DRAFT

Visual Impact Report

NORTHWEST GATEWAY PROJECT
Hartbeesfontein, North West Province

Graham A Young **Landscape Architect**

26 October 2018

PROPOSED NORTHWEST GATEWAY PROJECT, TOWNSHIP DEVELOPMENT ON PORTIONS (AND PORTIONS OF PORTIONS) 233, 234, 235, 236 AND 237 AND THE REMAINDER OF PORTION 151 OF THE FARM HARTEBEESTFONTEIN 445-JQ, MADIBENG LOCAL MUNICIPALITY, NORTH WEST PROVINCE

Submitted to:

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Report Revision No:	DRAFT
Date Issued:	26 October 2018
Prepared By:	Graham Young PrLArch, FILASA
Reviewed By:	Graham Young PrLArch, FILASA
Reference:	029_Northwest Gateway Project, VIA

EXPERTISE OF SPECIALIST

Name:	Graham A Young
Qualification:	Pr Larch
Professional Registration:	South African Council for the Landscape Architectural Profession (SACLAP) Fellow Institute of Landscape Architects of South Africa (ILASA)
Experience in Years:	38 years
Experience	Graham is a landscape architect with thirty years' experience. He has worked in Southern Africa and Canada and has valuable expertise in the practice of landscape architecture, urban design and environmental planning. He is also a senior lecturer, teaching urban design and landscape architecture at post and under graduate levels at the University of Pretoria. He specializes in Visual Impact Assessments and has won an ILASA for his VIA work.

DECLARATION OF INDEPENDENCE

I, Graham Young, declare that –

- I am contracted as the Visual Impact Assessment Specialist for the Northwest Gateway Project;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the National Environmental Management Act (Act 107 of 1998), 2014 Environmental Impact Assessment Regulations (as amended on 7 April 2017), and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will consider, to the extent possible, the matters listed in Regulation 13;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing – any decision to be taken with respect to the application by the competent authority; and – the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 16 (1)(b)(iii).

Graham A. Young PrLArch Reg. No. 87001 FILASA

26 October 2018

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SPECIALIST REPORTING REQUIREMENTS

Specialist Reporting Requirements According to Appendix 6 of the National Environmental Management Act (Act 107 of 1998), Environmental Impact Assessment Regulation 2014 (as amended on 7 April 2017)	
Requirement	**Relevant section in report**
Details of the specialist who prepared the report	Page iii, Appendix B
The expertise of that person to compile a specialist report including a curriculum vitae	Page iii, Appendix B
A declaration that the person is independent in a form as may be specified by the competent authority	Page iv
An indication of the scope of, and the purpose for which, the report was prepared;	Section 1.3 – 1.4
An indication of the quality and age of base data used for the specialist report;	N/A
A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	N/A
The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 1.4
A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Section 3
Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure	Section 9
An identification of any areas to be avoided, including buffers	N/A
A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Figures 3 and 10
A description of any assumptions made and any uncertainties or gaps in knowledge;	Section 1.5
A description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	Section 11
Any mitigation measures for inclusion in the EMPr;	Section 10
Any conditions for inclusion in the environmental authorisation	Section 10
Any monitoring requirements for inclusion in the EMPr or environmental authorisation	N/A
A reasoned opinion whether the proposed activity, activities or	Section 11

portions thereof should be authorised regarding the acceptability of the proposed activity or activities; and	
If the opinion is that the proposed activity, or activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	Section 10
A description of any consultation process that was undertaken during the course of carrying out the study	N/A
A summary and copies if any comments that were received during any consultation process	N/A
Any other information requested by the competent authority.	N/A

ACRONYMS, ABBREVIATIONS & GLOSSARY

Acronyms & Abbreviations	
BAR	Basic Assessment Report
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GYLA	Graham A Young Landscape Architect
MLC	Madibeng Local Municipality
SACLAP	South African Council for the Landscape Architectural Profession
VIA	Visual Impact Assessment

Glossary	
Aesthetic Value	Aesthetic value is the emotional response derived from the experience of the environment with its natural and cultural attributes. The response can be either to visual or non-visual elements and can embrace sound, smell and any other factor having a strong impact on human thoughts, feelings and attitudes (Ramsay, 1993). Thus, aesthetic value encompasses more than the seen view, visual quality or scenery, and includes atmosphere, landscape character and sense of place (Schapper, 1993).
Aesthetically significant place	A formally designated place visited by recreationists and others for the express purpose of enjoying its beauty. For example, tens of thousands of people visit Table Mountain on an annual basis. They come from around the country and even from around the world. By these measurements, one can make the case that Table Mountain (a designated National Park) is an aesthetic resource of national significance. Similarly, a resource that is visited by large numbers who come from across the region probably has regional significance. A place visited primarily by people whose place of origin is local is generally of local significance. Unvisited places either have no significance or are "no trespass" places. (after New York, Department of Environment 2000).
Aesthetic impact	Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility, even startling visibility of a project proposal, should not be a threshold for decision making. Instead a project, by its visibility, must clearly interfere with or reduce (i.e. visual impact) the public's enjoyment and/or appreciation of the appearance of a valued resource e.g. cooling tower blocks a view from a National Park overlook (after New York, Department of

	Environment 2000).
Cumulative Effects	The summation of effects that result from changes caused by a development in conjunction with the other past, present or reasonably foreseeable actions.
Landscape Character	The individual elements that make up the landscape, including prominent or eye-catching features such as hills, valleys, woods, trees, water bodies, buildings and roads. They are generally quantifiable and can be easily described.
Landscape Impact	Landscape effects derive from changes in the physical landscape, which may give rise to changes in its character and how this is experienced (Institute of Environmental Assessment & The Landscape Institute, 1996).
Study area	For the purposes of this report the Project Study area refers to the proposed project footprint / project site as well as the 'zone of potential influence' (the area defined as the radius about the centre point of the project beyond which the visual impact of the most visible features will be insignificant to views). The study area is defined as 7,5km radius around the proposed project footprint / site, beyond this distance most sensitive views would be blocked to the site due to the nature of the terrain and the screening effect of mature trees.
Project Footprint / Site	For the purposes of this report the *site* / *footprint* refers to the actual layout of the project.
Sense of Place (genius loci)	Sense of place is the unique value that is allocated to a specific place or area through the cognitive experience of the user or viewer. *A genius locus literally means* 'spirit of the place'.
Sensitive Receptors	Sensitivity of visual receptors (viewers) to a proposed development.
Viewshed analysis	The two-dimensional spatial pattern created by an analysis that defines areas, which contain all possible observation sites from which an object would be visible. The basic assumption for preparing a viewshed analysis is that the observer eye height is 1,8m above ground level.
Visibility	The area from which project components would potentially be visible. Visibility depends upon general topography, aspect, tree cover or other visual obstruction, elevation and distance.
Visual Exposure	Visibility and visual intrusion qualified with a distance rating to indicate the degree of intrusion and visual acuity, which is also influenced by weather and light conditions.
Visual Impact	Visual effects relate to the changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual

	amenity.
Visual Intrusion	The nature of intrusion of an object on the visual quality of the environment resulting in its compatibility (absorbed into the landscape elements) or discord (contrasts with the landscape elements) with the landscape and surrounding land uses.
Worst-case Scenario	Principle applied where the environmental effects may vary, for example, seasonally to ensure the most severe potential effect is assessed.
Zone of Potential Visual Influence	By determining the zone of potential visual influence, it is possible to identify the extent of potential visibility and views which could be affected by the proposed development. Its maximum extent is the radius around an object beyond which the visual impact of its most visible features will be insignificant primarily due to distance.

EXECUTIVE SUMMARY

Graham A Young Landscape Architect (GYLA) was commissioned by Landscape Dynamics, on behalf of Shalimaloq Investments cc, Posbus 74598, Lynnwoodrif, 0040, to carry out a visual scoping study (VIA) of the proposed North-western Gateway Project, Northwest Province ("the Project") at Hartebeespoort Dam. The study focuses on a mixed-use development comprising entertainment, hotel, institutional and retail activities on Portions (and Portions of Portions) 233, 234, 235, 236 AND 237 and the Remainder of Portion 151 of the Farm Hartebeesfontein 445-JQ, Madibeng Local Municipality, North West Province.

Site and Study area

The proposed development site is located north east of the intersection of the R104 and R502 (Damdoryn four-way stop) and approximately 1,0km directly west of the historic Hartebeespoort Dam Wall, in the Madibeng Local Municipality, North West Province. The study area comprises the visual envelope of 7,5km mostly north of the property as indicated on Figure 1. This is the distance at which the proposed activities would potentially be visible in fore to middle ground views (potential high impact). Beyond this distance, at ground level from surrounding roads and properties, activities will merge into the existing landscape features or views be blocked due to the nature of the undulating terrain and presence of mature trees on and immediately adjacent the site. From higher elevations on the Magaliesberg range, the site would be highly visible from greater distances with unobstructed views.

