

KEURBOOMSTRAND

Visual Impact Assessment

For Erf 155, Keurboomstrand

February 2022

Revision 1

Prepared by: FILIA Visual

Authored by: Fi Smit

In Association with: Rust van der Merwe

For: Viridus Works (Pty) Ltd



FILIA Visual

24 John Street, Mowbray
(+27) 79 841 0340
filia.visual@gmail.com

VISUAL IMPACT ASSESSMENT

For the

PROPOSED DEVELOPMENT AT KEURBOOMSTRAND**On Erf 155, Keurboomstrand**

Submitted to:

Virdus Works (Pty) Ltd77 Buitekring, Dalsig,
Stellenbosch
7600

Prepared by:

**Filia Visual (Pty) Ltd**24 John Street
Mowbray, Cape Town
7700

Project Information Summary	
Filia Project Reference:	008_VIA_Erf 155 Keurboomstrand
Date Issued:	15 February 2022
Revision No.:	1
Report Author:	Fioné (Fi) Smit (+27) 79 841 0340 filia.visual@gmail.com and fi@filia.co.za
Reference:	Smit, F. (2022). Visual Impact Assessment for the Proposed Development Erf 155, Keurboomstrand. VIA Report, Cape Town.

EIA Regulations Appendix 6 Checklist

The following specialist report has been prepared in terms of Item 1 of the Environmental Impact Assessment Regulations, 2014 (Appendix 6: Specialist Reports) under the National Environmental Management Act, 1998 (Act No. 107 of 1998).

Item	Description	Checklist & location in report
(a) (i) (ii)	details of— (i) the specialist who prepared the report; and (ii) the expertise of that specialist to compile a specialist report including a curriculum vitae;	<i>Project Information Summary (Page 2); Experience and Compliance (Page 5); and Annexure A: Curriculum Vitae and Experience of the visual specialist</i>
(b)	a declaration that the specialist is independent in a form as may be specified by the competent authority;	<i>Declaration and Statement of Independence (Page 5)</i>
(c)	an indication of the scope of, and the purpose for which, the report was prepared;	<i>Chapter 2: Introduction (2.1 and 2.2)</i>
(cA)	an indication of the quality and age of base data used for the specialist report;	<i>Chapter 2: Introduction (2.6)</i>
(cA)	a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	<i>Chapter 3: Site and RE Study (3.1); Chapter 6: Visual Impact Assessment (6.5)</i>
(d)	the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	<i>Chapter 3: Site and RE Study – introductory text.</i>
(e)	a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	<i>Chapter 2: Introduction (2.3 and 2.8)</i>
(f)	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, inclusive of a site plan identifying site alternatives;	<i>Chapter 4: Proposed Development, and Chapter 6: Visual Impact Assessment.</i>
(g)	an identification of any areas to be avoided, including buffers;	<i>Figures 85, 86, 87 and 88.</i>
(h)	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;	<i>Figures 85, 86, 87 and 88.</i>
(i)	a description of any assumptions made and any uncertainties or gaps in knowledge;	<i>Chapter 2: Introduction (2.8)</i>
(j)	a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	<i>Chapter 5: Visual Analysis, and chapter 6: Visual Impact Assessment.</i>
(k)	any mitigation measures for inclusion in the EMPr;	<i>Chapter 7: Management Actions and Mitigation Measures (7.2.1), (7.2.2) and (7.2.3)</i>
(l)	any conditions for inclusion in the environmental authorisation;	
(m)	Any monitoring requirements for inclusion in the EMPr or environmental authorisation;	
(n) (i) (iA) (iii)	a reasoned opinion— (i) whether the proposed activity, activities or portions thereof should be authorised; (iA) regarding the acceptability of the proposed activity or activities; and (ii) if the opinion is that the proposed activity, 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;	<i>Chapter 8: Conclusion and Visual Impact Statement (8.1) and (8.2.1)</i>

(o)	a description of any consultation process that was undertaken during the course of preparing the specialist report;	<i>(n/a)</i>
(p)	a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	<i>(n/a)</i>
(q)	any other information requested by the competent authority.	<i>Chapter 2: Introduction (2.2)</i>

Declaration and Statement of Independence

Statement of Independence and Disclaimer

The author hereby declares that they act as an independent specialist in this matter and will perform the work relating to the matter in an objective manner, even if this results in views and findings that are not favourable to interested parties. Neither Filia Visual, nor any of the authors of this report have any material present or contingent interest in the outcome of this Project, nor do they have any pecuniary or other interest that could be reasonably regarded as affecting their independence or that of Filia Visual. Filia Visual has no beneficial interest in the outcome of the assessment which is capable of affecting its independence, and it should be noted that Filia Visual does not have any interests in secondary or downstream applications that may arise from the granting of the application and proposed development.

The opinions, views and findings contained in this report are based on the information supplied to Filia Visual by the Client and project professional team. The author has exercised all due care and diligence in reviewing the project information supplied at the time of the writing of this report, however conclusions from the review remain reliant on the accuracy and completeness of the data and project information supplied. Filia Visual cannot accept responsibility for errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting therefrom. Filia Visual accepts no liability or responsibility whatsoever in respect of any use of or reliance upon this report by any third party. The findings of this report are based on the site conditions, proposal and receiving environment features as they existed at the time of investigation and writing, and those that are reasonably foreseeable, to the exclusion of conditions and features that present after the date of such site investigations and this report.

Experience and Compliance

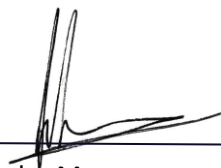
Fioné Smit, the report author, has been appointed to prepare this Visual Impact Assessment Screening Report, and has expertise in conducting the specialist report relevant to this matter, including knowledge of regulations and guidelines that have relevance to the proposed activities. She is a SACLAP registered Landscape Architect, a member of ILASA and IAIA, and an independent Visual studies practitioner. Filia Visual and its representatives will comply with the appropriate Acts, regulations and all other applicable legislation, undertaking to disclose to interested parties and the competent authority (CA) all material information in her possession that reasonably has or may have the potential of influencing any decision to be taken with respect to these matters by the CA; and the objectivity of any report, plan or document to be prepared by her for submission to the CA.

Declaration

This specialist report has been prepared for Viridus Works (Pty) Ltd and is subject to and issued in accordance with the agreement between these parties. The author herewith confirms the correctness of the information provided in this report, including supporting documents and reports.



Fioné Smit
Director, Filia Visual (Pty) Ltd.
Professional Landscape Architect



Rust van der Merwe
Independent Consultant
Professional Architect

1. EXECUTIVE SUMMARY

Filia Visual was appointed to prepare a Visual Impact Assessment (VIA) for the proposed development at Keurboomstrand in the Bitou Municipality, Western Cape. The proposal is to subdivide and rezone Erf155 from Open Space Zone II to Residential Zone II to enable the development of private dwelling houses.

1.1 Introduction

This VIA informs the Environmental authorisation and Land use planning application processes based on the nature of the receiving environment and at the behest of the municipal Town Planning department, respectively. To summarise the aspects of the receiving environment indicating that visual input is necessary include the following. The subject site is located:

- (De facto) within the urban edge;
- Inside the 100m Urban Coastal Setback Line;
- on an elevated promontory with an average slope of approximately 1:4;
- Withing a Critical Biodiversity Area containing protected tree species;
- Alongside a scenic route;
- Within an area with a recognized special character, sense of place and importance in terms of tourism and recreation value;
- Within an area with visually prominent ridgelines or skylines;
- And near to areas with protection status (nature reserves), areas with proclaimed heritage status, sites of cultural significance and areas with intact wilderness qualities.

Indicators suggesting the need for visual input based on the nature of the proposed project include the following. The project proposes:

- A change in land use from the prevailing use;
- A use that is in conflict with an adopted plan or vision for the area;
- Possible visual intrusion in the landscape.

1.2 Purpose, Classification and Scope of the VIA

The proposal is for a **Category 2** development within an area (or route) of **high scenic, cultural, historical significance**. The purpose of the VIA is to ensure that the visual & aesthetic consequences of the proposed project are understood and adequately considered in the environmental and land use planning process through a Level 3 Visual Impact Assessment. This includes the potential impacts on scenic routes, other protected resources, and local receptors.

The Bitou Municipality requested that the scope of the VIA include:

- i. Environmental development constraints
- ii. Viewshed analysis
- iii. An assessment of the value of the Sense of Place;
- iv. Identification and assessment of the Cumulative (Environmental) Visual Impact of the proposed development;
- v. and the potential impact on adjacent land uses (urban and ecological).

While Level 3 Assessments do not typically call for complete 3D modeling and simulations (with and without mitigation), these methods were employed during the course of the VIA as standard procedure as per Filia Visual's methodology outlined in Section 2.3.

Key issues anticipated at the outset were those associated with Moderate Visual Impact expected:

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

Key issues addressed during the impact assessment stage included the following:

- Effect on sensitive receptors
- Effect on important views, view cones and view corridors
- Effect on protected landscapes and scenic resources
- Effect on visual character and sense of place of Keurboomstrand (east).

Refer to Section 2.5.2 for further detail.

1.3 The Receiving environment

1.3.1 The subject site

The subject site is undeveloped, densely covered with coastal vegetation and situated on an elevated promontory with steeply sloping ground typical of the coastline in this part of the Western Cape. The botanical survey found the site to be partially degraded and partially developable, subject to limitations to protect specific elements of the vegetation and biodiversity inherent to the site (protected species, sensitive vegetation types/pristine habitats and steep slopes). The botanist concluded that any proposal to develop the site must be done in the most sensitive manner possible, from a botanical/ecological point of view.

The proposed property boundary is flanked by residential development in the town of Keurboomstrand and shares property boundaries with public place (Erf 391), undeveloped publicly accessible land (Erf 152), the Main Road 394 (a scenic route). The site is characterized mainly by its vegetation cover and the site topography which is steeply sloped on the eastern, western and southern boundaries; while gently sloping in the central area (it is located on a shelf or promontory of part of a larger coastal foothill which extends to the west of the site). Half of the site (bisected diagonally by the ridgeline of the promontory) faces south west, while the other half slopes off southward. The slope analysis conducted by a professional surveyor indicates portions of the site more steeply sloped than 1:4 that are no-go areas for proposed development, a recommendation described in the Geotechnical report.

1.3.2 The study area

The initial study area is delineated by a 10km to 15km radius around the project site, an area including the entirety of Plettenberg Bay in the Western Cape. The receiving environment is very diverse, and is described both in terms of the greater study area, and at the local scale of Keurboomstrand (which is unique in the receiving environment).

a) The greater receiving environment

Plettenberg bay is typical of the crenulate bays in the Eden District, with exposed rock headlands, long sandy beaches and estuaries. The Cape Fold Mountains are a ubiquitous presence, delineating the

northern extents of the famous Garden Route, where river valleys incise the inland plateau and give way to a coastal corridor of undulating coastal plains, flood plains, estuaries and sandy beaches at the coast. The series of estuaries, lakes and forests of the Garden Route are considered to have high scenic value.

The N2 freeway, which is a major structuring element and mobility route through the area has given rise over time to numerous settlements along the coastline. Plettenberg Bay's southern bay coastal area is heavily developed containing the town of Plettenberg Bay, whereas the northern part of the bay is largely undeveloped apart from several hotel complexes and the village of Keurboomstrand at its northern end. The coastline within the receiving environment has a number of important archaeological sites, two such heritage and scenic resources with formal protection being the Robberg Peninsula and Matjies River Cave (both Provincial Heritage sites (PHS)). Large parts of the Bitou Municipality are also under conservation, and the UNESCO Garden Route Biosphere reserve contains some of the most pristine parks in South Africa.

Land use and economic activity in the study area is diverse, with its roots in agriculture and forestry. All policy documents consulted during the Desktop study identified the bio-physical environment and diverse natural resource base of the region as either a key element of, or the very basis of the economy. The Bitou Municipality can be described as being rich in culture and an often-visited tourism destination in the Western Cape for local and international visitors. The coastline, in particular, draws tourists by the millions, and attracts development and economic activities. Coastal areas are particularly valued for whale-watching, wide open ocean views, hiking and other outdoor lifestyle, leisure and recreation activities.

Distinct landscape types in the study area include:

- Long sandy beaches of the crenulate bay and small coves;
- The Keurbooms river valley and estuary;
- The vegetated coastal dune systems and the dune slack area directly inland;
- Urban development areas (medium to high density settlement);
- The inland coastal plateau containing minor and major river valleys (forested – commercial and indigenous);
- Rural settlements within the inland coastal plateau;
- Vegetated foothills at the coast, which give way to hard rock cliffed coasts with rock shore platforms (interrupted by small sandy river mouths).

b) Keurboomstrand

It is necessary to describe the subject site's localised receiving environment due to the heterogeneity of the greater receiving environment, and the uniqueness of its local context. The local receiving environment is found within a relatively narrow strip of land referred to as a 'Coastal Corridor', between the sea and the rural hinterland, and at the intersection of three landscape types. Keurboomstrand as a township is divided into two distinct areas: the western portion situated in the floodplain of the estuary, on the dunes and within the dune slack area, and the eastern portion situated on the steep slopes of the vegetated foothills (Keurboomstrand town/east) where the subject site is located.

The town of Keurboomstrand (Keurboomstrand east) is described as a popular destination for tourists, a retirement town and a beach resort town., which has been developed over time in response to environmental conditions, historic patterns of subdivision, and built forms. The town proper is nestled in a sheltered cove, the topography and settlement of the town creating an amphitheater around its picturesque blue flag beaches. The MR 394, a scenic route, gives access to the town and is flanked by a paved pedestrian route that appears to be valued by locals and tourists for walking, cycling and other recreation and leisure pursuits. The town is compact, established and contains mostly single residential

buildings on erven with the notable exceptions of two gated communities, both with distinctive architectural styles.

The local vegetation is generally forest and coastal scrub forest, (intensified by the garden trees of the town itself), and the local settlement patterns tend to retain as much of the existing vegetation as possible, resulting in an urban environment that is generally verdant and lush. This results in a notable feature of the townscape character of the local receiving environment: buildings are generally hidden by surrounding vegetation up to at least the ground floor where site vegetation is not disturbed. In these cases, only the roof of the building or the first floor and roof are visible. The town is also situated next to a wilderness area which extends to Nature's valley and further east as part of the Garden Route and Tsitsikamma National Parks.

1.3.3 Evaluation of the Visual resource

The overall **landscape character of the receiving environment** is predominantly coastal, with a diverse mix of landscape types both natural (river, estuary, forest, dunes, rocky headlands and vegetated foot slopes) and transformed (urban areas, agricultural land, rural settlements and resorts).

The **landscape character of Keurboomstrand** is dual, encompassing both (a) the sparsely developed dune slack/floodplain area with an open, rural character between the vegetated foothill and the crenulate bay dune system; and (b) the compact, densely vegetated Keurboomstrand town proper situated on the steep foothill slopes with a distinctive resort-town character.

The **sense of place** is derived (especially at a local scale) from the scenic resources of the coastline, which are based on natural features. These include the sandy (blue flag) beaches, rocky promontories, vegetated primary dunes and dune slack areas, and the steep forested foothills that meet the rocky coastline.

The study area and receiving environment can be described as having a strong landscape character and a distinctive sense of place (albeit dual and localised). The greater receiving environment contains recognizable landmarks, landscape features and vistas as part of the Garden Route. The local receiving environment is unique and distinctive within the coastal belt, based on both the local townscape character and the value of the natural and scenic resources.

The landscape contains some intrusions or discordant structures and activities, and the Keurboomstrand town itself contributes to the erosion of landscape integrity. The intactness of the landscape in the study area increases as its integrity and quality increase toward the east, where the landscape has formal protection under conservation areas. The townscape character is generally eroded by buildings exceeding two storeys, with large footprints, excessive glazing, fencing, impermeable boundary walls and large unarticulated facades, as well as buildings that do not "nestle" into the landscape. The townscape character can accommodate buildings visible above the line of vegetation, but generally not exceeding one storey.

Landscape Quality in the receiving environment is high; and **the Landscape integrity** is moderate to high. Refer to Section 3.4.2 for further detail.

The **Aesthetic value** of the Visual Resource is **Moderate to High**, as the receiving environment exhibits:

- A positive character with valued features that combine to give the experience of unity, richness and harmony (high aesthetic value);
- As well as evidence of alteration to /degradation/erosion of features resulting in areas of more mixed character (moderate aesthetic value).

1.4 The proposed development

Three **development options** were tabled. The following criteria were used to describe, analyze and compare development options A, B and C:

- i. Number of units and density
- ii. Total footprint (of buildings, hard surfaces and vegetation impacted)
- iii. Bulk, massing and height
- iv. Configuration/arrangement of the buildings on the site
- v. Response to site development constraints and sensitivities (available at the time)
- vi. Appropriateness in terms of visual sensitivities (introduced by this investigation)

In all cases, the proposal is for three separate dwelling units in a sectional title development. A registered servitude right of way over public place Erf 391 alongside will provide access to the development.

At the time of the first draft of the VIA, Development option C was identified as the Preferred option (or Preferred proposal) to be assessed for Visual Impact, as per the specialist brief. Two additional alternative proposals were developed by the project architects and are assessed for visual impact in Section 6.



Image 1: Alternative 1, 2 and 3 (van der Merwe, Viridus Works and Slee Architects, 2020)

1.5 Visual Analysis

The site visit was conducted in February 2021, supported by 3D modelling and on sit visibility testing. Section 5.1.1 illustrates the visibility of the subject site, documenting, sensitive receptors and other noteworthy sensitivities in the study area as far away as 15km.

1.5.1 Results of Viewshed and Line of Sight testing

A viewshed analysis, (the accuracy of which was tested during the site visit) demonstrated that the proposed project will not be visible from any locations in the rural hinterland to the north of Keurboomstrand and the majority of the dune slack area and primary dunes to the east – more than half of the study area. Visibility from the west is generally limited by the local topography, and the viewshed demonstrates only limited and partial possible visibility along the Keurboomstrand beach and across the dune slack area eastward. Pockets of visibility are predicted from the east, but the Matjies river mouth, the Matjies river cave and Arch Rock are not affected. The viewshed accurately indicates that the proposed project is not visible from the scenic route except from +300m away, that the long western stretch of Keurboomstrand beach will experience 25% visibility, and that the majority of the Keurboomstrand town proper will be able to see parts of the proposed development.

In reality, the visibility of the proposed project from within the town of Keurboomstrand is drastically reduced by the local vegetation cover and local topography. The proposed development and the project site will be visible only from the eastern sides of the local beaches at sea level, and then only when not screened by existing buildings and vegetation. Additional noteworthy findings include:

- Local vegetation is typically at least 3m tall, preventing long views and for the most part screening all but the roofs or upper floors of buildings in the area - reasonable to expect that this limited visual intrusion will be acceptable from sensitive views within the local context for the proposed development; making retention of vegetation necessary and important.
- Generally, the topography and coastal vegetation result in a receiving environment with high visual absorption capacity (VAC).
- The presence of dense local vegetation reduces the visual exposure of the site, which is located on a steep, stepped promontory with otherwise high visual exposure. It is important to note that should too much vegetation be cleared; the combination of visually exposed topography and lack of vegetation will make for a very visible site.
- While there are views of the site and proposed buildings from between 1km and 5km away, they are mostly either from the ocean (not frequented by viewers); or screened by vegetation, sand dunes and topography; and the viewer will be less likely to see individual buildings - rather Keurboomstrand as a whole.
- Views from which the proposed project will be centered in the viewers field of vision are very few; as viewers are generally looking at the ocean, the roadway, the greater landscape etc.
- The proposed development will not obstruct the views of any neighbours.
- The proposed development will be most visible from up to 150m away to viewers moving eastward on the MR394. Alternative 2 and 3 demonstrate comparable visibility for viewers moving in the opposite direction.

1.5.2 Simulations

The Simulations were selected to represent typical views onto the project site from the locations of potentially sensitive viewers, and where the proposed development would be likely to have notable visual impact.

The Simulations demonstrated the following:

- **View A** is located at 500m east of the proposed project site, at sea level, on Keurboomstrand Beach: The proposed buildings of Alternative 1 and 3 will not be visible from the Keurboomstrand beach south west of the site. The buildings of Alternative 2 will be visible. The pool of Alternative 1 can be seen jutting out from the landscape in Simulation A, and the southernmost edges of Alternative 2's upper storey are visible above the silhouette of the vegetation. A scenic route offset of between 30 – 50m should reduce the overall visibility of the proposed development from the west to almost nil.
- **View B** is located at 100m south east of the center of the project site, at the level of the Scenic route MR394: All Alternatives will be visible from this vantage point, with varying degrees of visual intrusion and dominance in the visual field. The visual absorption capacity of the receiving environment is the lowest, and the potential for visual intrusion is the highest at View B. This view is sensitive because it is located on the scenic route, at the main entrance to the town, and the proposed development will be viewed on elevated ground, over low-growing fynbos. The proposed development will contribute to the erosion of the visual character of the scenic route and the threshold of Keurboomstrand town if potential negative impacts are not mitigated.
- **View C** is located 200m east, at the bend in the road that serves as the entrance to Keurboomstrand town: View C demonstrates the capacity of the site vegetation to screen the proposed development from views from the east within the Foreground; and highlights the need to protect screening vegetation. From the east, the proposed development will not break the continuity of the ridgeline, or obstruct the ocean views of neighbours. For Alternative 1, only the top half of Unit 3 would be visible above the vegetation, the remainder if the structures will be screened. Alternative 2's buildings will be lower down the slope and interrupt the ridge line. Alternative 3's buildings will again be higher up the slope (similar to Alternative 1) but are also expected to interrupt the ridge line – albeit to a lesser degree than in Alternative 2. The fact that unit 3 of Alternative 3 encroaches onto the 1:4 slope accounts for the amount of building façade that will be visible: vegetation that would otherwise have screened the buildings would be cleared, and the landscape as a container for development would be compromised.
- **View D** is located at 700m east, taken from a height just lower than the deck of the local restaurant, looking west over Keurboomstrand central beach: View D simulates a typical view from Keurboomstrand's most popular local restaurant, the central beach and the public route to access the easternmost beach and beyond. The proposed development Alternatives will not break the ridgeline. From this view, and for Alternatives 1 and 2, portions of the first floor will protrude above the vegetation in a way that is similar to the surrounding built environment (but only if the vegetation remains undisturbed). Alternative 3 will be slightly more exposed because of vegetation clearing necessitated by the placement of unit 3 (being able to see more than one storey of a building above the local vegetation is the exception in this context and should not be supported). The increased visual impact of light and bright colours against the dark green of the vegetation are demonstrated by the existing buildings from this view.

1.5.3 Visual Analysis

The RE is generally sensitive to change and will be detrimentally affected if change is inappropriately dealt with. The findings of the visual analysis are supported by 3D modelling, Line of Sight testing in the 3D environment and in the field, as well as viewshed analysis and Simulations. Please refer to Section 5.3 which describes the details of these eight aspects of the Visual Analysis at length.

Zone of Potential Visual Influence
The Zone of Potential Visual Influence of the proposed development is approximately 800m .
Landscape Character Sensitivity
The sensitivity of the Landscape Character (i.e.: the degree to which the RE can respond to accommodate change arising from the proposed development without detrimental effects on its character) is Moderate to High .
Local sensitive receptors and View corridors
Confirmed local sensitive receptors and view corridors in the ZoVI include: <ol style="list-style-type: none"> i. The users of beaches and estuaries (as ecological resources and tourism/recreation destinations), including associated infrastructure; ii. The Annex Arch Rock Nature Reserve and protected areas eastward; iii. Locals and tourists engaged in outdoor recreation and tourism activities (on the paved pedestrian pathway, timber boardwalks and staircases, whale watching, scenic route driving etc.) iv. Scenic Route: Keurboomstrand access road (Main Road M394) v. Local Keurboomstrand residents, workers and neighbouring properties; vi. The local commercial node including Enrico's restaurant vii. <i>(View corridor) Views from the beaches (northward) toward the ridge of the foothills within the study area and ZoVI;</i> viii. <i>(View corridor) The scenic route view corridor created by the long, straight MR394, terminating at the entrance to Keurboomstrand;</i> ix. <i>(View corridor) Views from the east towards Plettenberg Bay and the Keurboomstrand east area, looking westward.</i>
Potential Sensitivity of Visual Receptors
The Sensitivity of Visual Receptors is High .
Visibility
The proposed project has one instance of moderate visibility only within the Immediate Foreground. The overall visibility is however Moderate to Low , considering that: <ul style="list-style-type: none"> • the proposed development is visible from less than half the ZoVI (Moderate visibility); • views are partially obstructed (Moderate visibility); • and few viewers are affected (Low visibility).
Visual Exposure
For this project, Visual Exposure is Low overall. <ul style="list-style-type: none"> • High for Immediate Foreground views specifically, the +-150m stretch of the MR394 scenic route; • Moderate for a minority of Foreground views; • Low for a majority of Foreground views; • Insignificant for views from 800m away or more (the entire Middle ground and Background distance zones).
Visual Absorption Capacity
The VAC assessment for this proposed development is High to Moderate (please note that a higher VAC is desirable).
Relative Compatibility
The proposed development can be described as having Medium compatibility relative to the RE, with aspects of Low compatibility relative to the qualities of the existing landscape, sense of place and land use context.

1.6 Visual Impact Assessment

The VIA has determined that visual impacts will result from the development of the proposed Erf 155 Keurboomstrand project. Please refer to Chapter 6 for the detailed Visual Impact Assessment.

In an area with high sensitivity all round, the most desirable outcome is for all aspects of the proposed development to have medium to high compatibility, moderate or low exposure, low visibility and low visual impact overall.

The Department of Environmental Affairs and Development Planning have made their position on this matter clear, stating in their comments on the Local Area Spatial Plan that future development in Keurboomstrand **must have low visual impact** (Keurbooms and Environs Local Area Spatial Plan, 2013, p. 154). The Department makes specific reference to development proposals on slopes of 1:4 or steeper, where development would be highly visible.

The findings of the impact assessment are as follows:

Alternative 1 is expected to have **Low** visual impact overall, with Low to Medium visual impact on the scenic route.

- Impact on sensitive receptors: **Low** neutral (14).
- Impact on important views and view corridors: **Low** negative (6)
- Effect on protected landscapes & scenic resources (scenic route): **Low to Medium** negative (27)
- Effect on the visual character and sense of place: **Low** negative (16)

Alternative 2 is expected to have **Medium** visual impact overall, with Medium visual impact on the scenic route.

- Impact on sensitive receptors: **Low to Medium** neutral (24)
- Impact on important views and view corridors: **Medium** negative (40)
- Effect on protected landscapes & scenic resources (scenic route): **Medium** negative (44)
- Effect on the visual character and sense of place: **Low** negative (18)

Alternative 3 is expected to have **Low to Medium** visual impact overall, with Low to Medium visual impact on the scenic route.

- Impact on sensitive receptors: **Medium** neutral (32)
- Impact on important views and view corridors: **Low to Medium** negative (27)
- Effect on protected landscapes & scenic resources (scenic route): **Low to Medium** negative (30)
- Effect on the visual character and sense of place: **Low** negative (16)

1.6.1. Visual Sensitivity parameters for all Alternatives

To augment the botanical and geotechnical sensitivity mapping, the findings of this VIA supported the following visual sensitivity parameters.

- a) A **35m minimum visual sensitivity setback** line measured from the centre line of the MR394 road reserve;
- b) An additional **5m building offset** from the sensitive forest vegetation and 1:4 slope no-go area;

Together with the Botanical and Geotechnical sensitivity and no-go areas, the offsets described in section 6.7.2 a) and b) result in a developable area of approximately 1448m².

Additionally, a set of **Architectural Guidelines** were prepared by Rust van der Merwe in August 2021 to assist the project team to develop an appropriate design response for the proposed development at Erf 155 Keurboomstrand, and serve as a guiding document at later stages of the design development.

An assessment of each Alternative's responsiveness to visual sensitivity parameters found that none of the Alternatives are compliant. Please refer to Section 6.7.3 for further detail.

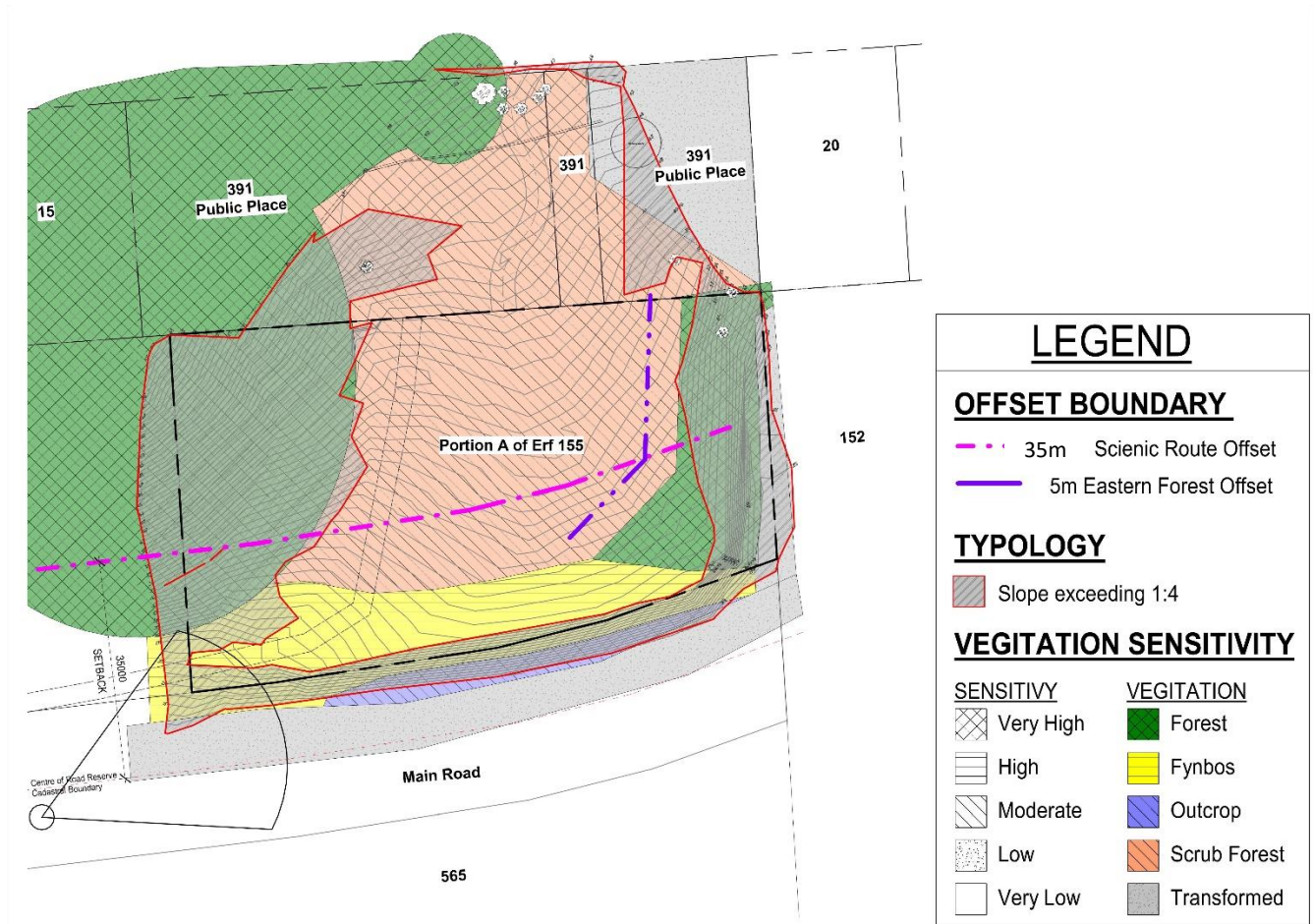


Image 2: Developable area (Smit, van der Merwe, 2021)

1.6.2. Visual Impact assessment conclusion

The VIA has determined that visual impacts will result from the development of the proposed Erf 155 Keurboomstrand project.

At the outset of this study, the DEA&DP Guidelines were used to predict Moderate visual impact based on the classification of a Category 2 development within an area (or route) of high scenic, cultural, historical significance.

The subsequent findings of this study have determined that the visual impact predicted will be:

- i **Low** for the Alternative 1;
- ii **Medium** for Alternative 2;
- iii and **Low to Medium** for Alternative 3.

The findings of the Visual Impact assessment indicate that Alternative 1 will have the lowest visual impact overall. Alternative 2 will have higher visual impact on the scenic route, while Alternative 3 will most likely have higher visual impact on sensitive receptors (locals and neighbours). Alternative 1 (sans the swimming pool) remains the most responsive to the visual sensitivities of the site; is the least visible from the surrounding receiving environment; and will impact minimally on key aspects of Landscape Character and Sense of Place.

The Cumulative visual impact of all three Alternatives on sensate features, hills and ridgelines will be comparable; but Alternative 2 is the most visually intrusive, especially at the threshold of the town, along the scenic route.

While a measure of urbanity that develops over time may be acceptable within the town proper, an entrance to what has been described as a resort town with a distinctive local character has a much lower tolerance for large, intrusive and visually dominant structures that are not embedded in the local forest and scrub forest vegetation.

However, the VIA does not support any one of the Alternatives outright, as none of the proposals comply substantially with both the recommendations of the Draft VIA and the visual sensitivity setbacks provided

1.7 Conditions, recommendations and mitigation measures

Due to the high value and sensitivity of the receiving environment, landscape character and the visual receptors, it is extremely important that a responsible and enforceable design approach be taken for the planning, construction and operational phases of each dwelling unit and the development as a whole, taking care to minimize the visual impact wherever possible. The Site Development Plan (SDP) and building plans must demonstrate adherence to the recommendations of this report in order for visual impact to be managed successfully.

The following visual sensitivity parameters are recommended to augment the botanical and geotechnical sensitivity offsets. Adherence to these limitations must be demonstrated in further detailed design for approval by the local authority at SDP and Building plan level:

- a) A 35m scenic route setback line measured from the centre line of the MR394 road reserve;
- b) Additional 5m offset from the eastern botanical and slope sensitivity no-go area;

As a condition of approval for the Rezoning and Subdivision Land use planning approval (this approval), this VIA recommends that the following documents and plans be submitted along with SDP and building plans to the local municipality for approval:

- i. A **Landscape Plan and Landscape Guidelines (including vegetation protection methodology)** by a suitably experienced and qualified professional, registered with SACLAP (refer to Section 7.2.3 for detailed requirements);
- ii. An **Environmental Management Programme (EMPr)** by a suitably experienced and qualified professional (refer to Section 7.2.4 for detailed requirements).

Key conditions and mitigation measures to be addressed through the two mechanisms above include:

- 1) The proposal must be limited to the developable area indicated by the ecological, geotechnical and visual sensitivities as illustrated on the Sensitivity map (including the 35m scenic route offset and the additional 5m screening vegetation buffer);
- 2) The building envelope, including chimneys, must not protrude above the 8m height restriction (this VIA recommends that the existing ground level (NGL) is the base level from which maximum height permitted is measured so that the height restriction slopes parallel to the existing ground level);
- 3) The colour palette for materiality and finishes must draw on the colouring of the natural environment, preferencing mid-tone to darker colouring to blend with forest vegetation. If natural material such as stone is used, the stone must be locally sourced and match the colouring (and, if possible, the geological origins) of the site and receiving environment. Materials and finishes may not consist of bright colours, highly reflective surfaces or gratuitous use of glass. Curtain walls, windows, skylights and other glazing features must be shaded/set back under overhangs or similar to prevent glare, especially in the direction of sensitive receptors identified. The use of exposed metal must be kept to a bare minimum, and any potentially shiny or reflective surfaces must be avoided altogether, or covered with matte, non-reflective finishes.

