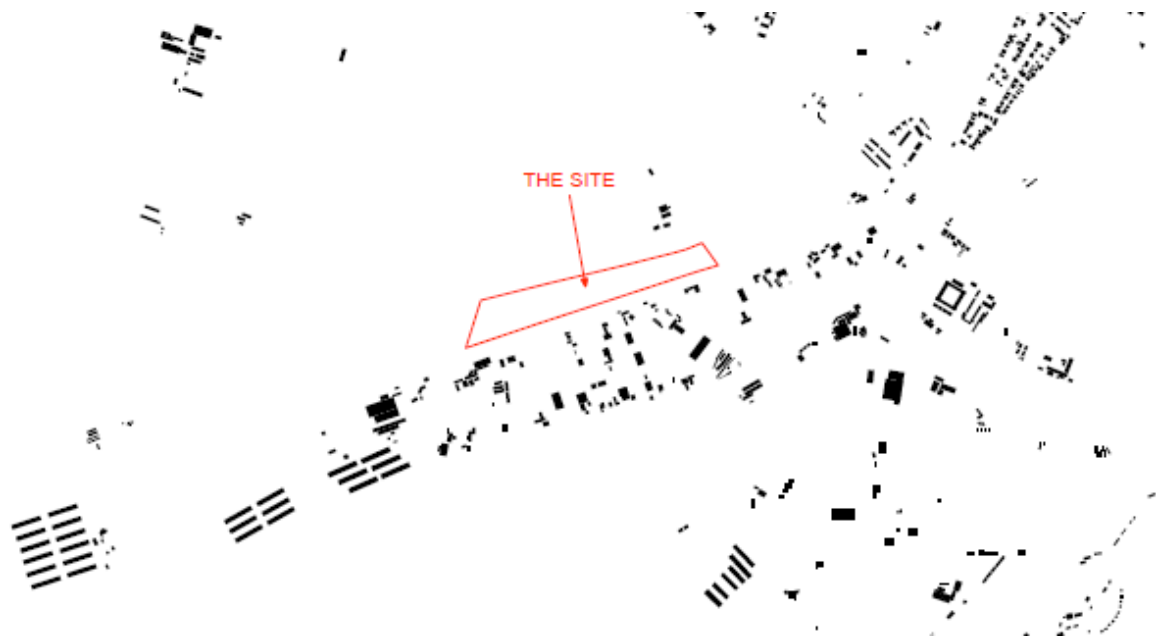


Figure 10: Figure-Ground (Refer to Phase 1 HIA Diagram No. 2; 2013)

3.1.5 Views & View Corridors

The site is fairly exposed and visible from routes at higher elevations on Paarl Mountain but not from the restaurant at the Paarl Language Monument. The N1 has been identified as an important view corridor by the PSDF and the Suid-Agter-Paarl Road as a scenic drive. Furthermore the intersection at the R101 and Suid-Agter-Paarl Road has been identified as a gateway to this scenic drive. This part of the N1 is also seen as a gateway into Paarl however, careful consideration should be given to the views towards the Hottentots Holland Mountain range.