Objective of the Specialist Study

The main aim of the study is to ensure that the visual / aesthetic consequences of the proposed project are understood and adequately considered in the Assessment Report process. Mitigation measures will be proposed, where appropriate.

Terms and Reference

A specialist study is required to assess the potential visual impacts arising from the Project based on the general requirements for a *basic* VIA and the *professional opinion* of the author. The following terms of reference was established:

- Conduct a field and photographic survey of the proposed study area from sensitive viewing points (site visit was undertaken on the 12 October 2018) inclusive of the heritage Hartebeespoort Dam Wall;
- Comment on the potential visual impact of the proposed Project and its cumulative effects on people visiting the Hartebeespoort Dam Wall and the Magaliesberg Biosphere core and buffer zones;
- Make a reasoned opinion whether the proposed activity, activities or portions thereof should be authorised regarding the acceptability of the proposed activities or whether a comprehensive visual impact assessment would be required.

Assumption, Uncertainties and Limitations

The following assumptions limitations have been made in the study:

- The extent of the study area is determined by the zone of potential influence, which in this study relates to a radius about the Project site of 7,5km. At this distance project activities would recede into background views (or be blocked) due to the nature of the terrain and mature tree cover in the study area; although from elevated views within the Magaliesberg Bioshphere core, project activities would be highly visible – however very few people visit these areas and Project activities would be perceived within the same visual envelope as existing urban development immediately adjacent to the site.
- The description of project components is limited to what has been supplied to the author prior to the date of completion of this report;
- The study will focus on viewing areas within public and tourist zones located within a 3,0km radius (fore and middle-ground views) of the site as, it is these views that would potentially be most impacted by the proposed Project activities.

Findings

The existing visual condition of the landscape that may be affected by the proposed Project has been described. The study areas scenic quality has been rated *high* within the context of the sub-region and sensitive viewing areas mapped indicating potential sensitivity to the proposed development within a 3 km radius of the project site. Impacts to views are the highest when viewers are identified as being sensitive to change in the landscape, and their views are focused on and dominated by the change. Visual impacts occur when changes in the landscape are noticeable to viewers looking at the landscape from their homes or from tourism / conservation areas, travel routes, and important cultural features and historic sites, especially in foreground views.

However, sensitivity to the project is *low* and the intrusive nature of Project components is also rated *low* as the project will be mostly screened and absorbed into the landscape scene by existing vegetation and topography. The Project would be seen from sensitive viewpoints on the upper slopes of the Magaliesberg. However, from these vantage points the development would always appear in the same visual envelope as other developments that define the cultural characteristic of the landscape and not appear out of place. SAHRA voiced a concern that the project could impact on views from the historic Hartebeespoort dam wall. Simulation modelling, however, indicates that the development would mostly be screened and would its physical presence would therefore not have a significant impact on tourists visiting the dam wall.

It is therefore predicted that *low* (i.e. a minor loss of or alteration to key elements / features / characteristics of the baseline) visual resource impacts would result from the construction, operation and maintenance of the proposed Project. It is the opinion of the author that all aspects of the Project, from a potential visual impact perspective, should be approved provided that the mitigation / management measures are effectively implemented, managed and monitored in the long term and that engagement with the community during this process is continued.

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1. INTRODUCTION

1.1 Project Overview and Background

Graham A Young Landscape Architect (GYLA) was commissioned by Landscape Dynamics, on behalf of Shalimaloq Investments cc, Posbus 74598, Lynnwoodrif, 0040, to carry out a visual scoping study (VIA) of the proposed North-western Gateway Project, Northwest Province ("the Project") at Hartebeespoort Dam. The study focuses on a mixed-use development comprising entertainment, hotel, institutional and retail activities on Portions (and Portions of Portions) 233, 234, 235, 236 AND 237 and the Remainder of Portion 151 of the Farm Hartebeesfontein 445-JQ, Madibeng Local Municipality, North West Province.

1.2 Proposed Site and Study area

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- The description of project components is limited to what has been supplied to the author prior to the date of completion of this report;
- The study will focus on viewing areas within public and tourist zones located within a 3,0km radius (fore and middle-ground views) of the site as, it is these views that would potentially be most impacted by the proposed Project activities.

LEGEND

Project Site

Zone of Potential Influence / Fore and Middle-ground views around project site

Figure 1: LOCALITY AND STUDY AREA

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2. LEGAL REQUIREMENTS AND GUIDELINES

This report adheres to the following legal requirements and guideline documents.

2.1 National Guidelines

National Environmental Management Act (Act 107 of 1998) EIA Regulations

The specialist report is in accordance to the specification on conducting specialist studies as per Government Gazette (GN) R 543 of the National Environmental Management Act (NEMA) Act 107 of 1998. The mitigation measures as stipulated in the specialist report can be used as part of the Environmental Management Plan (EMP) and will be in support of the Environmental Impact Assessment (EIA).

The NEMA Protected Areas Act (57 of 2003)

The main aim of the Act is to identify and protect natural landscapes. According to the 2010 regulations there are specific regulations for compilation of specialist report. This VIA report adheres to these specifications.

The National Heritage Resources Act (25 of 1999)

The Act is applicable to the protection of heritage resources and includes the visual resources such as cultural landscapes, nature reserves, proclaimed scenic routes and urban conservation areas. The NHRA states that it aims to promote “good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed for future generations”. An holistic landscape whose character is a result of the action and interaction and/or human factors has strong cultural associations as societies and the landscape in which they live are affected by one another in many ways;

Section 17 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEM: PAA) sets out the purposes of the declaration of areas as protected areas which includes the protection of natural landscapes. Landscapes are defined by the natural, visual and subjectively perceived landscape; these aspects of a landscape are intertwined to form a holistic landscape context.

Western Cape Department of Environmental Affairs & Development Planning: Guideline for Involving Visual and Aesthetic Specialists in EIA Processes Edition 1 (CSIR, 2005)

Although the guidelines were specifically compiled for the Province of the Western Cape they provide guidance that is appropriate for any EIA process. The Guideline document also seeks to clarify instances when a visual specialist should get involved in the EIA process.

3. APPROACH AND METHODOLOGY

3.1 Approach

The assessment of likely effects on a landscape resource and on visual amenity is complex, since it is determined through a combination of quantitative and qualitative evaluations. (The Landscape Institute with the Institute of Environmental Management and Assessment, 2002). When assessing visual impact, the worst-case scenario is considered. Landscape and visual assessments are separate, although linked, procedures.

The landscape, its analysis and the assessment of impacts on the landscape all contribute to the baseline for visual impact assessment studies. The assessment of the potential impact on the landscape is carried out as an impact on an environmental resource, i.e. the physical landscape. Visual impacts, on the other hand, are assessed as one of the interrelated effects on people (i.e. the viewers and the impact of an introduced object into a view or scene).

3.1.1 The Visual Resource

Landscape character, landscape quality (Warnock, S. & Brown, N., 1998) and “sense of place” (Lynch, K., 1992) are used to evaluate the visual resource i.e. the receiving environment. A qualitative evaluation of the landscape is essentially a subjective matter. In this study the aesthetic evaluation of the study area is determined by the professional opinion of the author based on site observations and the results of contemporary research in perceptual psychology.

Aesthetic value is the emotional response derived from the experience of the environment with its natural and cultural attributes. The response is usually to both visual and non-visual elements and can embrace sound, smell and any other factor having a strong impact on human thoughts, feelings and attitudes (Ramsay, 1993). Thus, aesthetic value is more than the combined factors of the seen view, visual quality or scenery. It includes atmosphere, landscape character and sense of place (Schapper, 1993). Refer also to Appendix B for further elaboration.

Studies for perceptual psychology have shown human preference for landscapes with higher visual complexity, for instance scenes with water or topographic interest. Based on contemporary research, landscape quality increases where:

- Topographic ruggedness and relative relief increase;
- Water forms are present;
- Diverse patterns of grassland and trees occur;
- Natural landscape increases and man-made landscape decreases;
- Where land use compatibility increases (Crawford, 1994).

Aesthetic appeal (value) is therefore considered high when the following are present (Ramsay, 1993):

- Abstract qualities: such as the presence of vivid, distinguished, uncommon or rare features or abstract attributes;
- Evocative responses: the ability of the landscape to evoke particularly strong responses in community members or visitors;
- Meanings: the existence of a long-standing special meaning to a particular group of people or the ability of the landscape to convey special meanings to viewers in general;
- Landmark quality: a feature that stands out and is recognized by the broader community.