- 4) **All** construction activities must be limited to the approved building footprint and a 2m offset buffer zone all around. Limited and appropriate soft landscaping may extend further than the 2m offset around the buildings within the Moderate and Low sensitivity areas (refer to the Sensitivity map), but should avoid the protected forest and fynbos vegetation areas (High and Very high sensitivity).
- 5) The Landscape Plan must include a Vegetation protection methodology to manage Construction phase impacts on vegetation (before, during and after), including guidelines on the re-establishment, replacement and/or rehabilitation of vegetation per vegetation type in the case of disturbance.
- 6) No fence or wall should be permitted adjacent to and/or within view of the Scenic route, or within the 35m setback area as indicated on the Visual Sensitivity map. All fencing must be visually permeable and no post top lighting, flood lights, peripheral/boundary security lights or uncovered luminaires of any kind should be allowed.
- 7) All exterior lighting shall be located and controlled so as to avoid direct illumination, glare or reflection onto any adjoining property or the scenic drive; provide precisely directed illumination to reduce light “spillage” beyond the immediate surrounds of the light source, and should preferably be movement activated.
- 8) The Landscape plan must show screening and softening of the edge on the southern side of the buildings. The aim is to visually screen the first storey of the proposed development from the Scenic route views up the slope (the expectation is not that the building will be hidden, but rather that the screening vegetation allows the buildings to blend into the visual context more easily by reducing the starkness of new built features; especially where these meet the surrounding landscape).
- 9) Prior to the beginning of the Construction phase, sensitive vegetation must be marked clearly and the rootzones of protected species and areas must be demarcated and made off limits to prevent compaction of soil and damage to the root zones.
- 10) Please refer to Section 7.2.3 for mitigation measures to be included in the EMPr.

Should the conceptual architectural proposal undergo significant change (especially in terms of height, siting, building envelope and massing, fencing, lighting and perimeter treatment or any feature that would constitute a change to the visual impact of the proposed development), the applicant/land owner will require a Visual statement issued by a suitably qualified visual specialist to determine if the findings of this study remain unchanged.

In conclusion, and given that none of the Alternatives are compliant with the visual sensitivity parameters, the proposal should be revised to avoid biodiversity and visual impacts, by proposing buildings within the developable area only (indicated by the Botanical, Geotechnical and Visual sensitivity offsets and no-go areas).

Contents page

EIA Regulations Appendix 6 Checklist	3
Declaration and Statement of Independence	5
1. EXECUTIVE SUMMARY	6
1.1 Introduction	6
1.2 Purpose, Classification and Scope of the VIA	6
1.3 The Receiving environment	7
1.3.1 The subject site	7
1.3.2 The study area	7
a) The greater receiving environment	7
b) Keurboomstrand	8
1.3.3 Evaluation of the Visual resource	9
1.4 The proposed development	10
1.5 Visual Analysis	11
1.5.1 Results of Viewshed and Line of Sight testing	11
1.5.2 Simulations	11
1.5.3 Visual Analysis	12
1.6 Visual Impact Assessment	13
1.6.1 Visual Sensitivity parameters for all Alternatives	14
1.6.2 Visual Impact assessment conclusion	15
1.7 Conditions, recommendations and mitigation measures	16
Contents page	18
2. INTRODUCTION	22
2.1 Background, Purpose and Classification of this report	23
2.2 Scope of Work	23
2.3 Approach and Methodology	24
2.4 Project Background	25
2.5 Key issues at the outset	28
2.5.1 Categories of Issues	28
2.5.2 Key issues	28
2.6 Information available and referenced in this report	29
2.7 Legal Framework: Applicable Legislation, Policies and/or Guidelines	29
2.8 Assumptions and Limitations	30
3. SITE AND RECEIVING ENVIRONMENT STUDY	32
3.1 The Subject site	32
3.2 The property within the local planning context	37

3.3	<i>The Receiving Environment</i>	47
3.3.1	Description of the Receiving Environment	47
3.3.2	Keurboomstrand	51
3.4	<i>Evaluation of the Visual resource in terms of Aesthetic value</i>	59
3.4.1	Landscape Character and Sense of Place	59
3.4.2	Landscape Quality and integrity	60
3.4.3	Quality and Aesthetic value of the Visual Resource	61
4.	PROPOSED DEVELOPMENT	64
4.1	<i>Development options</i>	64
4.1.1	Development Option A	65
4.1.2	Development Option B	67
4.1.3	Development Option C	67
4.2	<i>Analysis and comparison of Development options</i>	67
4.2.1	Development Option A: Analysis	70
4.2.2	Development Option B: Analysis	70
4.2.3	Development Option C: Analysis	71
4.3	<i>Development Alternatives</i>	72
4.3.1	Development Alternative description: Alternative 1	73
4.3.2	Development Alternative description: Alternative 2	74
4.3.3	Development Alternative description: Alternative 3	75
4.3.4	Limitations to the descriptions of Alternatives	77
5.	VISUAL ANALYSIS	79
5.1	<i>Preliminary visibility modelling, views affected and LoS testing</i>	79
5.1.1	Line of sight testing and visibility	80
5.1.2	Viewshed	87
5.2	<i>Simulations</i>	89
5.2.1	Simulation: View A	91
5.2.2	Simulation: View B	92
5.2.3	Simulation: View C	94
a)	Acceptable parameters of visibility from eastern views generally	94
5.2.4	Simulation: View D	96
5.3	<i>Visual Analysis</i>	98
5.3.1	The Zone of Potential Visual Influence	98
5.3.2	Landscape Character Sensitivity	98
5.3.3	View Corridors	99
5.3.4	Visual Receptors and their Potential Sensitivity	100
5.3.5	Visibility of the proposed development	101
5.3.6	Visual Exposure	102
5.3.7	Visual Absorption Capacity	103
5.3.8	Relative compatibility	104
5.4	<i>Summary of Visual Analysis</i>	105
6.	VISUAL IMPACT ASSESSMENT	106
6.1	<i>Visual Impact Assessment Methodology</i>	106
6.1.1	Methodology to determine Significance of Visual Impact	106

6.1.2	Visual impacts chosen for assessment	108
6.2	<i>Impact Assessment of Alternatives 1-3</i>	108
6.2.1	Impact on sensitive receptors	108
6.2.2	Impact on important views and view corridors	109
6.2.3	Impact on protected landscapes and scenic resources	110
6.2.4	Impact on visual character and sense of place of Keurboomstrand (east)	111
6.3	<i>Visual Impact Assessment of the Construction Phase</i>	111
6.4	<i>Visual Impact Assessment of the No-development option</i>	112
6.5	<i>Cumulative Impacts</i>	113
6.6	<i>Visual impact assessment: Conclusions</i>	113
6.6.1	Alternative 1	114
6.6.2	Alternative 2	114
6.6.3	Alternative 3	114
6.6.4	Construction Phase impacts	115
6.7	<i>Recommendations and responsiveness analysis</i>	115
6.7.1.	Recommendations issued with the Draft VIA relating to Alternative 1	115
6.7.2.	Visual Sensitivity parameters for all Alternatives	116
a)	Scenic route setback/offset	116
b)	Additions to botanical and geotechnical sensitivity area offsets	118
c)	Developable area	118
d)	Architectural guidelines	118
6.7.3.	Adherence/responsiveness to visual sensitivity parameters	119
7.	MANAGEMENT ACTIONS AND MITIGATION MEASURES	122
7.1	<i>Parameters and Principles for Mitigation</i>	122
7.2	<i>Management actions and Mitigation measures</i>	122
7.2.1	Additional information required for SDP level approvals	123
7.2.2	General architectural recommendations and mitigation measures	123
a.	Siting, layout of buildings and relationship to landscape features	123
b.	Architectural features	124
c.	Materials and colours	124
7.2.3	Landscape related recommendations and mitigation measures	124
a.	The clearing of vegetation	125
b.	Landscape/outdoor lighting	125
c.	Fencing	126
d.	Materials and finishes	126
e.	Plant species and landscape installation	127
f.	Alien control and management	127
g.	Relationship to open space system and public realm	128
7.2.4	Environmental Management Programme (EMPr)	128
a.	Content and focus of the EMPr for visual mitigation and management	128
8.	CONCLUSION AND VISUAL IMPACT STATEMENT	130
8.1	<i>Visual Impact Assessment summary of findings</i>	131
8.2	<i>Summary of conditions, recommendations and mitigation measures</i>	132
8.2.1	Visual Sensitivity parameters for all Alternatives	132

8.2.2 Additional information required for SDP level approvals	132
References	134
Annexure A: Curriculum Vitae and Experience of the visual specialist	139
Annexure B: Definition of Terms and Acronyms	142
<i>Terminology</i>	142
<i>Abbreviations and Acronyms</i>	144

2. INTRODUCTION

Filia Visual was approached by Viridus Works (Pty) Ltd (Development Management Consultants and Environmental Assessment Practitioners) in 2020 on behalf of the land owner Mare Nostrum (Pty) Ltd to prepare an independent Visual Impact Assessment (VIA) for the proposed development at Erf 155, Keurboomstrand, in Plettenberg Bay, Western Cape.

The Project involves the subdivision of Erf 155 for the construction of dwelling houses in a sectional title development. The current zoning of Erf 155 is Residential Zone II, while the portion of the property relevant to this VIA is zoned as Open Space Zone II (private open space). The planning application is made in terms of the Bitou Municipal Land Use Planning Bylaw (Western Cape Government, 2015) Section 15 (2)(a) for a rezoning to Residential Zone II; and Section 15 (2)(d) for subdivision, with a registered servitude right of way access over public place Erf 391 alongside.

According to the Viridus Works Development Application report (Viridus Works (Pty) Ltd, 2020), there are no title deed restrictions preventing the proposed land developments or use, and the application does not trigger any activity listed in terms of Section 38 of the National Heritage Resources Act, 1999, Act 25 of 1999 (NHRA). The application does however trigger activities listed in the Environmental Impact Assessment Regulations made in terms of the National Environmental Management Act, 1998, Act 107 of 1998 (NEMA) and related legislation.

This specialist study is conducted to form part of the basic assessment and environmental authorisation application process as well as the land use planning process. Involvement in the latter is based on the correspondence received on 27th October 2020 from Marius Buskes, Town Planner at the Bitou Municipality requesting that a Visual Impact Assessment accompany the rezoning and subdivision application. Please refer to item 2.5.2 for the key issues that the municipality requires the VIA to take into consideration.

While the findings of the planning motivation report indicate that no *heritage* concerns relating to the site or the area required impact assessment, indicators suggesting the need for *visual* input based on the nature of the receiving environment include the following (Guideline for involving visual & aesthetic specialists in EIA processes, 2005, p. 5). The subject site is located:

- outside of the urban edge;
- Within the 100m Urban Coastal Setback Line, on an elevated promontory with an average slope of approximately 1:4;
- within a Critical Biodiversity Area (CBA) and contains protected tree species (*Sideroxylon inerme*);
- alongside a scenic route, and within an area with a recognized special character or sense of place;
- within an area of important tourism or recreation value;
- within an area with visually prominent ridgelines or skylines.
- The subject site is also located nearby areas with protection status (nature reserves), areas with proclaimed heritage sites, sites of cultural significance and areas with intact wilderness qualities.

Indicators suggesting the need for visual input based on the nature of the proposed project include the following. The project proposes:

- A change in land use from the prevailing use;
- A use that is in conflict with an adopted plan or vision for the area;
- Possible visual intrusion in the landscape.

This report will be made available to various stakeholders and other Interested and affected parties (I&AP's) for comment during the EIA Basic Assessment Report application process (in terms of the National Environmental

Management Act, 1998, Act 107 of 1998 (NEMA)) that will be undertaken by Eco Route Environmental Consultancy.

The Bitou Municipality is the competent authority for consideration of the rezoning and subdivision of the property and the Department of Environmental Affairs & Development Planning (DEA&DP) is the competent authority for the consideration of the EIA process.

2.1 Background, Purpose and Classification of this report

According to the DEA&DP Guideline for involving visual & aesthetic specialists in EIA processes, this VIA requires specialist involvement at **Impact assessment stage**, to determine the character and visual absorption capacity of the landscape, the visibility of the proposed project, the potential visual impact on visual / scenic resources, and the nature, extent, duration, magnitude, probability and significance of impacts, as well as measures to mitigate negative impacts.

The chief purpose of any visual impact specialist study is to ensure that the visual & aesthetic consequences of the proposed project are understood and adequately considered in the environmental planning process (Young, 2014). The Guidelines (Oberholzer, 2005) recommend initial classification of projects to determine the level of assessment required, according to the type of development that is proposed and the type of environment where the development is proposed. Based on the project information at hand at the outset of the study, the proposed development is for a **Category 2 development** (i.e., low-key recreation / resort / residential type development, small-scale agriculture / nurseries, narrow roads and small-scale infrastructure) within an **area (or route) of high scenic, cultural, historical significance**.

Before the initiation of the study, based only on the nature of the development and a high-level assessment of the nature of the receiving environment (RE), **Moderate Visual Impact** was expected, and a **Level 3 Assessment** was recommended.

This report must be read in context of the previous and current land use and other planning or environmental approvals associated with the development proposal. Whereas this report focuses primarily on visual and aesthetic criteria, cognizance of other factors (social, heritage, cultural, environmental, ecological, etc.) are acknowledged and will be addressed in the report with the information at hand, and in consultation with the Environmental Practitioner and other specialists.

2.2 Scope of Work

Filia Visual has been appointed to conduct an independent professional visual study to define the potential Visual Impact¹ of the proposed development on the visual and scenic environment. This includes the potential impacts on scenic routes, other protected resources, and local receptors. The Impact Assessment is aided by 3D terrain modeling and graphic simulations of the proposed development, as necessary.

The Bitou municipality has requested the following specific input from the visual specialist (Buskes, 2020), calling for a VIA that takes into account the following:

¹ Please note the following key principles and concepts that should be considered and described in terms of visual input into the EIA process:

- 'Visual' implies the full range of visual, aesthetic, cultural & spiritual aspects of the environment that contribute to sense of place;
- Both the natural and the cultural landscape and their inter-relatedness including all scenic resources, protected areas, and sites of special interest, together with their relative importance in the region must be considered;
- Visual studies are underpinned by an understanding of the landscape processes, including geological, vegetation and settlement patterns, which give the landscape its character or scenic attributes;
- Both quantitative and qualitative criteria are necessary to describe visual aspects.

- i. Provide and motivate the (environmental) development constraints (prompting) that will encourage/bring about sensitive **development on hills and ridges**.
- ii. Motivate why proposed development on hill crests and steeply sloping areas on site should be strongly discouraged vs lower lying gentle sloping areas (in terms of aesthetics – **design, scale, layout**);
- iii. A **Viewshed analysis** to demonstrate the height of the development proposal visible to the surrounding receiving environment;
- iv. Determine the **value of the Sense of Place**;
- v. Determine and assess the **Cumulative (Environmental) Visual Impact** of the development on sensate features, hills and ridgelines;
- vi. Determine the **impact of the proposed development on adjacent land uses** (including urban and ecological).

2.3 Approach and Methodology

The existing project information, reports and studies comprising the project history were studied, as well as the legal and policy context of the proposal and property. A desktop survey using digital topographical survey maps and GIS databases was undertaken to describe the site setting, to identify landform, landscape, and built form patterns of the receiving environment, and to situate the proposed development in the spatial planning policy context of the receiving environment (RE). Aerial photography from a variety of sources as well as Digital Terrain Modelling (Google Earth and QGIS²) was used to assist in this part of the study, and the 3D model was transferred from SketchUp to Google Earth and QGIS for Line of sight (LoS) testing and visibility analysis.

Following the desktop study, a site visit was undertaken to confirm land use, assess the landscape character, identify sensitive receptors and conduct fieldwork. This included the capture of site photographs from and toward key views and viewers. The VIA report was then drafted according to the findings of the desktop study, the site visits, and standard recommended VIA methodology.

The basic components comprising an accepted methodology for visual studies include:

- Identification of landscape types, landscape character and sense of place, generally based on geology, landforms, vegetation cover and land use patterns;
- Identification of viewsheds, and view catchment areas, generally based on topography;
- Identification of important viewpoints and view corridors within the affected environment, including sensitive receptors;
- Indication of distance radii from the proposed project to the various viewpoints and receptors;
- Determination of the visual absorption capacity (VAC) of the landscape, usually based on vegetation cover or urban fabric in the area;
- Determination of the relative visibility, or visual intrusion, of the proposed project.
- Determination of the relative compatibility or conflict of the project with the surroundings;
- A comparison of the existing situation with the probable effect of the proposed project, through visual simulation, generally using photomontages, as necessary.

Level 3 VIA's call for a Visual impact assessment report by a visual specialist.

The suggested Methodology (Oberholzer, 2005) for a **Level 3 Assessment** is listed below:

² SRTMGL1 V003 (NASA Shuttle Radar Topography Mission Global 1 arc second – 30m) data set. Source: European Space Agency (ESA).

- *Identification of issues raised in scoping phase, and site visit;*
- *Description of the receiving environment and the proposed project;*
- *Establishment of view catchment area, view corridors, viewpoints and receptors;*
- *Indication of potential visual impacts using established criteria;*
- *Inclusion of potential lighting impacts at night;*
- *Description of alternatives, mitigation measures and monitoring programmes;*

While Level 3 Assessments do not call for complete 3D modeling and simulations (with and without mitigation), these methods will be used during the course of the VIA as standard procedure as per Filia Visual's methodology outlined below. Additionally, the brief given at the outset of the study called for simulations. For this reason, the following methodology is added:

- *3D modeling and simulations, with and without mitigation.*

2.4 Project Background

The site is located in Keurboomstrand, a resort town near Plettenberg Bay in the Western Cape, under the jurisdiction of the Bitou Municipality. Erf 155, Keurboomstrand (56 615,4m² in extent) contains large areas of undeveloped coastal forest vegetation as well as developed areas that are part of a share block resort abutting the western end of the Keurboomstrand residential neighbourhood (some of which are located on Erf 151, alongside).

The portion of the property relevant to this VIA (the subject site) is located on the eastern extremity of Erf 155, identified by the client for subdivision and rezoning from Open Space Zone II (private open space) to Residential Zone II (to match the remainder of the Mare Nostrum resort development). The proposal is for the construction of dwelling houses in a sectional title development, and three alternatives have been tables for assessment. Please refer to section 4 for further details on the proposed development.

The site is located directly abutting and between Keurboomstrand residential properties (Erven 15, 20 and 565) and public place (Erf 391). The land use application includes the registration of a seven-meter-wide servitude right of way access over public place Erf 391 alongside, by which the proposed development will take access.

Proposed development details summary:

<i>Physical address</i>	Keurboomstrand
<i>Portion and Farm name</i>	Portion A, Erf 155, Keurboomstrand
<i>Municipality</i>	Bitou Municipality
<i>Coordinates</i>	34° 0' 13.7844" S 23° 27' 16.5276" E
<i>Extent of Property</i>	>0,5 Ha
<i>Current use</i>	Undeveloped (private, open space)
<i>Current zoning</i>	Open Space Zone II (private open space)
<i>Proposed Zoning</i>	Residential Zone II
<i>Surrounding land uses</i>	Residential, transport, tourism, recreation.



Figure 1: Erf 155, Keurboomstrand locality. Note surrounding erven and existing cadastral extents of Erf 155 that include the Mare Nostrum resort at the western end of the property (Cape Farm Mapper, 2021).

According to the Land Development Application Motivation report, the proposed development site is an inherent part of the Mare Nostrum resort development. As the property registered as an erf in the Keurboomstrand township area, and was part of the approved residential development of the Mare Nostrum resort development (Bitou file ref: 18/151&155), Virdus Works argues that the entire property should have been included in the urban edge and not only that portion containing the houses.

The subject site is undeveloped, densely vegetated and situated on an elevated promontory with steeply sloping ground typical of the coastline in this part of the Western Cape. It occupies a place in the Keurboomstrand township that is flanked by residential development generally, although its immediate boundaries to the north, east, south and west are demarcated by public place (Erf 391), undeveloped publicly accessible land (Erf 152), the Main Road 394 (a scenic route) and the remainder of Erf 155 (Residential Zone II).

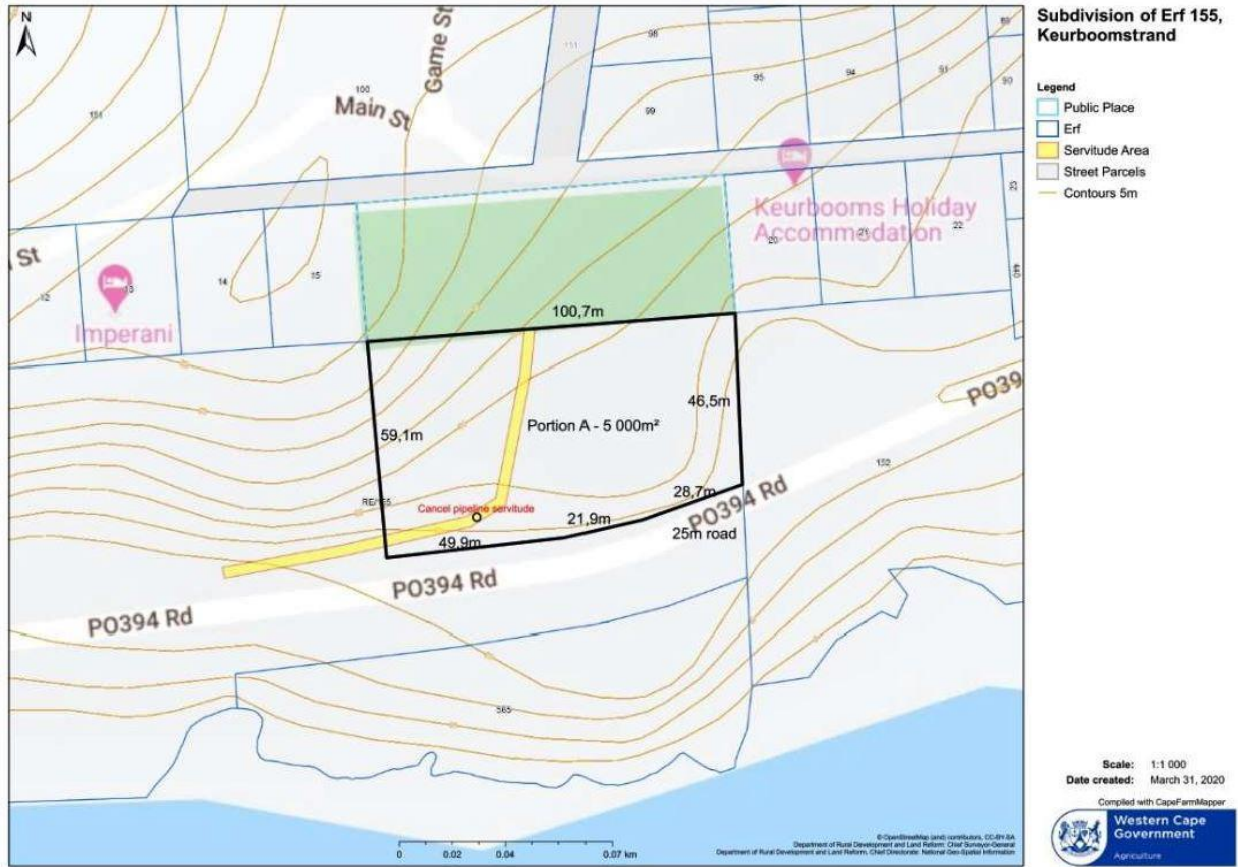


Figure 2: Plan indicating the proposed subdivision of Erf 155. Note the extents of the subject site (Portion A), the Erf 391 public place directly north, the cancelled pipeline servitude and the 25m road reserve allocated to the MR 394 (Viridus Works (Pty) Ltd, 2020)

While the site is identified as a Critical Biodiversity Area (CBA), an assessment by the ecologist Mr. Jamie Pote found it to be partially degraded and partially developable, subject to the protection of specific elements of the vegetation. These findings resulted in clear development restrictions that are illustrated in Figure 3:

- i. The protected species (*Sideroxylon inerme*), threatened vegetation types (the former Shale fynbos and the scrub forest) and pristine forest habitats (indicated by the CBA overlay) should not be impacted by the development.
- ii. The steeper slopes less desirable for development, and considering that the sensitive vegetation is generally associated with steeper slopes, development should be restricted to the flattest part of the property.
- iii. Overall, any proposal to develop the site must be done in the most sensitive manner possible, from a botanical/ecological point of view.

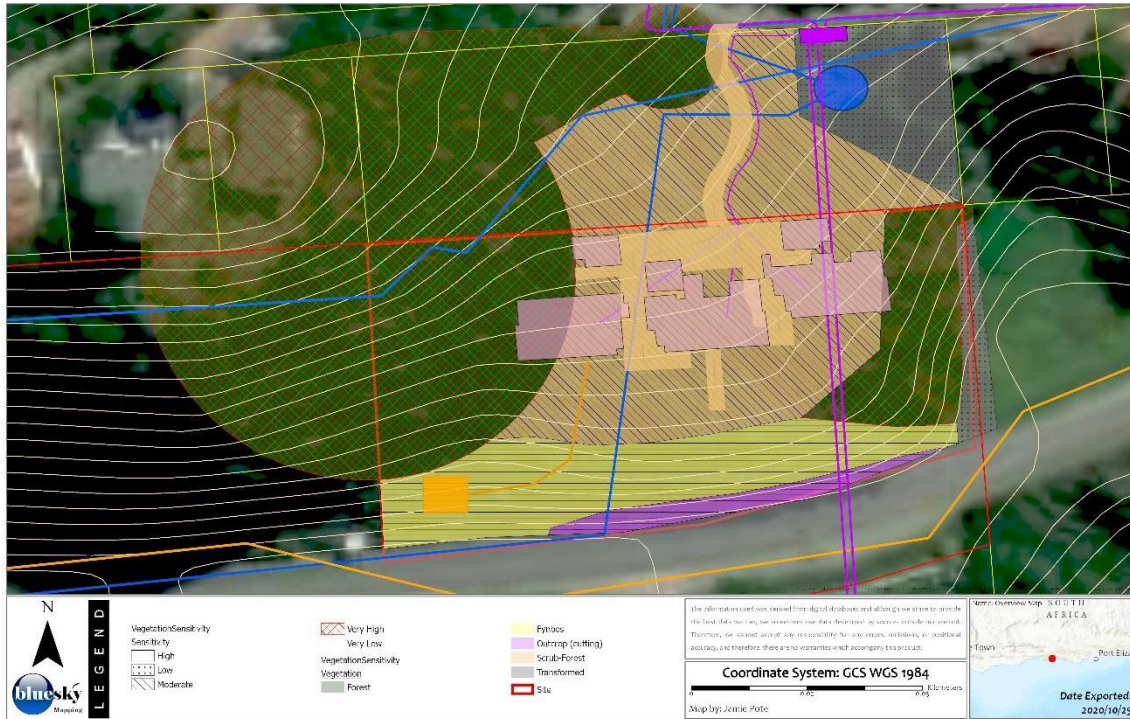


Figure 3: Vegetation and sensitivity map showing initial development restrictions (Blue Sky, 2020)

Three development options have been tabled, and will undergo visual analysis only. Three Alternatives and the 'no development' alternative will undergo impact assessment.

2.5 Key issues at the outset

2.5.1 Categories of Issues

For **Moderate** visual impact expected, the following are listed as expected issues according to the DEA&DP Guidelines involving visual & aesthetic specialists in EIA processes (Oberholzer, 2005, pp. 7, Box 3):

- *Potentially some effect on protected landscapes or scenic resources;*
- *Some change in the visual character of the area;*
- *Introduces new development or adds to existing development in the area.*

2.5.2 Key issues

Key issues are those raised during the desktop study, scoping process or included as part of the visual specialist's brief which requires further investigation (Oberholzer, 2005, p. 28). Key issues relating to visual concerns arising from the initial assessment of the site and the proposed development according to the brief, include:

- **Effect on protected landscapes and scenic resources**, with specific reference to:
 - Effect on the scenic route (MR394);
 - Effect on important views, view cones and view corridors (*i.e.*: continuity of views to and from the Indian Ocean and the coastal hills and ridgelines; views from within or towards protected areas or visually sensitive landscapes).

- Effect on visual character of the area (*i.e.: effect on the sense of place, settlement pattern, landscape character and other sensate features; with reference to the degree of change from existing development and land use in the area*);
- Effect on local heritage, scenic and cultural resources, sites, landscapes and monuments.
- Effect on **sensitive receptors** with specific reference to:
 - Sensitive viewers within the surrounding conservation and recreational areas generally (*i.e.: beach-goers, whale-watchers etc.*);
 - Local residents of Keurboomstrand and the users of local roads;
 - Tourists and other tourism-driven visitors to the area.

2.6 Information available and referenced in this report

The following documents made available by the client and project team were used as source reference material.

- Motivation Report: Motivation in support of Land Development Application for Erf 155, Keurboomstrand (October 2020) provided by Virtus Works;
- Topocadastral survey of the project site and Slope Analysis (Drawing No.: KB155SUB/1) provided by Beacon Survey (2020);
- Update to the Topocadastral survey of the project site and Slope Analysis (Drawing No.: J000_Erf 155_Keurboomstrand - New Road Servitude)
- Vegetation and Sensitivity map provided by Blue Sky Mapping (Mr. Jamie Pote, 2020) in .jpeg and .kmz;
- Record of the October 2020 correspondence requesting the VIA: Email with Subject line 27-10-2020 - Erf 155 KB - Application Incomplete - Provide Add Info send by Marius Buskes, Town Planner, Bitou Municipality.
- Sketch Design Drawing No: J319_Mare Nostrum Sketch Design_Site Plan provided by Slee Architects;
- Sketch Design Drawing No: J360 Keurprop - Keurboomstrand - Mare Nostrum - 2020.06.25 - Design Option 1 provided by Slee Architects;
- Sketch Design Drawing No: J360 Keurprop - Keurboomstrand - Mare Nostrum - 2020.06.25 - Design Option 2 provided by Slee Architects;
- Sketch Design Drawing No: 20210218105203528 provided by Slee Architects;
- Look and feel images provided by the applicant (2021).
- Geotechnical Report Cover Letter: RE: Geotechnical Investigations for the proposed residential development on Portion of remainder of Erf 155, Keurboomstrand provided by Outeniqua Geotechnical Services.
- Geotechnical Report of the project site provided by Outeniqua Geotechnical Services.
- Ground Floor Plan Drawing number: W_706 dates 09/20/21, Slee & co. Architects. Accompanied by hand-drawn sketch of Alternative 3.
- Architectural Guidelines for Erf 155, Keurboomstrand (Rust van der Merwe, August 2021).

2.7 Legal Framework: Applicable Legislation, Policies and/or Guidelines

It is essential to consider the policy and legislative context within which the development is proposed. This includes all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to the property, the activity, and the proposal. The following relevant policies, guidelines and legislation have been considered in the assessment process:

National

- National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) EIA Regulations
- National Environmental Management: Integrated Coastal Management Act (Act 24 of 2008).
- The NEMA Protected Areas Act (57 of 2003)
- National Heritage Resources Act (Act 25 of 1999) (NHRA)
- Spatial Planning and Land Use Management Act, 2013 (SPLUMA)

Provincial

- Western Cape Department of Environmental Affairs & Development Planning: Guideline for Involving Visual and Aesthetic Specialists in EIA Processes Edition 1 (CSIR, 2005)
- Western Cape Provincial Spatial Development Framework, 2014 (PSDF), incl. the PSDF Chapter 4 Amendment (2020)
- Western Cape Land Use Planning Act (Act 3 of 2014) (LUPA, and LUPA Regulations)
- Western Cape PSDF Heritage and Scenic Resources: Inventory and Policy Framework (2013)
- Western Cape Biodiversity Spatial Plan (2017)
- Western Cape Government Provincial Strategic Plan (PSP)
- Coastal Management Lines for Eden District: Project Report (March 2018)

Regional and Municipal

- Bitou Municipal Spatial Development Framework, 2019 (MSDF)
- Eden District Spatial Development Framework, 2017 (EDSDF)
- Garden Route Integrated Development Plan, 2020-2021 (IDP)
- Bitou Municipality Revised Integrated Development Plan (IDP) 2012/2017, revised 2017/2022
- Bitou Local Municipality Zoning Scheme By-Law Draft 2020
- Bitou Local Municipality Spatial Development Framework (SDF) May 2013, revised Nov 2019
- Keurbooms and Environs Local Area Spatial Plan (LASP) 2013

2.8 Assumptions and Limitations

The following assumptions and limitations apply to this report:

- The author assumes that where information is supplied by others, this information is correct and up to date unless otherwise stated by the client, project team or source. No responsibility is accepted by Filia Visual for incomplete or inaccurate data supplied by others;
- Filia Visual's assessment of the significance of impacts of the proposed project on the receiving environment has been based on the assumption that the activities will be confined to the areas for which impacts have been anticipated;
- Where detailed information is not available, the precautionary principle, i.e., a conservative approach that overstates negative impacts and understates benefits, has been adopted;
- It is assumed that any Public Participation or formal commenting and objections processes undertaken by others has identified and incorporated all relevant concerns and comments of stakeholders;
- Filia Visual assumes that the applicant will in good faith implement the mitigation measures identified in this report and elsewhere. In this regard, it is assumed that the applicant will commit sufficient resources and employ suitably qualified personnel to undertake such mitigation;
- It is assumed that the 3D model is an accurate approximation of the proposed development's eventual built form.

- Pseudo Mercator (EPSG: 3857) Coordinate system
- The viewshed analysis is based on the available Digital Elevation/Surface Model datasets available (SRTMGL1 V003 from NASA Shuttle Radar Topography Mission Global 1 arc second – 30m). It should be noted that viewshed analyses are not absolute indicators of either visibility of the level of significance (magnitude) of the impact in the view, but a statement of the fact of potential visibility. Visual analysis using the available Digital Elevation/Surface Models as a dataset only establish the lines of sight (LoS) between the observer and the proposed development and does not consider trees, buildings and other visual barriers that constitute solid protrusions. Empirical testing to take into account the visibility of view-limiting structures within urban space (be it a city or cultural landscape), requires either a precise Digital Surface Model (DSM, with raster resolution at most 2 x 2 m (Hlavatá and Ořahel' 2010))), or on-site LoS testing supported by 3D modeling. LiDAR (Light Detection and Ranging) improves the accuracy of viewsheds and visibility analyses by including these elements, especially for visual studies conducted in urban areas. South Africa does not have LiDAR data available. For this reason, a viewshed analysis using LiDAR data could not inform this report. However, the assumption is that the GIS Viewshed and LoS methods of analysis employed in this report will satisfy the requirements of the brief.
- Additionally, readers should note that the aim of photography and photomontage in visual studies is to represent the receiving environment under consideration and the proposed development, both as accurately as is practical. However, two-dimensional photographic images and photomontages alone cannot capture or reflect the complexity underlying the visual experience and should therefore be considered an approximation of the three-dimensional visual experiences that an observer would receive in the field (The Landscape Institute, 2011).
- Please note that the simulations and 3D models overlaid on to the photogrammetry site model do not indicate site clearance or removal of vegetation. The impression of visual absorption capacity will therefore be higher than that of the actual development.
- This study assumes that the development proposal will not be amended significantly after the issue of this report, and that any guidelines or recommendations will be interpreted in way not significantly deviating from the interpretation of this study.
- Finally, when determining the significance of the visual impact of the Project (with mitigation), the assumption is that the mitigation measures proposed in this report are correctly and effectively implemented and managed throughout the life of the project.

Notwithstanding the above, the authors are confident that these assumptions and limitations will not compromise the overall findings of this report.

3. SITE AND RECEIVING ENVIRONMENT STUDY

This section contains descriptions of the site and receiving environment for the proposed development at Keurboomstrand. The information presented here is based on desktop studies, aerial photographs, an overview of local policy and project information at hand; as well as the observations of the specialist during the site visit and fieldwork conducted over two days in early February 2021. The season of the site visit has limited bearing on the visual study, as the local vegetation types are predominantly evergreen and seasonal variations are not dramatic in terms of visual and aesthetic considerations.

3.1 The Subject site

The subject site is undeveloped, containing no existing buildings, services or infrastructure (with one exception being some decommissioned water pipelines and associated infrastructure). It is offset from the nearest road (Main Street) by the 27m width of the adjoining public place (Erf 391), which shares its northern boundary. Its southern boundary is delineated by the 25m wide road servitude set out for Main Road 394, which is the main access and entrance road for the whole of the Keurboomstrand town. The eastern and western boundaries are shared with Erf 152 and Erf 155, respectively.