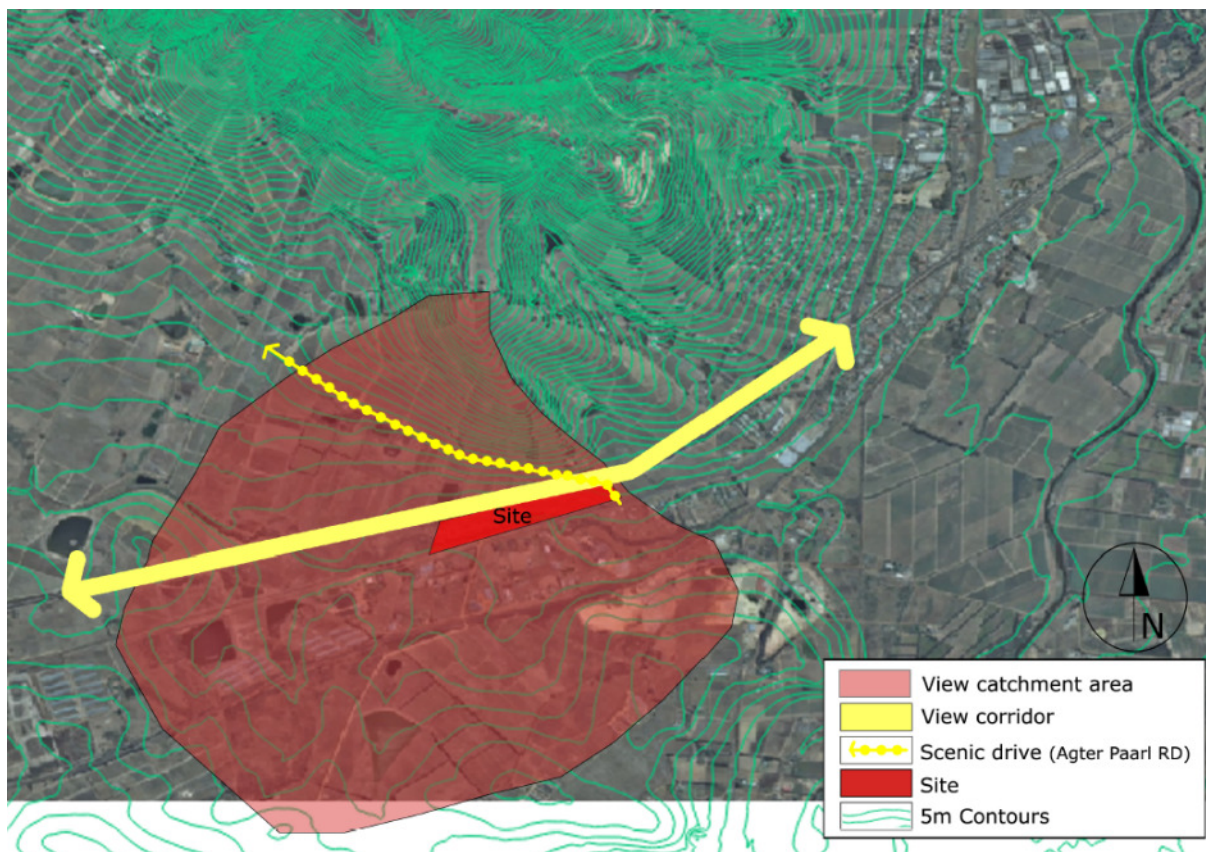


Figure 11: View corridor & Scenic drive

3.1.6 Landscape Character

The spirit, or sense of place, is that quality imparted by the aspects of scale, colour, texture, landform, enclosure, and in particular, the land use. According to K. Lynch (1992) *'it is the extent to which a person can recognise or recall a place as being distinct from other places as having a vivid, or unique, or at least a particular character of its own'*.

The area has a typical rural Winelands character that is characterised by vineyards and associated infrastructure however the area is incrementally being transformed by expanding

towns, commercial and light industrial development. The property falls within a heritage overlay zone identified by the Drakenstein Heritage Survey and endorsed by Heritage Western Cape. The aim of this overlay is to preserve the cultural landscape guide appropriate development.

Natural features such as Simonsberg, Paarl Mountain and the Hottentots Holland Mountain range are important visual landscape elements within the vicinity.

3.1.6.1 Landscape Character Sensitivity

The proposed site and its immediate surroundings are fragile to large, monotonous and compact objects but, low and fragmented objects could be more easily screened and integrated into its surroundings. The natural flora (as well as vineyards) are low growing and has a low visual screening capacity however, windbreaks - which form part of the area's cultural heritage- has a high visual screening capacity and could easily be used in conjunction with berms to integrate the proposed commercial, office and light industry development into the landscape.

3.1.6.2 Visual Absorption Capacity

“Visual absorption capacity” is defined as the landscape's ability to absorb physical changes without transformation in its visual character and quality.

This depends on the following characteristics of the environment:

- The density and distribution of similar developments in an area;
- The similarity between existing features and the new feature to be introduced;

Other factors that may also influence visual absorption capacity relate to the setting of the proposed development in the landscape. A landscape may offer VAC on grounds of colour, texture and topography, where the background against which the development is set may assimilate the development to a certain degree. The foreground, which is formed by the distance between the observer and the development, plays an important role to either screen the development or create a visual buffer.

For example, grassland and croplands have a low visual absorption capacity (VAC) whereas parkland and plantations have a high VAC. Similarly, rural areas have generally a low VAC whereas urban areas have a high VAC (Refer Figure 12).