And conversely, it would be low where:

- Limited patterns of grasslands and trees occur;
- Natural landscape decreases and man-made landscape increases;
- And where land use compatibility decreases (after Crawford, 1994).

In determining the quality of the visual resource for the Project site, both the objective and the subjective or aesthetic factors associated with the landscape are considered. Many landscapes can be said to have a strong sense of place, regardless of whether they are scenically beautiful but where landscape quality, aesthetic value and a strong sense of place coincide - the visual resource or perceived value of the landscape is very high. The criteria given in Appendix B are used to assess landscape quality, sense of place and ultimately to determine the aesthetic value of the study area.

3.1.2 Sensitivity of Visual Resource

The sensitivity of a landscape or visual resource is the degree to which a landscape type or area can accommodate change arising from a particular development, without detrimental effects on its character. Its determination is based upon an evaluation of each key element or characteristic of the landscape likely to be affected. The evaluation will reflect such factors such as its quality, value, contribution to landscape character, and the degree to which the element or characteristic can be replaced or substituted (Institute of Environmental Assessment & The Landscape Institute, 1996:87).

3.1.3 Sense of Place

Central to the concept of sense of place is that the landscape requires uniqueness and distinctiveness. The primary informant of these qualities is the spatial form and character of the natural landscape taken together with the cultural transformations and traditions associated with the historic use and habitation of the area. According to Lynch (1992), sense of place “is the extent to which a person can recognize or recall a place as being distinct from other places – as having a vivid, unique, or at least particular, character of its own”. Sense of place is the unique value that is allocated to a specific place or area through the cognitive experience of the user or viewer. In some cases, the values allocated to the place are similar for a wide spectrum of users or viewers, giving the place a universally recognized and therefore, strong sense of place.

Because the sense of place of the study area is derived from the emotional, aesthetic and visual response to the environment, it cannot be experienced in isolation. The landscape context must be considered. The combination of the natural landscape (mountains and the vegetation) together with the manmade structures (residential areas, roads, and utilities) contribute to the sense of place for the study area. It is these land-

uses, which define the Hartbeespoort area and which establish its identity.

3.1.4 Sensitive Viewer Locations

The sensitivity of visual receptors and views are dependent on the location and context of the viewpoint, the expectations and occupation or activity of the receptor or the importance of the view. This may be determined with respect to its popularity or numbers of people affected, its appearance in guidebooks, on tourist maps, and in the facilities provided for its enjoyment and references to it in literature or art.

The most sensitive receptors may include:

- Users of all outdoor recreational facilities including public rights of way, whose intention or interest may be focused on the landscape;
- Communities where development results in changes in the landscape setting or valued views enjoyed by the community;
- Occupiers of residential properties with views affected by the development.

Other receptors include:

- People engaged in outdoor sport or recreation (other than appreciation of the landscape, as in landscapes of acknowledged importance or value);
- People traveling through or past the affected landscape in cars or other transport modes;
- People at their place of work.

Views from residences and tourist facilities / routes are typically more sensitive, since views from these are frequent and of long duration. The view from the Hartebeespoort Dam Wall is considered of particular significance in this study as the wall is a declared SAHRA heritage site.

For a detailed description of the methodology used in this study, refer to Appendix A. Image 1 below, graphically illustrates the visual impact process and the baseline section of it:

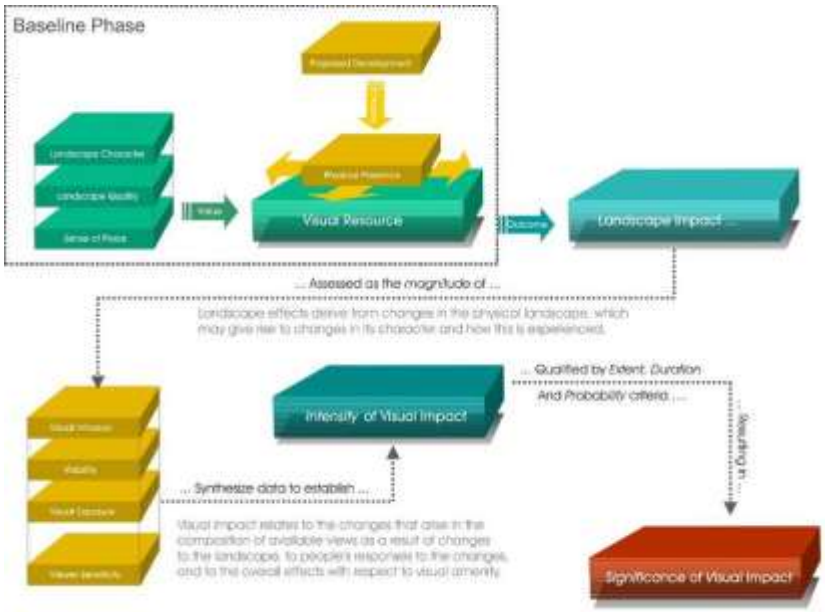

Image 1: Visual Impact Process

3.2 Methodology

The following method was used:

- Site visit: A field survey was undertaken on the 12 October 2018 when the study area was scrutinized to the extent that the receiving environment could be documented and adequately described.
- Project components: The physical characteristics of the project components were described and illustrated;
- The landscape character of the study area was described. The description of the landscape focused on the nature and character of the landscape rather than the response of a viewer;
- The quality of the landscape was described using recognized contemporary research in perceptual psychology as the basis;
- The sense of place of the study area was described as to the uniqueness and distinctiveness of the landscape.
- Determine the potential visual impact on sensitive viewing areas including the Hartebeespoort Dam Wall (a heritage site).

4. DESCRIPTION OF THE PROJECT

The proposed mixed-use development comprises the following activities:

Entertainment and resort

- Shops, Places of refreshment, Amusement, Entertainment (±7 500m2)
- Sewage Farm system (or similar)
- Private resort
- 60 storage units (±17m2 each)
- Trailer and caravan parking
- Boutique guest house and spa (± 1800m2)

Hotel and Private Resort

- Administration and Welcome Centre
- 150 room hotel (± 10 000m2)
- 22 Luxury Private Resort units (144m2 each)
- 89 2-bedroom Private Resort units (117m2 each)
- Green Zone / Private Open Space (±5.5 hectares)
- Restaurant
- Industrial Kitchen and Laundry
- Recreation Centre
- Wellness Clinique
- Clubhouse (450m2)
- Chapel (100m2)
- Bowling grounds
- Gardens and walkways

Institutional (± 20 000m2)

- Hospital and step-down clinic and/or a neurological centre (i.e. where Alzheimer's patients
- can be treated).

Ancillary and Subservient

- Parking
- Personnel parking
- Staff Quarters
- Delivery yard

Cemetery *for existing graves only*

- 225m2 around the existing graves will be fenced in with access for family members.

The total build area is ±60 000m2 (6 hectares) and environmental sensitivities as identified during specialist studies (Scoping Phase) have been incorporated into the layout designs. Refer to Figure 2 below, which illustrates the nature and location of the proposed facilities along with the proposed height of the structures.