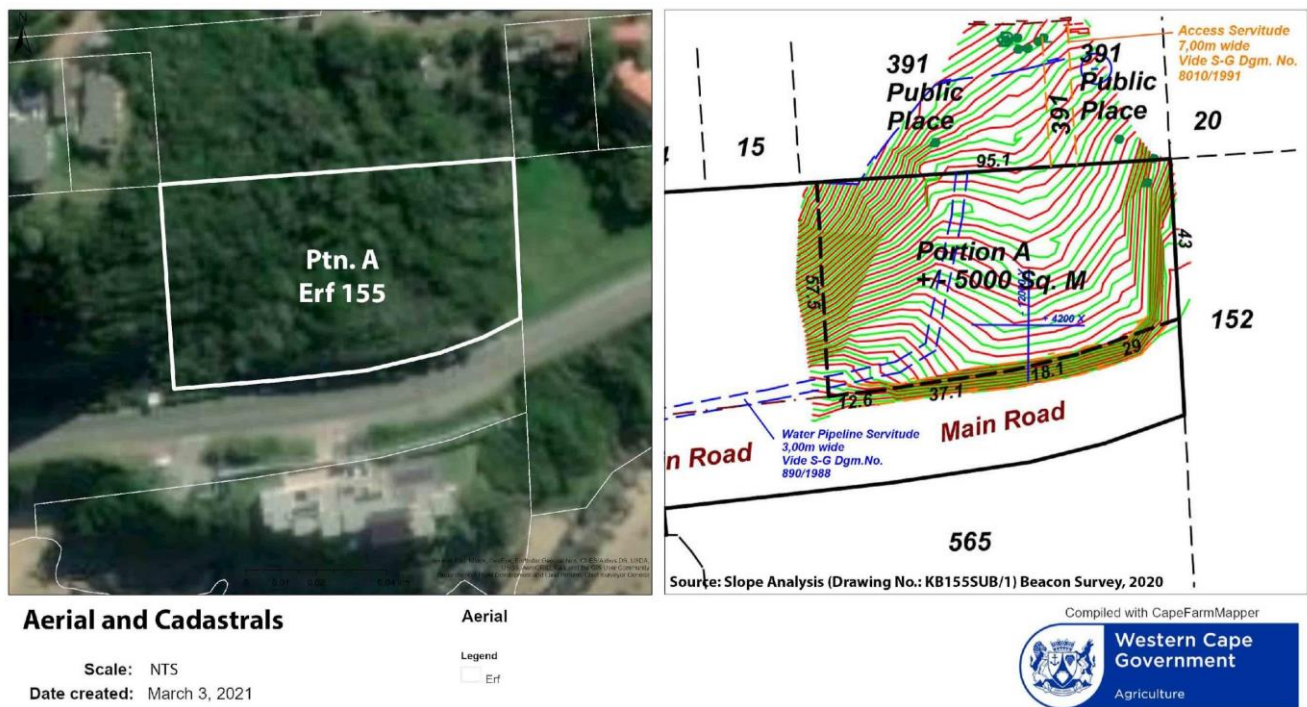


Figure 4: Aerial image of site alongside the site survey (Smit, 2021)

Existing residential buildings are located up-slope to the north east (Erven 15, 14, 13 etc.) and north west (Erven 20, 21, 22 etc.) of the site, with the majority of the town being located to the east. The recently developed Erf 565 is located 25m downslope of the site. The adjoining public place (Erf 391) is not utilised as a public space despite its zoning, houses a water reservoir and associated infrastructure, and does not appear to be part of an integrated corridor or network of public places. Erf 152 contains an open grassed area that appears to have some local amenity, and is one of a string of open areas at the foot of the coastal dune ridge that are accessible by the wide pedestrian pathway that runs along the entire length of the Main Road 394. A bus stop is located at the south western corner of the site, along the pedestrian route, and across from a small viewing area across the road, and west of Erf 565.



Figure 5: Site maps indicating vegetation types and CBA overlaid with the vegetation sensitivity areas (Smit, 2021)

The site is characterized mainly by its vegetation cover and the site topography. The mapped vegetation type over the site is Goukamma Dune Thicket (previously Keurbooms Thicket forest) according to the Mucina & Rutherford (The Vegetation Map of South Africa, Lesotho and Swaziland, 2018). The property falls within a Critical Biodiversity Area (CBA) according to the Western Cape Biodiversity Spatial Plan (2017), and the ecological survey determined that the site-specific vegetation types include Scrub Forest and Shale Fynbos, both of which are threatened vegetation types. The ecologist found that the site contains elements of critical biodiversity: patches of protected scrub forest and the protected Milkwood tree (*Sideroxylon inerme*). However, their conclusion was that the vegetation is partially degraded and therefore the site is partially developable, subject to (a) the protection of specific elements of the vegetation and (b) the directive to ensure that any development on site is undertaken in the most sensitive manner possible.

The site is situated on a shelf or promontory about three-quarters of the way up the slope of the vegetated foothill (which is approximately 60m ASL at its highest point), between the 25m and 50m ASL contours. The site gains 32m in elevation from the lowest to the highest point, sloping most steeply at its north western and eastern boundaries (see Figures 6 and 7 indicating the steep/no-go areas). Half of the site (bisected diagonally by the ridgeline of the promontory) faces south west, while the other half slopes off southward. A slope analysis has indicated all portions of the site that are no-go areas for proposed development. The central area of the site is less steeply sloped than the extremities of the site.

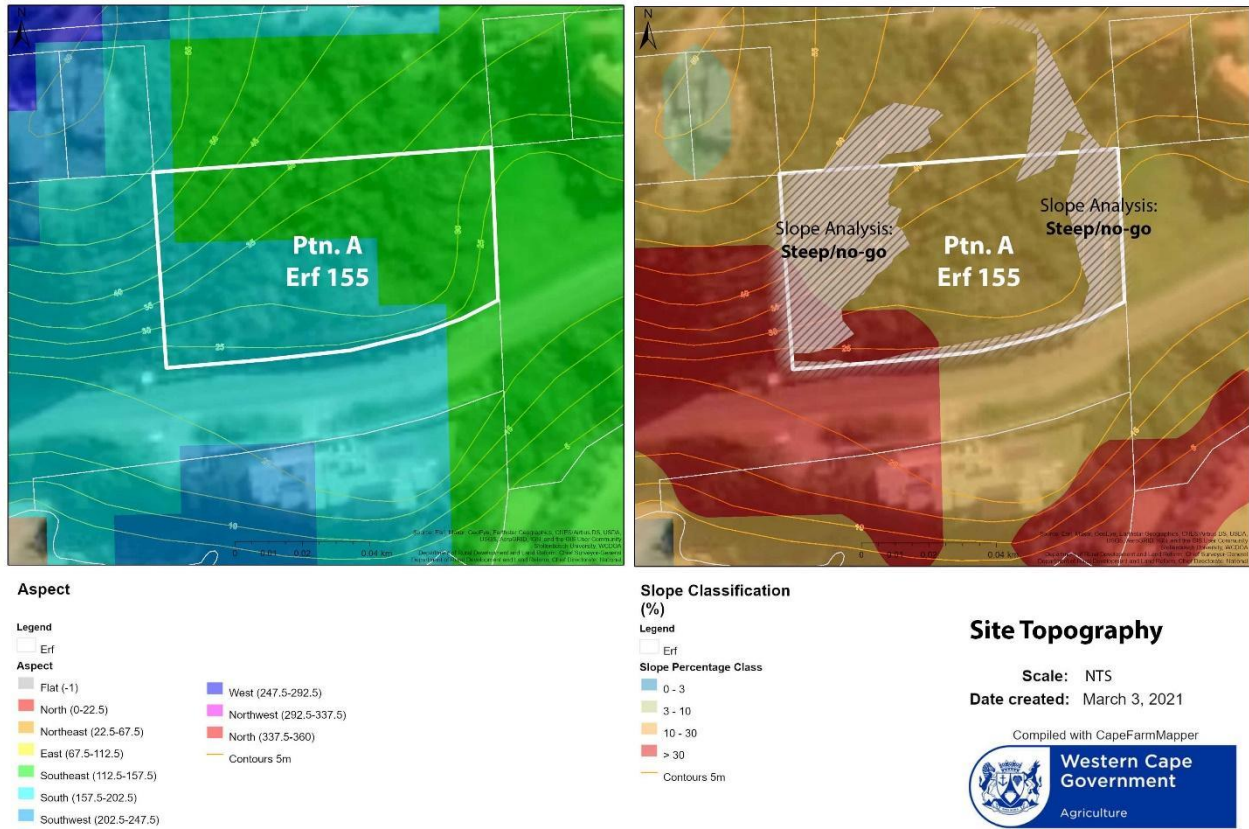


Figure 6: Site map indicating slope aspect, slope classification and the results of the slope analysis (Smit, 2021)

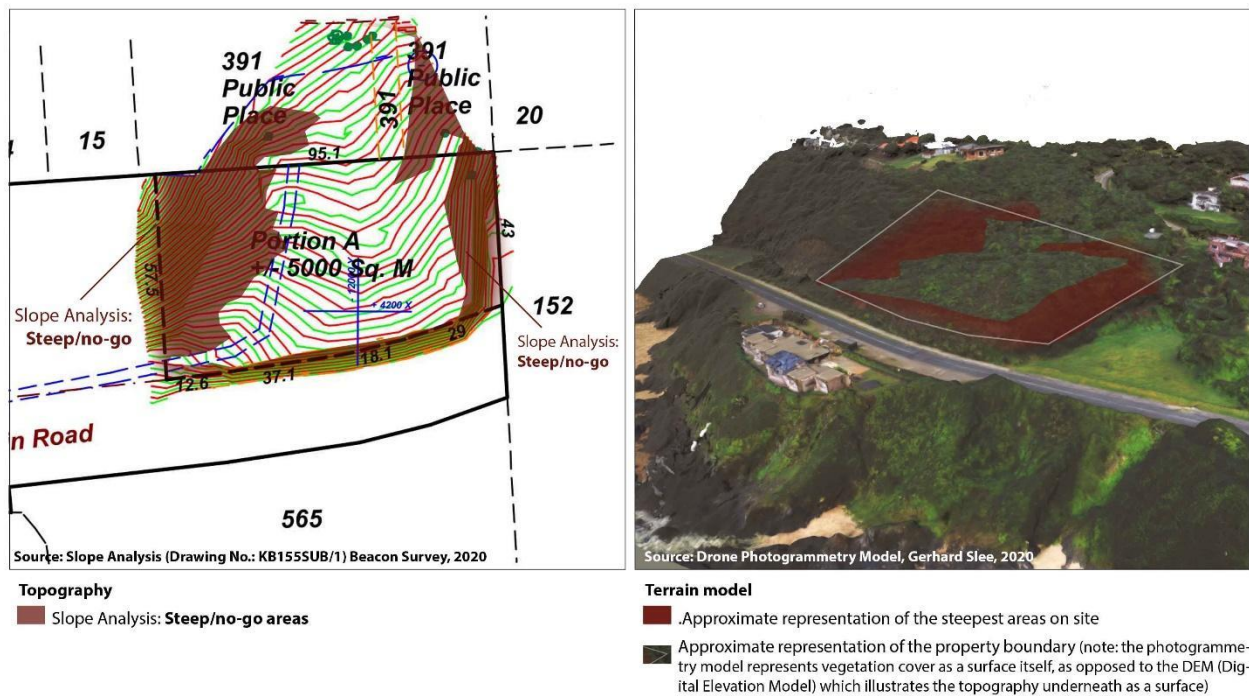


Figure 7: Graphic showing slope analysis overlaid approximately over a photogrammetry model provided by Slee Architects (Smit, 2021).

According to the recommendations of the Geotechnical report, no earthworks or development is recommended on slopes steeper than 1:4, unless special engineering solutions are developed, and no development is recommended within a buffer zone of 5m from the top of slopes which exceed a gradient of 1:2 (most notably along the southern (and eastern) boundaries).



Figure 8: Site photograph taken from the junction of Game and Main Streets, approximately 50m from the subject property boundary. The vegetation in the foreground is growing on Erf391 upslope to the north (Smit, 2021)

Vegetation patterns on the site are strongly influenced by the topography and geological features of the site. The forest areas generally adhere to the steepest parts of the site, while the Fynbos is limited to the shale soils presenting along the southern portion of the promontory. The Forest areas are densely vegetated, growing in places in excess of 6m tall, while the Fynbos vegetation type is generally lower-growing (0,5 – 1,5m in height). The Scrub-forest is established in the central and less steeply sloping part of the site. The height of the vegetation is between 2 and 5m, and grows less densely as one moves southward, opening up to views over the ocean where it meets the Fynbos area.



Figure 9: Site photograph from within the Forest Vegetation type (Smit, 2021).



Figure 10: Site photograph from the Scrub-forest vegetation type looking west toward the Forest vegetation type area containing Milkwood trees (Smit, 2021)



Figure 11: Site photograph taken from within the Fynbos vegetation type, looking north toward the Scrub-forest vegetation type (Smit, 2021)



Figure 12: Photograph of the site taken from the parking area of the lookout point on the ocean side of the MR 394 scenic route. Note the steep cutting and density of vegetation covering the site (Smit, 2021)

3.2 The property within the local planning context

The property is located within the Bitou Municipality, Eden District in the Western Cape province. The following section describes the site within the local planning context and identifies key informants, limitations, principles and guidelines that must be taken into consideration during the impact assessment.

Western Cape Provincial Spatial Development Framework, 2014 (PSDF)

The Western Cape's Provincial Spatial Development Framework (PSDF) includes the protection of spatial assets such as cultural and scenic landscapes as one of its three main goals, and encourages the sustainable use of provincial assets including scenic landscapes (Western Cape Government, 2014). Under the Guiding Principle of Sustainability and Resilience, the PSDF prescribes land development which is spatially compact and compatible with cultural and scenic landscapes (Western Cape Government, 2014, p. 22), citing the Western Cape's unique cultural, scenic and coastal resources as spatial assets upon which the tourism economy depends. The PSDF identifies the mountain ranges belonging to the Cape Fold Belt and the coastlines of the Western Cape as "the most significant in scenic terms, and underpin the Western Cape's tourism economy" (Western Cape Government, 2014, p. 53).

"Losses of scenic and heritage rural character are taking place due to recent patterns of residential sprawl on the outskirts of urban centers associated with low- density property developments." (Western Cape Government, 2014, p. 53)

While the site itself is not considered to be within a threatened scenic landscape of high significance according to the PSDF (i.e., rural landscapes, undeveloped coastal landscapes, historic mountain passes, wilderness landscapes); the greater receiving environment contains cultural and scenic assets that the PSDF deems worthy of protection.

Spatial implications listed for scenic landscapes of high significance:

- Protect the overall natural and cultural landscape, and the layered pattern of settlements in response to the natural landscape over time;
- Retain the essential character and intactness of wilderness, rural and urban areas (i.e.: protect landscape integrity in the face of fragmentation through unstructured urbanization);
- Retain the continuity, connectivity and interconnectedness of wilderness and agricultural landscapes including ecological corridors and green linkages;
- Maintain the role of the natural landscape as a 'container' within which settlements are embedded (the landscape providing the dominant setting or backdrop – landscape setting);
- Recognize the intrinsic characteristics and suitability of the landscape and its influence on land use, settlement and movement patterns, in response to geology, topography, water, soil types and microclimate.

The PSDF states that development (subject to limitations) of an appropriate scale and form can be accommodated outside the urban edge (except in bona fide wilderness areas) (Western Cape Government, 2014, p. 66), provided – amongst other things – that it is consistent with the cultural and scenic landscapes within which it is situated. This view is supported by the Land development objectives of the Bitou Municipality, in that developments with site specific impacts could be positively regarded if they contribute to ensuring conservation friendly land use (CNdV Africa (Pty) Ltd, 2017, p. 200).

Garden Route Integrated Development Plan, 2020 – 2021

The IDP classifies the Garden Route as a global urban and rural biodiversity hotspot (Garden Route District Municipality, 2020, p. 117). According to the IDP, the Garden Route's outstanding natural beauty is made up of diverse wilderness and agricultural landscapes, estuaries and lagoons, mountain backdrops and coastal settings, including the verdant landscapes of the Garden Route. The Southern Cape coastal belt has been identified as a significant leisure, tourism, lifestyle and retirement economic destination, driven largely by the quality of life and climatic advantages of the region. The district's natural capital and its varied scenic and cultural resources are the attractions that make the Western Cape the country's premier tourism destination (Garden Route District Municipality, 2020, p. 117).

According to the (Garden Route District Municipality, the natural and cultural landscapes of the district add to the identity and aesthetic appeal of the region. They are also large contributors to tourism. The IDP concludes that keeping the natural environment, wetlands, lakes and rivers in a pristine condition is key to future security in the future of the region and must be preserved in the district (Garden Route District Municipality, 2020, p. 118).

Bitou Municipal Spatial Development Framework, 2017 (MSDF)

The Eden District Spatial Development Framework notes that the Eden District has been identified as a strategic area within the province regarding its scenic value, on equal footing to that of its regional competitiveness and economic performance (GAPP Architects, Urban Designers and Spatial Planners, 2017, p. 36). Given that the scenic resources of the area originate from the landscape itself, it follows that conservation of the natural environment is critical for the Bitou area (CNdV Africa (Pty) Ltd, 2017, p. 201). The Garden Route Critical Biodiversity Areas Map includes the subject site and its environs in its mapped Critical Biodiversity Areas (CBA), which represent the biodiversity priority areas which should be maintained in a natural to near natural state. The desired management objective associated with CBA's is to maintain natural land, rehabilitate degraded to natural or near natural and manage them to prevent further

degradation. In term of proposed development, only land use activities that are compatible with maintaining the Desired Management Objectives are to be encouraged.

According to the Biodiversity Compatible land use guidelines matrix, land use recommendations for the subject site allow holiday accommodation and low-density rural housing within Core 1 CBA areas, under the Restricted category. This category specifies that the land use is possible under strict controls in order to avoid impacts on biodiversity (CNdV Africa (Pty) Ltd, 2017, p. 86). Finer mapping on the Draft conceptual proposals for Keurbooms River area allocates the site to Core 2 (river wetland/coastal corridor), but this is considered an error of mapping, as the Core 1 (Natural area, ecological corridor, steep slopes) is clearly the intended category.

The Conceptual Development Framework of the Bitou SDF is entitled “The Garden Route’s Sustainable Tourism Playground for the Benefit of All”. The authors of the SDF acknowledge upfront that Bitou’s greatest economic asset is the range of superb lifestyles that make it attractive to the local and international jet set (CNdV Africa (Pty) Ltd, 2017, p. 199), a reality that the vision of the SDF explores in some detail.

“The public policy and spatial planning challenge created by such lifestyles is not that they should occupy a low public policy priority because they are only accessible to a small elite but rather to ensure that the benefits of supplying the resources needed to sustain such lifestyles are spread as widely as possible.” (Bitou Municipal Spatial Development Framework, 2017, p. 199)

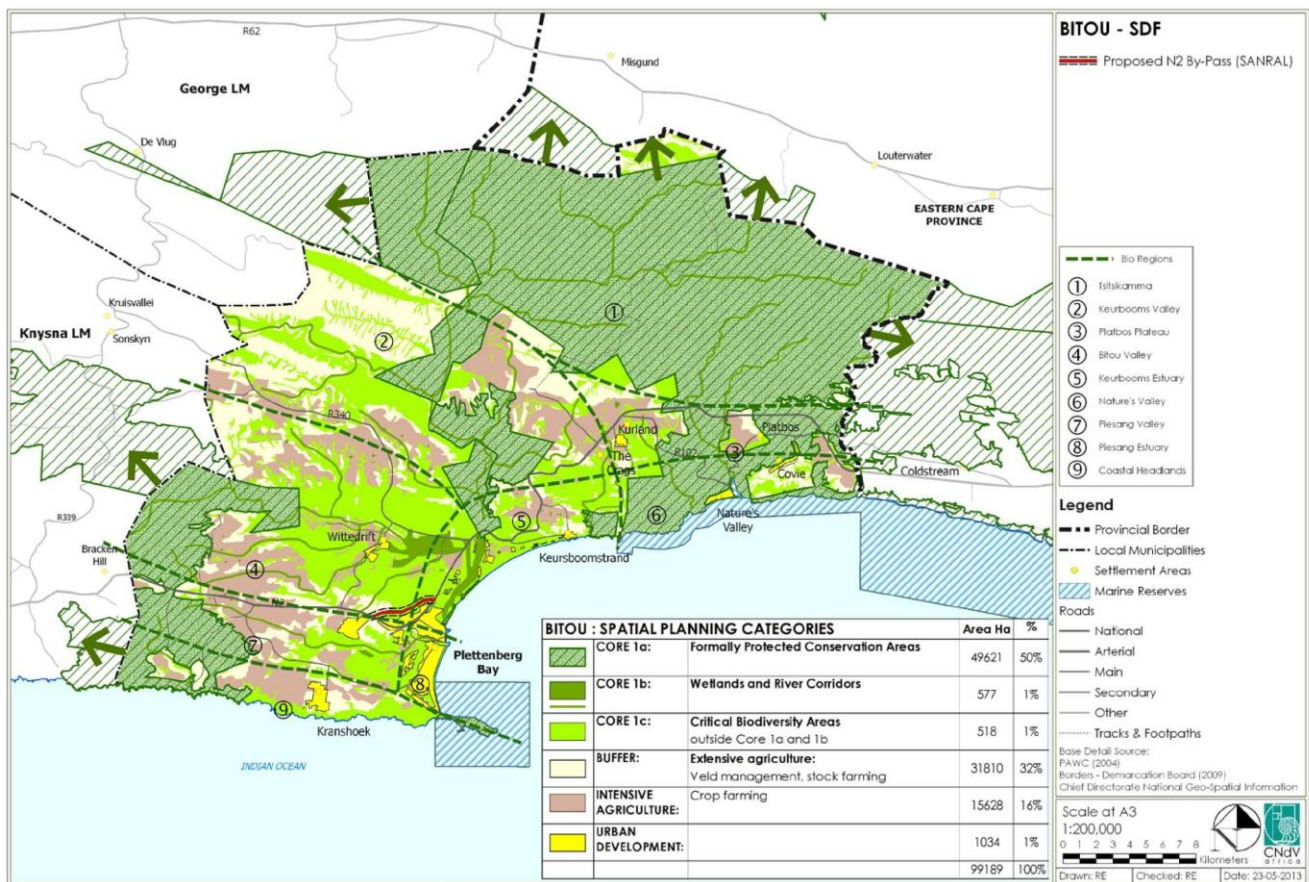


Figure 13: Bitou Municipal Spatial Development Framework (CNdV Africa (Pty) Ltd, 2017, p. 213)

The SDF goes on to suggest that rather than settlements becoming a series of exclusionary gated communities with little attention paid to the urban development needs of the majority, every effort should be made to develop inclusionary spatial frameworks in which it is convenient and efficient for all residents of Bitou to participate. Maintaining the quality of Bitou’s natural environment is a key factor in realizing the vision of the SDF.

The site and study area falls within the Keurboomstrand and Keurbooms River Conceptual development Framework theme (CNdV Africa (Pty) Ltd, 2017, p. 202). According to this framework, the site falls within a Buffer 1 area within the Keurbooms Estuary Bio-region (Buffer 1 areas contain CBA’s and critically endangered vegetation) (CNdV Africa (Pty) Ltd, 2017, pp. 211-213). According to the SDF principles to guide proposals, areas in the Buffer 1 category contain endangered areas of biodiversity in which land may be converted to other uses if satisfactory offsets are provided.

The MSDF identifies two Scenic Tourism Routes within the study area. While no formal framework or protection measures have been identified or put in place for scenic routes in the Bitou Municipality, the intention is (CNdV Africa (Pty) Ltd, 2017, p. 226):

- to ensure continued access to scenic amenities and the visual environment along these routes (this is of high importance);
- To preserve the visual and scenic qualities of the routes;
- To prioritize the management and preservation of the scenic and tourism qualities along these routes.

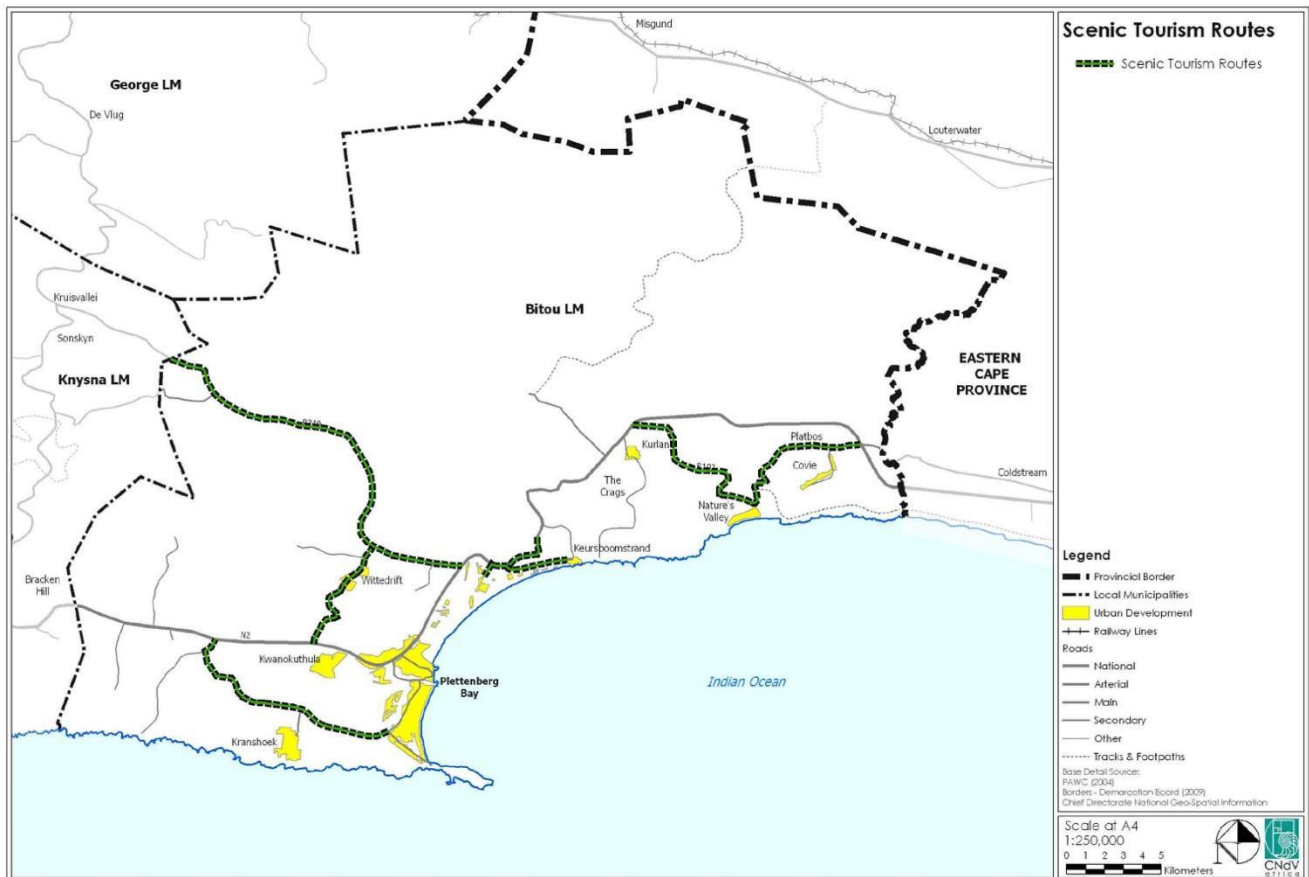


Figure 14: MSDF map showing local and regional scenic routes (CNdV Africa (Pty) Ltd, 2017)

This means that the views from scenic routes and their scenic quality is protected from inappropriate urban development. In the absence of guidelines (in the form of the prescribed visual resource management corridor), this VIA will make recommendations regarding the erection of boundary walls and fences, mitigation measures to manage the visual impact of buildings, development and construction along the routes affected by the proposed development. The DEA&DP guidelines for proposed development in visually sensitive areas prescribes development that will not result in or contribute to visually obtrusive or ribbon development along the coastline or along cliffs and ridges; landscape types the study area contains in abundance.

The Keurbooms river Draft Spatial development framework describes the town of Keurboomstrand as having a strong holiday/resort character. “It is fairly homogenously developed with residential and resort uses, wedged between sea and the coastal plateau slopes. Altering its character by permitting commercial and other non-residential development could detract from the area’s attraction. The theme should thus be a low density residential one.” (Bitou Municipal Spatial Development Framework, 2017, p. 202).

Eden District Coastal Management Lines Situational Analysis, 2018

The Eden district Coastal Policy Plan recommended that in urban zones the Coastal set back line should be 100 meters. It makes provision for site-specific conditions by stating that these set-back lines can be more accurately defined on a detailed project by project basis. For example, it may be possible to reduce these set-backs on rocky head lands as compared to sandy beaches (Royal Haskoning DHV, 2018, p. 274). Portions of the Keurboomstrand village and the proposed site are situated within the 100-meter setback. However, the Urban Development notes acknowledge that a balance has to be found between utilizing the most attractive sites and complying with the coastal set back lines, which can be done more easily in areas of lower risk.

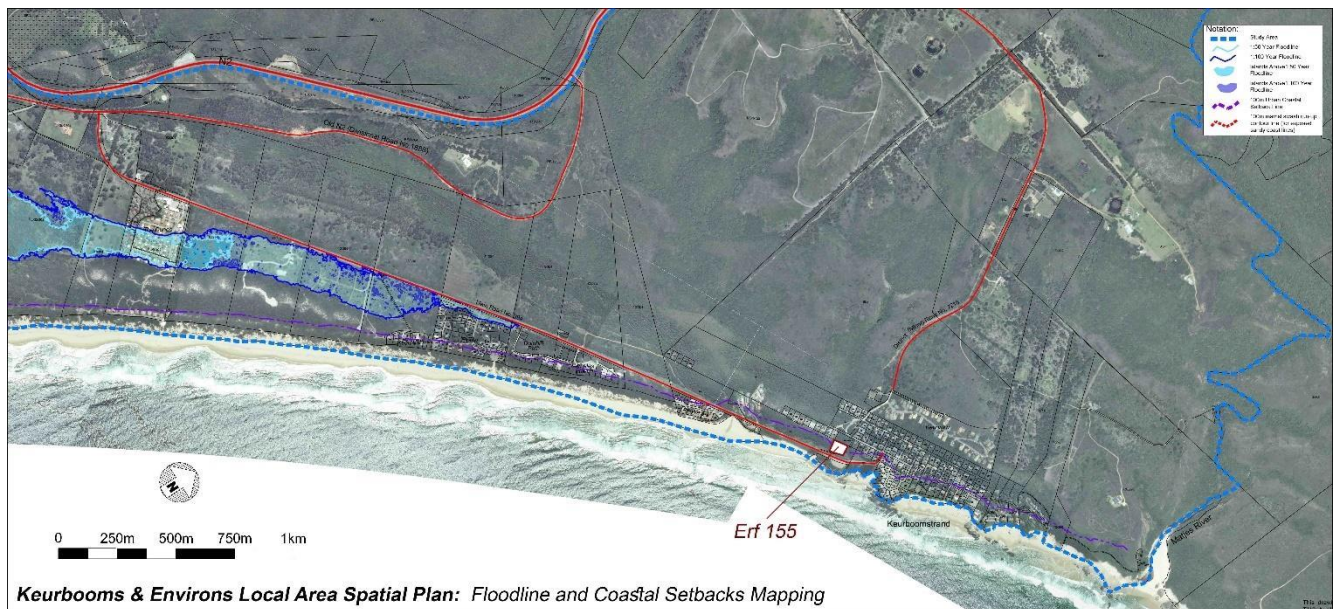


Figure 15: Keurbooms & Environs LASP: Floodline and Coastal Setback mapping. Note the purple line indicating 100m CML in the map above (TV3 Architects and Town Planners, 2013)

Keurbooms River and Environs Local Area Spatial Plan, 2012 (LASP)

Comment on the LASP provided by Department of Environmental Affairs & Development Planning in February 2013 noted that future development in Keurboomstrand must have low visual impact (TV3 Architects and Town Planners, 2013, p. 154).

“It is clear that the Keurbooms area is attractive because of its unique sense of place, beautiful vistas and natural vegetation. It is also undeniable that future development, if undertaken inappropriately and intrusively, has the potential to drastically alter or damage this sense of place. Therefore, appropriate urban design guidelines, height restrictions, indigenous vegetation screening and building typologies should all be explored and proposed, which will act as a tool to minimise the loss of sense of place where development is deemed appropriate and desirable.”
(Keurbooms and Environs Local Area Spatial Plan, 2013)

Additionally, the Department noted their concerns that where development opportunities are proposed on slopes of 1:4 or steeper, the development would become highly visible, and its visual impact far greater than for development on flatter ground (Keurbooms and Environs Local Area Spatial Plan, 2013, p. 155).

Heritage and Scenic Resource: Inventory and Policy Framework for the Western Cape

Keurboomstrand is not considered to be a Historical settlement. However, heritage resources have been identified in the study area, and according to the definitions in the Inventory and policy Framework, the site and project study area contains resources with the following resource types/classifications:

- a) Natural landscapes (visually sensitive mountain slopes and ridgelines, areas with visually sensitive wilderness (and rural) landscapes).
- b) Archaeology, Paleontology & Geology (Development along the coastline where sites are highly concentrated, Incremental destruction of coastal archaeology and loss of wilderness ‘pre-colonial’ landscape settings.)
- c) Rural Landscapes (Development on the edges of urban areas, development and gentrification of rural landscapes resulting in Incremental erosion and fragmentation, loss of rural authenticity, character and scenic value.)
- d) Scenic routes (Intrusion of development resulting in loss of scenic value, wilderness experience and rural character).

The Framework document also lists principles and guidelines that provide an overarching framework for heritage and scenic resources in the province (Western Cape Government, 2013, pp. 30-33). The following have bearing on this project’s receiving environment:

Principles	
Landscape significance	Acknowledging the overall natural and cultural landscape, and the layered pattern of settlements in response to the natural landscape over time.
Landscape integrity	Retaining the essential character and intactness of wilderness, rural and urban areas in the face of fragmentation through unstructured urbanization and commercial agriculture.
Landscape connectivity	Retaining the continuity and interconnectedness of wilderness and agricultural landscapes, including ecological corridors and green linkages.
Landscape setting	Maintaining the role of the natural landscape as a “container” within which settlements are embedded, the landscape providing the dominant setting or backdrop.
The logic of landscape	Recognizing the intrinsic characteristics and suitability of the landscape and its influence on land use, settlement and movement patterns, in response to geology, topography, water, soil types and microclimate.

Cultural significance & the Contribution of all periods	Acknowledging all aspects of cultural significance and cultural diversity as well as transforming interpretations of history and heritage values; while recognizing and respecting all periods that contribute to the history of a place, without undue emphasis on one particular period.
Settlement hierarchy	Preserving the structural hierarchy of towns, villages, hamlets and farmsteads in relation to patterns of movement in preference to uncontrolled sprawl.
Settlement typology	Recognizing settlement types such as grid, linear, informal etc. in response to environmental, historical and social influences, and avoiding indiscriminate or inappropriate forms of development.
Authenticity	Ensuring that interventions in heritage contexts are sympathetic to distinctive regional building and landscaping typologies, and appropriate in terms of scale, massing, form and architectural idiom.
Sense of place	Responding to the unique topographical, geological and cultural features inherent in remote, cultivated and urban landscapes, each with their own sense of place.
Sense of fit	Maintaining a sympathetic relationship between settlement and topography - treading lightly on the landscape.
Sense of timelessness	New development remaining sensitive to the context, and expressing a sense of rootedness in the local landscape.
Minimal intervention	Respecting historical fabric, with the least possible physical intervention, within the parameters of appropriate adaptive uses, and avoiding conjecture.
Access to resources	Ensuring access to cultural resources as a key conservation management principle, especially where the public has traditionally enjoyed rights of access.
Integration with development planning	Landscape and heritage management regarded as an essential and integral aspect of development and planning, which guides responsible and sustainable management of change, and is thus not separate from the planning system.
Heritage tourism	Recognizing that heritage and scenic resources are economically valuable in terms of tourism development and job creation if developed in a responsible and sustainable way.