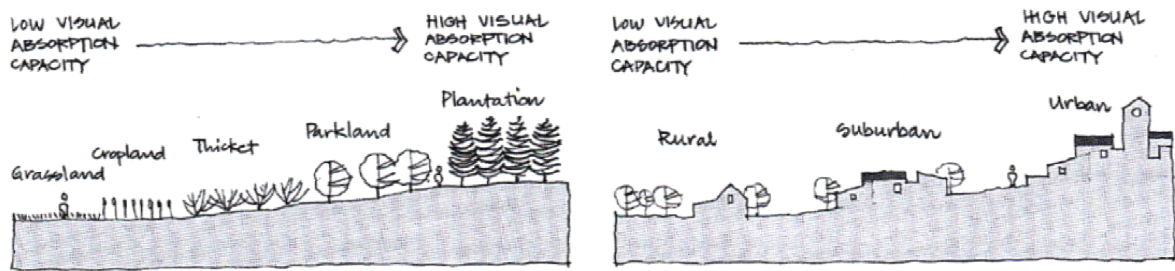


Figure 12: Degrees of Visual Absorption Capacity (Refer Oberholtzer, 2011:88)

The proposed development would be similar to existing development south of the property however, the intention is that the buildings will be smaller in scale (limited to two storeys), more fractured (maximum length of 30m and width of 12m) and closer together (75% coverage).

The proposed development and associated infrastructure could effectively be screened by a combination of berms and windbreaks.



Image 2: *Casaurina cunninghamiana* (Beefwood) windbreaks along Sandringham Rd (R101)



Image 3: *Pinus pinaster* (Cluster pine) windbreaks along the N1, south bound.



Image 4: *Cupressocyparis leylandii* (Leyland cypress) windbreaks along the N1 (in the background), north bound.

3.1.7 Synthesis

The property is located within a cultural landscape and borders onto a riparian zone (the Van Wyk's River) to the south and the foot of Paarl Mountain towards the north. The mostly flat plain is flanked by vineyards, vacant land, a wetland and light industrial development. The property has been completely transformed and the indigenous flora has limited screening potential.

The property falls within a transition zone (from rural to urban) and is situated along important gateway moments (into Paarl and onto the Suid-Agter-Paarl Road). Both the latter and the N1 has been identified as important scenic routes and the Simonsberg, Paarl Mountain and Hottentots Holland Mountain range as important views from the property. The Heritage Overlay Zone aims to preserve the area's Winelands character and windbreaks have been identified as a landscape element with high visual screening capacity.

The proposed development will tie in with existing development and has the opportunity to improve the views onto the less structured developments (to the south, refer Image below) however, care needs to be taken to limit the impact of development on the vineyards and scenic routes to the north with special attention to signage, building scale, massing, height and architectural language.



Image 5: Development south of Sandringham Rd / R101

4. IDENTIFICATION OF VISUAL ISSUES

No significant visual issues due to nature of the development and screening effect of the landscape elements however, careful consideration should be given to signage and lighting particularly on the north and western side of the property.

4.1 Permit Requirements

No relevant permits or licenses are required for the visual aspects of this proposed development.

5. VISUAL IMPACT ASSESSMENT OF THE PROPOSED DEVELOPMENT

The visual impacts identified below were assessed based on a synthesis of criteria as defined by the National Environmental Management Act (NEMA) regulations (2005:28).

5.1 Impact Assessment Criteria

NEMA suggests five visual impact assessment criteria according to which proposed development should be assessed. They are as follow:

5.1.1 Extent of the Impact

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

- Site-related: extending only as far as the activity;
- Local - limited to the immediate surroundings;
- Regional - affecting a larger metropolitan or regional area;
- National - affecting large parts of the country;
- International - affecting areas across international boundaries.

The location of the proposed Van Wyks River Park development is at the foot of Paarl Mountain and the visual impact thus limited to the immediate surrounds including the southern slopes of the mountain.

EXTENT	National	Regional	<i>Local</i>	Site
---------------	----------	----------	---------------------	------

5.1.2 Duration of the Project

The predicted life-span of the visual impact:

- Short term - e.g. duration of the construction of infrastructure;
- Medium term - e.g. duration for screening vegetation to mature;

- Long term - e.g. lifespan of the project;
- Permanent - where the visual impact is irreversible.