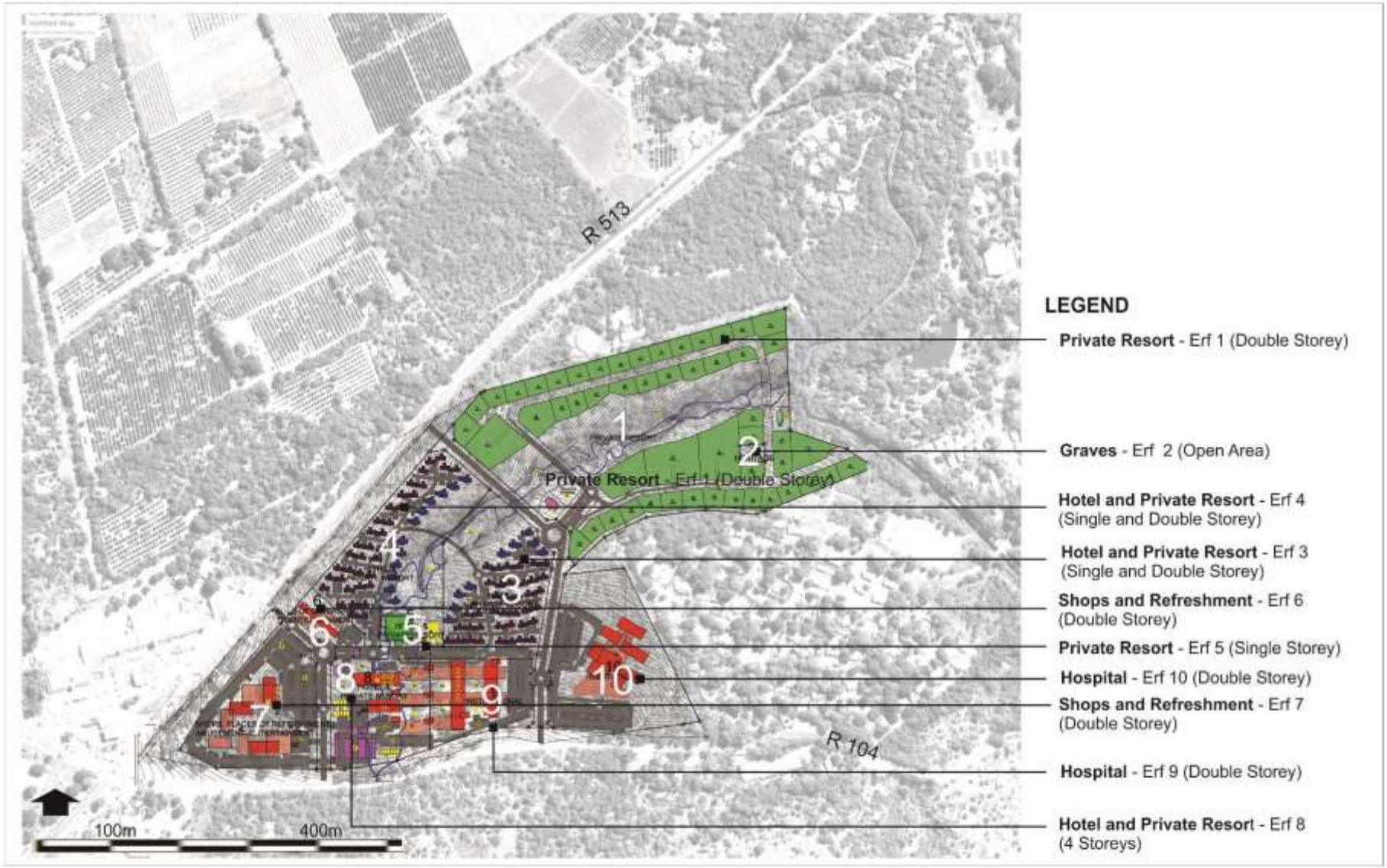

Figure 2: PROJECT LAYOUT

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5. PROJECT ALTERNATIVES

No project alternatives were considered in the visual study. Only the preferred layout has been assessed. It should however be noted that:

The PREFERRED LAYOUT as presented ensures that the development is not detrimental to, amongst other, the riparian system and heritage resources that are present on the site:

- The Environmental Sensitivity Map guided the layout as proposed.
- The heritage resources as discussed [in the scoping report], with special emphasis on the small graveyard in the eastern corner of the site, are provided for.
- There are no any other restrictions (i.e. pipelines and road servitudes) that influenced the layout.
- Requirements from the landowners were taken into consideration.
- Relevant legislation was taken into consideration.

This layout takes into consideration the recommendations as made by the ecologist, heritage specialist, the NW Province Department of Public Works and Roads as well as input as received during the public participation process to date. The Preferred Layout as proposed is therefore in line with the findings of this EIA study[1].

[1] Final Scoping Report for the NW Gateway Project, Compiled by Landscape Dynamics Environmental Consultants, October 2018: 28-29

6. VISUAL ISSUES

Typical issues associated with development projects of this nature are:

- Who will be able to see the new development?
- What will it look like and will it contrast with the receiving environment?
- Will the development affect sensitive views in the area and if so how?
- What will be the impact of the development during the day and at night?
- What will the cumulative impact be?

The public participation process is being conducted by Landscape Dynamics and during the process, to date, no visual concerns have been raised and there were no definite objections or questions raised during the process other than the concern of SAHRA concern of the impact of the development on views from the Hartebeespoort Dam wall, a recognized heritage site[2].

[2] NW Gateway Project, Township Development on Portions (and Portions of Portions) 233, 234, 235, 236 and 237 and the Remainder of Potion 151 of the Farm Hartebeesfontein 445-JQ, Mabideng Local Municipality, North West Province, Scoping & EIA Application, Final Scoping Report, October 2018

7. THE ENVIRONMENTAL SETTING

7.1 The Study Area - General

The study area is located to the north of the Magaliesberg range, west of the Hartebeespoort Dam wall and west of the Crocodile River. The Magaliesberg Biosphere Core occurs south of the site as indicated in Figure 3 and the site lies within the Magaliesberg Biosphere 'buffer zone'.

The study area falls within the Savanna biome and classified as belonging to the vulnerable Moot Plains Bushveld (SVcb 8) (Mucina & Rutherford 2006). The site is an open area with mostly natural vegetation that is in various conditions ranging from degraded to natural. A small, seasonally moist drainage line originates on the site and runs north east through the property, draining storm water from the catchment.

The site is in an area surrounded by various developments that ranges from agriculture, residential to commercial[3].

Refer also to the photographs in Figures 4 to 9, which illustrate the landscape character of the study area. The locations of the panorama views are indicated in Figure 3.

7.2 Land Use

7.2.1 Residential

The study area comprises several individual residential units to the south west and north west (mostly related to agricultural activities) of the site as indicated in Figure 3. South of the Magaliesberg along the northern shore of the Hartebeespoort Dam are Kosmos, Kosmos Ridge and the western extension of Schoemansville, however they fall outside the viewshed of the proposed development.

7.2.2 Infrastructure and roads

The two main roads in the area are the R104 and R512, which intersect at the south western corner of the project site. The R104 passes the site to the south and joins with the historic dam wall east of the site.

7.2.3 Commercial and Tourism

Tourism in one of the main industries in the area and is associated with the Magaliesberg mountains, the Hartebeespoort dam and a strip of development along the R104 west of the site as illustrated in Figure 3. The Magaliesberg, inclusive of the dam wall, is a protected landscape, which attract tourism where the focus of the activity is on the beautiful scenery and elevated views afforded from the top of the mountain.

The area is well supported with many types of tourist accommodation and associated activities that 'feed off' of the main attractions to the area. Immediately east of the site are several established holiday resorts including, On Golden Pond and Mount Amanzi.

[3] Final Scoping Report for the NW Gateway Project, Compiled by Landscape Dynamics Environmental Consultants, October 2018: 30

7.2.4 Agriculture

Agriculture lands, mostly under irrigation, occur extensively to the north west of the site. Their eastern extension is the Crocodile River.

7.3 Natural landscape

The southern section of the study area comprises the Magaliesberg with its steep south facing cliffs leading to the ridge line and the grassy / savannah mountain terrain sloping north towards the site. The Crocodile River flows north from the dam wall across the study area. These areas are protected and are the main reason, along with the dam, that attract tourist to this scenic area.