Listed imperatives for special scenic and cultural landscapes (Western Cape Government, 2013, p. 32):

- A pre-cautionary approach to development applications within these landscapes should be adopted. The emphasis should be on enhancement of significance, and the avoidance of negative impacts rather than the mitigation thereof.
- Conservation of special qualities which make these landscapes particularly unique.
- Conservation emphasis should be on the public realm, public view cones and corridors, public access and public space.
- Avoidance of large-scale developments.
- Avoidance of incremental erosion by developments of these values, (e.g., piecemeal subdivision of productive agricultural land into smaller farming units within rural landscapes of high heritage and scenic significance or commercial development along scenic routes through rural landscapes).

Policies and Guidelines for Natural Landscapes of Significance

In terms of coastlines and promontories (such as Robberg), the relevant Framework policy is to “Conserve visually sensitive coastlines and coastal promontories for their scenic and cultural value.” (Western Cape Government, 2013, p. 36). The following guidelines apply to landscapes such as Robberg:

- Prevent urban sprawl along the coastline and consolidate the edges of urban areas into distinct, compact settlements to maintain the integrity of landscapes and townscapes.

- Adhere to coastal setbacks at a municipal level as prescribed in the Integrated Coastal Management Act, to prevent new development in the dynamic coastal zone and to conserve coastal scenic resources.
- Encourage ecological and visual corridors between mountain and sea, and protect coastal promontories with scenic and cultural value.

In terms of Geological features (such as rock outcrops, cliffs, caves, waterfalls etc. at the district and local level) the policy is to “Conserve important geological features for their scenic and scientific interest.” (Western Cape Government, 2013, p. 35). The guidelines are to identify and protect such special geological features.

In terms of protected natural areas, public open spaces and patterns of access, the policy imperative is to “Place emphasis on achieving a network of conservation areas and corridors by linking mountains, coastlines, rivers and wetlands.” (Western Cape Government, 2013, p. 36). Because of the proximity of the public open space area alongside, the following guidelines are noted:

- Prevent fragmentation and provide continuity within conservation networks, ensuring long term viability of ecosystems and areas of high scenic value.
- Prevent privatization of natural places forming part of the historical public open space resource network.
- Facilitate public access, education and interpretation to places of natural amenity by means of recreation trails and tourism facilities.

Policies and Guidelines for Rural Landscapes of Significance

The Framework provides policy and guideline framework for the natural visual setting within rural landscapes. The imperative is to “Conserve the green or topographical “containers” of rural landscapes and settlements.” (Western Cape Government, 2013, p. 38). The guideline advice is to prevent encroachment of development where these erode distinctive visual settings.

In terms of rural settlement patterns, the policy is to “Maintain the natural ordering system of town, village, hamlet and farmstead evolved in response to the natural environment and movement routes.” (Western Cape Government, 2013, p. 39). Guidelines that apply to this project context include:

- Ensure that new development is responsive to the historical rural context, and avoid suburban type layouts, particularly “gated” estates.
- Ensure that new developments are in sympathy with the topography, drainage patterns and microclimate.
- Observe the siting of existing settlements (i.e., avoiding visually-exposed, wind-swept hillcrests, and frost-prone valley bottoms)
- Ensure that new buildings are in sympathy with the scale, massing, layout and idiom of surrounding buildings (with particular reference to historical precinct or werf contexts).

Policies and Guidelines for Paleontological and Archaeological Landscapes of Significance

While the receiving environment does contain Paleontological and Archaeological Landscapes of Significance, these are not affected by the proposed development. However, the following policy and guideline is included because of the proximity of these resources to the project site. The Framework makes provision for the conservation of the natural and cultural landscape settings of important sites. The guideline prescribes that not only the sites, but also the broader landscape settings must be protected.

Policies and Guidelines for Scenic Routes of Significance

For Major scenic routes, the Framework policy is as follows: “Protect and promote scenic routes and passes of regional, heritage and tourism significance, because of their cultural value and importance to the economy of the Western Cape.” (Western Cape Government, 2013, p. 41). Relevant guidelines include:

- Prohibit obstruction of sea and mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.
- Establish visual buffer zones with setbacks and height restrictions along scenic routes. (E.g., for secondary routes, but these are dependent on view corridors and other local conditions)

In terms of Landscape setting and design for Scenic routes, the policy is to: “Respect the landscape setting and gateway qualities of important scenic routes and mountain passes, particularly those with a wilderness or rural setting.” (Western Cape Government, 2013, p. 41). Guidelines are to:

- Ensure appropriate design of road verges, stormwater structures, fences etc. which should be in character with the natural or rural surroundings.
- Avoid over-engineered construction details which are not in keeping with wilderness, natural or rural surroundings.

3.3 The Receiving Environment

The initial study area is delineated by a 10km to 15km radius³ around the project site. Certain views from as far as 15km have been incorporated into the study area to include areas such as the Robberg Nature Reserve. The following section describes this area as the receiving environment (RE). The study area and the scale of the receiving environment will later be reduced to focus on the Zone of Potential Visual Influence (ZoVI) after viewshed and Line of sight testing.

3.3.1 Description of the Receiving Environment

The project is located within Plettenberg Bay, which is part of the Bitou Municipal area in the Eden District of the Western Cape. Plettenberg bay is typical of the crenulate bays along the Eden District Municipality coast, with exposed western rock headlands, long, sheltered sandy beaches extending eastward from the headlands and an estuary at the western side of the bay. The Cape Fold Mountains (the Outeniqua range) are a ubiquitous presence in the region, their marches delineating the extent of the famous Garden Route between the mountains and the coast. Major and minor river valleys extend across the inland plateau where the mountainous topography (generally covered by natural and commercial forest) gives way to a coastal corridor of undulating coastal plains, rocky headlands, flood plains, estuaries and sandy beaches at the coast.

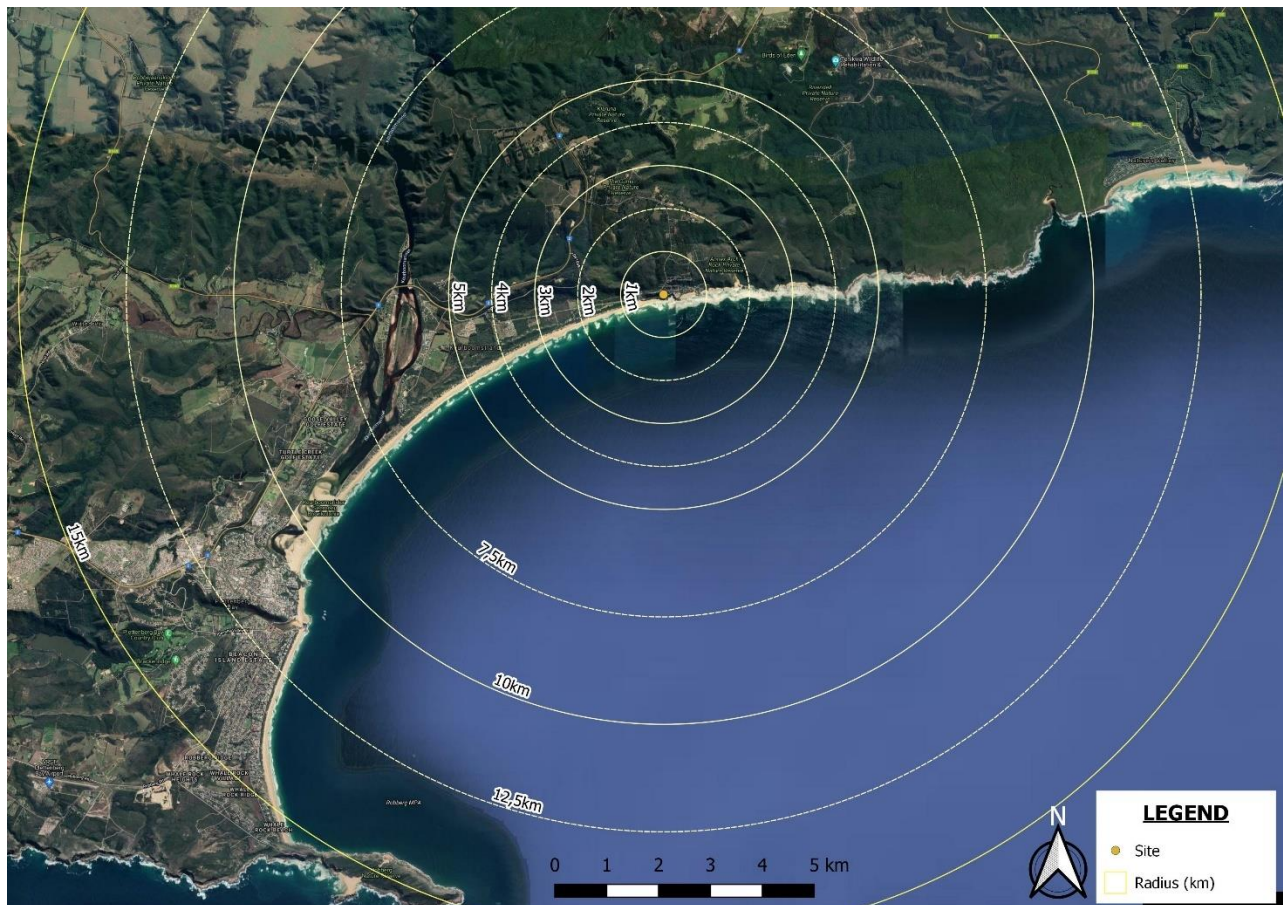


Figure 18: The receiving environment study area (van der Merwe, 2021)

³ The upper limit of potential visibility for a development of this scale within this kind of receiving environment is between 5 and 10km. Views near to, at or at distances of more than 10km are considered negligible. After Visibility testing, this distance may decrease.

The study area is well connected to neighbouring coastal towns via the N2 freeway, which is a major structuring element and mobility route through the municipality in the area, having given rise over time to numerous settlements along the coastline. The region experiences increasing pressure for urban expansion, expressed mostly in and around the town of Plettenberg Bay, the local major urban center providing higher order medical, educational, commercial and administrative services. Nearby towns include Plettenberg Bay (approximately 10km south west), Nature's Valley (10km east), The Crags & Kurland (7km north east) and Wittedrift (11km west). Knysna is about 40km west, and the border of the Eastern Cape is situated a little less than 20km to the east (all measurements taken from the center of the study area - the project site itself).



Figure 19: Site photograph of the N2 freeway just before the Keurboomstrand access road turnoff (left), demonstrating the typical inland topography and vegetation cover (Smit, 2021)

The series of estuaries, lakes and forests of the Garden Route are considered to have high scenic value, most notably from Mossel Bay onward, extending to Nature's Valley and beyond, into the Eastern Cape. Plettenberg Bay's southern bay coastal area is heavily developed containing the town of Plettenberg Bay, whereas the northern part of the bay is largely undeveloped apart from several hotel complexes and the village of Keurboomstrand at its northern end. The rocky coast east of Keurboomstrand continues for a further 8km to the western end of Nature's Valley. The coastline within the receiving environment has a number of important archaeological sites, two such heritage and scenic resources with formal protection being the Robberg Peninsula and Matjies River Cave (both Provincial Heritage sites (PHS)).



Figure 20: Site photograph illustrating topographical and landform features: mountain backdrop, deeply incised forested river valleys on the inland plateau; estuaries, lagoons and either dune systems or rocky headlands at the coast (Smit, 2021)

Large parts of the Bitou Municipality are currently under conservation, and according to the Bitou SDF it has one of the largest percentages of formally protected land of any municipality in South Africa (CNdV Africa (Pty) Ltd, 2017, p. 203). The UNESCO Garden Route Biosphere reserve contains some of the most pristine parks in South Africa and dramatically scenic formally or informally conserved areas - many of which are contained within the Garden Route National Park (GRNP). The Nature's Valley section of the GRNP is located in the east of the study area, and protects large Southern Cape indigenous forests (of national importance), fynbos areas, mountain catchments, rivers and lakes.

The Keurbooms River Estuary and Provincial Nature Reserve at the mouth of the Keurbooms river is ranked 16 in terms of conservation importance in South Africa, according to the Garden Route Biodiversity Sector Plan of 2010, and the Robberg Nature Reserve is a Provincial Heritage site, described as being a pristine example of animal and plant life existing in a unique coastal environment (Bitou Municipal Spatial Development Framework, 2017, p. 117). Additionally, there are various private nature reserves within the rural hinterland (around the Craggs) and along the coast, the nearest to the subject site being the Annex Arch Rock Private Nature Reserve, directly east. No formal register of historical sites exists in the Bitou municipality.



Figure 21: Site photograph taken from within the Robberg Nature Reserve (a Provincial Heritage site) of the southern side of the rocky peninsula (Smit, 2021)

Land use and economic activity in the study area is diverse, with its roots in agriculture and forestry (Garden Route District Municipality, 2020, p. 62). Eden district is one of the last areas in the Western Cape actively utilised by the Forestry sector, according to the PSDF (Western Cape Government, 2014). All policy documents consulted during the Desktop study identified the bio-physical environment and diverse natural resource base of the region as either a key element of, or the very basis of the economy. The Bitou Municipality can be described as being rich in culture and an often-visited tourism destination in the Western Cape (CNdV Africa (Pty) Ltd, 2017, p. 192).



Figure 22: Site photograph at the outskirts of the Keurboomstrand village at approximately the point that no further views of the sea or the town are visible, showing the condition of local vegetation at the edge of the rural hinterland forestry area (Smit, 2021)

According to the Eden District Spatial Development Framework (GAPP Architects, Urban Designers and Spatial Planners, 2017, p. 36), the internationally recognized Garden Route area is generally considered as a leisure and tourism region. The District's outstanding natural beauty is made up of diverse wilderness and agricultural landscapes, estuaries and lagoons, mountain backdrops and coastal settings, including the verdant landscapes of the coastal belt (Garden Route District Municipality, 2020). These features make it a significant leisure, tourism, lifestyle and retirement economic destination.



Figure 23: Site photograph taken from the old N2 (a scenic route), showing a view of the study area as the road winds its way down the outside of the hill slope overlooking the floodplain and estuary. These dramatic views are not enjoyed by the "new" N2 route, which passes through a cutting further inland (van der Merwe, 2021)

The coastline, in particular, draws tourists by the millions, and attracts development and economic activities. (Coastal Management Lines for Eden District: Project Report, 2018). Coastal areas are particularly valued for whale-watching, wide open ocean views, hiking and other outdoor lifestyle, leisure and recreation activities.

The RE contains a number of areas that are distinct from one another in terms of topography, ecology and settlement pattern, amongst other aspects. These use areas and landscape types can be grouped into:

- Sandy beaches (linear, open and flat, within the crenulate bay and bounded by resistant rock headlands (in this case, Robberg peninsula and the Keurboomstrand headland) (Royal Haskoning DHV, 2018))
- The Keurbooms river valley and estuary (flat and low-lying, with medium-density and low-density settlement on the periphery of the river, lagoon and estuary – some of which is located within the floodplain)
- The vegetated coastal dune systems (undulating) and the dune slack area directly inland (flat, low-lying)
- Urban development areas such as Plettenberg bay (characterized by medium to high density settlement, located on and covering a variety of landforms, especially in the south eastern portion of the study area);
- The inland coastal plateau containing minor and major river valleys, densely vegetated with indigenous fynbos or forest; or under forestry (through which the N2 winds);
- Rural settlements within the inland coastal plateau, mostly surrounded by forestry, tourism and agricultural land uses;
- Vegetated foothills at the coast, which give way to hard rock cliffed coasts with rock shore platforms (interrupted by small sandy river mouths)

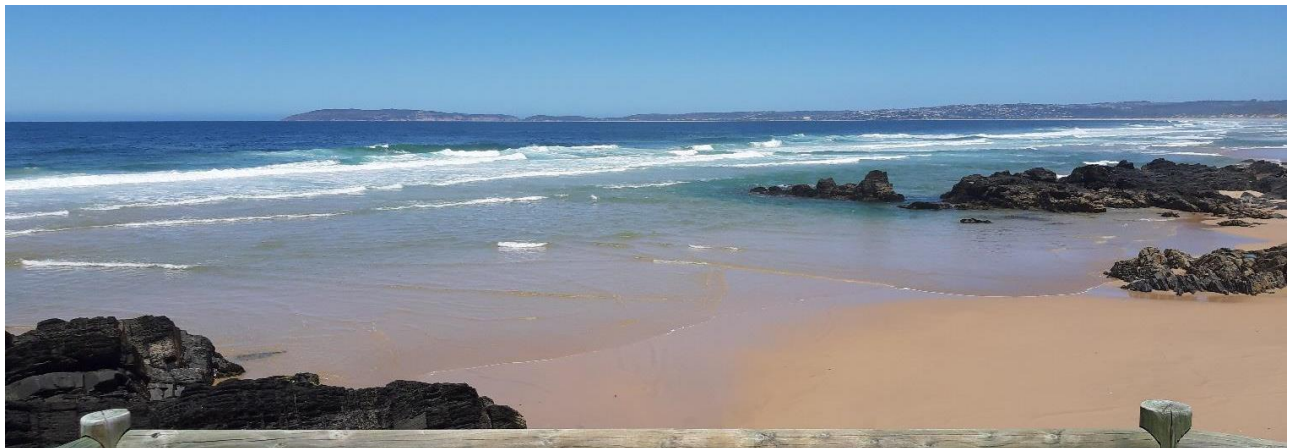


Figure 24: Site photograph showing the view from the Keurboomstrand main beach boardwalk towards Plettenberg bay and Robberg (van der Merwe, 2021)

3.3.2 Keurboomstrand

The local receiving environment is found at the intersection of three of the broad landscape types identified above. It is necessary to describe the subject site's localised receiving environment due to the heterogeneity of the greater receiving environment, and the uniqueness of its local context.

Keurboomstrand falls within a relatively narrow strip of land referred to as a 'Coastal Corridor', between the sea and the rural hinterland. Keurboomstrand as a township is divided into two distinct areas: the western

portion situated in the floodplain of the estuary, on the dunes and within the dune slack area (extending approximately 4km east of the Keurboomsrivier Estuary), and the eastern portion situated on the steep slopes of the vegetated foothills. Both areas are delineated to the north by the inland coastal plateau (although, notably, the Keurboomstrand east urban edge includes some of this elevated, forested area for future development). This division of Keurboomstrand is created by the narrowing of the dune slack area where the primary barrier dunes that line the coastal edge of the flood plain meet the steep slopes of the vegetated foothills as the landscape changes eastward into rocky and forested cliffs.

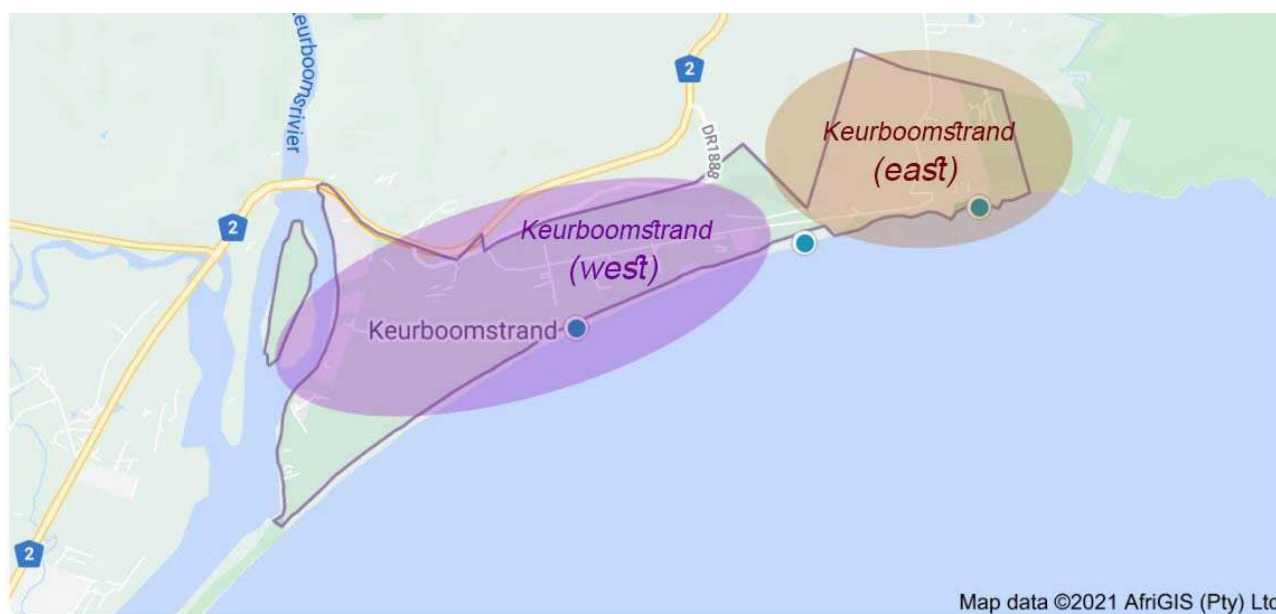


Figure 25: Area defined as Keurboomstrand (Smit, 2021)

The town of Keurboomstrand (Keurboomstrand east) is described as a resort town, which has been developed over time in response to environmental conditions, historic patterns of subdivision, and built forms (Western Cape Government, 2013). The town proper is nestled in a sheltered cove, the topography and settlement of the town creating an amphitheater around its blue flag beaches.

Keurboomstrand is accessed mainly by the DR 1888 turn-off from the N2, which is met by the MR394. This road is notable for its 3km straight, flat stretch through the dune slack area between the coastal primary dune (south) and the steep vegetated foothill (north). There is a circular route through Keurboomstrand east via Game street and the rural hinterland north of the town, but this appears to be little used. The MR 394, a scenic route, is flanked by a paved pedestrian route that appears to be valued by locals and tourists for walking, cycling and other recreation and leisure pursuits.



Figure 26: Site photograph (looking west) along the MR349, showing the roadway and the paved pedestrian route alongside. Note also the height of the vegetation alongside, typical of this stretch of road (Smit, 2021).



Figure 27: Site photograph showing typical landform (flat dune slack area and steep vegetated foothill). Note the pedestrian pathway and the remnants of forestry activities on the ridge (Smit, 2021)

Keurboomstrand west has a low density and disparate settlement pattern (CNdV Africa (Pty) Ltd, 2017, p. 274), characterized in recent years by the gated developments (holiday resort townships and private residential) that were built along the lines of large agricultural erven. The area contains some private estates, medium-density housing estates, farm stall and restaurant, and one area of semi-agricultural use (equine). The sea is not visible or accessible in this area except from the dunes on privately owned land and the +-5km sandy beach.



Figure 28: Site photograph of the Keurboomstrand town welcome sign (at the entrance of Keurboomstrand east) (Smit, 2021)



Figure 29: Site photograph showing the older gated development, from Erf 15 on Main road. Note the consistent building typology and extent to which the vegetation absorbs visual intrusion (Smit, 2021)

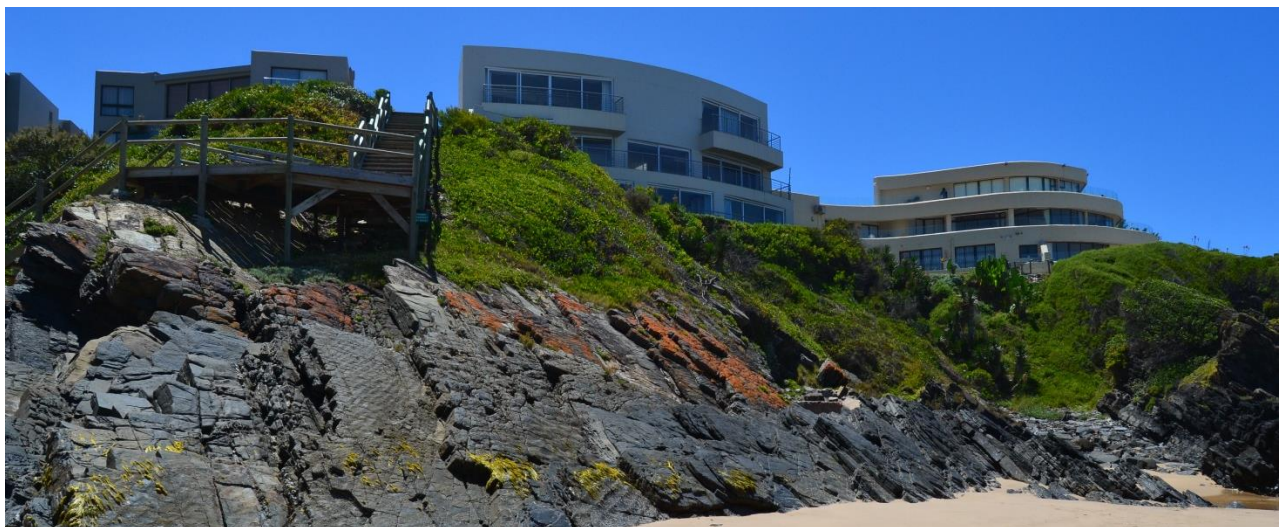


Figure 30: Site photograph from the small cove beach at low tide, looking up toward the second gated development. Note the building typology and visually exposed position on the rocky promontory (Smit, 2021)

Keurboomstrand east is compact and has a number of clusters of development. The westernmost portion consists of the Mare Nostrum and Waves Avenue buildings, situated north and south of the MR394, respectively. Keurboomstrand Beach is accessible here via a public parking lot with timber boardwalk access to the beach and lifeguards on duty. Further east is the center of the town, arranged along the Main Road which leads to the local restaurant (Enrico's) and the smaller beaches.



Figure 31: Site photograph of Keurboomstrand Main road within the town proper (Smit, 2021)

The topography prevents any north/south connecting roads in the town's layout, and it is generally the east/west roads (at different altitudes, ending in either cul-de-sacs or the entrances of private property) that give access to erven. The town consists mainly of single residential buildings on erven, with the notable exceptions of two gated communities, both with distinctive architectural styles.



Figure 32: Site photograph showing "whale watching" local tourism signage, at the threshold between Keurboomstrand east and west (Smit, 2021)



Figure 33: Site photograph taken from the Keurboomstrand public beach at the western end of Keurboomstrand east. Note the buildings visible on the ridge and the dense vegetation of the steeply sloped foothill (Smit, 2021)

Keurboomstrand is a popular destination for tourists, retirement town and beach resort town. As a matter of interest, the highest average asking prices on the urban property market in the Bitou Municipality are located in Keurboomstrand (Bitou Municipal Spatial Development Framework, 2017, p. 151). The town is situated next to a wilderness area (CNdV Africa (Pty) Ltd, 2017, p. 28), which extends to Nature's valley and further east as part of the Garden Route and Tsitsikamma National Parks.



Figure 34: Site photograph overlooking the 5km long Keurboomstrand beach, looking toward Keurboomstrand west and Plettenberg Bay in the distance (van der Merwe, 2021)



Figure 35: Site photograph showing the use of the rocky promontories for recreational pursuits (van der Merwe, 2021)

The coastline resources are highly valued as tourism, recreation, leisure and scenic resources, including the use of the beaches and the rocky promontories for fishing. There is direct access to the Annex Arch Rock nature reserve, the Matjies River Cave and Annex rock itself via a short hiking trail (reminiscent of the Otter trail) from the easternmost beach.



Figure 36: View from the hiking trail within Annex Arch Nature Reserve west (Smit, 2021)

The local vegetation is generally forest and coastal scrub forest, (intensified by the garden trees of the town itself), and the local settlement patterns tend to retain as much of the existing vegetation as possible, resulting in an urban environment that is generally verdant and lush. This results in a notable feature of the character of the local receiving environment: buildings are generally hidden by surrounding vegetation up to at least the ground floor where site vegetation is not disturbed. In these cases, only the roof of the building or the first floor and roof are visible. Where vegetation is cleared, buildings are more exposed and more visible, especially when they are built on higher ground.



Figure 37: Example of an existing building in Keurboomstrand with high visual exposure (due to size & height of building and position on slope) and little vegetation screening (center of image) (van der Merwe, 2021)



Figure 38: Examples of existing buildings in the Mare Nostrum development with moderate visual exposure (due to size & height of building and position on slope) and little vegetation screening (van der Merwe, 2021)



Figure 39: Example of existing building in Keurboomstrand with low visual exposure (due to size & height of building and position on slope) and effective use of the surrounding vegetation for screening (Smit, 2021)

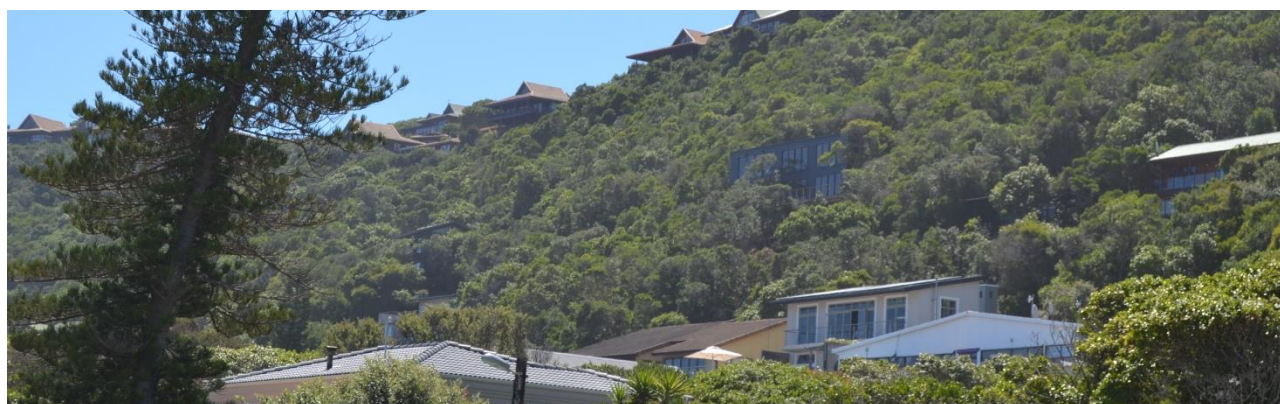


Figure 40: Example of existing building in Keurboomstrand with very low visual exposure supported by architectural form and material colouring, and effective use of the surrounding vegetation for screening (Smit, 2021)

3.4 Evaluation of the Visual resource in terms of Aesthetic value

According to the Western Cape's Provincial Spatial Development Framework (PSDF), the Western Cape economy is founded on the Province's unique asset base, which includes its varied scenic and cultural resources - attractions that make the Western Cape South Africa's premier tourism destination (Western Cape Government, 2014, p. 38).

The following section defines and describes the Landscape Character, the Sense of Place, the Quality and Integrity of the landscape, and concludes by providing a rating for the Aesthetic value of the Visual Resource.

3.4.1 Landscape Character and Sense of Place

The Sense of Place is the unique quality or character of a place, whether natural, rural or urban (Oberholzer, 2005, p. 28). According to Lynch (1976), 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". It follows that an important aspect of Sense of Place is the uniqueness and distinctiveness of a landscape. According to Graham Young, 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.

The receiving environment contains a variety of landscape types at the intersection of three of the Bio-regions defined by the SDF, each with different Landscape Characters. The overall landscape character of the receiving environment is predominantly **coastal**, with a **diverse mix of landscape types** both **natural (river, estuary, forest, dunes, rocky headlands and vegetated foot slopes)** and **transformed (urban areas, agricultural land, rural settlements and resorts)**.

The landscape character of Keurboomstrand is dual, as outlined in section 3.4.1, encompassing both (a) the **sparsely developed dune slack/floodplain area** with an **open, rural character** between the vegetated foothill and the crenulate bay dune system; and (b) the **compact, densely vegetated Keurboomstrand town proper** situated on the **steep foothill slopes** with a **distinctive resort-town character**.

Key elements of the landscape character, both overall and localised, are:

- i. Dramatic coastal scenery in the form of mountainous forests (in places seemingly untouched) offering a backdrop to long sandy beaches, estuaries and river valleys, and open views of the ocean looking east, south and west. This element is maintained by the limited disturbance to vegetation, the visual continuity between the foothill and the sea, and the scenic route view corridor (its functioning as a gateway into the town proper and the lack of visual intrusion on coastal and sea views).
- ii. The landscape and natural resources (including scenic resources) as a setting and container for tourism, recreation, leisure etc. (including visual character). Generally associated with limited development that does not require the clearing of vegetation, and protection of landmarks and natural features from inappropriate development, and the retention of the townscape character, pace and lifestyle as that of a resort town and holiday destination.

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 (Young, 2014, p. 7).

The Garden route is a locally and internationally recognized destination place for scenic beauty and leisure/recreational and tourism activities. While the study area itself (Plettenberg Bay and the Keurboomstrand area) contains some internationally and nationally recognized cultural and historical sites, the sense of place is derived (especially at a local scale) from the scenic resources of the coastline, which is based on natural features (some of which are under conservation). These include the sandy (blue flag) beaches, rocky promontories, vegetated primary dunes and dune slack areas, and the steep forested foothills that meet the rocky coastline.

Locally, the sense of place is also drawn from the unique townscape character of the Keurboomstrand town, which (although developing) is generally that of a small, coastal resort town with single residential buildings of approximately two stories, nestled within and screened by the local vegetation.

- Eastward, the landscape takes on a distinct **coastal wilderness** Sense of Place, with high contrast between the natural features (sea, rocky coastline and steep green slopes).
- Westward, the landscape takes on a more **rural** Sense of Place within the dune slack area, still heavily influenced by the local topography and natural features, but becoming more and more transformed by infrastructure, resort and urban development toward Plettenberg Bay.

The study area and receiving environment can be described as having a **strong landscape character** and a distinctive **sense of place** (albeit dual and localised). The greater receiving environment contains **recognizable landmarks, landscape features and vistas as part of the Garden Route**. The local receiving environment is **unique and distinctive within the coastal belt**, based on both the **local townscape character** and the **value of the natural and scenic resources**.

3.4.2 Landscape Quality and integrity

Landscape Integrity refers to “The relative intactness of the existing landscape or townscape, whether natural, rural or urban, and with an absence of intrusions or discordant structures” (Oberholzer, 2005, p. 28). Landscape quality and integrity will be described separately in terms of the intactness of the landscape and the intactness of the townscape. Landscape quality increases where topographic ruggedness and relative relief increase, water forms are present, diverse patterns of vegetation occur, natural landscape increases and man-made landscape decreases and where land use compatibility increases (Young, 2014).

The landscape contains **some intrusions or discordant structures and activities**. While the beach and estuary systems themselves function and present as more or less pristine ecosystems, the wilderness qualities of the receiving environment in the dune slack areas and on the vegetated foot slopes are eroded by human activity and development within the landscape (including roads, estates, buildings and other infrastructure). The foot slopes themselves show signs of disturbance to the vegetation over time by forestry – an effect that tends to decrease toward the coastline.

The Keurboomstrand town itself contributes to the erosion of landscape integrity, but does so minimally, due to its limited overall footprint and the average buildings having limited footprints, with minimal clearing of vegetation. There are examples of development that has a greater effect on landscape integrity, such as buildings located south of the MR394 and on the visually exposed rocky promontory.

As mentioned previously, the intactness of the landscape increases as its integrity and quality increase toward the east, where the landscape has formal protection under conservation areas.

In terms of the intactness of townscape character, there is a great deal of variation in the local architectural landscape. However, Keurboomstrand is nevertheless a recognizable town with a distinctive sense of place.

The townscape character is somewhat eroded by buildings exceeding two storeys, with large footprints, excessive glazing and large unarticulated facades. Buildings that do not “nestle” into the landscape and vegetation also degrade the townscape character, as do erven with fences or walls surrounding the property. The townscape character does accommodate buildings being visible above the line of vegetation, but not exceeding one storey in most cases.

In summary, the Landscape Quality is **high**; and Landscape integrity is **moderate to high**.

3.4.3 Quality and Aesthetic value of the Visual Resource

Aesthetic value can be defined as an emotional response that is derived from the experience of the environment and 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).” (Young, 2014, p. iv)

Assigning values to visual resources is a subjective process, but based on industry-wide findings that there are consistent levels of agreement among individuals asked to evaluate visual quality. Humans have a preference for landscapes with a higher visual complexity (particularly in scenes with water or high relief), 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).

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. However, where recognized 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.