The proposed Van Wyks River Park development will be implemented in phases i.e. the first phase will be to construct the perimeter fence and internal roads with associated services and landscaping. Because erven will be sold individually construction of commercial, office or light industrial space will probably occur over a couple of years. Although windbreaks have been identified as a landscape element with high visual screening capacity the structures and therefore impact will be permanent.

DURATION	<i>Permanent</i>	Long-term	Medium-term	Short-term
-----------------	------------------	-----------	-------------	------------

5.1.3 Probability of the Impact

The degree of possibility of the visual impact occurring:

- Improbable - where the possibility of the impact occurring is very low;
- Probable - where there is a distinct possibility that the impact will occur;
- Highly probable - where it is most likely that the impact will occur; or
- Definite - where the impact will occur regardless of any prevention measures.

Should the proposed Van Wyks River Park development proceed the impact will definitely occur however, its severity might reduce over time as vegetation matures.

PROBABILITY	<i>Definite</i>	Highly Probable	Possible	Improbable
--------------------	-----------------	-----------------	----------	------------

5.1.4 Intensity of the Impact

The magnitude of the impact on views, scenic or cultural resources

- Low - where visual and scenic resources are not affected;
- Moderate - where visual and scenic resources are affected to a limited extent;
- High - where visual and scenic resources are significantly affected.

The magnitude of the development on views, scenic and cultural resources would be moderate for the extent is limited.

INTENSITY		High	Moderate	Low
------------------	--	------	-----------------	-----

5.1.5 Visual Impact Significance

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

- Low - where it will not have an influence on the authority decision;
- Medium - where it should have an influence on the authority decision and (in the case of negative impacts) requires management actions to avoid or mitigate the impacts; or
- High - where it would influence the authority decision and (in the case of negative impacts) requires management actions to avoid or mitigate the impacts.

Although the impact will be permanent and will occur definitely its extent is limited and intensity moderate therefore, it is of medium significance and will require management actions to avoid or mitigate the impacts

EXTENT	National	Regional	Local	Site
DURATION	Permanent	Long-term	Medium-term	Short-term
PROBABILITY	Definite	Highly Probable	Possible	Improbable
INTENSITY		High	Moderate	Low

5.2 Impact Assessment and Mitigation Measures

A number of key criteria will be assessed which will identify and indicate what the visual impact would be on the landscape and on receptors.

The criteria which will be assessed include **visibility** (View Catchment Area and Zone of Visual Influence (ZVI)), **receptors** and their sensitivity, **visual exposure** and **visual intrusion**.

5.2.1 Visibility

5.2.1.1 View Catchment

View Catchment: The geographic area defined by the context's topography, from which the project will be visible, or view catchment area.

The view catchment of the proposed Van Wyks River Park development is limited to the immediate surrounds and the areas at a higher elevation than the site location itself (Paarl Mountain).