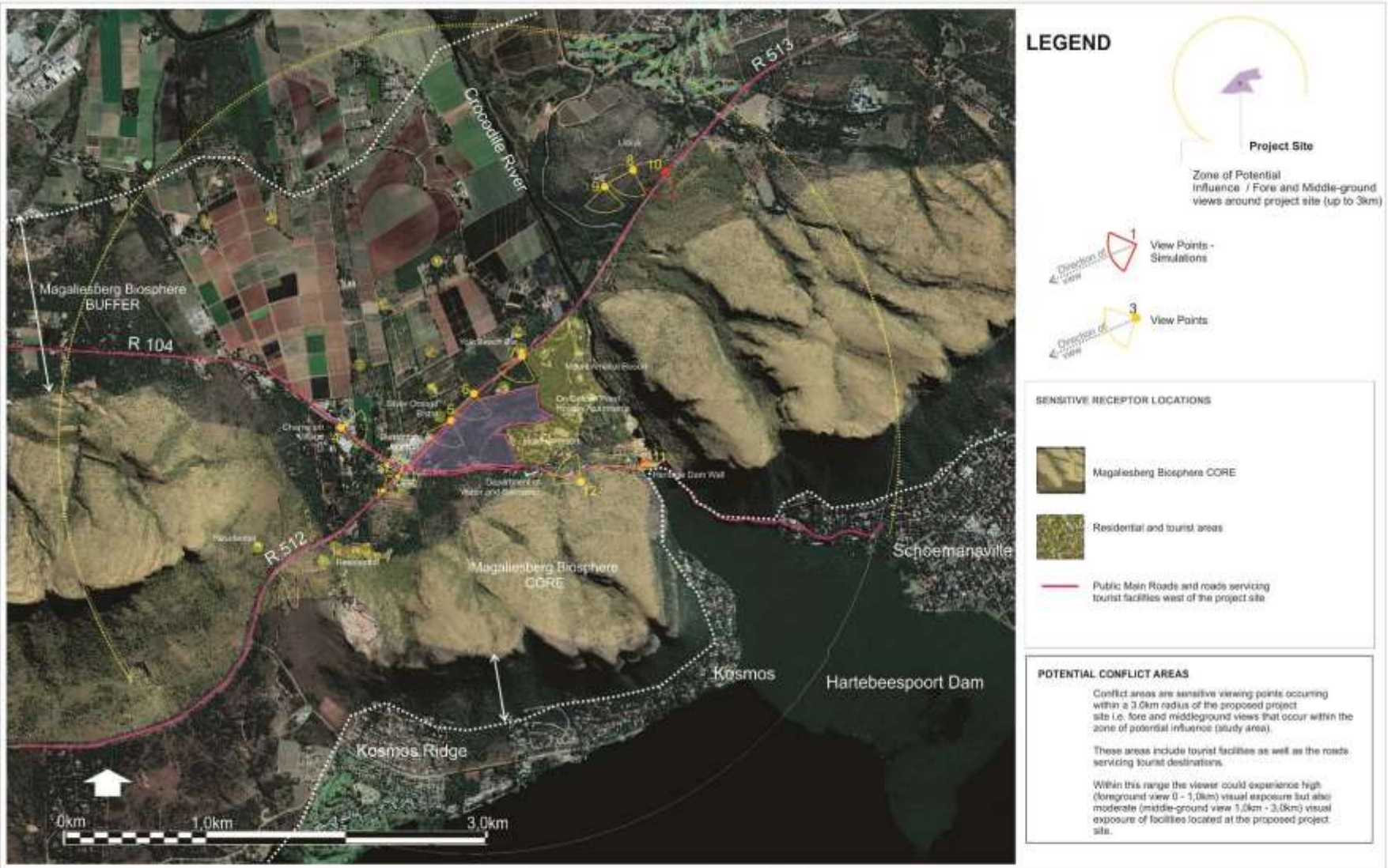

Figure 3: VIEW SITES AND SENSITIVE RECEPTOR AREAS

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Figure 4: LANDSCAPE CHARACTER_ Views 1 and 2

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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Figure 5: LANDSCAPE CHARACTER_ Views 3 and 4

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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Figure 6: LANDSCAPE CHARACTER_ Views 5 and 6

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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Figure 7: LANDSCAPE CHARACTER_ Views 7 and 8

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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Figure 8: LANDSCAPE CHARACTER_ Views 9 and 10

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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View 11 looking west to the site from the viewing point on the Hartebeespoort Dam wall

View 12 looking north-west towards the site from immediately above the R104 near Tant Malie se Winkel

Figure 9: LANDSCAPE CHARACTER_ Views 11 and 12

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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8. VISUAL RESOURCE

8.1 Visual Resource Value / Scenic Quality

The scenic quality (using the scenic quality rating criteria described in Appendix A) of the study area is primarily derived from the Magaliesberg mountain range along with its treed talus slopes which give the study area a distinct natural character and dramatic identity (Figures 6,7 and 8). The dramatic drop in elevation and flow of the Crocodile River immediately downstream of the dam wall also add to its identity. The mountain's profile is ever-present and forms the backdrop to most views experienced from the northern side of the mountain looking south. The scenic value of the area is a major contributor to a thriving tourist industry within the sub-region and contributes to the area's unique identity.

The north western section of the study area is dominated by agricultural activities (Figure 3) that are mostly hidden from ground views from the two main public roads (R104 and R512/3) by vegetation adjacent to the roads. However, as soon as the viewer rises the slopes of the Magaliesberg the extent of these activities becomes evident (Figure View 12 Figure 9). Compromising the natural/cultural character is the commercial tourist activities that occur along the R104 west and immediately east of the intersection with the R512 (Figures 4 and 5).

When the criteria listed in Appendix A are taken together, an overall rating of *high* is allocated to the study area because of the overwhelming presence of the mountain. However, the nature and expansion of urban activity along the main roads is compromising the natural/wild beauty of the area as mentioned above. A summary of the visual resource values, within the context of the sub-region, is tabulated in Table 1 below. The project site lays within the area described as having moderate visual resource appeal.

Table 1: Value of the Visual Resource

(After The Landscape Institute with the Institute of Environmental Management and Assessment, 2002)

High	**Moderate**	**Low**
Magaliesberg mountain and Crocodile River Valley	Tourist resorts, residential areas, an agricultural land (includes the project site)	Urban areas associated with strip commercial and tourist development along the R104
This landscape type is considered to have a *high* value because it is a: Distinct landscape that exhibits a very positive character with valued features that combine to give the experience of unity, richness and harmony. It is a landscape that may be of importance to conserve and which has a strong sense of place. Sensitivity:	This landscape type is considered to have a *moderate* value because it is a: Common landscape that exhibits some positive character, but which has evidence of alteration / degradation/ erosion of features resulting in areas of more mixed character. Sensitivity:	This landscape type is considered to have a *low* value because it is a: Minimal landscape generally negative in character with few, if any, valued features. Sensitivity:

It is sensitive to change in general and will be detrimentally affected if change is inappropriately dealt with.	It is potentially sensitive to change in general and change may be detrimental if inappropriately dealt with	It is not sensitive to change in general and change

8.2 Sense of Place

The sense of place for the study area derives from the combination of all landscape types and their impact on the senses. The Magaliesberg is the focus of the visual senses, making the study area unique within the sub-region, and consequently evokes a strong and dramatic sense of place to the study area.

9. VISUAL ISSUES

9.1 Visual Receptors

Visual receptors include people living in, visiting or travelling through the study area primarily along the R104 and R512/3 main roads. The area is considered a tourist local destination area for visitors from Gauteng and North West Provinces.

9.2 Sensitive Viewers

The Magaliesberg is a protected environment and the visual resource responsible for a thriving tourism industry making any interventions to the existing situation potentially sensitive. The project site is located with the Magliesberg Bisophere Reserve 'buffer zone' (Figure 3) and immediately adjacent its Core area.

The following receptors and viewing areas are considered as potentially sensitive to the proposed development and are identified on Figure 3. Potential conflict areas occur within a 3 km radius of the project site (i.e. fore and middelground views that could be affected by the proposed development). SARHA has identified the view from the historic dam wall (View 11 Figure 9 as particularly sensitive as it is a tourist viewing site with dramatic views into the Crocodile River.

Table 2: Potential Sensitivity of Visual Receptors

High	Moderate	Low
Residences and tourists visiting Hartebeespoort dam wall, the Magaliesberg Reserve and tourists visiting the study area	Locals travelling through the study area for business other than to visit a tourist destination	People working or travelling to work in the study area
Visitors of tourist attractions and travelling along local routes, whose intention or interest may be focused on the landscape; Communities where the development results in changes in the landscape setting or valued views enjoyed by the community; Occupiers of residential properties with views affected by the development.	People engaged in outdoor sport or recreation (other than appreciation of the landscape, as in landscapes of acknowledged importance or value); People travelling through or past the affected landscape in cars or other transport routes.	Visitors and people working within the study area and travelling along local roads whose attention may be focused on their work or activity and who therefore may be potentially less susceptible to changes in the view.

Although visual sensitivities could arise from viewing areas as described in the Table above, the outcome of public participation meetings indicate that members of the public do recognize visual sensitivity as an issue. However, SARHA have indicated that they are concerned about the potential visual impact of the proposed development on views from the Hartebeespoort Dam wall. The project site is located within a moderately sensitive landscape and adjacent to a highly rated landscape, and therefore the potential of visual impact

must be considered, and that impact on the existing character of the landscape and sensitive should be prevented as far as is possible.

9.3 Visibility and Visual Intrusion

9.3.1 Visibility

The 'zone of potential influence' was established at 3,0km. Over 3,0km the impact of the Project's activities would have diminished as the project will recede into the background and/or views to the site (other than views from the Magaliesberg) would be screened by topographic relief, existing vegetation and structures.

In determining the visibility of the Project the most prominent aspects of the development (refer to Figure 2 for relative heights of project components) are considered. The offsets, equivalent to the maximum height of proposed structures, were used to produce the viewshed illustrated in Figure 10. The viewshed (which was generated using contours only and did not include all off-site structures and vegetation) indicates that the proposed development would be highly visible for most areas within the 'zone of potential influence'. However, as is evident in the panoramas in Figures 4 - 9, extensive tall tree cover creates a situation where most views to the site originating from sensitive viewing sites (other than elevated views from the Magaliesberg) would be screened. Visibility is therefore rated as low for 'ground level' views, since views would be obstructed or completely obscured and high for views from elevated positions on the Magaliesberg.