The rating criteria used to determine the sensitivity of the Landscape Character and aesthetic value of the Visual Resource is derived from the Landscape Institute with the Institute of Environmental Management and Assessment (2002). 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:

Table 1: Rating the quality of the Visual Resource

High	Moderate	Low
<i>(Modified from: The Landscape Institute with the Institute of Environmental Management and Assessment (2002)</i>		
The Value of a visual resource is High under the following circumstances:	The Value of a visual resource is Moderate under the following circumstances:	The Value of a visual resource is Low under the following circumstances:

<p>Areas that exhibit a very positive character with valued features that combine to give the experience of unity, richness and harmony.</p> <p>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.</p> <p>Where the landscape has a special quality of uniqueness that is identifiable.</p> <p>Multiple scales where there is a hierarchy or range of scales to the landscape pattern in relation to the human size.</p>	<p>Areas that exhibit some positive character (as in high valued landscapes).</p> <p>But which may have evidence of alteration to /degradation/erosion of features or discordant elements which tend to distract from the overall scenic and experiential quality of the landscape resulting in areas of mixed character.</p> <p>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.</p>	<p>Areas are generally negative in character with evidence of major alteration to/degradation/erosion of elements resulting in few, if any, valued features.</p> <p>Lack of diversity/complexity.</p> <p>No special quality or distinctness to the landscape.</p> <p>Scope for positive enhancement frequently occurs.</p>
High	n/a	n/a

A set of Rating Criteria for determining the value of a visual resource and scenic quality developed by the Department of the Interior of the USA Government, Bureau of Land Management is modified here for use in the South African context.

Table 2: Visual Resource Value Rating table

Key factors	Rating Criteria and Score		
<i>(Modified from The Visual Resource Management System, Department of the Interior of the USA Government, Bureau of Land Management)</i>			
Landform	High vertical relief as expressed in prominent cliffs, or massive rock outcrops, or severe surface variation or highly eroded formations including dune systems; or detail features dominant and exceptionally striking and intriguing.	Steep canyons and 'kloofs'; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional.	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.
<i>Score:</i>	5	3	1
Vegetation and landcover	A variety of vegetative types as expressed in interesting forms, textures, and patterns.	Some variety of vegetation, but only one or two major types.	Little or no variety or contrast in vegetation.
<i>Score:</i>	5	3	1
Water	Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape.	Flowing, or still, but not dominant in the landscape.	Absent, or present, but not noticeable.
<i>Score:</i>	5	3	0
Colour	Rich colour combinations, variety or vivid colour; or pleasing contrasts in the soil, rock, vegetation, or water.	Some intensity or variety in colours and contrast of the soil, rock and vegetation, but not a dominant scenic element.	Subtle colour variations, contrast, or interest; generally mute tones.
<i>Score:</i>	5	3	1

Influence of adjacent scenery	Adjacent scenery greatly enhances visual quality.	Adjacent scenery moderately enhances overall visual quality.	Adjacent scenery has little or no influence on overall visual quality
Score:	5	3	0
Scarcity	One of a kind; or unusually memorable, or very rare within the region. Consistent chance for exceptional wildlife or wildflower viewing, etc. National and provincial parks and conservation areas.	Distinctive, though somewhat similar to others within the region.	Interesting within its setting, but fairly common within the region.
Score:	5+	3	1
Cultural modifications	Modifications add favourably to visual variety while promoting visual harmony.	Modifications add little or no visual variety to the area, and introduce no discordant elements.	Modifications add variety but are very discordant and promote strong disharmony.
Score:	2	0	-4

The table below summarises the Value of Visual Resource expressed as Scenic Quality, per Landscape Character Area, according to the rating chart above.

Table 3: Scenic Quality Evaluation Chart

Value of the Visual Resource	
Landform	4
Vegetation and landcover	3
Water	5
Colour	4
Influence of adjacent scenery	4
Scarcity	4
Cultural modifications	-1
Visual Resource Quality	High
Sense of Place	High

Table 4: Value of the Visual Resource (Scenic Quality)

Value of the Visual Resource (Scenic Quality)	Rating	Value of Visual Resource
	A (23)	High

Aesthetic value can be defined as an emotional response that is derived from the experience of the environment and 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).” (Young, 2014, p. iv)

The Value of the Visual Resource (Scenic Quality of the Receiving Environment) is **High** (refer to Table 1⁴). The rating criteria used to determine the aesthetic value of the Visual Resource can be found in Table 2 above.

⁴ This tabular method is derived from a publication of the Landscape Institute with the Institute of Environmental Management and Assessment (2002) to determine the aesthetic value of the Visual Resource.

4. PROPOSED DEVELOPMENT

The proposed development has undergone numerous iterations and revisions prior to and during visual specialist involvement. A brief overview of the resulting three development options is provided below. Please refer to section 4.2 for a tabulated comparison followed by an analysis of all three development options⁵. The impact assessment is conducted for three development Alternatives.

4.1 Development options

Three development options were investigated before the visual study commenced. These development options explored different layout proposals, density and coverage models and building heights, in response to the site conditions and development parameters provided by specialists, as well as the limitations imposed by the Bitou Local Municipality Zoning Scheme By-Law (1988). According to the Zoning Scheme regulations, Council allows for up to a maximum of twenty units per gross hectare or a 3:1 ratio with regard to the gross density of surrounding dwelling units, whichever permits a smaller number of units.

As part of the VIA, the development options were modelled and compared in plan, section and 3D, using both GIS mapping and 3D modelling to describe and analyze the various aspects of the proposals including:

- i. Number of units and density
- ii. Total footprint (of buildings, hard surfaces and vegetation impacted)
- iii. Bulk, massing and height
- iv. Configuration/arrangement of the buildings on the site
- v. Response to site development constraints and sensitivities (available at the time)
- vi. Appropriateness in terms of visual sensitivities (introduced by this investigation)

Figures 41 to 43 illustrate the three development options from a bird's eye view in the 3D environment, enabling the reader to have a sense of the differences in scale and massing.



Figure 41: 3D model in Google Earth showing Development option A from a bird's eye view (van der Merwe, 2021)

⁵ Option C was developed to a slightly higher level of detail by Slee Architects than development options A and B. The authors assume that details such as method of construction, material palette and overall architectural style are generally transferable to the earlier iterations.



Figure 42: 3D model in Google Earth showing Development option B from a bird's eye view (van der Merwe, 2021)

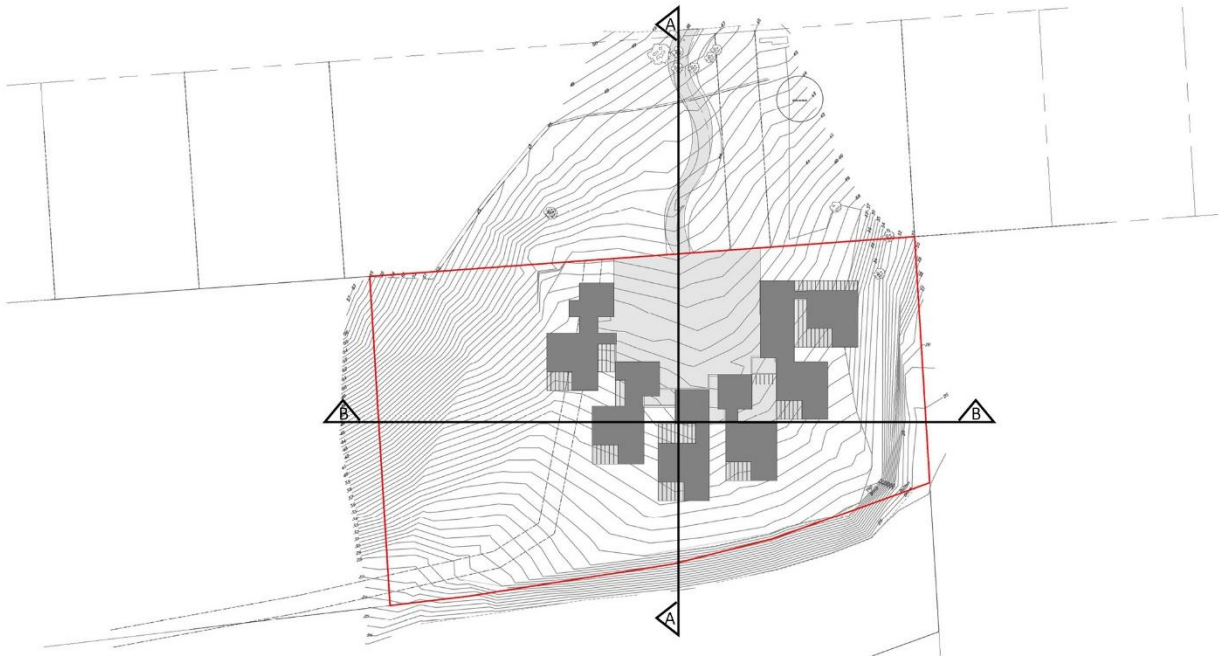


Figure 43: 3D model in Google Earth showing Development option C from a bird's eye view (van der Merwe, 2021)

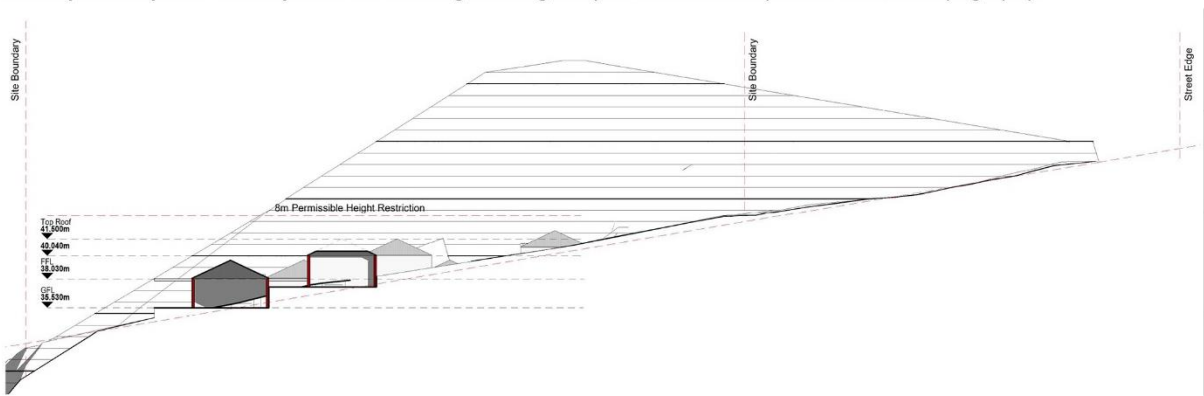
4.1.1 Development Option A

Development option A proposes a 6-unit scheme with a total coverage and footprint size of 979m². The buildings would consist of 2 storeys with a total height of 7,9m. Option A equates to a density of 12 units per hectare (a 1:1 ratio with regard to the gross density of surrounding dwelling units).

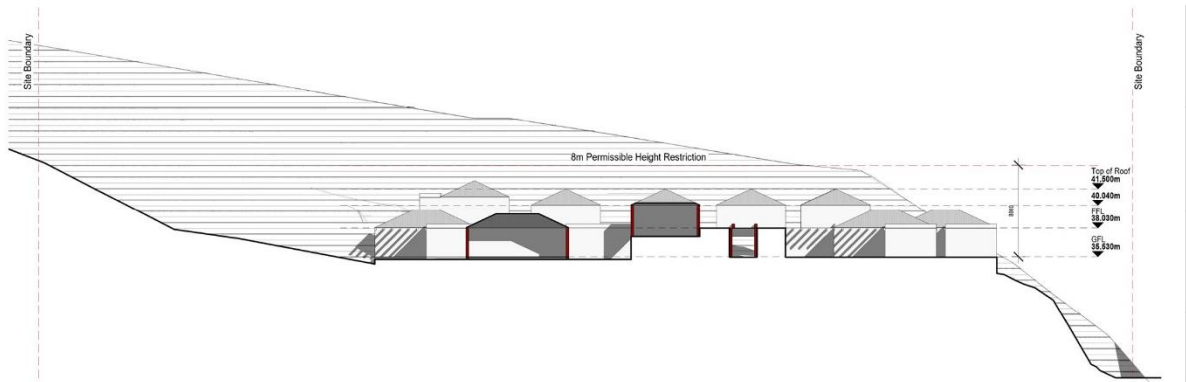
The buildings are relatively small and irregularly shaped, each with a footprint of approximately 130 m², and generally rectangular along a north/south axis. The buildings are grouped on the central more gently sloping portion of the site in a U-shaped configuration. No driveway has been indicated, but the assumption is of a central driveway area serving all 6 units, which would equate to vegetation clearing of minimum 1623 m² in total (forest - 55m²; fynbos - 4m²; scrub forest -1560m²).



Development option - Site layout: Plan showing building footprint and driveway areas over site topography.



Section AA: Section showing site slope upward from the MR391 from south (left) to north (right). Note the main dune to the west of the site, shown here behind the development option buildings.



Section BB: Section showing site topography slope downward from west (left) to east (right). Note the central area flanked by two steep areas at the extremities of the site.

Figure 44: Development Option A - layout and sections (van der Merwe, 2021)

4.1.2 Development Option B

Development option B proposes a 6-unit scheme with a total coverage of 1044m². The buildings would be single storey dwellings with a total height of 6,2m. Option B equates to a density of 12 units per hectare.

The buildings are identical, each with a footprint of approximately 175 m² each, and more or less square. The buildings are grouped in a widely curving linear arrangement (U-shaped) across the central more gently sloping portion of the site. A driveway with a number of articulations (presumably to allow for response to vegetation on site) services the 6 units individually from a central area. This configuration would result in a minimum total vegetation clearing of 1831 m², limited to the building footprints and the driveway (forest - 195m²; fynbos - 0m²; scrub forest 2046m²).

4.1.3 Development Option C

Development option C proposes a 3-unit scheme with a total coverage of 921 m². The buildings would be double storey dwellings with a total height of 7,1m (including chimneys measuring 8,1m). Option C equates to a density of 6 units per hectare (a 1:1 ratio with regard to the gross density of surrounding dwelling units).

The buildings vary slightly in layout, with an average footprint of 238 m² per dwelling unit, generally rectangular along an east/west axis. Garage units are fully or partly separated from the main structure, and there is the addition of a swimming pool to the central unit. The buildings are arranged in a straight line across the upper half of the site, cutting into the steep portion on the western side, but making use of the central area's gently slope for central and easternmost units. A compact central driveway provides access to the buildings, which appears to be continuous with hard landscaping that surrounds the units. This configuration would result in a minimum total vegetation clearing of 1597 m² (forest - 191m²; fynbos - 0m²; scrub forest - 1403m²).

4.2 Analysis and comparison of Development options

The following section provides a brief analysis and comparison of the three development options in terms of the development limitations and parameters to date.

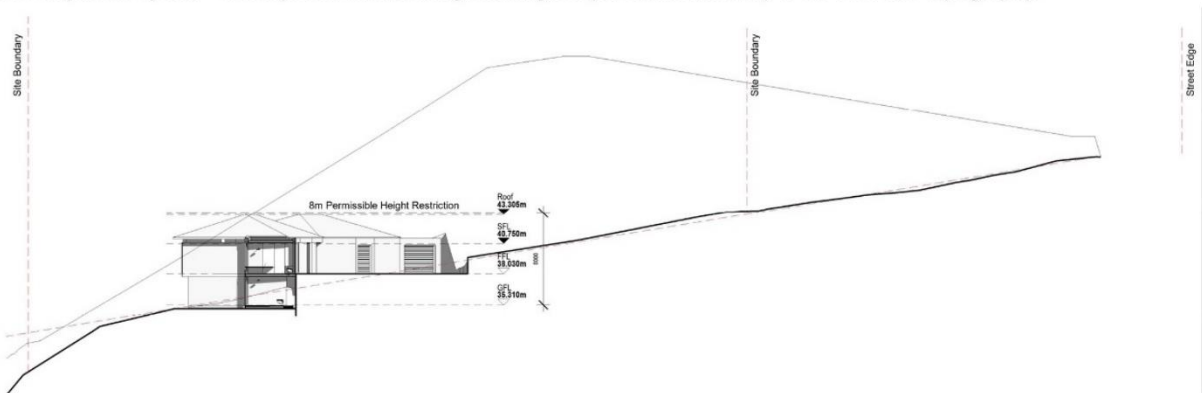
The development options were compared in plan, section and 3D, using both GIS mapping and 3D modelling to describe and analyze the various aspects of the proposals including the measurable aspects contained in the table below, as well as their configuration/arrangement on the site and the response to site development constraints and sensitivities.

Table 5: Comparison of Development Options

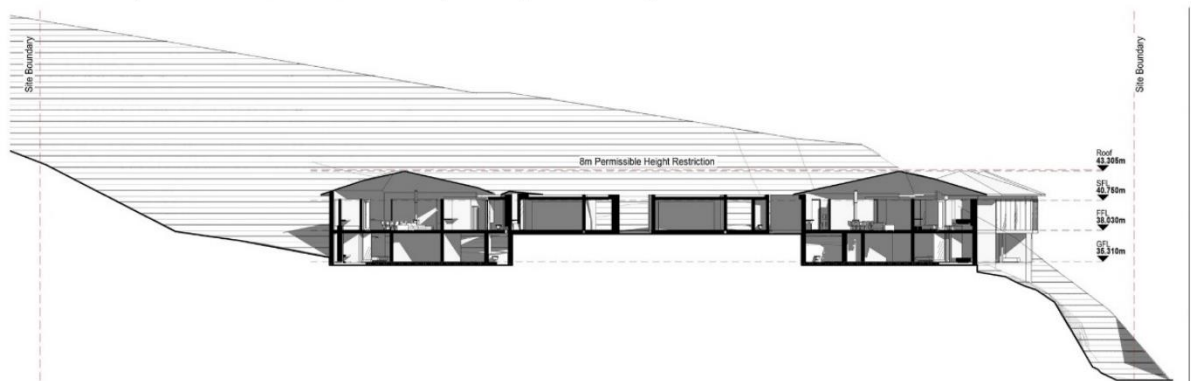
Dev. Option	Units	Storeys	Height (m)	Footprint (m ² incl. driveway)	Coverage (m ²)	Veg. cleared (m ² / (% of Erf 155))	Portion on 1:4 slope (m ²)
A	6	2	7.9	1 112	979	1 283 / 25.6%	63
B	6	1	6.2	1 831	1 044	1 620 / 32.4%	180
C	3	2	7.1 (chimney 8.1)	1 597	921	1 487 / 29.7%	276



Development option - Site layout: Plan showing building footprint and driveway areas over site topography.

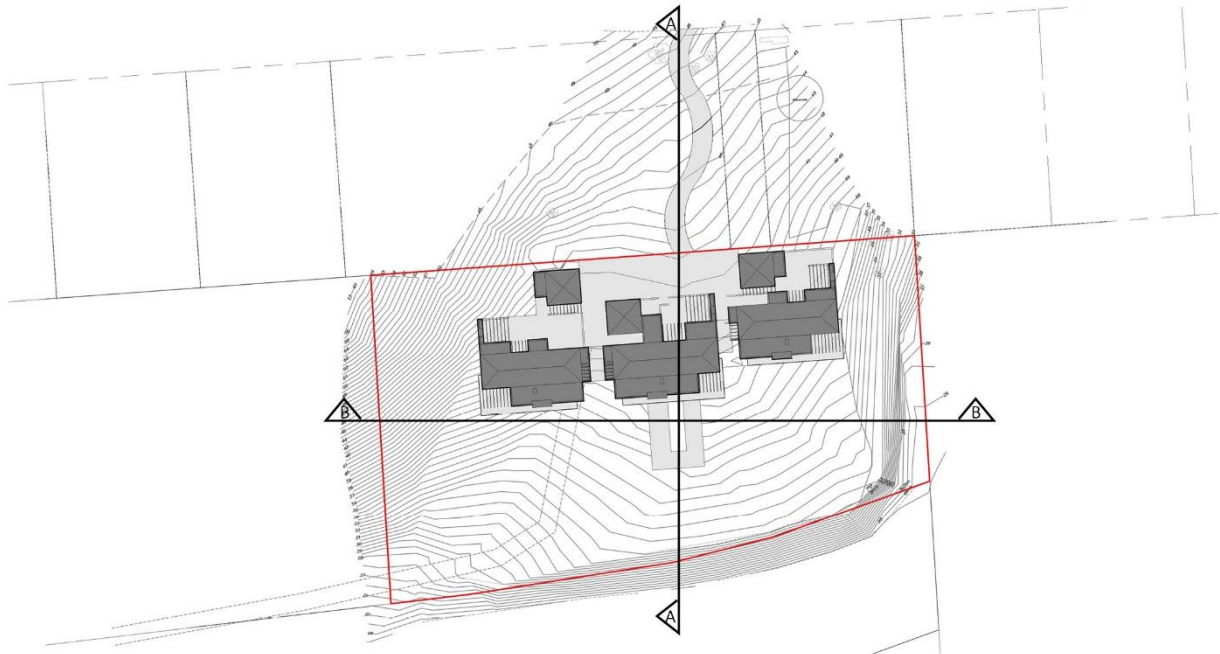


Section AA: Section showing site slope upward from the MR391 from south (left) to north (right). Note the main dune to the west of the site, shown here behind the development option buildings.

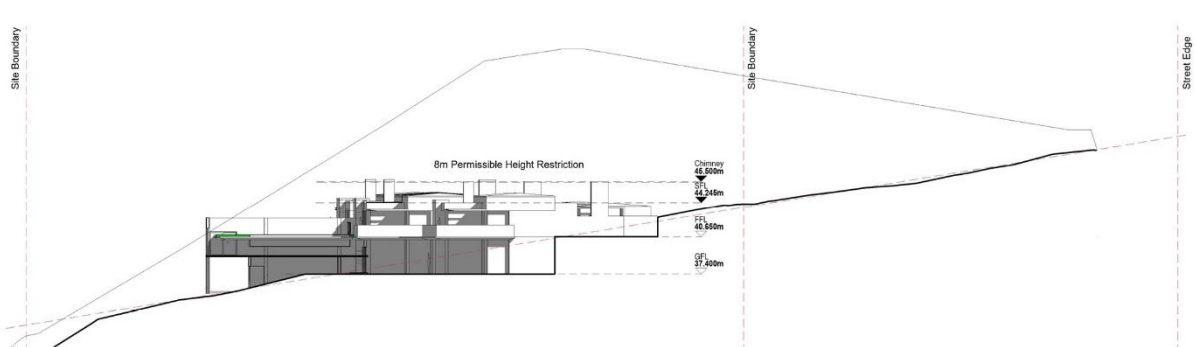


Section BB: Section showing site topography slope downward from west (left) to east (right). Note the central area flanked by two steep areas at the extremities of the site.

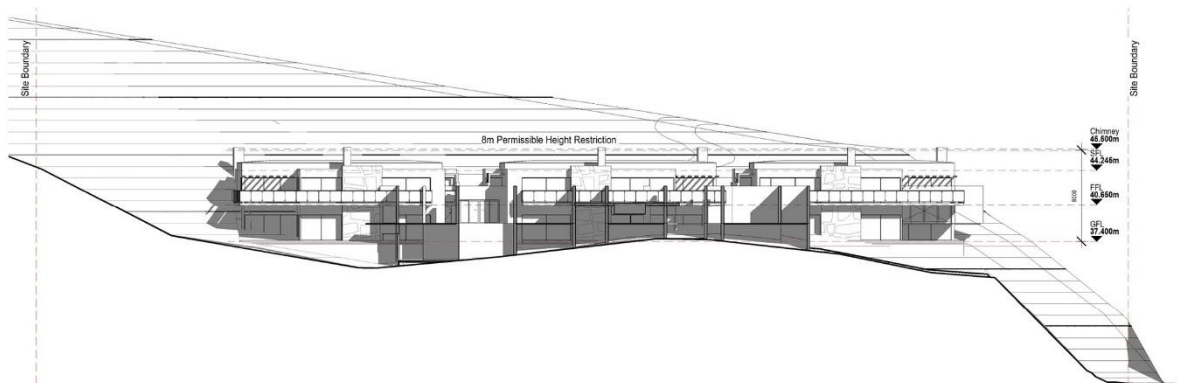
Figure 45: Development Option B - layout and sections (van der Merwe, 2021)



Development option - Site layout: Plan showing building footprint and driveway areas over site topography.



Section AA: Section showing site slope upward from the MR391 from south (left) to north (right). Note the main dune to the west of the site, shown here behind the development option buildings.



Section BB: Section showing site topography slope downward from west (left) to east (right). Note the central area flanked by two steep areas at the extremities of the site.

Figure 46: Development Option C - layout and sections (van der Merwe, 2021)

4.2.1 Development Option A: Analysis

Option A’s 6-unit configuration allows the buildings to follow the site’s natural contours, and make good use of the developable area within the scrub forest. It has the smallest footprint, would result in the clearance of only a quarter of the site vegetation and the least intrusion of all three options on the 1:4 steep slope no-go areas. Units 2, 3 and 4 (all double storey structures) are however placed very far forward on the most visually exposed southern portion of the site, and would be visually intrusive to the Scenic route.

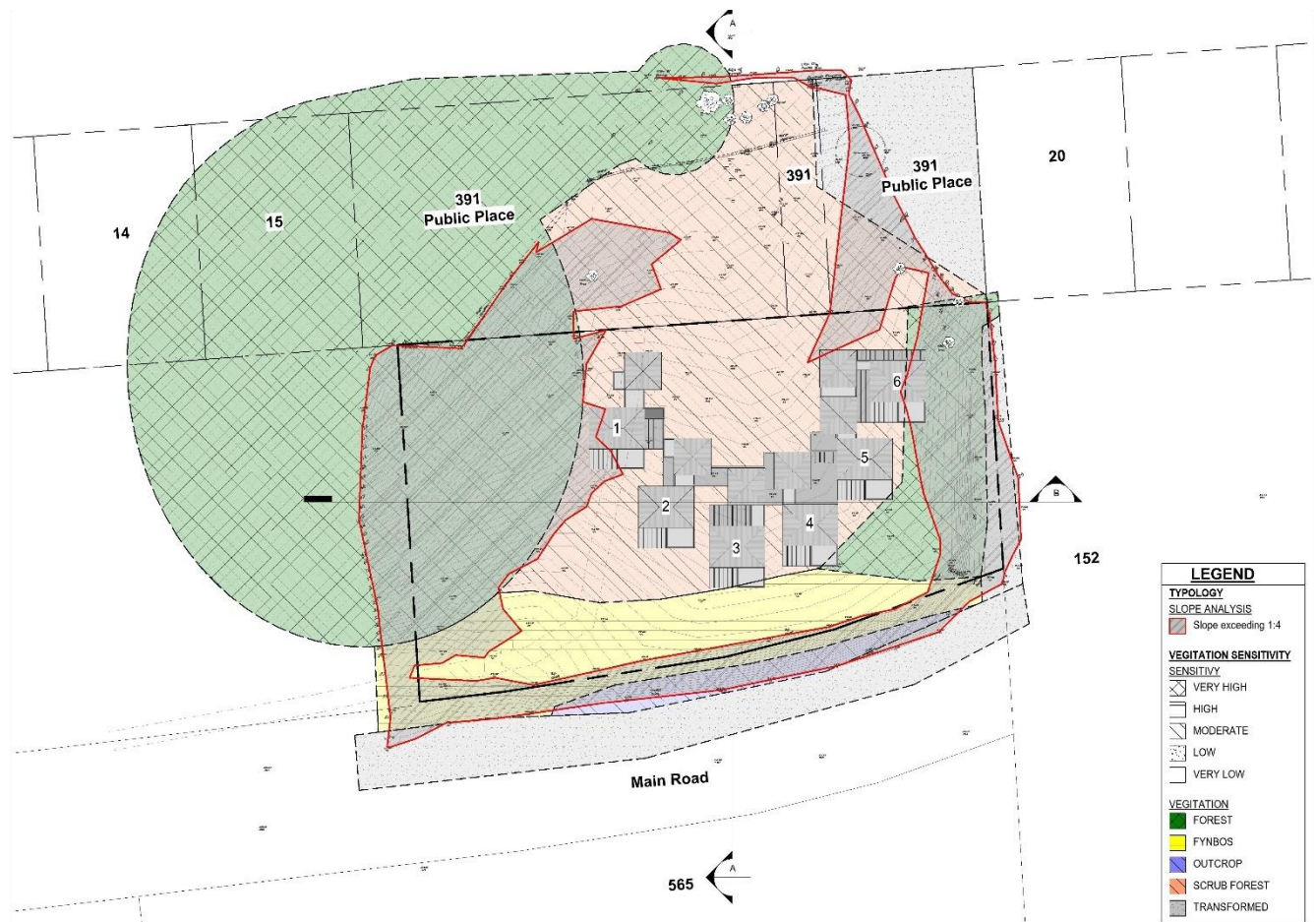


Figure 47: Site Plan of Development option A showing botanical sensitivity and geotechnical no-go areas (prior to updated survey) over site contours (van der Merwe, 2021)

4.2.2 Development Option B: Analysis

Option B proposes buildings that are lower overall, but with a 64% increase in total footprint, compared to option A. The buildings follow a similar u-shaped configuration in response to the site’s convex slope. The repetition and the density of the buildings may create the impression of one continuous building. The buildings are placed as far forward as those of option A on the most visually sensitive southern slope, leaving the areas with highest visual absorption capacity (the northern central area) for the driveway, which is not ideal in terms of visual impact. At least 32.4% of the site vegetation would be cleared, and units 4, 5 and 6 encroach significantly over the 1:4 steep slope no-go areas on the eastern side of site (180m² in total). The proximity of the buildings to the fynbos and forest vegetation types would have edge effects on the ecologically sensitive areas. The encroachment on sensitive areas is considered unacceptable.

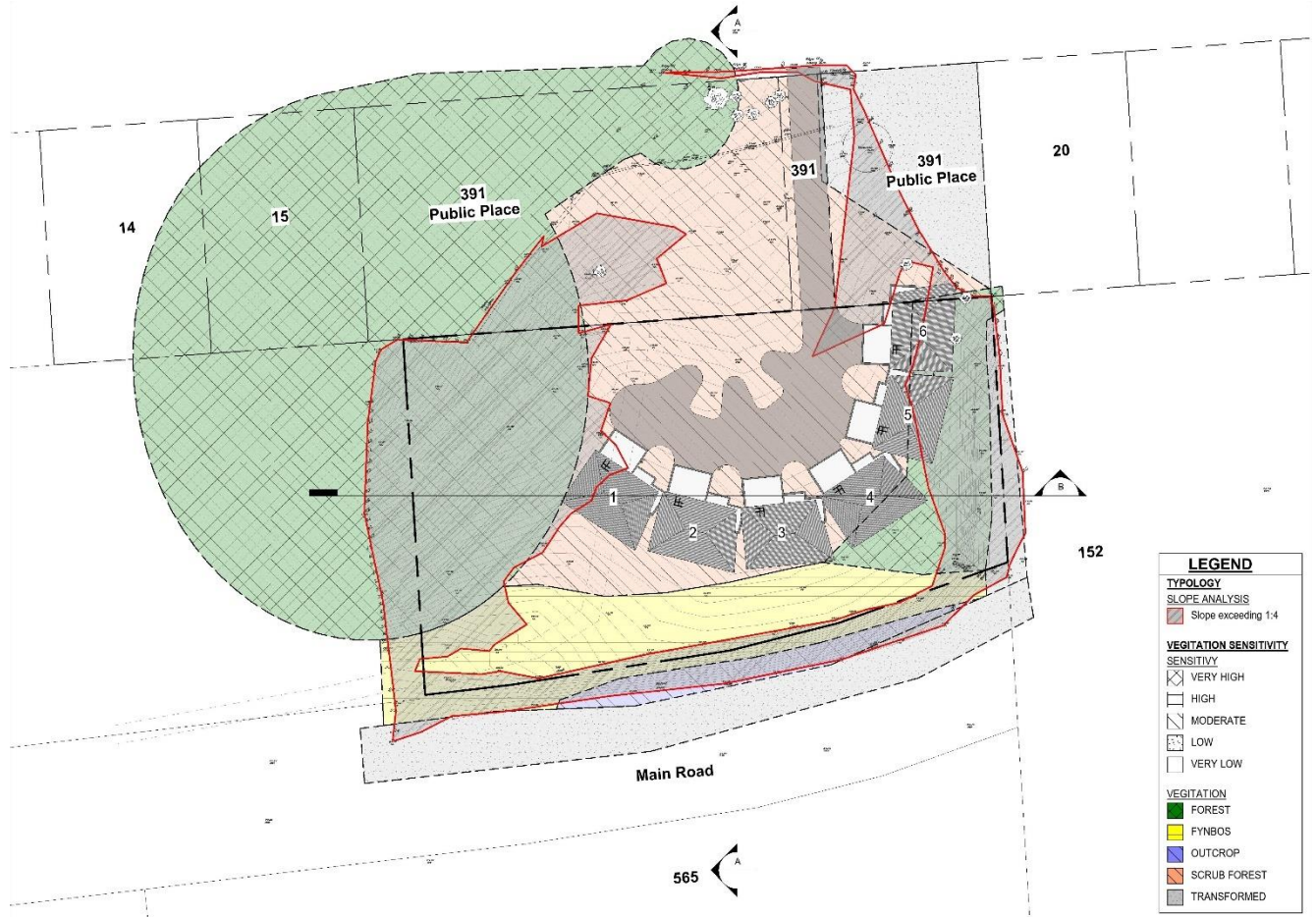


Figure 48: Site Plan of Development option B showing botanical sensitivity and geotechnical no-go areas (prior to updated survey) over site contours (van der Merwe, 2021)

4.2.3 Development Option C: Analysis

Option C proposes a reduced total footprint and coverage from option B. The chimneys exceed the 8m building height restriction imposed by the Bitou Zoning Scheme regulations, while the remainder of the buildings measure approximately 7m. Each unit is approximately 300m² (compared to the +- 165m² per unit of the previous options), and the buildings are arranged on an east/west axis parallel to the fall of the slope. While this option makes far better use of the north and central part of the site with the highest visual absorption capacity, the building placement responds poorly to the natural site contours and the ecologically sensitive areas.

The buildings are set back from the Scenic route sufficiently, but the swimming pool encroaches on this visually sensitive area. Unit 3 is outside of, but still too near to the sensitive slope area; while unit 1 encroaches significantly on the ecologically sensitive forest and sensitive slope on the western side of the site. This option proposes that approximately 1 500 m² of vegetation be cleared (30% of Erf 155), 276m² of which is located within the 1:4 step slope no-go areas. The encroachment on sensitive areas proposed by option C is considered unacceptable.



Figure 49: Site Plan of Development option C showing botanical sensitivity and geotechnical no-go areas (prior to updated survey) over site contours (van der Merwe, 2021)

4.3 Development Alternatives

Three Alternatives will be assessed as part of this VIA. Please note:

- i. At the time of the first draft of the VIA, **Development option C** was identified as the Preferred option (or Preferred proposal) to be assessed for Visual Impact, as per the specialist brief. However, during the course of the VIA two additional alternative proposals were developed by the project architects after receiving input from the environmental specialists and later the findings of the first draft of this report.
 - a. The first of these alternatives (Alternative 2) was tabled prior to the completion of the VIA and was therefore generally unresponsive to visual and aesthetic considerations.
 - b. One further alternative proposal (Alternative 3) was then tabled in December 2021, after the draft VIA had been issued and Architectural Guidelines had been developed that incorporated the findings of all the specialist recommendations to date.

Development option C (previously referred to as the Preferred proposal) will now be referred to as Alternative 1. Alternative 2 and Alternative 3 are titled to in order of chronology.

4.3.1 Development Alternative description: Alternative 1

Figures 50 and 51 below illustrate Alternative 1 as a 3D model and on plan. The proposed development is for the subdivision and rezoning of a portion of Erf 155 to enable the construction of three dwelling units in a sectional title development. A registered servitude right of way over public place Erf 391 alongside will provide access to the development through the establishment of a 3,2m driveway. However, the proposal is to move the right of way servitude to accommodate a driveway that will be established within a new 7m servitude right of way. The architect's proposal is for the new driveway to be curved to accommodate sensitive vegetation on site and minimise clearing.