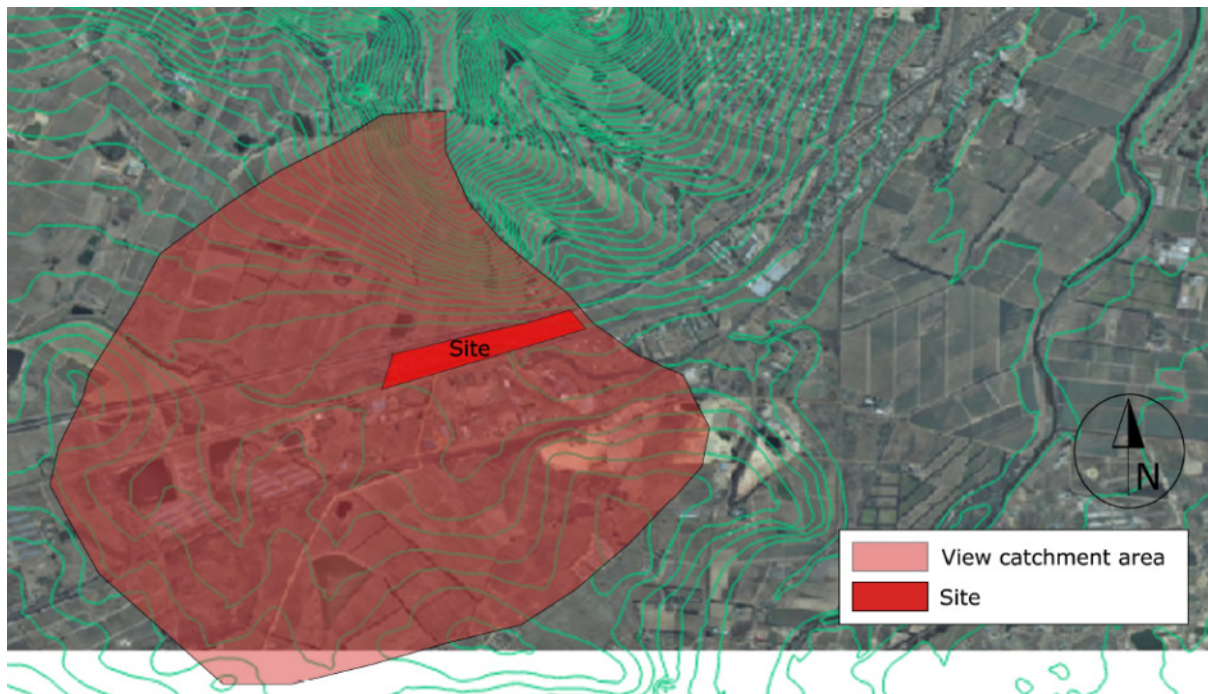


Figure 13: View Catchment Area

5.2.1.2 Zone of Visual Influence

Zone of Visual Influence: The actual zone of visual influence of the project may be smaller because of screening by existing trees and buildings.

This also relates to the number of receptors:

- High visibility: visible from a large area (e.g. several square kilometres)
- Moderate visibility: visible from an intermediate area (e.g. several hectares)
- Low visibility: visible from a small area around the project site.

The actual zone of influence is limited due to the

- topography, and
- it could be limited even more if the proposed development was screened by tree lines similar to the existing windbreaks in the vicinity.

In addition, berms (which have been proposed on the north and eastern boundary of the property) could further limit the visual zone of influence.

5.2.2 Receptors

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

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

Receptors within the view catchment are scenic routes, commercial and light industrial developments. Although scenic routes are listed as highly sensitive, the development can be screened from the N1 and Suid-Agter-Paarl Road by landscape elements such as berms and tree lines. The visual impact could be acceptable if it is well screened from the sensitive receptors.

Due to the undulation of the lower slopes of Paarl Mountain the property is not visible from the Afrikaans Language Monument (Refer Image 6).



Image 6: View from Afrikaans Language Monument (taken by Graham Jacobs)

5.2.3 Visual Exposure

Visual exposure – based on distance from the project to selected viewpoints. Exposure or visual impact tends to diminish exponentially with distance.

- *High exposure* – dominant or clearly noticeable;
- *Moderate exposure* – recognisable to the viewer;
- *Low exposure* – not particularly noticeable to the viewer;

Seven viewpoints have been identified (refer 5.2.5).

Western Portion of Property

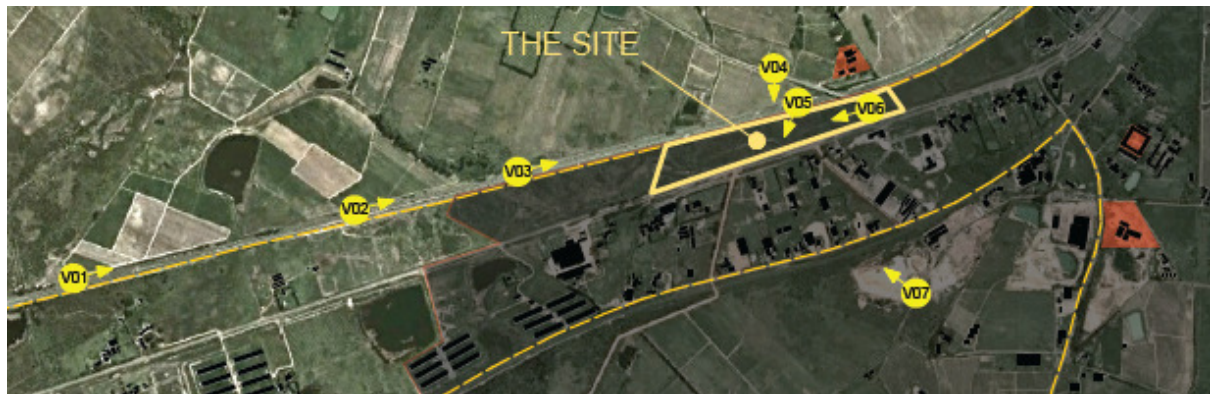


Figure 14: Viewpoints as determined by heritage architect (Refer HIA Phase 1, Diagram No. 1; 2013) for the western portion of the property.