The Project would not be visible from the viewing site on the Hartebeesport Dam wall as indicated in the simulation in Figure 12 as it would be screened by existing vegetation growing on properties east of the development site. Views from residential properties to the south and south west of the site (refer to Figure 3), would have elevated views of the project site but many of these would be partially or totally screened by existing tall trees.

The proposed development would be highly visible from the upper elevations of the Magliesberg. However, it would be seen by relatively few people[4] and it would always appear in the same visual envelope as existing development about the R104 and R512 intersection. Views from the Magaliesberg always comprise a combination of cultural, natural and man-made landscapes i.e. they are not of pristine or wilderness natural areas. The development would therefore not be out of place given this context i.e. the viewer would most likely not be sensitive to the development.

9.3.2 Visual Intrusion

Visual intrusion deals with the notion of contextualism i.e. how well does a project component fit with or disrupt / enhance the ecological and cultural aesthetic of the landscape as a whole? The simulations in Figures 11 and 12 below illustrate the effect that proposed development will have on the visual landscape when viewed from south of the site (Figure 11 - Uitkyk) and the Hartebeespoort Dam Wall (Figure 12).

[4] There is however a popular hiking trail, the Uitkyk trail, that starts at the Rissik Estate south of the development site and winds its way up the Magaliesberg west of the Crocodile River. The development would be highly visible from higher elevations along the trail.

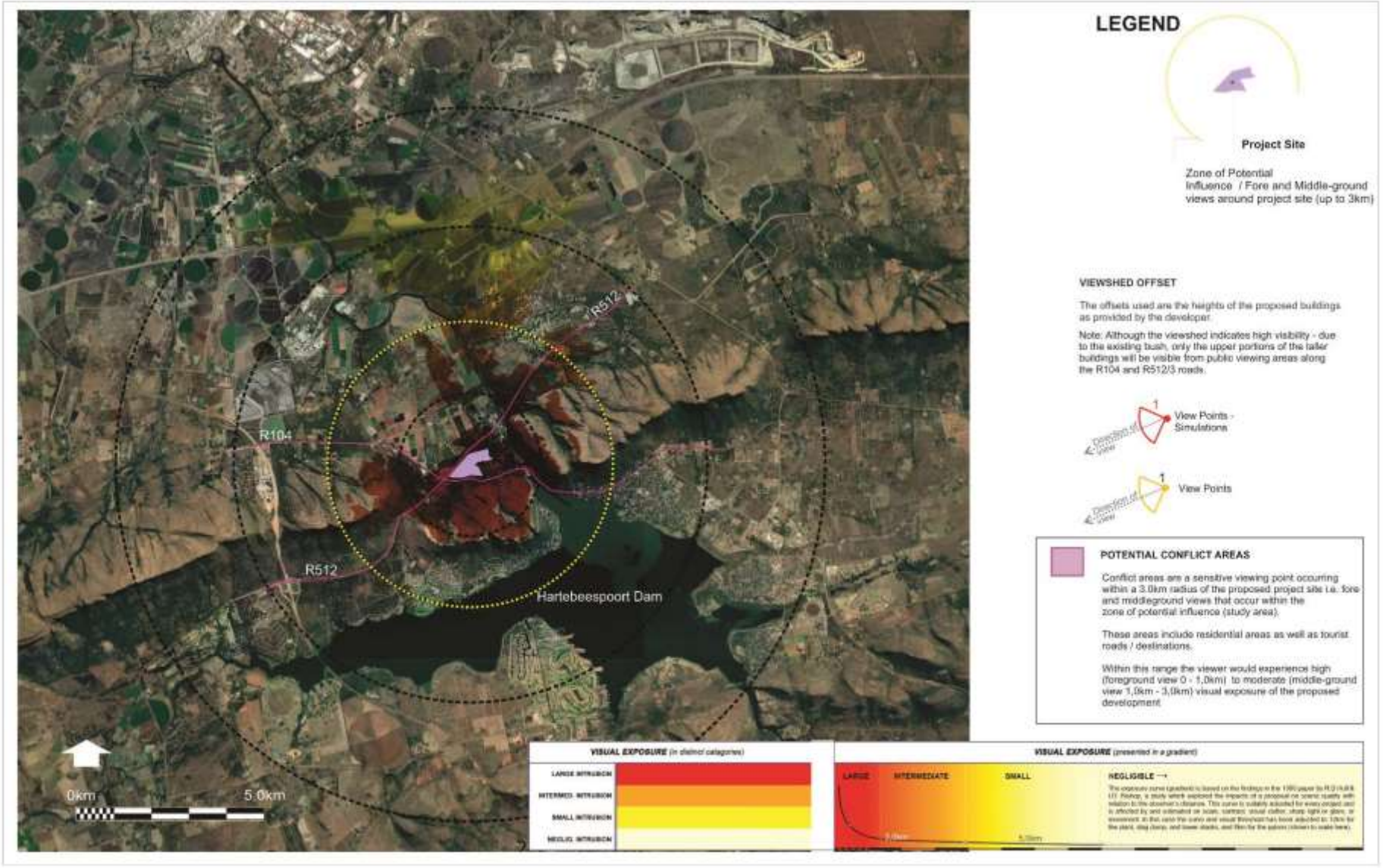

Figure 10: VIEWSHED ANALYSIS

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Visual intrusion is *moderate* to *low.* The development site is mostly compatible with the cultural aesthetic of the area (i.e. contained to an existing development node at the R104 and R512 that contains a variety of commercial and tourist facilities) and contrasts moderately with the patterns that define the landscape. Also, the extensive vegetative cover on the site and its immediate surrounds, tends to 'absorb' the development, assuming that all vegetation not directly related to building or infrastructural development is retained (see also Management Measures Section 10).

Table 3: Visual Intrusion of the Proposed Development

High	**Moderate**	**Low**
The development would have a substantial negative effect on the visual quality (sense of place) of the landscape relative to the baseline landscape because it would: - Contrast with the patterns or elements that define the structure of the landscape;	The development project would have a negative effect on the visual quality (sense of place) of the landscape; - Have a moderate negative effect on the visual quality (sense of place) of the landscape; - **Contrast moderately with the current patterns or elements that define the structure of the landscape;** - Be partially compatible with land use, settlement or enclosure patterns of the general area;	The development would have a minimal effect on the visual quality (sense of place) of the landscape; - Contrasts minimally with the patterns or cultural elements that define the structure of the landscape; **- Is mostly compatible with land use, settlement or enclosure patterns;**
RESULT: Notable change in landscape characteristics over an extensive area and an intensive change over a localized area resulting in major changes in key views.	*RESULT:* Moderate change in landscape characteristics over localized area resulting in a moderate change to key views.	*RESULT:* **Minimal change resulting in a minor change to key views from the tourist and residential areas in Hartebeesfontein area.**