Figure 50: Erf 155 proposed development Alternative 1 – 3D image (Virdus Works, Slee Architects 2020)

The buildings are double storey with flat roofs throughout, with a total height of 7,1m measured from top of finished floor level. All the buildings are proposed on the same height, which will require cut and fill to create what is essentially one platform for all three structures. This total height is exceeded in six places by the chimney stacks, which measure 8,1m in height. The three buildings are separate from one another, and arranged in a straight line across the widest part of the site facing the sea (an east/west axis), parallel to the contours in the central, more gently sloping portion of the site. The building sizes, features and footprints vary (two having separate garages, and one including a swimming pool), but in the author's understanding, the architectural treatment, construction methods and material finishes will be identical for all three. The driveway proposal indicates hard landscaping that will be continuous with patio and other accessible outdoor areas around the buildings.



Figure 51: Site Layout – Alternative 1 (Slee Architects, 2020)

4.3.2 Development Alternative description: Alternative 2

Figure 52 below illustrates Alternative 2 as a 3D model. Alternative 2 is similar to Alternative 1 in that it is a 3-unit scheme of double storey dwellings, but with slightly larger building footprints and an interior courtyard for each. The buildings are arranged in a u-shape, as opposed to the linear configuration, which more effectively avoids impacts on the botanical and geotechnical no-go areas.



Figure 52: 3D view of the Alternative 2 (including retaining wall) from the south west (scenic route), modeled by the authors of this report and based on the project architect's concept sketch. The materials are indicative (van der Merwe, 2021)

However, units 1 and 2 are moved forward considerably, with both floors of unit 2 extending to the position of the swimming pool in Alternative 1. There is a central driveway area providing parking and one freestanding garage structure, the driveway areas appearing to be continuous with hard landscaping that surrounds the units. The swimming pool is smaller, on ground floor, and built along the eastern side of the buildings.

There is also the addition of a retaining wall structure that edges the swimming pool and wraps around the front of the buildings in a semi-circle. The total footprint is 1917 m², including the driveway. This configuration would result in a minimum total vegetation clearing of 1785 m² (which equates to 36% of the vegetation on Erf 155).

Overall, the buildings respond to site contours – previous development options were all on one level, and did not step down with the sloping site. The overall building height is the same as Alternative 1, but the building is cut into the landscape slightly more: proposing a Ground floor and semi-basement, as opposed to a Ground floor and First floor. Because the Alternative proposal is more responsive to site-specific slope conditions (better balance between cut and fill), it is more likely that this approach will result in less vegetation disturbance than Alternative 1.



Figure 53: 3D model in showing the Alternative 2 proposal from a bird's eye view (van der Merwe, 2021)

4.3.3 Development Alternative description: Alternative 3

Alternative 3 is similar to the other two Alternatives in that it proposes a 3-unit scheme of double storey dwellings in a sectional title development. The servitude right of way over Erf 391 will provide access via a 3,2m driveway, which is continuous with a central paved area on the northern side of the proposed buildings. The buildings have very gently sloped (almost flat) roofs throughout, and total building heights are all under the 8m height restriction, with only the chimney stacks exceeding it (see sections in Figure 00).



Figure 54: 3D model in showing the Alternative 3 proposal from a bird's eye view (van der Merwe, 2021)

Unit 1 is an L-shaped building, while Units 2 and 3 are blocks, with courtyards that appear to function as lightwells. The buildings are arranged on the site in a linear configuration, with slight variation in alignment. The buildings will be cut into the natural topography on individual platforms, and maintain the responsiveness to slope that was established in Alternative 2 – stepping down from ground floor to basement level as the ground falls away to the south. The swimming pool and retaining wall have been retained in the proposal for Alternative 3. The pool is located slightly below Basement level, and on the southernmost edge of the curved retaining wall.

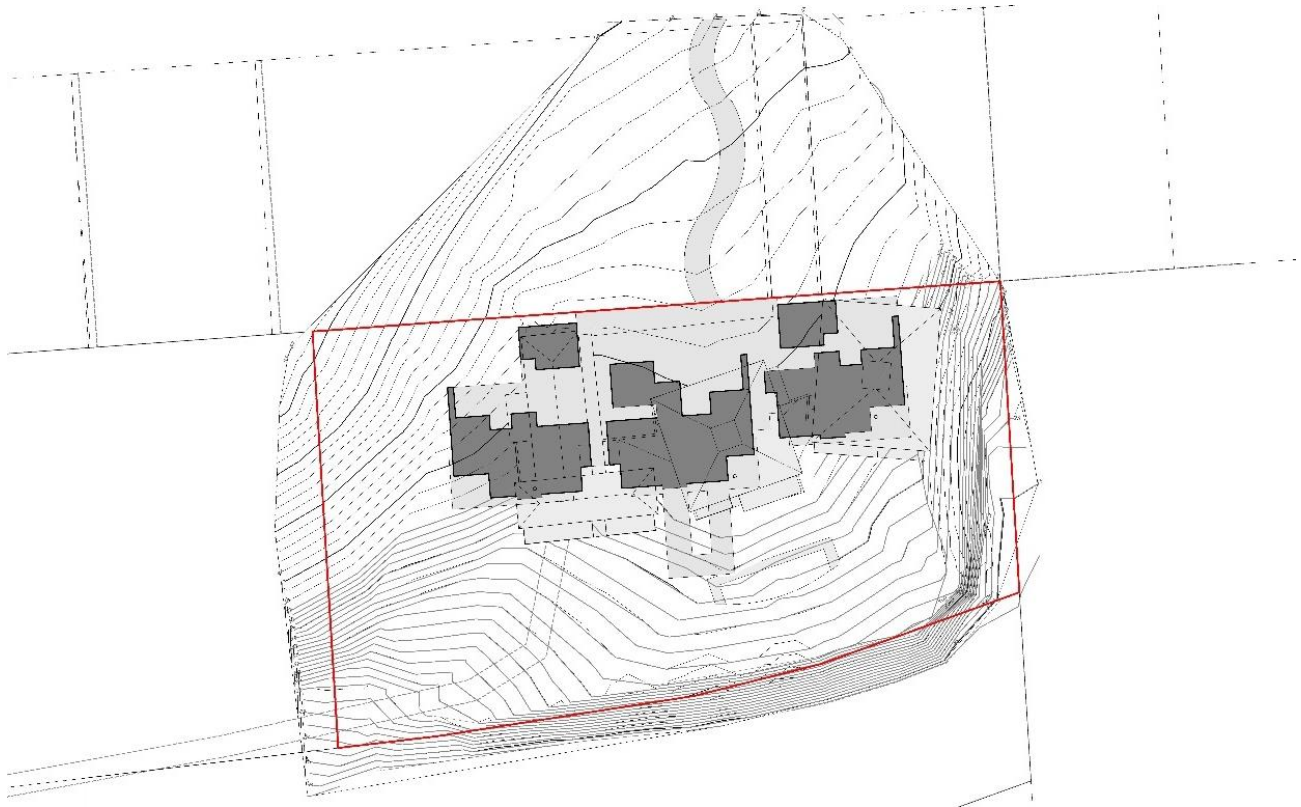


Figure 55: Alternative 1 footprint (in dark grey) overlaid onto the Alternative 3 plan (light grey) to illustrate the difference in form, arrangement on site and footprint.(van der Merwe, 2021)



Figure 56: Alternative 3 plan (Slee Architects, 2021)

4.3.4 Limitations to the descriptions of Alternatives

The following information has not yet been provided definitively for any of the three Alternatives:

- A Tree survey (while the botanical survey indicating vegetation types and sensitivities is accepted, note that no survey indicating the position of individual trees to be removed and retained/protected is currently available);
- Working drawings (i.e., building plans or complete/final Site Development Plans)
- Civils or other drawings indicating major earthworks, the treatment of platforms, retaining structures and cut and fill associated with the project;
- Built typology description; finalized building materials, finishes and colours of the proposed structures, nor detailed guidelines describing this;
- Construction methods and finishes of access roads, internal roads and parking areas;
- Type and height of lighting, including flood-lighting (and/or detailed guidelines describing this);
- Type and height of all outdoor (permanent and temporary) signage, including illuminated signage, associated with the project;
- Type and height of all ancillary structures (masts, antennas, perimeter and internal security/other fencing, gatehouses, substations, sewage package plants, irrigation rainwater tanks, electrical kiosks, reservoirs etc. both on and off the property that are associated with the project);
- Type and height of fences, walls, entrance gates or security barriers;
- Construction phase sequencing and/ or scheduling proposal;

- Construction phase facilities, such as construction camps, site office, labourers' housing, haul roads, material storage, stockpiles, batch mixing areas, etc.;
- Construction phase information generally, especially related to vegetation clearance and disturbance;
- Landscape Plan and guidelines
- Environmental management plan and/or programme.

The Architectural Guidelines address a number of these points, and if adopted, should ensure that the final development is sensitive to visual impacts. However, in the absence of enforceable versions of the above information, Chapter 7 provides recommendations and limitations to ensure that the visual impacts associated with these aspects are managed.

5. VISUAL ANALYSIS

The following section analyses various aspects regarding the visibility of the proposal within the receiving environment.

5.1 Preliminary visibility modelling, views affected and LoS testing

Fieldwork conducted in February 2021 tested views within the receiving environment from which the development would possibly be visible. The basic assumption for this mode of visibility testing is that the observer eye height is 1.8m above ground level, and preferences publicly or reasonably accessible places. The location of site photographs, sensitive receptors and other noteworthy sensitivities in the study area from up to 15km away from the subject site are indicated in Figure 52. The fieldwork is undertaken using a reference scale of 1km increments to describe the range of distances from which the proposed development may be visible, as illustrated below. Distance zones are later used to determine and describe Visual Exposure – please refer to item 5.3.6.

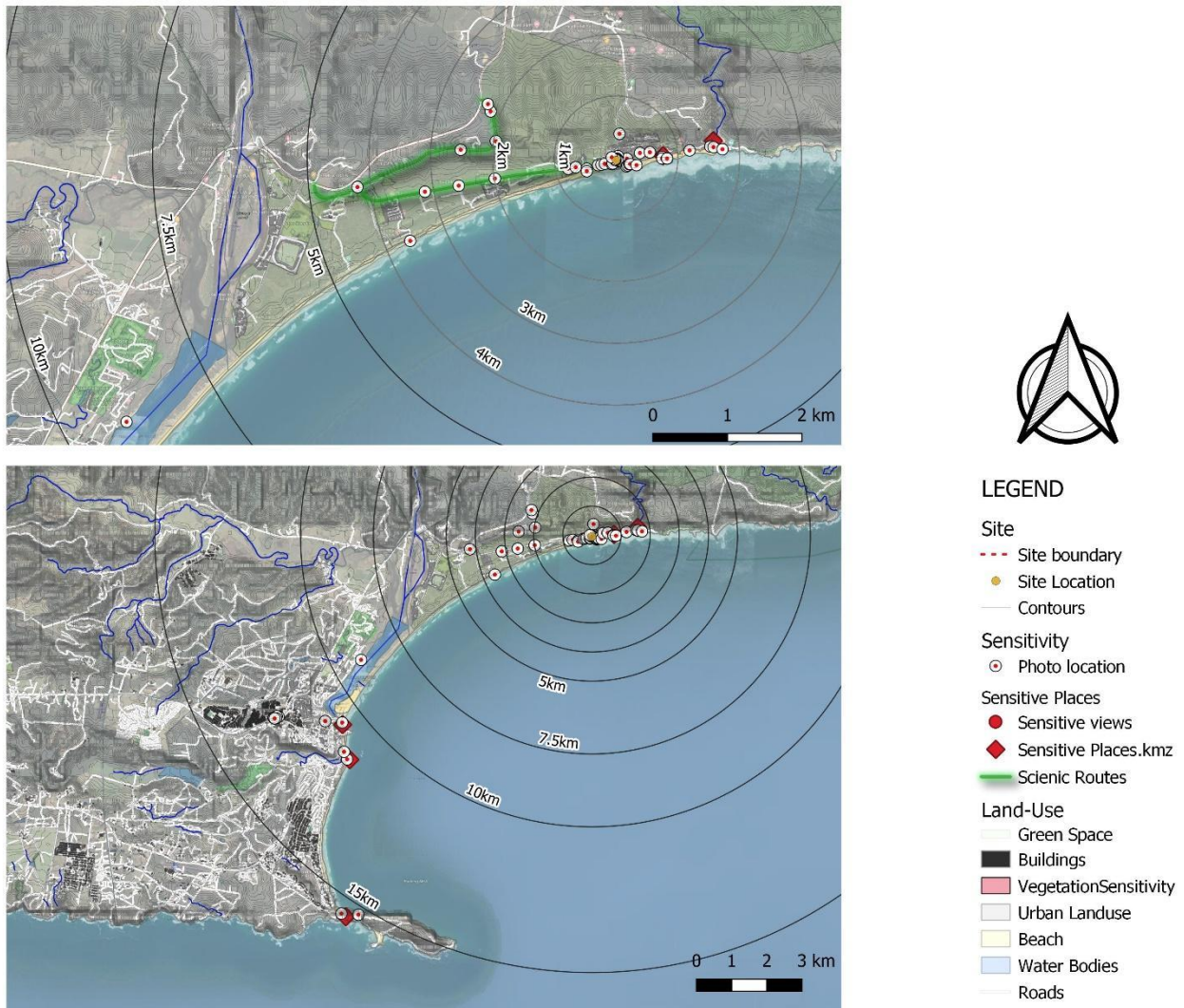


Figure 57: Graphic illustrating the location of photographs taken during fieldwork in the study area (up to 15km) to test visibility (van der Merwe, 2021)

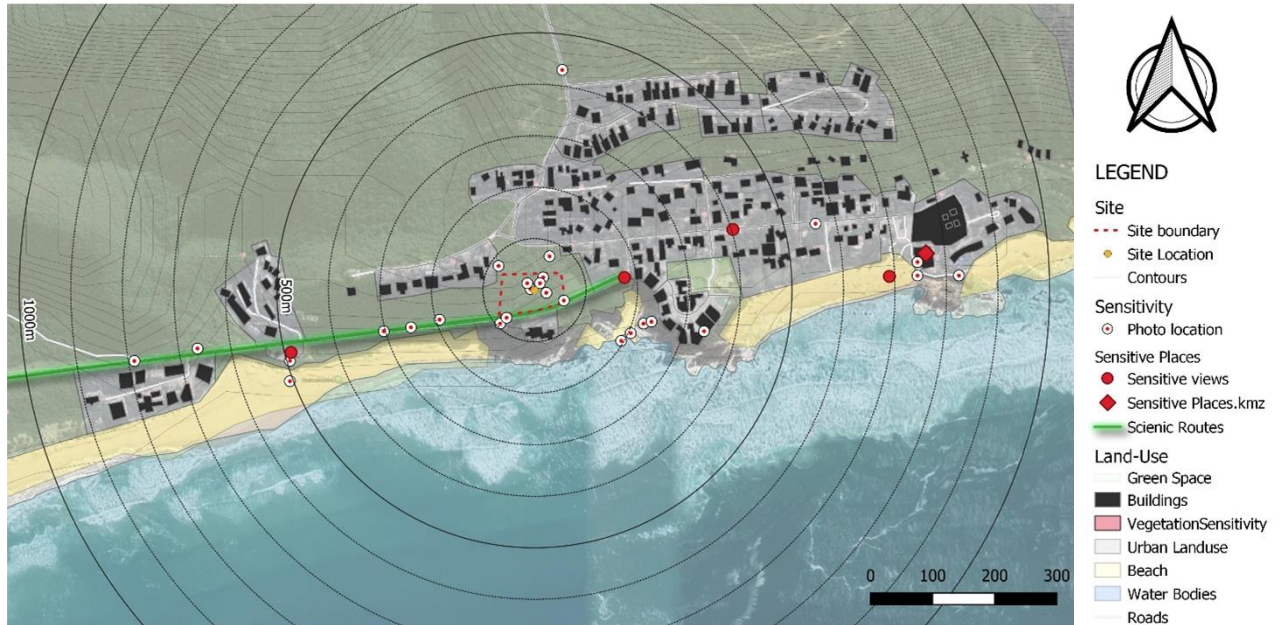


Figure 58: Graphic illustrating the location of photographs taken during fieldwork in the study area (up to 100m) to test visibility (van der Merwe, 2021)

5.1.1 Line of sight testing and visibility

The following series of site photographs illustrate the location of the site in photographic views captured from a variety of distances from the site. The intention of this section is to assist the reader to understand the visual context by illustrating the observations listed during fieldwork. These observations record the actual potential visibility of the proposed development, noting features and objects that have an influence on visibility.



Figure 59: Site photograph taken from the northern Robberg lookout point, located 13km south east of the project site (Smit, 2021)



Figure 60: Site photograph taken from Plettenberg Bay Central beach nearby the Beacon Island complex. This view is located approximately 9,5km from the site, looking north east (Smit, 2021)



Figure 61: Site photographs taken from Plettenberg Bay Lookout beach, approximately 8km from the site. The second photograph is enlarged to illustrate visibility more accurately (Smit, 2021)



Figure 62: Site photograph taken from Lagoon View Point on Beacon Way, an elevated view from within the town of Plett. The photograph is taken looking north east at a distance of 9,2km from the site (Smit, 2021)



Figure 63: Site photographs taken from the pedestrian walkway alongside N2 traffic circle at the intersection of Theron street and Marine Way, located 10,2km from project site. Please note the lower photograph is enlarged (Smit, 2021)

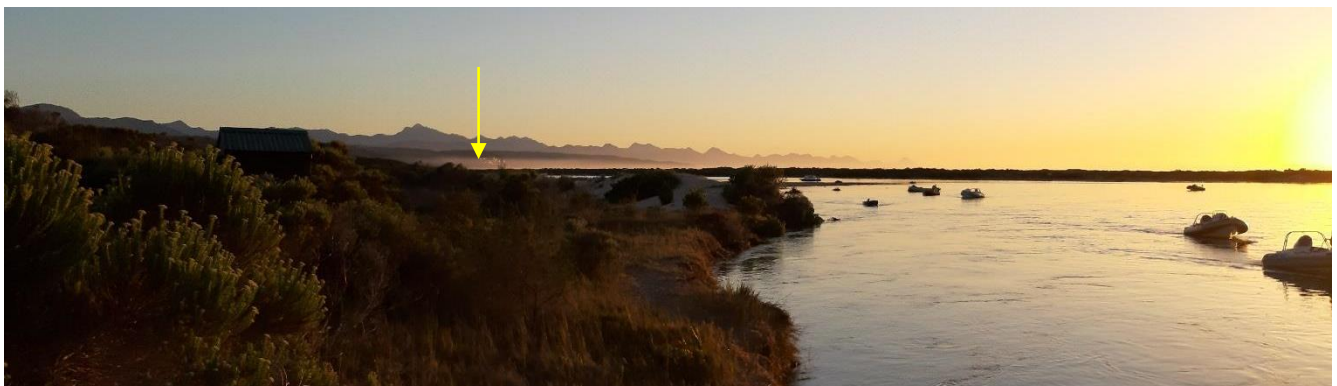


Figure 64: Site photograph taken from the western bank of the estuary at approximately 6km, looking east. Note early morning light reflecting off the buildings at Keurboomstrand that are located high on the slopes (van der Merwe, 2021)



Figure 65: Site photograph taken from 3km away, looking north east towards the site across the Keurboomstrand beach. Note that the lower photograph is enlarged (Smit, 2021)

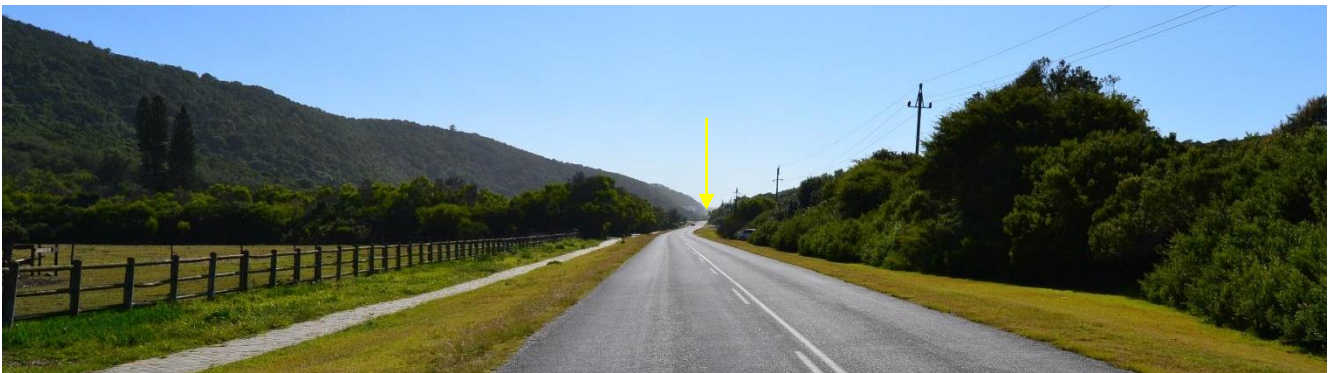


Figure 66: Site photograph taken from the MR394 scenic route at 1,5km away, looking east (Smit, 2021)



Figure 67: Site photograph taken from MR394 scenic route pedestrian pathway 800m away, looking east (Smit, 2021)



Figure 68: Site photograph taken from the elevated pedestrian walkway alongside the MR394 scenic route at 500m from the project site, looking east (Smit, 2021)



Figure 69: Site photograph taken from the pedestrian walkway alongside the MR394 scenic route at 150m from the project site, looking east (Smit, 2021)



Figure 70: Site photograph taken from the pedestrian walkway alongside the MR394 scenic route, at a distance of 50m from the project site boundary, looking west (Smit, 2021)



Figure 71: Site photograph taken from the publicly accessible private staircase across the small cove beach from the site, at 180m, looking west (Smit, 2021)



Figure 72: Site photograph taken from the central beach at 500m, looking west (Smit, 2021)



Figure 73: Site photograph taken from Main street at 500m, looking west (Smit, 2021)



Figure 74: Site photograph taken from the public boardwalk at a distance of 700m from the project site, looking west (Smit, 2021)



Figure 75: Site photograph taken from the hiking trail within the Annex Arch Rock Nature Reserve, at a high point of the trail at a distance of 1,3km, looking west (Smit, 2021)



Figure 76: Site photograph taken from the mouth of the Matjiesrivier within the Nature Reserve, at 1,5km and looking west (Smit, 2021)

5.1.2 Viewshed

While the viewshed analysis below gives a general idea of the visibility of the proposed development alternatives, the analysis is only as good as the quality and fineness of the data available. Line of sight testing during fieldwork is therefore critical to ground truth (confirm or adjust) the actual visibility and Zone of Visual Influence on the ground. Due to the fact that local topographical features, built features and vegetation data are not fed into the viewshed analysis, the ZoVI has a smaller footprint than indicated graphically.

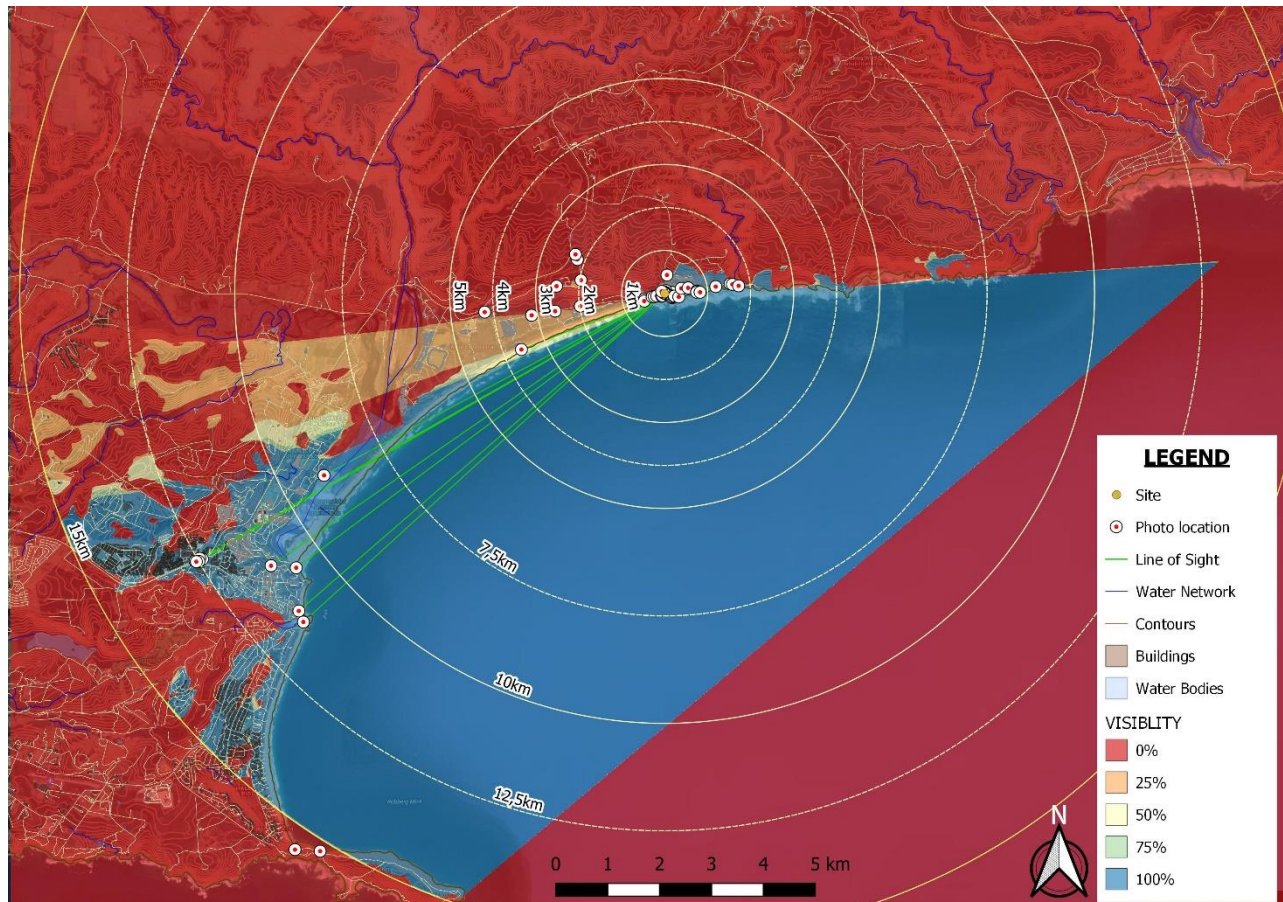


Figure 77: Viewshed indicating visibility within a 15km radius of the project site (van der Merwe, 2021)

The viewshed indicates that the proposed development will not be visible from any locations in the rural hinterland to the north of Keurboomstrand. The site is theoretically visible (because of no topographical obstructions) from the south generally, over the sea and from various points along the coast in Plettenberg Bay and the Robberg peninsula. Visibility from the west is generally limited by the local topography, and the viewshed demonstrates limited and partial possible visibility along the Keurboomstrand beach and across the dune slack area eastward. Pockets of visibility are predicted from the east within the conservation areas, from west-facing hill slopes.

Within a 2km radius of the site, the viewshed indicates that the proposed development will generally be visible from most of the Keurboomstrand town proper, up to a distance of approximately 1,7 km east. The river mouth, the Matjies river cave and Arch Rock are not affected. Views from the north are limited by the ridges of the foothills (refer to Figure 22 which shows the site photograph taken from the viewpoint on Game street indicated on the norther edge of the town indicated in the viewshed below).

The Viewshed indicates that MR394 scenic route does not enjoy views of the site from between 300m and 2,5km away. Limited visibility (25%) is expected from the Keurboomstrand east beach, the primary dunes and parts of the dune slack area (and a small portion of the old N2 road scenic route). The visibility of the proposed development generally increases from 300m away, as the topography opens into the amphitheater form of the town, and direct views onto the site become possible from lower and higher elevations (it is situated about halfway up the slope of the foothill).

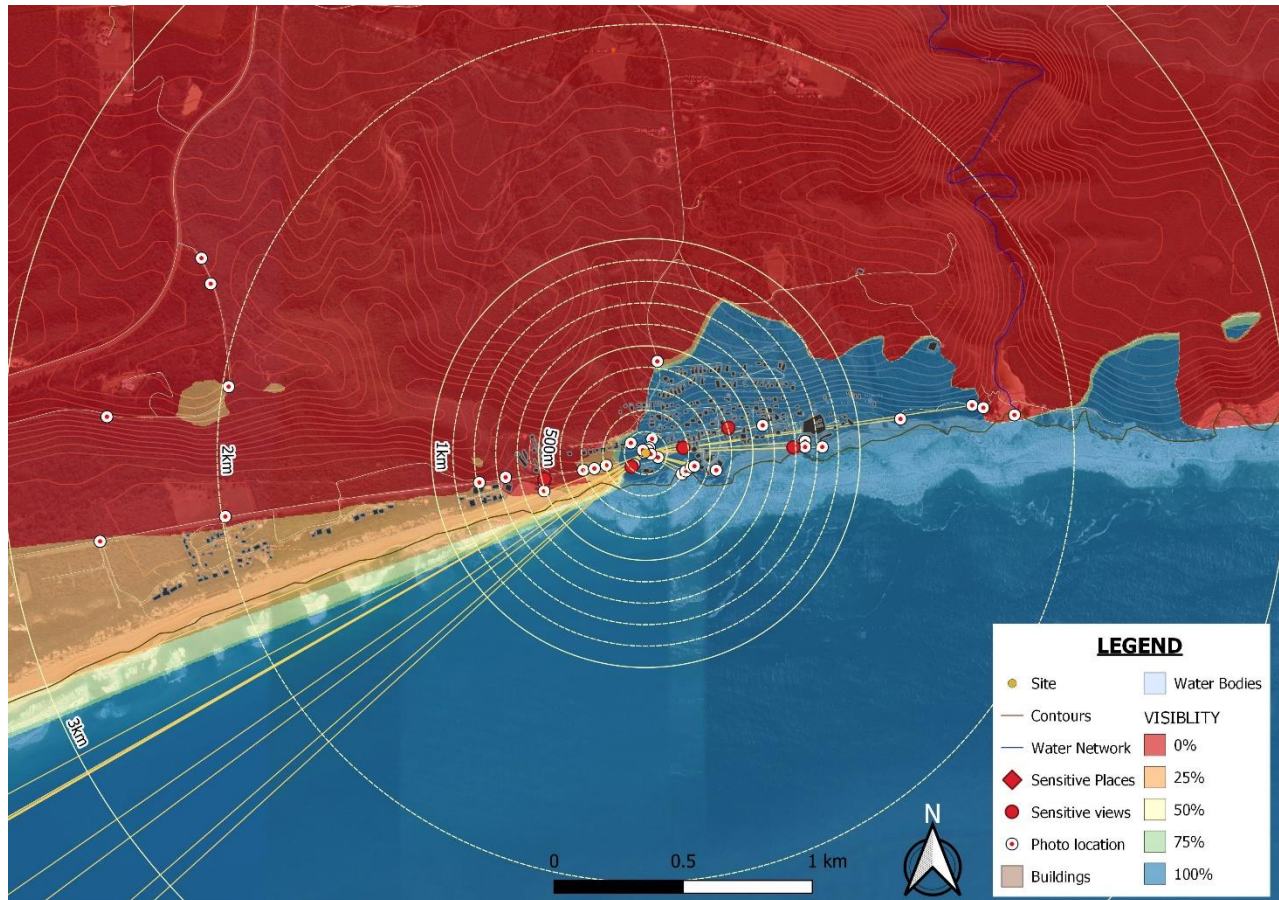


Figure 78: Viewshed indicating visibility within a 2km radius of the project site (van der Merwe, 2021)

To confirm or refute the predictions of the viewshed, Line of sight testing was conducted on site. Fieldwork offered the following observations:

- The project site is not visible from the northern rural hinterland as indicated by the viewshed, it is not visible from the old N2 road, the Matjies river mouth or the majority of the dune slack area and primary dunes to the east.
- The viewshed accurately indicates that the proposed project will not be not visible from the scenic route except from about 300m away.
- The limited visibility of the proposal from the Keurboomstrand beach is accurate but reduced considerably by sea spray and distance.
- The actual visibility of the proposed development in the town of Keurboomstrand is drastically reduced by the local vegetation cover and local topography, in comparison to the footprint of the viewshed. The Simulations are representative of the very few views that local residents will have of the proposed buildings, which are mainly from the east.

- The proposed development and the project site will be visible only from the eastern sides of the local beaches at sea level, and then only when not screened by existing buildings and vegetation.
- Local vegetation is typically at least 3m tall, preventing long views and for the most part screening all but the roofs or upper floors of buildings in the area - reasonable to expect that this limited visual intrusion will be acceptable from sensitive views within the local context for the proposed development; making retention of vegetation necessary and important.
- Generally, the topography and coastal vegetation result in a receiving environment with high visual absorption capacity (VAC).
- The presence of dense local vegetation reduces the visual exposure of the site, which is located on a steep, stepped promontory with otherwise high visual exposure. It is important to note that should too much vegetation be cleared; the combination of visually exposed topography and lack of vegetation will make for a very visible site.
- Views in which the proposal are both visible and identifiable are generally from the east or the west and within no more than 1km of the project site.
- While there are views of the site and proposed buildings from between 1km and 5km away, they are mostly either screened by vegetation, sand dunes and topography; and the viewer will be less likely to see individual buildings - rather Keurboomstrand as a whole.
- Views from which the proposed development will be centered in the viewers field of vision are very few; as viewers are generally looking at the ocean, the roadway, the greater landscape etc.
- The proposed development will not obstruct the views of any neighbours.
- It will be most visible from 150m away (and less) to viewers moving eastward on the MR394. Alternative 2 and 3 demonstrate comparable visibility for viewers moving in the opposite direction.
- It will be visible, but decreasingly so, from the publicly accessible boardwalk connecting the cove beach to the central beach, and from other views taken from the east within 500m of the site.
- The proposal (all alternatives) is for three individual buildings with footprints larger, but comparable to the local built form, and viewers are not likely to be able to discern the proposed buildings from the rest of the Keurboomstrand town buildings from distances of more than 2km away.

5.2 Simulations

Simulated photomontages use photographs of an actual scene modified by the insertion of an accurate representation of the visible changes brought about by the proposed development (The Landscape Institute, 2011). The visual simulations thus enable 'before' and 'after' comparisons of the proposed development within the receiving environment (Oberholzer, 2005, p. 18). 3D modelling allows the specialist to navigate through the 3D environment with a visual representation of the height, massing and building configuration of the proposed development in its three-dimensional context. This enables more accurate identification of sensitive views, viewers and view corridors before fieldwork, to be tested and verified during and after the site visit is undertaken. Understanding the scale and potential visibility of the proposed development in relation to its context enables more accurate simulation and impact assessment.

A selection of site photographs have been overlaid with 3D models of the proposed development to support the findings of the Visibility analysis section and provide and assist the specialist to conduct the visual impact assessment. These simulations represent views from sensitive receptors and to illustrate typical views from various key distances or areas. Refer to Figure 73 for the location of Simulations.