Image 7: Viewpoint 1 (from N1 travelling towards Paarl)



Image 8: Viewpoint 2 (from N1 travelling towards Paarl)



Image 9: Viewpoint 3 (from N1 travelling towards Paarl)

Viewpoints one to three were taken from the N1 travelling north (travelling towards the Huguenot Tunnel). From viewpoint one and two the development would not be particularly noticeable due to the distance from which it is viewed and from viewpoint three it is not visible due to the vegetation in the N1 island thus from this viewpoint the exposure would be minimal.



Image 10: Viewpoint 4 (from Suid-Agter-Paarl Rd)



Image 11: Viewpoint 5 (from N1 travelling towards Cape Town)

Viewpoint five was taken from the N1 travelling south (towards Cape Town). The development would be clearly noticeable to the viewer however most of the development could be screened by berms and tree lines.



Image 12: Viewpoint 6 (from Suid-Agter-Paarl Rd)

Viewpoints four and six were taken from the flyover bridge and the development would be clearly noticeable from this viewpoint. With mitigation measures the development would still be recognisable to the viewer.



Image 13: Viewpoint 7 (from brickfields).

Viewpoint seven was taken from the brickfields south of the property. From this viewpoint the development would not be particularly visible to the viewer.

Eastern Portion of Property (Erf 22)



Figure 15: Viewpoints determined in consultation with heritage architect for Erf 22 to assess Erf 22, the eastern portion of the property.



Image 14: Viewpoint 8 (from R101 travelling towards CT)

Viewpoint eight was taken from the R101 travelling south (travelling towards Klapmuts). From this viewpoint Erf 22 would be negligently noticeable due to its distance from and due to the existing light industrial development south of the property.



Image 15: Viewpoint 9 (from N1 travelling towards Paarl)



Image 16: Viewpoint 10 (from N1 travelling towards Paarl)

Viewpoints nine and ten were taken from the N1 travelling north (travelling towards the Huguenot Tunnel). From this viewpoint Erf 22 would be very noticeable due to its proximity to the site.



Image 17: Viewpoint 11 (from N1 travelling towards Cape Town)

Viewpoint eleven was taken from the N1 travelling south (travelling towards Cape Town). From this viewpoint Erf 22 would be very noticeable due to its proximity to the site.



Image 18: Viewpoint 12 (from Suid-Agter-Paarl Rd bridge looking south)

Viewpoint 12 was taken from the flyover bridge and Erf 22 would be clearly noticeable from this viewpoint. With mitigation measures the development would still be recognisable to the viewer.

5.2.4 Visual Intrusion

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

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

The proposed Van Wyks River Park development partially fits into the surrounding environment and it could be screened sufficiently with elements that are congruent with the qualities of the area.

5.3 Visual Impacts

5.3.1 Change in Landscape Character

The generally flat landscape with its commercial, light industrial, road infrastructure, wetland and vineyards result in a relatively high visual diversity. The landscape towards the north will have moderate difficulty in being able to accept visual change readily and will result in the development being moderately visible due to the moderate to high visual contrast. The landscape towards the south will easily accept the visual change and will result in the development being low to moderately visible due to the low visual contrast.

5.3.2 Height and Scale of Development

Any structure of large bulk or height will contrast markedly with the surrounding landscape to the north and will be highly visible due to its elevated position and therefore its difficulty to screen effectively however; with appropriate building height, scale, massing and architectural language in addition to screening it will be possible to reduce the impact from high to moderate. Development to the south will be an extension of the existing development and will therefore have a minimal impact.

5.3.3 Visibility from Sensitive Receptors

The landscape character of the area is more sensitive towards the north and less sensitive towards the south due to the nature of the surrounding land uses and due to the landscapes changing state: from rural to urban. It is less visually sensitive towards the south and east due to development and its more urban fabric and more sensitive towards the north due to the relatively monochromatic land use and rural sense of place. The general visibility of the site would be moderate, should screening occur on all sides of the development.

5.3.4 Glare and Reflection

Glare and reflection will be limited due to the roof materials that will be used. Limited glare would only be noticeable from Paarl Mountain and the Suid-Agter-Paarl Road.