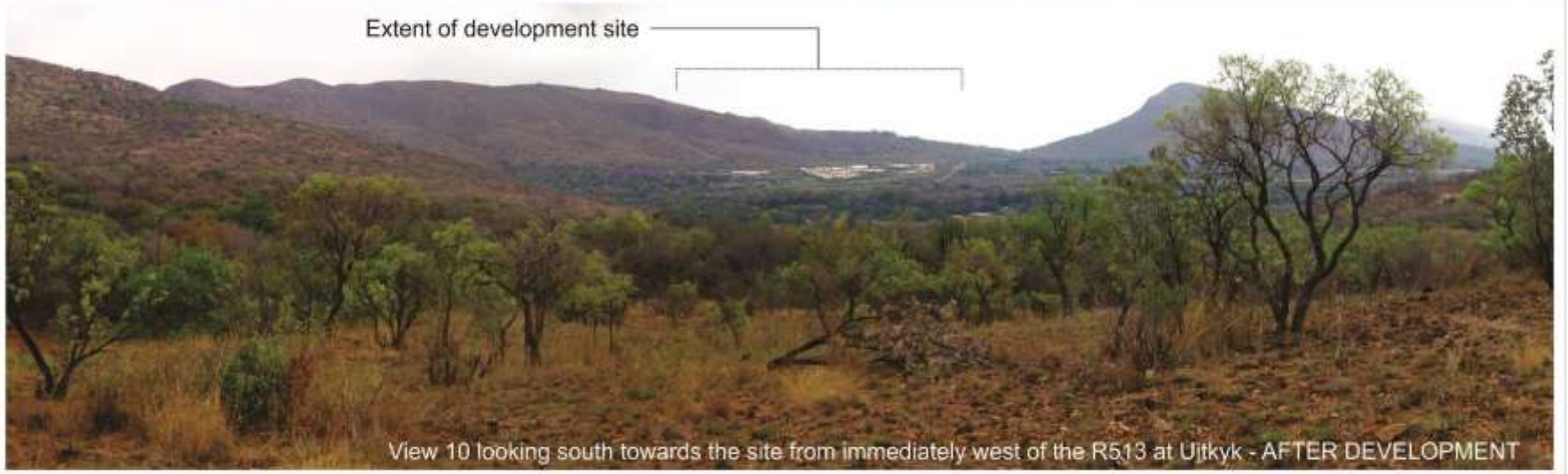

Figure 11: SIMULATION_ View 10 from UITKYK

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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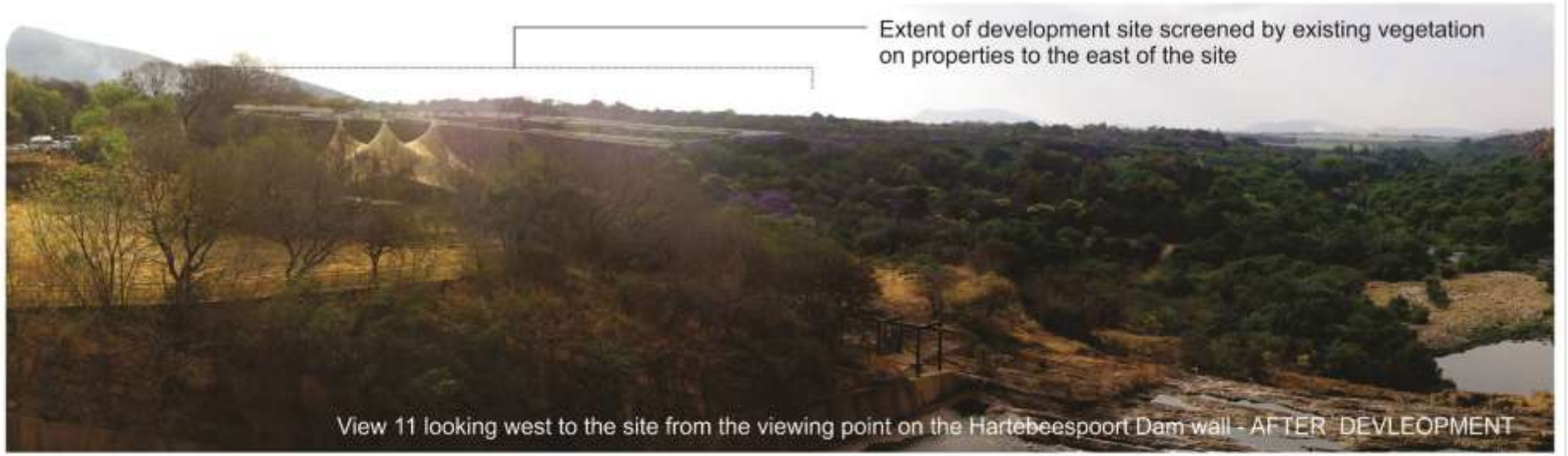

Figure 12: SIMULATION_ View 11 from Hartebeespoort Dam Wall

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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10. MANAGEMENT MEASURES

In considering mitigating measures three rules are considered - the measures should be feasible (economically), effective (how long will it take to implement and what provision is made for management / maintenance) and acceptable (within the framework of the existing landscape and land use policies for the area). To address these, the following principles have been established:

- Mitigation measures should be designed to suit the existing landscape character and needs of the locality. They should respect and build upon landscape distinctiveness.
- It should be recognized that many mitigation measures, especially the establishment of planted screens and rehabilitation, are not immediately effective.

General mitigation measures are proposed for the Project as well as mitigating the night-time impact of lights. The following general actions are recommended:

10.1 Planning and site development

- During construction activities, the minimum amount of existing vegetation and topsoil should be removed. Ensure, wherever possible, natural vegetation is retained and incorporated into the site rehabilitation. All top-soil that occurs within the proposed footprint of an activity must be removed and stockpiled for later use.

10.2 Earthworks

- Earthworks should be executed in such a way that only the footprint and a small 'construction buffer zone' around the proposed activities is exposed. Building and parking platforms should be designed to follow the contours and not be perpendicular to them. In all other areas, the natural occurring vegetation, more importantly the indigenous vegetation should be retained, especially along the periphery of the site. Dust suppression techniques should always be in place during all phases of the project, where required.

10.3 Landscaping and ecological approach

- When new vegetation is introduced to the site, an ecological approach to rehabilitation and vegetative screening measures, as opposed to a horticultural approach to landscaping should be adopted. For example, communities of indigenous plants enhance biodiversity and blend well with existing Magaliesberg vegetation (Savanna biome). This approach can significantly reduce long term costs as less maintenance would be required over conventional landscaping methods as well as the introduced landscape being more sustainable.

10.4 Structures and associated infrastructure

Paint structures with colours that reflect and compliment the natural colours of the surrounding landscape. To further reduce the potential of glare, the external surfaces of structures should be articulated or textured to create interplay of light and shade. Refer to Figure 13 below which illustrates the positive results of the effect.

10.5 Lighting

Light pollution is largely the result of bad lighting design, which allows artificial light to shine outward and upward into the sky, where it's not wanted, instead of focusing the light downward, where it is needed. Ill designed lighting washes out the darkness of the night sky and radically alters the light levels in rural areas where light sources shine as 'beacons' against the dark sky and are generally not wanted.

Of all the pollutions faced, light pollution is perhaps the most easily remedied. Simple changes in lighting design and installation yield immediate changes in the amount of light spilled into the atmosphere. The following are measures that must be considered in the lighting design of the Project:

- Install light fixtures that provide precisely directed illumination to reduce light "spillage" beyond the immediate surrounds of the site.
- Avoid high pole top security lighting along the periphery of the site and use only lights that are activated on illegal entry to the site.
- Minimise the number of light fixtures to the bare minimum, including security lighting.
- Wherever possible, lights should always be directed downwards to avoid illuminating the sky.

To facilitate the implementation of mitigation measures a Visual Impact Management Plan should be developed. The plan should include a Landscape Development Plan, which identifies the location and nature of landscaping and tree planting schemes. These efforts should be concentrated in areas that would maximize the screening of the development from sensitive viewing areas during the operational phase. It is recommended that the plan be developed by a landscape architectural practise registered with the South African Council for the Landscape Architectural Profession (SACLAP) and that this plan is implemented under the supervision of a registered landscape architect.

Figure 13: SIMULATION_ View 10_Mitigation

Refer to Figure 3 for location of views: Photos taken 12 and 20 March 2018

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11. CONCLUSION

The existing visual condition of the landscape that may be affected by the proposed Project has been described. The study areas scenic quality has been rated *high* within the context of the sub-region and sensitive viewing areas mapped indicating potential sensitivity to the proposed development within a 3 km radius of the project site.

Impacts to views are the highest when viewers are identified as being sensitive to change in the landscape, and their views are focused on and dominated by the change. Visual impacts occur when changes in the landscape are noticeable to viewers looking at the landscape from their homes or from tourism / conservation areas, travel routes, and important cultural features and historic sites, especially in foreground views.

However, sensitivity to the project is *low* and the intrusive nature of Project components is also rated *low* as the project will be mostly screened and absorbed into the landscape scene by existing vegetation and topography. The Project would be seen from sensitive viewpoints on the upper slopes of the Magaliesberg. However, from these vantage points the development would always appear in the same visual envelope as other developments that define the cultural characteristic of the landscape and not appear out of place.

SAHRA voiced a concern that the project could impact on views from the historic Hartebeespoort dam wall. Simulation modelling, however, indicates that the development would mostly be screened and would its physical presence would therefore not have a significant impact on tourists visiting the dam wall.

It is therefore predicted that *low* (i.e. a minor loss of or alteration to key elements / features / characteristics of the baseline) visual resource impacts would result from the construction, operation and maintenance of the proposed Project. It is the opinion of the author that all aspects of the Project, from a potential visual impact perspective, should be approved provided that the mitigation / management measures are effectively implemented, managed and monitored in the long term and that engagement with the community during this process is continued.

****GYLA****

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In order to reach an understanding of the effect of development on a landscape resource, it is necessary to consider the different aspects of the landscape as follows:

Landscape Elements and Character

The individual elements that make up the landscape, including prominent or eye-catching features such as hills, valleys, savannah, trees, water bodies, buildings and roads are generally quantifiable and can be easily described.

Landscape character is therefore the description of pattern, resulting from particular combinations of natural (physical and biological) and cultural (land use) factors and how people perceive these. The visual dimension of the landscape is a reflection of the way in which these factors create repetitive groupings and interact to create areas that have a specific visual identity. The process of landscape character assessment can increase appreciation of what makes the landscape distinctive and what is important about an area. The description of landscape character thus focuses on the *nature of the land*, rather than the response of a viewer.