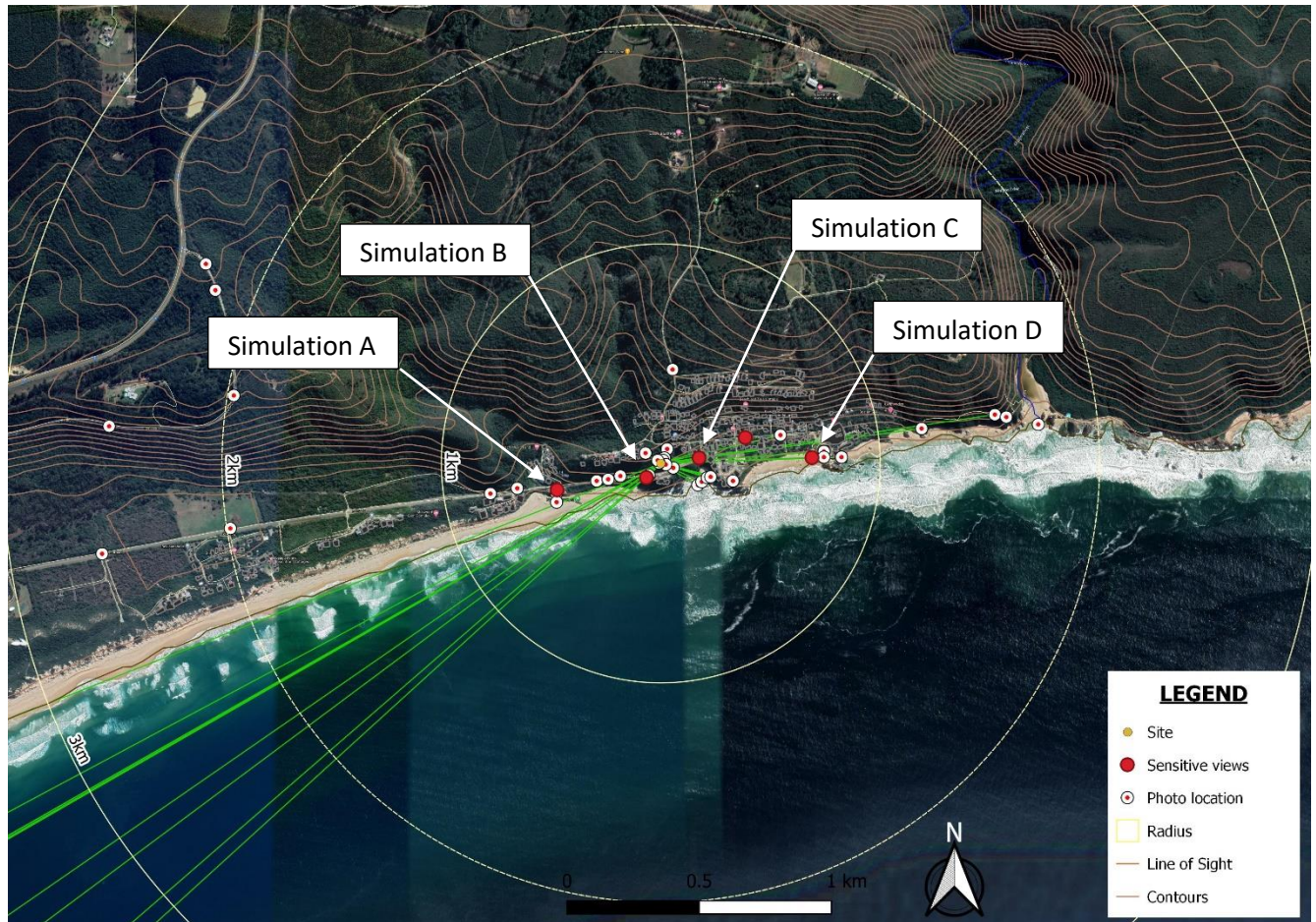


Figure 79: Location of Simulations A, B, C and D (van der Merwe, 2021)

The Simulations were selected to represent typical views onto the project site from the locations of potentially sensitive viewers, and where the proposed project site would be likely to have notable visual impact. Note that all the Simulations are from views within 800m of the proposed projects site. A number of views were considered at distances further than 500m after the site visit and during visibility analysis. However, further testing showed that the proposed buildings would either no be visible form these locations, or that their visibility was so low that they did not warrant inclusion as Simulations (due mostly to distance and screening by vegetation).

- **View A** is located at 500m east of the proposed project site, at sea level, on Keurboomstrand Beach.
- **View B** is located at 100m south east of the center of the project site, at the level of the Scenic route MR394, from the whale-watching platform across the road.
- **View C** is located 200m east, at the bend in the road that serves as the entrance to Keurboomstrand town (this view is at the location of a bench and a timber staircase access to the small cove beach below). The view is looking west, and representative of the visibility of the proposed project for locals leaving the town.
- **View D** is located at 700m east, taken from a height just lower than the deck of the local restaurant, looking west over Keurboomstrand central beach.

5.2.1 Simulation: View A



Site photograph: Receiving environment sans proposed development (No-go alternative).



Simulation: The development proposal - Alternative 1.



Simulation: The development proposal - Alternative 2.



Simulation: The development proposal - Alternative 3. The proposed building will not be visible from this vantage point.

Figure 80: Simulation View A: 500m east, from Keurboomstrand beach just below the parking lot (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)

The simulation from View A shows that the buildings of Alternative 1 and 3 will not be visible from the Keurboomstrand beach south west of the site. The buildings of Alternative 2 will be visible. The pool of Alternative 1 can be seen jutting out from the landscape in Simulation A, and the southernmost edges of Alternative 2's upper storey are visible above the silhouette of the vegetation. Notice that the existing residential building of Erf 565 (south and downslope from the proposed site) breaks the silhouette of the natural topography, as do those of the existing buildings higher up the slope on the ridgeline.

Should a scenic route offset be introduced that ensures the proposed buildings are established from no lower than approximately the 34m contour (which is between 30 and 50m from the Scenic route), the overall visibility of the project from the scenic route, the entire western stretch of the Keurboomstrand beach (from the public access point, at least) and the east in general will be reduced to nil.

5.2.2 Simulation: View B

View B illustrates the visual impact of the proposed development from less than 100m away along the MR 394 (distances are measured from the center of the subject site).

This is the point from which the visual absorption capacity of the receiving environment is the lowest, and the potential for visual intrusion is the highest. The part of the site viewed from the photo location in Simulation B is sensitive because it is located on the scenic route, at the main entrance to the town, on elevated ground, and viewed over a patch of fynbos (which typically grows lower than the neighbouring forest and scrub-forest vegetation types).

For Alternative 1, note that the proposed swimming pool breaks the crest of the foot slope (both the site's silhouette and the line of the ridge in the background). There is no information available at the time of writing this report that describes the construction of the pool platform, but the authors argue that any supporting structure would present an unacceptable visual intrusion from this viewpoint (and its representative sensitive receptors) at least. The building placement from this vantage point is relatively unproblematic.

For Alternative 2, the visibility of the proposed development is significantly increased overall. It is the most visually intrusive option from this viewer location, given the proximity and height of the buildings to the southern property boundary (the most visually sensitive part of the site) where the ground falls away and the existing vegetation offers little screening. Units 2 and 3 will be clearly visible, and the proposed buildings will break up the site's silhouette and the line of the ridge in the background.

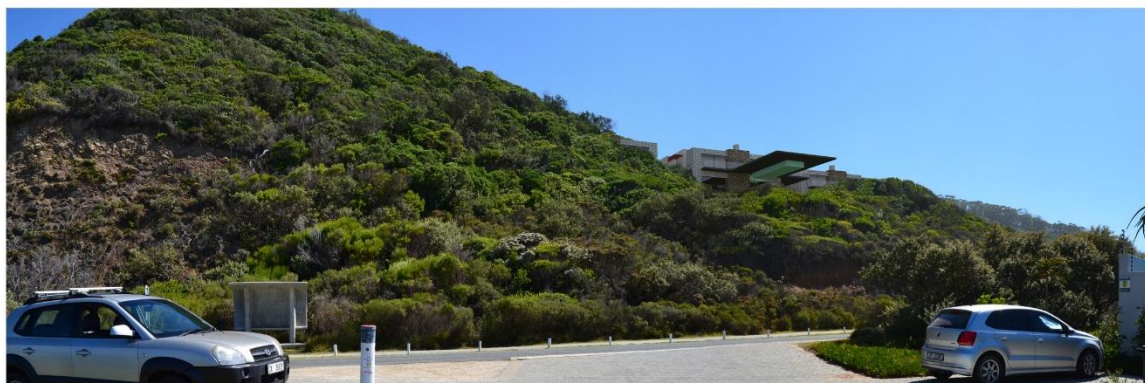
Alternative 3 sets the buildings back somewhat, and so reduces visibility and visual intrusion from this location. The southern facades of the proposed buildings also interrupt the ridgeline, but reduce the contrast in form by preferencing a more squat, horizontal building massing. The retaining wall will be visible from the scenic route, but the pool will not.

It is important to acknowledge that the visual impact of the proposed development will contribute to the erosion of the visual character and scenic resources at this sensitive threshold if potential negative impacts are not mitigated. Two nearby developments visible from this area are highly visible and already intrude on the scenic resources (having brought about noticeable change in visual character of the area, introduced a new precedent for development in the area). All three Alternatives, will add to the cumulative visual impact of two existing developments at this sensitive threshold.

The scenic route offset previously mentioned will limit visual intrusion and visual impact of the proposed development from View B as well.



Site photograph: Receiving environment sans proposed development (No-go alternative).



Simulation: The development proposal - Alternative 1.



Simulation: The development proposal - Alternative 2.



Simulation: The development proposal - Alternative 3.

Figure 81: Simulation View B: 100m SSE (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)

5.2.3 Simulation: View C

View C simulates the view of the proposed development from 200m away, and from the east. Generally, the views of the proposed development from the east are further away, from within the Keurboomstrand town, the beaches or the conservation areas along the coast. Please note that while the viewshed indicated that the project site would be visible from the entire town, Line of sight testing on site showed that this was true for only a small number of places in the public realm where topography, other buildings or vegetation did not screen the site completely. Views from within 200m of the project site (except those simulated) were generally screened by vegetation and topography, even when the viewer would be located at a higher elevation. Therefore, this view (Simulation C) can be seen as a unique/rare but very important view.

a) Acceptable parameters of visibility from eastern views generally

Note that the existing natural vegetation (with specific reference to the steep forested slope on the western edge of the site) would screen any proposed development significantly. However, breaks in the cover caused by disturbance to the existing vegetation will increase the visibility and intrusiveness any structures proposed, from eastern views.

Currently, the 8m building height restriction ensures that the buildings will not protrude above the site vegetation in excess of the ratio described in section 5.1.2 as acceptable in terms of the Keurboomstrand context. From the view illustrated in Figure 82 (taken from across the cove beach, halfway up the timber access stairway), there is also an argument to be made that the proposed development will not have unacceptable or unprecedented visibility or visual intrusion in the context of the townscape character or local built form. Note that the existing buildings highlighted in red below protrude from the surrounding vegetation at least by the height of their pitched roofs, or one storey. Being able to see more than one storey of a building above the local vegetation is the exception and should not be supported.

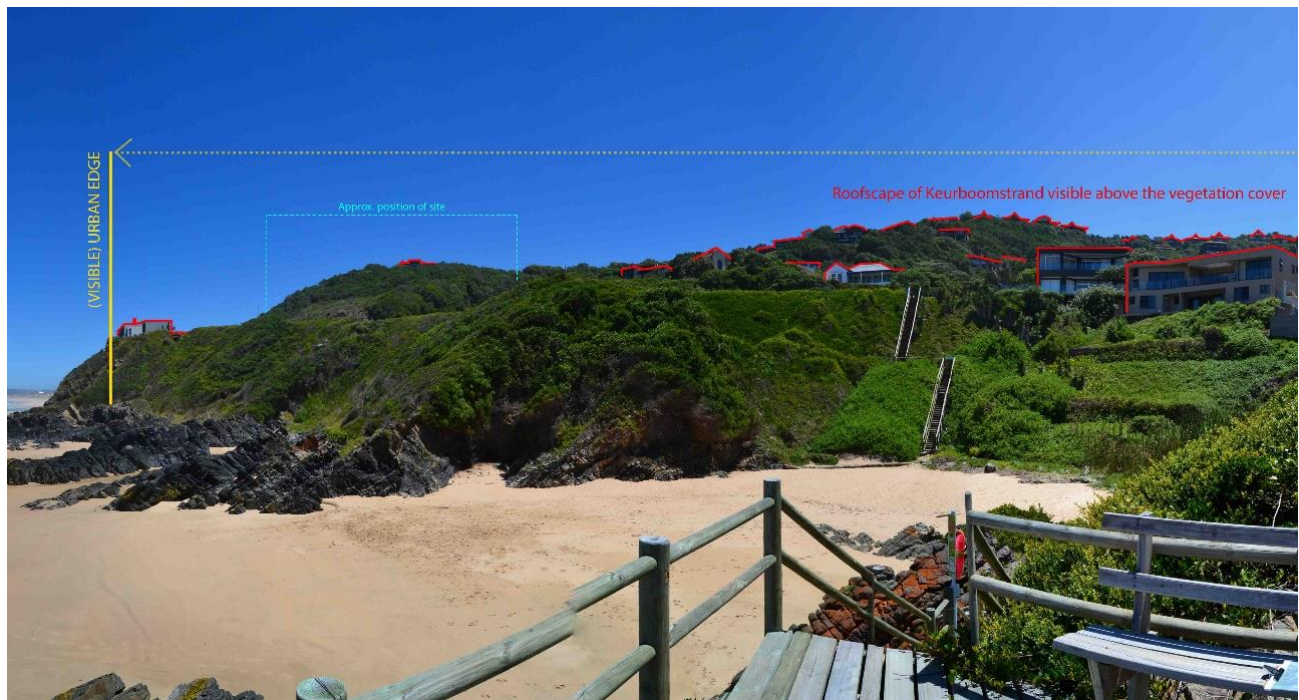
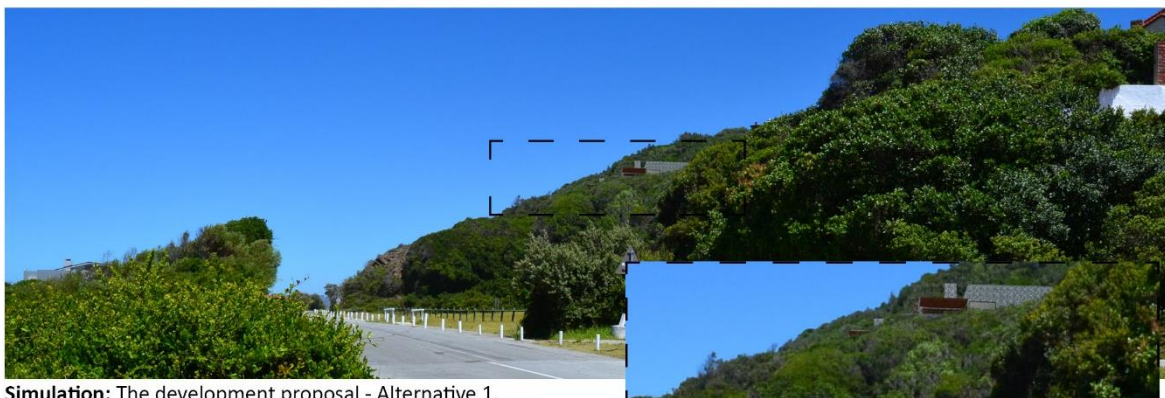


Figure 82: Site photograph taken at 250m ESE illustrating the typical visibility of existing buildings relating to vegetation and topography from eastern views (Smit, 2021)



Site photograph: Receiving environment sans proposed development (No-go alternative).



Simulation: The development proposal - Alternative 1.

Simulation: Enlargement (200%).



Simulation: The development proposal - Alternative 2.

Simulation: Enlargement (200%).



Simulation: The development proposal - Alternative 3.

Simulation: Enlargement (200%).

Figure 83: Simulation View C: 200m E (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)

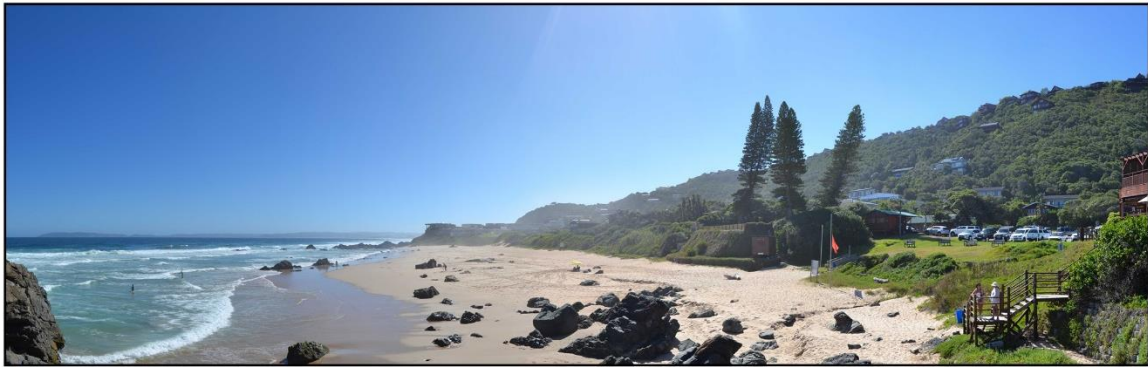
For Alternative 1, only the top half of Unit 3 would be visible above the vegetation, the remainder if the structures will be screened. Alternative 2's buildings will be lower down the slope and interrupt the ridge line. Alternative 3's buildings will again be higher up the slope (similar to Alternative 1) but are also expected to interrupt the ridge line – albeit to a lesser degree than in Alternative 2. The fact that unit 3 of Alternative 3 encroaches onto the 1:4 slope accounts for the amount of building façade that will be visible: vegetation that would otherwise have screened the buildings would be cleared, and the landscape as a container for development would be compromised.

5.2.4 Simulation: View D

View D is the simulation of a typical view from Keurboomstrand's most popular local restaurant, the central beach and the public route to access the easternmost beach and beyond. For all Alternatives, the proposed development will not break the ridgeline of the foothill in terms of its height.

From this view, and for Alternatives 1 and 2, portions of the first floor will protrude above the vegetation in a way that is similar to the surrounding built environment (but only if the vegetation remains undisturbed). Alternative 3 will be slightly more exposed because of vegetation clearing necessitated by the placement of unit 3.

This simulation demonstrates the effect of the sea spray for views located at distances of 500m and further, and the increased visual impact of light and bright colours against the dark green of the vegetation are demonstrated by the existing buildings from this view. Simulation D is also a useful indicator of the limits of the Zone of Potential Visual Influence (ZoVI), which will be determined in section 5.3. Note that the visibility of the proposal's most visible features (such as the swimming pool for Alternative 1, the eastern façade of unit 3 for Alternative 3 and the chimneys) diminish notably in the space of only approximately 500m (between View C and View D).



Site photograph: Receiving environment sans proposed development (No-go alternative).



Simulation: Enlargement (200%).

Simulation: The development proposal - Alternative 1.



Simulation: Enlargement (200%).

Simulation: The development proposal - Alternative 2.



Simulation: Enlargement (200%).

Simulation: The development proposal - Alternative 3.

Figure 84: Simulation Alternative 1 - View D: 700m E (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)

5.3 Visual Analysis

Based on 3D modelling, fieldwork and LoS testing, the following conclusions can be drawn from the Visual Analysis (for all three Alternatives).

5.3.1 The Zone of Potential Visual Influence

The Zone of Potential Visual Influence (ZoVI) is the radius around an object beyond which the visual impact of its most visible features will be insignificant primarily due to distance. Determining the ZoVI enables the specialist to confirm the extent of visibility and views which could be affected by the proposed development.

For this scale of development within the visual and topographical context of the RE, the ZoVI of the proposed Keurboomstrand development is less than 1km (approximately **800m**, in terms of Distance zones). Refer to Simulation D for reference, demonstrating the project visibility from 700m. Views of the proposed development's most visible features experienced from further than 100m away begin to lose significance in the visual field, and at 800m away or further, they become insignificant in the landscape.

The only view from which the proposed development demonstrates some dominance in the visual field is from the MR394 scenic route, 200m to the east and the west of the subject site. Refer to Simulations B and C for reference.

5.3.2 Landscape Character Sensitivity

The sensitivity of a landscape or visual resource is the degree to which a particular landscape type or area can *respond to* and where appropriate, *accommodate* change arising from a particular development *without detrimental effects on its character*. Key elements of the Landscape Character are evaluated to determine if and how they are likely to be affected by the proposed development, and the degree to which the particular element or characteristic can be replaced or substituted (Young, 2014, p. 7). According to the DEA&DP Guideline for involving visual & aesthetic specialists in EIA processes (Oberholzer, 2005), the following terms are used to describe the effects of visual impact:

- **Fundamental change:** dominates the view frame & experience of the receptor;
- **Noticeable change:** clearly visible within the view frame & experience of the receptor;
- **Some change:** recognizable feature within the view frame & experience of the receptor;
- **Limited change:** not particularly noticeable within the view frame & experience of the receptor;
- **Generally compatible:** practically not visible or blends in with the surroundings.

Table 1: Key elements of Landscape Character

Key elements	Likely effect
Dramatic coastal scenery (mountainous forests offering a backdrop to long sandy beaches) and open views of the ocean. <ul style="list-style-type: none"> ● Limited disturbance to vegetation; ● Visual continuity between the foothill and the sea, ● Protect the scenic route from negative impacts (its functioning as a gateway into the town proper and the lack of visual intrusion on ridges, coastal and sea views) 	<p><i>The proposed project is likely to result in some change to this element of Landscape character.</i></p> <ul style="list-style-type: none"> ● <i>The difference between “noticeable change” and “some change” will be determined by the extent to which the vegetation on site is disturbed (from eastern views especially).</i> ● <i>The proposal is likely to result in no change (generally compatible) for the majority of the scenic route; which will increase to noticeable change for a +- 400m stretch of the road, at the entrance to Keurboomstrand. The fact that it is not central in the viewers sight, the presence of the existing building on Erf565, and the emphasis of most viewers on sea-views at this</i>

	<p>point prevent the proposal from dominating the view frame and experience of the receptor.</p> <ul style="list-style-type: none"> The proposal will bring about some change to the visual continuity between scenic resources (coastline, mountain, sea) from the simulated views, but this effect reduced drastically from 200m to the edge of the ZoVI, where the proposed development will blend in with the surrounding built environment context (generally compatible).
<p>Landscape (natural and scenic resources) as a setting and container for tourism, recreation, leisure etc.</p> <ul style="list-style-type: none"> Associated with limited development footprint and vegetation loss; Protection of landmarks and natural features; Retain townscape character: small resort town and holiday destination with unique sense of place. 	<p>The proposed project is likely to result in limited change to this element of Landscape character.</p> <ul style="list-style-type: none"> Please note that the likely effect is judged based on the assumption that vegetation clearing will be limited to the building footprint and clearing necessary for building the driveway and access road. Should more vegetation be cleared, the proposed development is likely to bring about noticeable change to the landscape within the ZoVI. The proposal will result in limited change for landmarks and natural features, and will result in limited change to the townscape character (provided that all the ecological, geotechnical and visual sensitivities are adequately responded to).

The key Landscape Character elements above cannot be replaced once negatively affected by inappropriate development. However, aspects such as disturbance to vegetation can be mitigated over time, to replace or substitute the effect of the original vegetation on visual continuity, scenic value and the landscape as a setting and container. The table below is derived from the publication of the Landscape Institute with the Institute of Environmental Management and Assessment (2002):

Table 2: Aesthetic value of the Visual Resource

<ul style="list-style-type: none"> High: 	<p>Areas that exhibit a positive character with valued features that combine to give the experience of unity, richness, and harmony.</p> <ul style="list-style-type: none"> These are landscapes that may be considered to be of particular importance to conserve. <u>They may be sensitive change in general; which may be detrimental if change is inappropriately dealt with.</u>
<ul style="list-style-type: none"> Moderate: 	<p>Areas that exhibit positive character, but which may have evidence of alteration to /degradation/erosion of features resulting in areas of more mixed character.</p> <ul style="list-style-type: none"> <u>Potentially sensitive to change in general.</u> <u>Change may be detrimental if inappropriately dealt with,</u> but it may not require special or particular attention to detail.
<ul style="list-style-type: none"> Low: 	<p>Areas generally negative in character with few, if any, valued features.</p> <ul style="list-style-type: none"> Scope for positive enhancement frequently occurs.

The sensitivity of the Landscape Character for this proposed development is **Moderate to High**.

5.3.3 View Corridors

View corridors identified with high scenic value:

- Views from the beaches (northward) toward the ridge of the foothills within the study area and ZoVI;

- The scenic route view corridor created by the long, straight MR394, terminating at the entrance to Keurboomstrand;
- Views from the east towards Plettenberg Bay and the Keurboomstrand east area, looking westward (delineated by the ridge of the foothill visible in the center of Simulations C and D).

This study has shown that the proposed project (all three alternatives) does not generally disrupt or obstruct the continuity of views from beaches towards the foothill ridgelines. The scenic route corridor is (potentially) notably affected for a +-400m stretch directly south west, south and south east of the project site, but not at all from the remainder of the route. The proposal is not anticipated to negatively impact the most important views toward the ocean for which the scenic route is valued. The view corridor from Keurboomstrand's most frequented beaches and the local restaurant eastward is affected, but the all three alternatives are not particularly noticeable within the view frame & experience of the receptor.

5.3.4 Visual Receptors and their Potential Sensitivity

The Guideline for involving visual & aesthetic specialists in EIA processes for, defines receptors as individuals, groups or communities who are subject to the visual influence of a particular project (Oberholzer, 2005, p. 28). The locations of these receptors are variable but can be assumed to be those occupying local public roads, scenic routes and local places of recreation, work, learning and habitation, public open spaces, community facilities and institutions, and culturally sensitive receptors like local heritage resources and overlay zone areas.

The Potential Sensitivity of visual receptors may be determined with respect to a place or space's popularity or numbers of people affected, its appearance in guidebooks, on tourist maps, its value to local tourist or recreational users, and in the facilities provided for its enjoyment and references to it in literature or art (Young, 2014). The most sensitive receptors may include:

- Communities where development results in changes in the landscape setting or valued views enjoyed by the community;
- Users of all outdoor recreational facilities including public rights of way, especially those whose intention or interest may be focused on the landscape;
- Residents and residential properties with views affected by the development.
- Views from residences and tourist facilities / routes are typically more sensitive since views from these are considered to be frequent and of long duration.

Other receptors may include:

- People traveling through or past the affected landscape in cars or other transport modes;
- People engaged in outdoor sport or recreation other than appreciation of the landscape;
- People at their place of habitation;
- People at their place of work.

Potentially sensitive receptors identified at the outset of the project such as visitors to the Robberg Peninsula and the Matjies River Cave heritage sites, the Old N2 (Divisional Road 1888) scenic route and as well as the views from Plettenberg Bay's most popular lookout points and beaches will not be visible to receptors. The sensitivity of the remaining 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. Sensitive receptors identified for this VIA were:

- a) The users of beaches and estuaries (as ecological resources and tourism/recreation destinations), including associated infrastructure;
- b) The Annex Arch Rock Nature Reserve and protected areas eastward;
- c) Locals and tourists engaged in outdoor recreation and tourism activities (on the paved pedestrian pathway, timber boardwalks and staircases, whale watching, scenic route driving etc.)
- d) Scenic Route: Keurboomstrand access road (Main Road M394)
- e) Local Keurboomstrand residents, workers and neighbouring properties;
- f) The local commercial node including Enrico's restaurant.

The Sensitivity of Visual Receptors is generally **High**, most of the sensitive receptors being within the residential area, and/or within a landscape and setting highly valued for recreation and tourism.

5.3.5 Visibility of the proposed development

Visibility can be defined simply as the area from which proposed project components would potentially be visible. Once the proposed building or infrastructure envelope has been determined, visibility depends on the topography of the RE, slope aspect, tree cover or other visual obstructions in the natural or built environment; as well as elevation and distance. Please note that a high visibility rating does not necessarily signify a high visual impact.

The visibility of the proposed development has been tested from a variety of distances, elevations, and viewpoints within the study area. As previously determined, the Zone of Potential Visual Influence is approximately 800m. On-site Line of Sight testing, 3D modelling and Simulations demonstrated that the significance of proposed development's most visible features experienced from further than 100m away begin to lose significance in the visual field, and at more than 1km become insignificant in the landscape.

The degree to which the proposed development would be visible is also moderated by the proposed development's relationship with the local site topography and the greater landscape forms, the compatibility of the proposal in terms of the local architectural context as well as appropriate materials and finishes. Weather and season conditions (such as sea spray) also affect visibility, but these factors are harder to predict and are not central to this analysis.

Table 3: Visibility

High	Moderate	Low
If the development is visible from over half the ZoVI, and/or views are mostly unobstructed and/or the majority of viewers are affected.	If the development is visible from less than half the ZoVI , and/or views are partially obstructed and/or many viewers are affected	If the development is visible from less than a quarter of the ZoVI, and/or views are mostly obstructed and/or few viewers are affected .
<i>Visual receptors experiencing High Visibility:</i>	<i>Visual receptors experiencing Moderate Visibility:</i>	<i>Visual receptors experiencing Low Visibility or do not have views of the proposal:</i>
	<ul style="list-style-type: none"> ● 400m of the Main Road MR394 scenic route (including local residents, and tourists engaged in outdoor recreation and tourism activities – limited to this stretch of road) 	<ul style="list-style-type: none"> ● Locals and tourists engaged in outdoor recreation and tourism activities. ● Users of local beaches; ● Annex Arch Rock Nature Reserve & protected areas eastward; ● Local Keurboomstrand residents, workers and neighbouring properties;

		The local commercial node including Enrico's restaurant.
--	--	--

For this project, overall visibility is **Moderate** to **Low** for all three alternatives.

5.3.6 Visual Exposure

It is well established that distance is a key variable that determines the magnitude of potential visual impacts from a proposed development (Sullivan, Abplanalp, Lahti, & Beckman, 2014). Distance from a viewer to a viewed object or area of the landscape influences how visual changes are perceived in the landscape. Generally speaking, the assumption is that colour, form, texture and detail become less perceptible with increased distance from the viewed object (Young, 2014, p. 46). Additionally, the impact of an object diminishes at an exponential rate as the distance between the observer and the object increases. To illustrate, the visual impact at 1km would be 25% of the impact as viewed from 0,5km. At 2km it would be 10% of the impact at 0,5km (Hull & Bishop, 1988).

Distance zones are based on three categories of distance: fore-, mid- and background (Landscape Aesthetics: A Handbook for Scenery Management, 1995). The Background category can be considered the threshold after which distance measurement becomes impossible to the viewer in the absence of known landmarks (Felleman 1979, 8). These zones can reasonably be understood as ideas that are responsive to context – their approximate parameters are shown below:

Table 4: Distance Zones for Visual Exposure

Distance Zone	Distance	Description
<u>Immediate Foreground</u>	0 to 100m	Most detailed aspects of objects are discernible, including materials and textures. Considered to be the most sensitive due to the proximity to the viewer and the ability to perceive detail.
<u>Foreground</u>	Up to 800m	The foliage of trees and finer textural details of vegetation are normally perceptible within this zone. After 500m, perception of detail and textures decreases, but overall form, shape colour and edges of objects are still discernable. Considered to be sensitive due to the proximity to the viewer and the ability to perceive detail.
<u>Middle ground</u>	800m to 6km	After 800m, vegetation appears as outlines or patterns. Only large or bright/contrasting objects with simple outlines are easily identified and differentiated from the general view. Depending on topography, vegetation and built form, the middle ground zone is sometimes considered to be up to 8km. In the middle ground, one can perceive individual landscape features under clear conditions but not in great detail. In urban and suburban areas, middle ground views are mostly obscured by built form and vegetation, except at a higher elevation than the surroundings, or within large open or public spaces. Not considered to be sensitive except in areas with exceptionally low VAC.
<u>Background</u>	Beyond 6km (up to 10km)	From 6km onward, individual landscape elements blend into the view and are generally absorbed partly or fully by the receiving environment. Only broad landforms are discernible and atmospheric conditions alter the perception and clarity of objects. Landforms and local or regional landscape patterns become discernable and dominate the views at these distances. Typically, not sensitive .

Visual Exposure accounts for the limiting effect that increased distance has on visual impact, as well as factors that are influenced by weather and diurnal light conditions.

For this project, Visual exposure is:

- **High** Exposure (i.e.: significant contribution to visual impact and high/most sensitivity) for Immediate Foreground views (up to 100m, from only a +-150m stretch of the MR394 scenic route);
- **Moderate** Exposure (i.e.: moderate contribution to visual impact, sensitive) for a minority of Foreground views, which account for the majority of total possible views (from 200m up to 800m);
- **Low** Exposure (i.e.: minimal influence on visual impact) for the majority of Foreground views, which account for the majority of total possible views (from 200m up to 800m);
- **Insignificant** Exposure (i.e.: negligible influence on visual impact) for views from 800m or more (the entire Middle ground and Background distance zones)

The above accounts for an overall project Visual Exposure that is:

- i. **Low** overall (as it is generally limited to the Foreground distance zone);
- ii. with a notable exception of the +-150m stretch of the MR394 scenic route where the proposed development's exposure will be **High**.

5.3.7 Visual Absorption Capacity

Visual absorption capacity refers to the ability of the RE to accommodate physical and visual changes without a concurrent transformation in its visual character and quality. This is a function of existing settlement / development patterns, the similarity or difference between existing features and proposed features, the amount of visual clutter, contrast and variability of visible features present in the landscape, how dramatic the local topography is and how sensitive the landscape character and visual receptors are.

To determine the VAC of the RE, it must also be tested against the extent and nature of the proposal. For instance, while grassland, undulating topography and agricultural or rural areas generally have a low VAC, the capacity of such an RE to absorb a new coal mine vs. its capacity to absorb a new single storey residential dwelling is different. An associated concept is Visual Intrusion, which is the measure of a proposed development's compatibility (absorbed into the landscape elements) vs. its discord (contrasts with the landscape elements) with the landscape and surrounding land uses. Visual intrusion also diminishes with scenes of higher complexity and as distance increases (the object becomes less of a focal point and more of a visual distraction (Young, 2014, p. 44). In this assessment, high VAC is a positive and low VAC is a negative.

Table 5: Visual Absorption Capacity

High	Moderate	Low
The RE absorbs all or most of the development successfully – limited views with low visual intrusion and high compatibility with existing landscape character & built form etc.	The RE absorbs parts of the development successfully – views demonstrate moderate visual intrusion by the proposed development, which is generally similar in nature (or presents an acceptable degree of change) to existing landscape character & built form.	The RE cannot visually absorb the proposed development, which introduces a contrasting built form or dramatic change in landscape character. Many key views demonstrate high visual intrusion.
Rating:	High to <u>Moderate</u>	

Generally, the VAC resulting from the combination of the this RE and the proposed development is **High to Moderate** (depending on response to the ecological, geotechnical and visual sensitivities such as vegetation clearing and placement on the site).

5.3.8 Relative compatibility

The relative compatibility or congruence of the proposed project is measured against the qualities of the existing landscape (or the 'sense of place'), as well as the extent to which the proposed land usage is in line with the surrounding development and land usage (present and future).

Table 6: Relative Compatibility

Compatibility	Description
High:	Appropriate development will harmonize with the surrounding landscape either by strengthening or protecting the sense of place, or as a minimum not deviating from the existing land uses and overall character of the RE. In line with existing policy and future development plans.
Medium:	Moderately appropriate development partially fits into the surroundings in terms of land use, sense of place and overall landscape character, but to a lesser degree and only with care. Generally, the development will be noticeable. Some elements respond to context while others introduce new or different aspects. Substantively in line with exiting policy and future development plans, but may include departures, alternative rezoning or “pushing the envelope” development.
Low:	Inappropriate development is visually intrusive and/or discordant with the surrounding landscape, land use, sense of place etc. The development introduces entirely new or unprecedented elements into the landscape that do not fit in and have limited possibility for mitigation. Proposed development is at odds with exiting policy and future development plans.

The proposed Erf 155 development alternatives can be described as having some aspects of **Medium compatibility**, and some aspects of **Low compatibility** relative to the RE.

- The proposed development overall demonstrates Medium compatibility in that it partially fits into the surroundings in terms of land use, sense of place and overall landscape character.
 - It should be noted that in a receiving environment with Moderate to High Landscape Character sensitivity and High Sensitivity of Visual Receptors, this can be achieved only with care.
 - As long as the proposal is responsive to the context (guided by recommendations and offsets defined by specialists), this statement can be upheld.
 - The proposed development is generally in line with exiting policy and future development plans, but may include departures, alternative rezoning or “pushing the envelope” development.
- However, the proposed development includes features such as the swimming pool (Alternative 1), the retaining wall and terrace (Alternatives 2 & 3), a comparatively large coverage and footprint for the size of the developable area of site (all alternatives), and various encroachments on the ecological and geotechnical offsets recommended by the specialists. These aspects have limited fit in the landscape, and limited possibility for mitigation.

In summary, All three Alternatives of the proposed development have **Medium compatibility** relative to the RE, with aspects of **Low** compatibility.