5.3.5 Light Pollution

Limited information is available on lighting. In general it is important that firstly lights are used sparingly and secondly that the light source is not directly visible. It is critical that lighting and illuminated signage is limited on the northern extent of the property as not damage the night time experience along the scenic routes and the rural character of this side.

5.3.6 Visual Scarring

Limited visual scarring will occur should the development be screened on all sides.

5.3.7 Visibility of Construction Site Camp & Construction Vehicles

At this stage no information is available about the position of the site camp however; once construction starts the site camp should be located on the southern side of the property.

5.3.8 Cumulative Impacts

The proposed Van Wyks River Park development would be similar to the developments to the south of the property and within an area that has been earmarked by the municipality as a commercial; and light industrial node and therefore in line with the spatial development plan.

It is vitally important that the development is properly screen in particular along its northern edge and along the flyover bridge towards the Suid-Agter-Paarl Road.

5.4 Mitigation Measures

Several mitigation measures will reduce the visual impact of the proposed development.

They are as follow:

Screen Planting:

It is vitally important that the property is screened along the northern and eastern edges of the property, congruent with the rural agricultural landscape will reduce the visibility of the proposed development. Tree planting, similar in spacing to the windbreaks in the vicinity, will reduce the visual impact of the development and tie in with the surrounding rural / cultivated landscape.

Shaping

Although berms are normally associated with residential development (for noise reduction) where possible this can be used to screen parking spaces however; preference would be given to screen trees i.e. windbreaks.

Buildings

The development will be able to mitigate views and improve the visual experience of this part of Paarl if an appropriate height, scale, massing and architectural language is used. This includes lighting which should be used sparingly, the sources never visible especially toward the northern edge of the property. Roof structures should not produce glare and the cumulative effect and configuration be carefully considered. It should tie in rather than contrast with the surrounding landscape

Fencing

Where possible, should be limited to the perimeter. Fencing that would encourage passive surveillance and that is visually unobtrusive should take preference.

6. CONCLUSIONS AND RECOMMENDATIONS

The proposed development will fit in with the developments on the southern edge of the property and it has the ability to mitigate views and to improve the visual experience travelling to and from Paarl on the N1 however, it will need significant screening and strict landscape and architectural guidelines, especially on the northern boundary, to achieve this.

The development has a medium to high exposure level from the Scenic Drive (Suid-Agter-Paarl Rd) and View Corridor (N1 south & north) and care should be taken to minimise the impacts on these sensitive receptors especially in terms of building height, massing, and architectural language as well as fencing, lighting and landscaping.

It is recommended that with the necessary landscape and architectural guidelines this development is approved by Heritage Western Cape.

7. REFERENCES

- Chief Directorate Surveys and Mapping. Topographical Map 3318 DD Stellenbosch.
- Chief Directorate Surveys and Mapping. Orthophotos 3318 DD 4 Van Wyksrivier & 3318 DD 5 Suider Paarl.
- Dee, C. 2001. Form and Fabric in Landscape Architecture: A Visual Introduction, Spon Press, UK.
- Drakenstein Heritage Survey Group, 2010-2011. Draft Drakenstein Heritage Survey.
- Harding, W. R. H. 2010. Aquatic Assessment Stream and Wetland Report: Portion 10 of the Farm Van Wyk's River, Paarl. Final Report. Report prepared for Guillaume Nel Environmental Consulting. DH Environmental Consulting South Africa.
- ICOMOS, 2009. World Heritage Cultural Landscapes. UNESCO-ICOMOS Documentation Centre, Paris.
- Kaplan, J. 2013. Archaeological Impact Assessment. Agency of Cultural Resource Management.
- Lynch, K. 1960. The Image of the City. MIT Press, USA.
- Macroplan, 2010. Amended Spatial Development Framework for the Drakenstein Municipality.
- Malan, L. 2013. Phase 1 Heritage Impact Assessment.
- Mucina & Rutherford, 2009. The Vegetation of South Africa, Lesotho & Swaziland, SANBI.
- Oberholzer, B. 2005. **Guideline for involving Visual & Aesthetic Specialists in EIA processes:** Edition 1. CSIR Report No ENV-S-C 2005 053 F. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.
- Oberholzer, B. 2011. Reading the Landscape, Notebook.
- Provincial Government of the Western Cape, 2009. Provincial Spatial Development Framework.