Landscape Value – all encompassing (Aesthetic Value)

Aesthetic value is the emotional response derived from the experience of the environment with its particular natural and cultural attributes. The response can be either to visual or non-visual elements and can embrace sound, smell and any other factor having a strong impact on human thoughts, feelings and attitudes (Ramsay 1993). Thus aesthetic value encompasses more than the seen view, visual quality or scenery, and includes atmosphere, landscape character and sense of place (Schapper 1993).

Aesthetic appeal (value) is considered high when the following are present (Ramsay 1993):

- *Abstract qualities*: such as the presence of vivid, distinguished, uncommon or rare features or abstract attributes;
- *Evocative responses*: the ability of the landscape to evoke particularly strong responses in community members or visitors;
- *Meanings*: the existence of a long-standing special meaning to a particular group of people or the ability of the landscape to convey special meanings to viewers in general;
- *Landmark quality*: a particular feature that stands out and is recognised by the broader community.

Sense of Place

Central to the concept of a sense of place is that the place requires uniqueness and distinctiveness. The primary informant of these qualities is the spatial form and character of the natural landscape together with the cultural transformations and traditions associated with historic use and habitation. According to Lynch (1992) sense of place "is the extent to which a person can recognize or recall a place as being distinct from other places - as having a vivid, or unique, or at least particular, character of its own". Sense of place is the

unique value that is allocated to a specific place or area through the cognitive experience of the user or viewer. In some cases these values allocated to the place are similar for a wide spectrum of users or viewers, giving the place a universally recognized and therefore, strong sense of place.

Scenic Quality

Assigning values to visual resources is a subjective process. The phrase, “beauty is in the eye of the beholder,” is often quoted to emphasize the subjectivity in determining scenic values. Yet, researchers have found consistent levels of agreement among individuals asked to evaluate visual quality.

Studies for perceptual psychology have shown human preference for landscapes with a higher visual complexity particularly in scenes with water, over homogeneous areas. On the basis of contemporary research landscape quality increases when:

- Topographic ruggedness and relative relief increase;
- Where water forms are present;
- Where diverse patterns of grasslands and trees occur;
- Where natural landscape increases and man-made landscape decreases;
- And where land use compatibility increases and land use edge diversity decreases (Crawford 1994).

Scenic Quality - Explanation of Rating Criteria:

(After The Visual Resource Management System, Department of the Interior of the USA Government, Bureau of Land Management)

Landform: Topography becomes more interesting as it gets steeper or more massive, or more severely or universally sculptured. Outstanding landforms may be monumental, as the Fish River or Blyde River Canyon, the Drakensberg or other mountain ranges, or they may be exceedingly artistic and subtle as certain badlands, pinnacles, arches, and other extraordinary formations.

Vegetation: (Plant communities) Give primary consideration to the variety of patterns, forms, and textures created by plant life. Consider short-lived displays when they are known to be recurring or spectacular (wildflower displays in the Karoo regions). Consider also smaller scale vegetational features, which add striking and intriguing detail elements to the landscape (e.g., gnarled or wind beaten trees, and baobab trees).

Water: That ingredient which adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration in selecting the rating score.

Colour: Consider the overall colour(s) of the basic components of the landscape (e.g., soil, rock, vegetation, etc.) as they appear during seasons or periods of high use. Key factors to use when rating "colour" are variety, contrast, and harmony.

Adjacent Scenery: Degree to which scenery outside the scenery unit being rated enhances the overall impression of the scenery within the rating unit. The distance which adjacent scenery will influence scenery within the rating unit will normally range from 0-8 kilometres, depending upon the characteristics of the topography, the vegetative cover, and other such factors. This factor is generally applied to units which would normally rate very low in score, but the influence of the adjacent unit would enhance the visual quality and raise the score.

Scarcity: This factor provides an opportunity to give added importance to one or all of the scenic features that appear to be relatively unique or rare within one physiographic region. There may also be cases where a separate evaluation of each of the key factors does not give a true picture of the overall scenic quality of an area. Often it is several not so spectacular elements in the proper combination that produces the most pleasing and memorable scenery - the scarcity factor can be used to recognize this type of area and give it the added emphasis it needs.

Cultural Modifications: Cultural modifications in the landform / water, vegetation, and addition of structures should be considered and may detract from the scenery in the form of a negative intrusion or complement or improve the scenic quality of a unit.

Scenic Quality Inventory and Evaluation Chart

(After The Visual Resource Management System, Department of the Interior of the USA Government, Bureau of Land Management)

Key factors	Rating Criteria and Score		
Landform	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing such as glaciers. **5**	Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional. **3**	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features. **1**
Vegetation and landcover	A variety of vegetative types as expressed in interesting forms, textures, and patterns. **5**	Some variety of vegetation, but only one or two major types. **3**	Little or no variety or contrast in vegetation. **1**
Water	Clear and clean appearing, still, or cascading white water,	Flowing, or still, but not dominant in the landscape.	Absent, or present, but not noticeable.

	any of which are a dominant factor in the landscape. **5**	**3**	**0**
Colour	Rich colour combinations, variety or vivid colour; or pleasing contrasts in the soil, rock, vegetation, water or snow fields. **5**	Some intensity or variety in colours and contrast of the soil, rock and vegetation, but not a dominant scenic element. **3**	Subtle colour variations, contrast, or interest; generally mute tones. **1**
Influence of adjacent scenery	Adjacent scenery greatly enhances visual quality. **5**	Adjacent scenery moderately enhances overall visual quality. **3**	Adjacent scenery has little or no influence on overall visual quality. **0**
Scarcity	One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc. National and provincial parks and conservation areas *** 5+**	Distinctive, though somewhat similar to others within the region. **3**	Interesting within its setting, but fairly common within the region. **1**
Cultural modifications	Modifications add favourably to visual variety while promoting visual harmony. **2**	Modifications add little or no visual variety to the area, and introduce no discordant elements. **0**	Modifications add variety but are very discordant and promote strong disharmony. **4**

Scenic Quality (i.e. value of the visual resource)

In determining the quality of the visual resource both the objective and the subjective or aesthetic factors associated with the landscape are considered. Many landscapes can be said to have a strong sense of place, regardless of whether they are considered to be scenically beautiful but where landscape quality, aesthetic value and a strong sense of place coincide - the visual resource or perceived value of the landscape is considered to be very high.

When considering both objective and subjective factors associated with the landscape there is a balance between landscape character and individual landscape features and elements, which would result in the values as follows:

Value of Visual Resource – expressed as Scenic Quality
(After The Landscape Institute with the Institute of Environmental Management and Assessment (2002))

High	Moderate	Low
Areas that exhibit a very positive character with valued features that combine to give the experience of unity, richness and harmony. These are landscapes that may be considered to be of particular importance to conserve and which may be sensitive change in general and which may be detrimental if change is inappropriately dealt with.	Areas that exhibit positive character but which may have evidence of alteration to /degradation/erosion of features resulting in areas of more mixed character. Potentially sensitive to change in general; again change may be detrimental if inappropriately dealt with but it may not require special or particular attention to detail.	Areas generally negative in character with few, if any, valued features. Scope for positive enhancement frequently occurs.

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Visual Impact Assessments

Graham is a registered landscape architect with interest and experience in landscape architecture, urban design and environmental planning. He holds a degree in landscape architecture from the University of Toronto and has practiced in Canada and Africa, where he has spent most of his working life. He has served as President of the Institute of Landscape Architects of South Africa (ILASA) and as Vice President of the Board of Control for Landscape Architects.

During his 35 years plus career he has received numerous ILASA and other industry awards. He has published widely on landscape architectural issues and has had projects published both locally and internationally in, scientific and design journals and books. He was a being a founding member of Newtown Landscape Architects and is also a senior lecturer, teaching landscape architecture and urban design at post and under graduate levels, at the University of Pretoria. He has been a visiting studio critic at the University of Witwatersrand and University of Cape Town and in 2011 was invited to the University of Rhode Island, USA as their Distinguished International Scholar for that year. Recently, Graham resigned from NLA and now practices as a Sole Proprietor.

A niche specialty of his is Visual Impact Assessment for which he was cited with an ILASA Merit Award in 1999. He has completed over 250 specialist reports for projects in South Africa, Canada and other African countries. He was on the panel that developed the *Guideline for Involving Visual and Aesthetic Specialists in EIA Processes* (2005) and produced a research document for Eskom, *The Visual Impacts of Power Lines* (2009). In 2011, he produced '*Guidelines for involving visual and aesthetic specialists'* for the Aapravasi Ghat Trust Fund Technical Committee (they manage a World Heritage Site) along with the *Visual Impact Assessment Training Module Guideline Document.*

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