5.4 Summary of Visual Analysis

The following is a summary of the findings of the Visual Analysis detailed in Section 5.3 of this report. The aspects of analysis, key information and the associated rating are provided here for ease of reference.

Zone of Potential Visual Influence
The Zone of Potential Visual Influence of the proposed development is approximately 800m .
Landscape Character Sensitivity
The sensitivity of the Landscape Character (i.e.: the degree to which the RE can respond to accommodate change arising from the proposed development without detrimental effects on its character) is Moderate to High .
Local sensitive receptors and View corridors
Confirmed local sensitive receptors and view corridors in the ZoVI include: <ul style="list-style-type: none"> x. The users of beaches and estuaries (as ecological resources and tourism/recreation destinations), including associated infrastructure; xi. The Annex Arch Rock Nature Reserve and protected areas eastward; xii. Locals and tourists engaged in outdoor recreation and tourism activities (on the paved pedestrian pathway, timber boardwalks and staircases, whale watching, scenic route driving etc.) xiii. Scenic Route: Keurboomstrand access road (Main Road M394) xiv. Local Keurboomstrand residents, workers and neighbouring properties; xv. The local commercial node including Enrico's restaurant xvi. <i>(View corridor) Views from the beaches (northward) toward the ridge of the foothills within the study area and ZoVI;</i> xvii. <i>(View corridor) The scenic route view corridor created by the long, straight MR394, terminating at the entrance to Keurboomstrand;</i> xviii. <i>(View corridor) Views from the east towards Plettenberg Bay and the Keurboomstrand east area, looking westward.</i>
Potential Sensitivity of Visual Receptors
The Sensitivity of Visual Receptors is High .
Visibility
The proposed project has one instance of moderate visibility only within the Immediate Foreground. The overall visibility is however Moderate to Low , considering that: <ul style="list-style-type: none"> • the proposed development is visible from less than half the ZoVI (Moderate visibility); • views are partially obstructed (Moderate visibility); • and few viewers are affected (Low visibility).
Visual Exposure
For this project, Visual Exposure is Low overall. <ul style="list-style-type: none"> • High for Immediate Foreground views specifically, the +-150m stretch of the MR394 scenic route; • Moderate for a minority of Foreground views; • Low for a majority of Foreground views; • Insignificant for views from 800m away or more (the entire Middle ground and Background distance zones).
Visual Absorption Capacity
The VAC assessment for this proposed development is High to Moderate (please note that a higher VAC is desirable).
Relative Compatibility
The proposed development can be described as having Medium compatibility relative to the RE, with aspects of Low compatibility .

6. VISUAL IMPACT ASSESSMENT

For the **Moderate** visual impact predicted at the *outset of the study*, the issues that were *expected* included:

- *Potentially some effect (and intrusion⁶) on protected landscapes or scenic resources;*
- *Some change⁷ in visual character of the area;*
- *Introduces new development or adds to existing development in the area.*

Key visual concerns were:

- **Effect on protected landscapes and scenic resources**, with specific reference to:
 - Effect on the scenic route (MR394);
 - Effect on important views, view cones and view corridors (*i.e.: continuity of views to and from the Indian Ocean and the coastal hills and ridgelines; views from within or towards protected areas or visually sensitive landscapes*).
 - Effect on visual character of the area (*i.e.: effect on the sense of place, settlement pattern, landscape character and other sensate features; with reference to the degree of change from existing development and land use in the area*);
 - Effect on local heritage, scenic and cultural resources, sites, landscapes and monuments.
- Effect on **sensitive receptors** with specific reference to:
 - Sensitive viewers within the surrounding conservation and recreational areas generally (*i.e.: beach-goers, whale-watchers etc.*);
 - Local residents of Keurboomstrand and the users of local roads;
 - Tourists and other tourism-driven visitors to the area.

The following section describes anticipated visual impacts of the proposed development alternatives on the receiving environment and visual receptors. As per the NEMA Regulations (The Department of Environmental Affairs, 2010) the nature, extent, duration, intensity/magnitude, probability and significance of the impacts must be described in these terms.

Please note that the visual impact predicted at the outset of the study may change after Visual Impact Assessment has been undertaken in the following section.

6.1 Visual Impact Assessment Methodology

6.1.1 Methodology to determine Significance of Visual Impact

Visual Impact is described and assessed for significance according to the criteria outlined by the DEA&DP Guideline (Oberholzer, 2005, p. 28), for the operational phase of the proposed development only (no decommissioning phase is anticipated for this project, and there is no definitive information regarding the Construction phase forthcoming at this time). Three development alternatives have been tabled for visual impact assessment.

The following list indicates the numerical scoring system that is used to determine impact:

⁶ Visual intrusion describes the level of compatibility or congruence of the project with the particular qualities of the area, landscape and surrounding land uses, or its 'sense of place', measured against the degree to which it is in discord, or contrasts with these. This is related to the idea of context and maintaining the integrity of the landscape or townscape. Visual intrusion diminishes within landscapes of higher complexity and as distance increases (*i.e.*, the object becomes less of a focal point and more of a visual distraction).

⁷ "Some change" is defined as: "Recognizable feature within the view frame and experience of the receptor;"

Extent	Description	Score
Site-related	Extending only as far as the activity	1
Local	Limited to the immediate surroundings i.e.: extending only as far as the local community or urban area	2
Regional	Affecting a larger metropolitan, Municipality or regional area	3
National	Affecting large parts of the country (South Africa)	4
International	Affecting areas across international boundaries	5

Duration	Description (the lifespan of the impact)	Score
Immediate	Less than 1 year	1
Short-term	1 – 5 years (e.g., duration of the construction phase)	2
Medium term	6 – 15 years (e.g., duration for screening vegetation to mature)	3
Long term	15 years or more (e.g., the impact will cease after the operational life span of the project, or where time will mitigate the impact partially)	4
Permanent	No mitigation measures or natural process will reduce the impact after construction (i.e., where time will not mitigate the visual impact)	5

Intensity	Description	Score
None/zero	Where the aspect will have no impact on the environment and natural and/or social functions & processes remain unaltered.	0
Minor	Where the impact affects the environment in such a way that natural, cultural and social functions & processes are not affected.	1
Low	Where the impact affects the environment in such a way that natural, cultural and social functions & processes are slightly affected or altered.	2
Moderate	Where the affected environment is altered; but natural, cultural and social functions & processes continue - albeit in a modified way.	3
High	Where natural, cultural or social functions or processes are altered to the extent that these will temporarily cease / be severely altered.	4
Very High	Where natural, cultural or social functions or processes are altered to the extent that it will permanently and irrevocably cease.	5

Probability	Description (the likelihood of the impact actually occurring)	Score
None	Impact will not occur.	0
Improbable	The possibility of the impact materializing is very low (as a result of design, historic experience or implementation of adequate mitigation measures).	1
Low probability	There is a possibility that the impact will occur.	2
Medium probability	The impact may occur.	3
High probability	It is most likely that the impact will occur.	4
Definite / unknown	the impact will occur regardless of the implementation of any prevention or corrective actions OR the specialist does not know what the probability will be, based on too little information available.	5

Status of the impact	Description	Score
Negative effect	Negative effect at the cost of the environment, receptors or the visual amenity.	n/a
Positive effect	Results in a net positive effect that benefits the environment, receptors or the visual amenity.	n/a

Neutral effect on the environment	Neither positive nor negative.	n/a
-----------------------------------	--------------------------------	-----

To determine the significance of the Impact, the extent (*E*), duration (*D*) and intensity (*I*) scores are added up and multiplied by the probability of the impact to produce a significance weighting (*x*).

$$x = (E + D + I)P$$

Significance	Description (significance weighting)	Score
Negligible	The impact has no impact or the impact is unknown	0
Low	The impact does not have a direct influence on the decision to develop the area.	0-15
Low to Medium	The impact has an influence, but the impact can be mitigated.	16-30
Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated.	31-45
Medium to High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact although these may be difficult as well as expensive.	46-60
High	where the impact must have an influence on the decision to proceed to develop in the area.	60 +

6.1.2 Visual impacts chosen for assessment

The impact assessment was undertaken in terms of four key anticipated impacts, determined during the course of the literature review, the desktop study, fieldwork and the visual analysis process. The nature of these possible visual impacts is specified in the tables below.

- Effect on sensitive receptors;
- Effect on important views, view cones and view corridors;
- Effect on protected landscapes and scenic resources
- Effect on visual character and sense of place of Keurboomstrand (east).

6.2 Impact Assessment of Alternatives 1-3

The following four tables show the visual impact assessment of all three alternatives side by side. Each table is populated by a brief description of the nature of the anticipated impact, and followed by a list of noting exclusions and observations prior to impact assessment.

6.2.1 Impact on sensitive receptors

Table 6: Visual Impact Assessment for (a) Effect on sensitive receptors.

Nature of Impact	Changes experienced by sensitive receptors: (i.e.: visitors to local heritage, scenic and cultural resources, sites, landscapes and monuments; the users of surrounding conservation and recreational areas; local residents etc.).		
Proposal:	Alternative 1	Alternative 2	Alternative 3
Extent	2	2	2
Duration	4	4	4
Intensity	1	2	2
Probability	2	3	4

Status of the impact	Results in <i>change</i> , neither net positive nor net negative (the change includes <u>aspects</u> of positive and <u>aspects</u> of negative)		
Significance	14 (Low: <i>The impact does not have a direct influence on the decision to develop the area.</i>)	24 (Low to Medium: <i>The impact has an influence, but the impact can be mitigated.</i>)	32 (Medium: <i>The impact could influence the decision to develop in the area unless it is effectively mitigated.</i>)
Notes:	Please note that this assessment holds for the proposed buildings of Alternative 1 only. The swimming pool is disregarded as unfeasible, and if included in the final proposal it would increase the significance rating to Medium (negative).		This higher significance rating for Alternative 3 is because of the large footprints and the amount of clearing that unit 3 will require: increasing the amount of building exposed to the views from neighbouring properties and the scenic route.

Discussion and impact-specific observations to support the findings of the assessment:

- i. Because the proposed development will not **be visible from any local heritage and cultural resources** (sites, landscapes and/or monuments) or **conservation areas**, viewers in these locations are not affected by the proposed development.
- ii. In terms of recreational areas, all Alternatives will be visible from the easternmost portion of the Keurboomstrand beach and will therefore have a visual impact on some beach areas within the ZoVI.
- iii. There is no evidence to suggest that views from the neighbouring properties will be affected negatively.
- iv. **Local residents** driving in and out of the town, and pedestrians using the paved walkway, the whale watching platform and the stairways giving access to the small cove beach will experience visual impacts.

6.2.2 Impact on important views and view corridors

Table 7: Visual Impact Assessment for (a) Effect on important views and view corridors.

Nature of Impact	<u>Changes to important views, view cones and view corridors:</u> (i.e.: continuity of views to and from the Indian Ocean and the coastal hills and ridgelines; views from within or towards protected areas or visually sensitive landscapes, the scenic route corridor generally).		
Proposal:	Alternative 1	Alternative 2	Alternative 3
Extent	2	2	2
Duration	3	5	5
Intensity	1	3	2
Probability	1	4	3
Status of the impact	Negative	Negative	Negative
Significance	6 (Low: <i>The impact does not have a direct influence on the decision to develop the area.</i>)	40 (Medium: <i>The impact could influence the decision to develop in the area unless it is effectively mitigated.</i>)	27 (Low to Medium: <i>The impact has an influence, but the impact can be mitigated.</i>)
Notes:	As long as the swimming pool is not included in the proposal, the assessment above stands.		

Discussion and impact-specific observations to support the findings of the assessment:

- i. The site is not visible from the majority of the scenic route and the east/west view corridor it creates.
- ii. The proposed project does not break the silhouette of the ridgeline for all of the eastern views tested (including those from the conservation areas).
- i. No public view corridors between the Indian Ocean and the coastal hills and ridgelines are interrupted or dominated visually by the proposed development. The proposed development does not have an effect on the ridgelines directly west of the site, nor the ridges of the foothills further inland.
- iii. Alternatives 2 and 3 interrupt the continuity of the ridgelines from a portion of the scenic route, and at the incoming and outgoing thresholds of the town.

6.2.3 Impact on protected landscapes and scenic resources

Table 8: Visual Impact Assessment for (a) Effect on protected landscapes and scenic resources.

Nature of Impact	Change affecting protected landscapes and scenic resources: (i.e.: effect on the scenic route envelope; the effect on the total visual, heritage, conservation and tourism amenity of the area as well as heritage and conservation resources themselves).		
Proposal:	Alternative 1	Alternative 2	Alternative 3
Extent	2	2	2
Duration	4	5	4
Intensity	3	4	4
Probability	3	4	3
Status of the impact	Negative	Negative	Negative
Significance	27 (Low to Medium: The impact has an influence, but the impact can be mitigated.)	44 (Medium: The impact could influence the decision to develop in the area unless it is effectively mitigated.)	30 (Low to Medium: The impact has an influence, but the impact can be mitigated.)
Notes:	The above ratings describe visual impact on protected landscapes and scenic resources with specific reference to the scenic route .		

Discussion and impact-specific observations to support the findings of the assessment:

- ii. The proposed development will **not impact on local heritage and cultural resources** (sites, landscapes and/or monuments) from a visual point of view.
- iii. The **conservation areas** identified as potential sensitive receptors are outside of the ZoVI, and will thus **not be affected**.
- iv. The tourism amenity of the area is unlikely to be affected by the development in any significant way.
- v. The site is situated on the inland side of the scenic route, and does not encroach on or interrupt sea views.
- vi. Generally, the proposed development alternatives do not substantially deviate from the local settlement pattern. Alternatives 2 & 3 protrude above the vegetation notably from a limited number of views.
- vii. In terms of the scenic route, aspects of all three Alternatives are visible from a short portion of the road at the entrance of Keurboomstrand, an important threshold in terms of the visual character of the town.

6.2.4 Impact on visual character and sense of place of Keurboomstrand (east)

Table 9: Visual Impact Assessment for (a) Effect on the visual character and sense of place of Keurboomstrand (east).

Nature of Impact	<u>Change to the visual character of the area:</u> (i.e.: effect on the sense of place, settlement pattern, landscape character and other sensate features of Keurboomstrand (east); with reference to the degree of change from existing development and land use in the area. The effect on the total visual, heritage, conservation and tourism amenity of the area, especially as these contribute to the sense of place and landscape character.		
Proposal:	Alternative 1	Alternative 2	Alternative 3
Extent	2	2	2
Duration	4	4	4
Intensity	2	3	2
Probability	2	2	2
Status of the impact	Negative	Negative	Negative
Significance	16 <i>(Low: The impact does not have a direct influence on the decision to develop the area.)</i>	18 <i>(Low: The impact does not have a direct influence on the decision to develop the area.)</i>	16 <i>(Low: The impact does not have a direct influence on the decision to develop the area.)</i>
Notes:	n/a	n/a	n/a

Discussion and impact-specific observations to support the findings of the assessment:

- i. The proposed development does not introduce a change in land use from the land use in the area, but does introduce a scale of development that (while not unprecedented) deviates somewhat from the settlement pattern and townscape character of Keurboomstrand east in terms of footprint, overall size and number of dwellings per erf.
- ii. The proposed project is likely to result in some change to the Landscape character within the ZoVI (the difference between “noticeable change” and “some change” will be determined by the extent to which the vegetation on site is disturbed (from eastern views especially).
- iii. The proposal will result in limited change for landmarks and natural features, and is will result in limited change to the townscape character, provided that all the ecological, geotechnical and visual sensitivities are adequately responded to.

6.3 Visual Impact Assessment of the Construction Phase

Please note that the Probability ratings for all Construction phase impacts would be Unknown (5) where the “specialist does not know what the probability will be, based on too little information available”. In all cases, the Construction phase impacts will be: Local in Extent (2), Short-term in Duration (2) and Very High in Intensity (5).

Table 10: Visual Impact Assessment for the Construction Phase (Alternatives 1, 2 and 3)

Nature of Impact	Construction phase impacts such as unsightly structures under construction, hoarding fencing and signage, airbourne dust and increased dust on public roads alongside. Scaffolding and site camps.
Proposal:	Construction phase (Alternatives 1, 2 and 3)
Extent	2
Duration	2

Intensity	5
Probability	5
Status of the impact	Negative effect at the cost of the environment, receptors or the visual amenity.
Significance	45 (Medium: <i>The impact could influence the decision to develop in the area unless it is effectively mitigated.</i>)
Summary:	Medium (Negative) visual impact: Construction phase (Alternatives 1, 2 and 3)

This delivers an overall **Negative** Visual Impact of **Medium significance** (45) for the Construction phase for Alternative 1, 2 and 3 (i.e. The impact could influence the decision to develop in the area unless it is effectively mitigated).

6.4 Visual Impact Assessment of the No-development option

The No-development option is considered here, in order to indicate the predicted visual impact of the proposed project should it not be built, and the property remain undeveloped. The following summarises the significance ratings for the No-development option:

- i. The extent of the No-development alternative will be site-related (1), as existing conditions on site will neither develop nor significantly deteriorate, and the visual impact of the status quo will not be affected locally or regionally.
- ii. The duration of the impact of the No-development alternative has been selected as “Immediate” in order to reflect a low criteria rating (0). In truth, the duration of an absent impact cannot be measured, as it does not occur in the first place, and no visual impacts are anticipated in the absence of development.
- iii. Because the natural and/or social functions and/or processes of the subject site will remain unaltered, the intensity of the No-development alternative’s potential impacts is None/zero (0).
- iv. The probability of visual impacts occurring as a result of the No-development alternative is very low, and is assigned to the None (0) criterion for probability.

Table 11: Visual Impact Assessment for the No-development option.

Nature of Impact	No development occurs.
Proposal:	No-development option
Extent	1
Duration	0
Intensity	0
Probability	0
Status of the impact	Neutral effect on the environment
Significance	0 (Negligible: <i>The impact has no impact.</i>)
Summary:	Negligible (Neutral) visual impact: No-development option

Overall, the visual impact significance for the No-development option is Negligible (0). There are no impacts, negative or otherwise, to mitigate.

6.5 Cumulative Impacts

Cumulative visual impacts are the result of compounded visual effects and changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments. These other developments can be associated with or separate to the proposed development under assessment and can also refer to actions that occurred in the past or are likely to occur in the foreseeable future. Cumulative effects may be positive or negative, and they may influence the way that a landscape is experienced. Where they result in *benefits* or a series of positive impacts, they may be considered to form part of the mitigation measures.

Cumulative effects can also arise from the intervisibility (visibility) of a range of developments and /or the combined effects of individual components of the proposed development occurring in different locations or over a period of time (Young, 2014, p. 50). While the individual effects of these actions or proposed project components may not be significant, they have the potential to collectively bring about either successful mitigation or an unacceptable degree of negative effects on visual receptors or environmental resources.

Existing Erf 565 development. Cumulative impacts are anticipated on the scenic route, landscape character and townscape character at a significant threshold/entrance, when the anticipated visual impact of the proposed development is taken together with that of the existing Erf 565 development. The affected portion of the MR394 is a significant threshold for the Keurboomstrand town, being located at the main pedestrian and vehicular entrance, and where the densely vegetated (substantively undisturbed) foothill that comprises the rest of Erf155 terminates. On the seaward side of the road, the development on Erf 565 is visually exposed, and presents a walled, almost urban interface with the public realm. In areas with scenic drive management plans or overlay zones, buildings and structures are not generally permitted on a site abutting the lower or down-slope side of a scenic drive, or to project more than 1.2m above the footway in the public street (Scenic Drive Network Management Plan, 2003, p. 17). The addition of another building on the up-slope side of a scenic route that would interrupt the visual continuity between the ocean and the terrestrial landscape further would have the cumulative effect of changing the landscape and townscape character of this threshold space. In areas with scenic drive management plans or overlay zones, no portion of a building is permitted to project so as to impair the view to the top of a ridge, hill or mountain when viewed from a point 1,2m above the centerline of the scenic drive (City of Cape Town, 2003, p. 17). Inappropriate development along the scenic route will have a negative cumulative visual impact.

Townscape character. The development will also add more generally to the compounded visual effect of densification and development within Keurboomstrand town, with particular reference to views from the east in a westerly direction. The existing built form from these views absorbs the new one to an extent, but only within the acceptable parameters discussed in Section 5.2.3 a) and elsewhere in this document (i.e.: buildings do not generally protrude above the vegetation except for their roofs and/or the top floor and roof).

6.6 Visual impact assessment: Conclusions

In an area with high sensitivity all round, the most desirable outcome is for all aspects of the proposed development to have medium to high compatibility, moderate or low exposure, low visibility and low visual impact overall.

The Department of Environmental Affairs and Development Planning have made their position on this matter clear, stating in their comments on the Local Area Spatial Plan that future development in Keurboomstrand **must have low visual impact** (Keurbooms and Environs Local Area Spatial Plan, 2013, p. 154). The Department makes specific reference to development proposals on slopes of 1:4 or steeper, where development would

be highly visible. Their recommendation is to limit development to flatter ground (TV3 Architects and Town Planners, 2013, p. 155).

6.6.1 Alternative 1

Alternative 1 is expected to have **Low** visual impact overall, with Low to Medium visual impact on the scenic route.

- Impact on sensitive receptors: **Low** neutral (14).
- Impact on important views and view corridors: **Low** negative (6)
- Effect on protected landscapes & scenic resources (scenic route): **Low to Medium** negative (27)
- Effect on the visual character and sense of place: **Low** negative (16)

6.6.2 Alternative 2

Alternative 2 is expected to have **Medium** visual impact overall, with Medium visual impact on the scenic route.

- Impact on sensitive receptors: **Low to Medium** neutral (24)
- Impact on important views and view corridors: **Medium** negative (40)
- Effect on protected landscapes & scenic resources (scenic route): **Medium** negative (44)
- Effect on the visual character and sense of place: **Low** negative (18)

Conclusions:

- Alternative 2 increased the visibility of the proposed development overall, but especially from the scenic route and recreational areas, increasing the number of sensitive receptors.
- It is more visually intrusive to sensitive receptors than Alternative 1 because the bulk of the buildings are located on the most visually sensitive part of the site, where the VAC is the lowest (on the seaward side of the promontory, where the vegetation does not screen the proposed buildings).
- Alternative 2 increases the Zone of Visual Influence because of its higher visibility. More of the development will be visible to users of the Keurboomstrand beaches, and a longer stretch of the scenic route to the west (at least 1km).
- The visual impact on views from the east will be comparable to that of Alternative 1.
- Alternative 2 may be more noticeable from neighbouring properties than Alternative 1.
- The effect on key elements of the Landscape Character will be increased, as the proposed building would be more clearly visible within the view frame & experience of receptors, with increased dominance especially from the scenic route.
- Alternative 2 demonstrates higher exposure in the Foreground Distance zone.
- The overall compatibility of Alternative 2 is lower than that of Alternative 1.

6.6.3 Alternative 3

Alternative 3 is expected to have **Low to Medium** visual impact overall, with Low to Medium visual impact on the scenic route.

- Impact on sensitive receptors: **Medium** neutral (32)
- Impact on important views and view corridors: **Low to Medium** negative (27)
- Effect on protected landscapes & scenic resources (scenic route): **Low to Medium** negative (30)
- Effect on the visual character and sense of place: **Low** negative (16)

Conclusions:

- i. The overall visibility of Alternative 3 is comparable to that of Alternative 1, except that the buildings are larger with longer and more continuous facades – demonstrated in Simulation B.
- ii. Alternative 3 is less visually intrusive than Alternative 2 generally, but the increased exposure of Unit 3 on the eastern side results in higher visual impact on sensitive receptors (i.e.; local residents).
- iii. Alternative 3 may be more noticeable from neighbouring properties than Alternative 2.
- iv. The overall compatibility of Alternative 3 is lower but comparable to that of Alternative 1.

6.6.4 Construction Phase impacts

Alternative 1 is expected to have **Medium** negative visual impact overall.

6.7 Recommendations and responsiveness analysis

A number of parameters were provided in response to visual impact assessment upon submission of the Draft VIA in 2021.

6.7.1. Recommendations issued with the Draft VIA relating to Alternative 1

Alternative 1 was selected as the Preferred option at the time of the submission of the Draft VIA. They are included here for the record. Conditions of development to be imposed on Alternative 1 from a visual point of view were the following:

- i. The proposed swimming pool should either be removed from the proposal or reduced in size and repositioned parallel to buildings (on ground level or maximum 1,5 m above Natural Ground Level (NGL) if on the southern (scenic route) side of the property).
- ii. The recommendations and offsets of the Botanical, Geotechnical and Visual specialists must be incorporated into the final proposal. This may involve re-orientating the units to reduce biodiversity impacts (as per the recommendations previously provided by specialists).
- iii. The footprints of the buildings and driveway areas must be reduced if necessary, to fit the three dwellings into the developable area determined by the specialist offsets/setbacks. In particular, unit 1 (the westernmost unit) is positioned over the steep slope and sensitive forest areas and must be shifted out of the high sensitivity biodiversity area.
- iv. The building envelope, including chimneys, must not protrude above the 8m height restriction. The Bitou Municipality's zoning scheme does not provide specific guidance as to how the base level measurement is taken, but does provide definitions to determine "Storey" and "Basement" heights:
 - a. "Storey" means a single level of a building, excluding a basement, which does not exceed a height of 4 m, measured from finished floor level to finished floor level or the top of the ceiling in the case of the top storey.
 - b. "Basement" means that portion of a building, the finished floor level of which is at least 2 m below, or the ceiling of which is at most 1 m above, a level halfway between the highest and lowest natural levels of the ground immediately contiguous to the building.

This VIA recommends that the existing ground level (NGL) is **the base level from which maximum height permitted is measured** so that the height restriction slopes parallel to the existing ground level.

- v. The final proposal should adopt the approach taken by Alternative 2 in responding to site contours more sensitively. This is achieved by balancing the amount of cut and fill, and embedding the buildings in the slope according to the contours surrounding each unit.
- vi. All mitigation measures outlined in Section 6.8 must be adhered to. Mitigation measures regarding the clearance and disturbance of existing vegetation are of particular importance.

6.7.2. Visual Sensitivity parameters for all Alternatives

To augment the botanical and geotechnical sensitivity mapping, the findings of this VIA supported the following visual sensitivity parameters.

a) *Scenic route setback/offset*

In the absence of guidelines for Scenic routes within the Bitou Municipality, it falls to the Visual specialist to establish visual buffer zones with setbacks and height restrictions along scenic routes (that would be impacted by the proposed development), the dimensions of which are dependent on site and receiving environment sensitivities, view corridors and other local conditions (Western Cape Government, 2013, p. 41). The directive to protect scenic routes in the Western Cape stems from their regional, heritage and tourism significance and because of value their cultural value and importance to the economy of the Western Cape. The Heritage and Scenic Resources Inventory and Policy Framework for the Western Cape serves as reference material to determine an appropriate offset for Erf155.

The following specific guidelines are of particular importance in the context of the Erf 155 development proposal:

- Prohibit obstruction of sea and mountain views along proclaimed scenic routes;
- Avoid visual intrusions (such as inappropriate signage, fencing, building envelopes and other infrastructure), and prevent the obstruction of views towards important cultural and landscape features;
- Establish visual buffer zones with setbacks and height restrictions along scenic routes. (E.g., for secondary routes, but these are dependent on view corridors and other local conditions);
- Respect the landscape setting and gateway qualities of scenic routes, particularly those with a wilderness or rural setting;

The City of Cape town guidelines for scenic routes (which serve as reference material in the handling of scenic routes in the absence of local guidelines) routinely propose a Scenic route setback measuring a distance of not less than four times the building's largest dimension, and never less than 30m. Considering that the seaward views have already been negatively impacted by development on nearby erven, protecting the landscape setting and gateway qualities of this particular stretch of road is an imperative.

- The setback line has been determined based on and in response to the findings of this VIA with regard to the sensitivities of this subject site (through visibility and viewshed analysis, 3D modelling and simulation).
- An offset would enable visual intrusion to be managed to an acceptable extent. Even though the buildings would be higher up the slope, the denser and taller existing vegetation would surround and absorb the buildings more effectively to reduce visibility.
- An offset would ensure that the gateway character of the scenic route at this NB entrance point would be subject to less visual intrusion.
- The centre line of the road reserve of Main Road 394 serves as the origin line for the setback.

- The Scenic Route setback enables the topography and vegetation to screen the proposed buildings for the sensitive scenic route views.

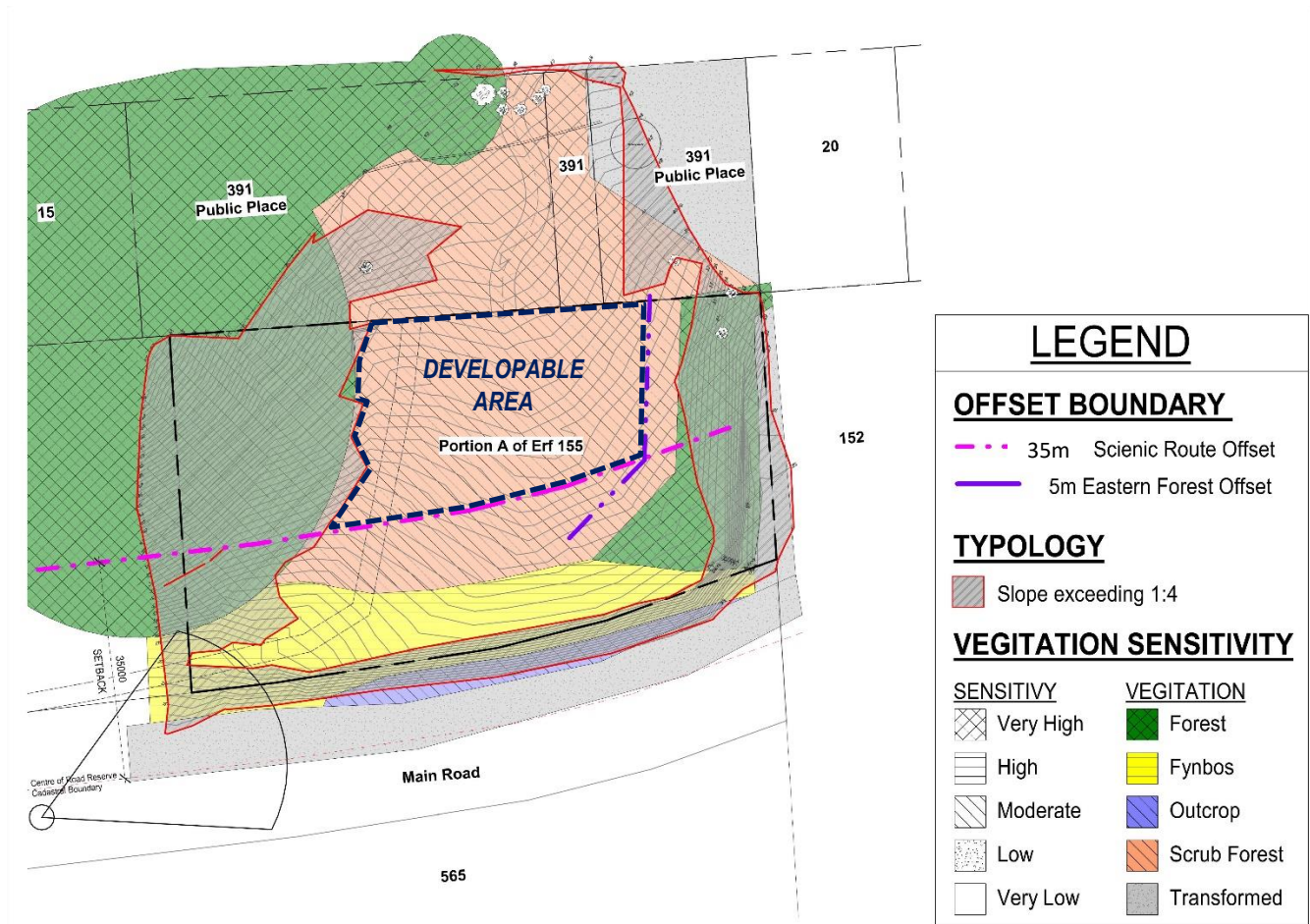


Figure 85: Visual Sensitivity offsets and setback lines (Smit & van der Merwe, 2021)

As the existing zoning scheme and SDP’s do not provide formal protection of scenic routes, or define the scenic road envelope (an area that includes the carriageway, road reserve, immediately adjacent public land and the first erven abutting any of these (City of Cape Town, 2003, p. 21)), the following recommendations are made:

- The proposed project must preserve the continuity of views from the scenic route to the surrounding ridgelines;
- No development, structures or building envelopes should be allowed to occur higher than 8m above the average slope of the natural ground level anywhere on the site;
- Steep fill slopes and retaining walls facing the scenic route should not be permitted (as with walls);
- No boundary wall will be permitted on the upper side of the scenic route;
- A 35m scenic route setback line, measured from the centre line of the MR394 road reserve (which is a surveyed cadastral boundary) is recommended to limit all building and development within that area.
- Landscaping in this area may be permitted to provide privacy, limited accessible landscape areas (notably excluding large open lawns and terraces) and screening.

It is the considered opinion of the authors that the sensitivity of the site on this southern edge warrants the 35m minimum setback, and that any reduction to it will risk unacceptable visual intrusion and impact within the context.

b) Additions to botanical and geotechnical sensitivity area offsets

The steep slope no-go areas determined by the geotechnical report and the protected vegetation no-go areas mapped by the botanist must be adhered to. While these mapped sensitive areas are all important, the easternmost slope and corresponding forest area are of particular importance in terms of predicted visual impacts.

- An **additional 5m building offset** is recommended (from the line of the easternmost steep slope and forest vegetation area), to ensure that the existing vegetation that will screen the proposed buildings for eastern views is not disturbed.
- All trees and tall vegetation in this area must be retained.
- Hard and soft Landscaping sympathetic to the existing trees and large shrubs (protected species or not) should be allowed in this area.

All other mitigation measures must be adhered to in addition to the sensitivity parameters indicated below.

c) Developable area

Taken together with the Botanical and Geotechnical sensitivity and no-go areas, the offsets described in section 6.7.2 a) and b) above result in a developable area of approximately 1448m². Refer to Figure 38 of the Architectural guidelines, and Figure 85.

d) Architectural guidelines

A set of Architectural Guidelines were prepared by Rust van der Merwe in August 2021 to assist the project team to develop an appropriate design response for the proposed development at Erf 155 Keurboomstrand, and serve as a guiding document at later stages of the design development. The guidelines were developed in response to the aesthetic, building and landscaping requirements outlined in the Draft VIA.

Please refer to Item 6.1 of the Architectural Guidelines for a description of the General Design Approach. Items 6.3 to 6.24 list guidelines for all aspects of the development including building height and form, roofs, materials and colours, exterior walls and fences, windows, pergolas, balustrades, carports services, chimneys, lighting, swimming pools, landscaping and clearing of vegetation.

Key parameters include:

- Adherence to the height restriction;
- Adherence to Single Residential II Zoning Scheme Regulations;
- Adherence to 1:4 slope no-go areas, the botanical and geotechnical development limitations;
- Offsets and restrictions described in the VIA (scenic route and slope/vegetation offsets)
- Specification of appropriate finishes (Material, colour and texture)
- Use of local materials, products and indigenous plants;
- Approach to site-wide design: buildings to be appropriately scaled and seen as an extension of the natural landscape; to be nestled within vegetation and natural sloping topography;

- Avoid large retaining structures, plinths and building platforms i.e.; a balanced approach towards cutting and filling of the site;
- Limit visual impact, visibility and light pollution in relation to neighboring properties;
- Limit the clearance of vegetation during construction phase and beyond;

6.7.3. Adherence/responsiveness to visual sensitivity parameters

The following series of graphics demonstrates the adherence of the three Alternatives to the various development constraints. Table 12 below then compares the compliance of each Alternative to key aspects of the development that influence visual impact:

- Does the proposed development remain within the developable area?
- Compliance with Scenic route setback line?
- Compliance with eastern forest/slope offset?
- Adherence to the height restriction?
- Are buildings to be appropriately scaled and seen as an extension of the natural landscape; nestled within vegetation and natural sloping topography?
- Balanced approach towards cutting and filling of the site?
- Limit the clearance of vegetation?

Please refer to Table 12 below for the findings.

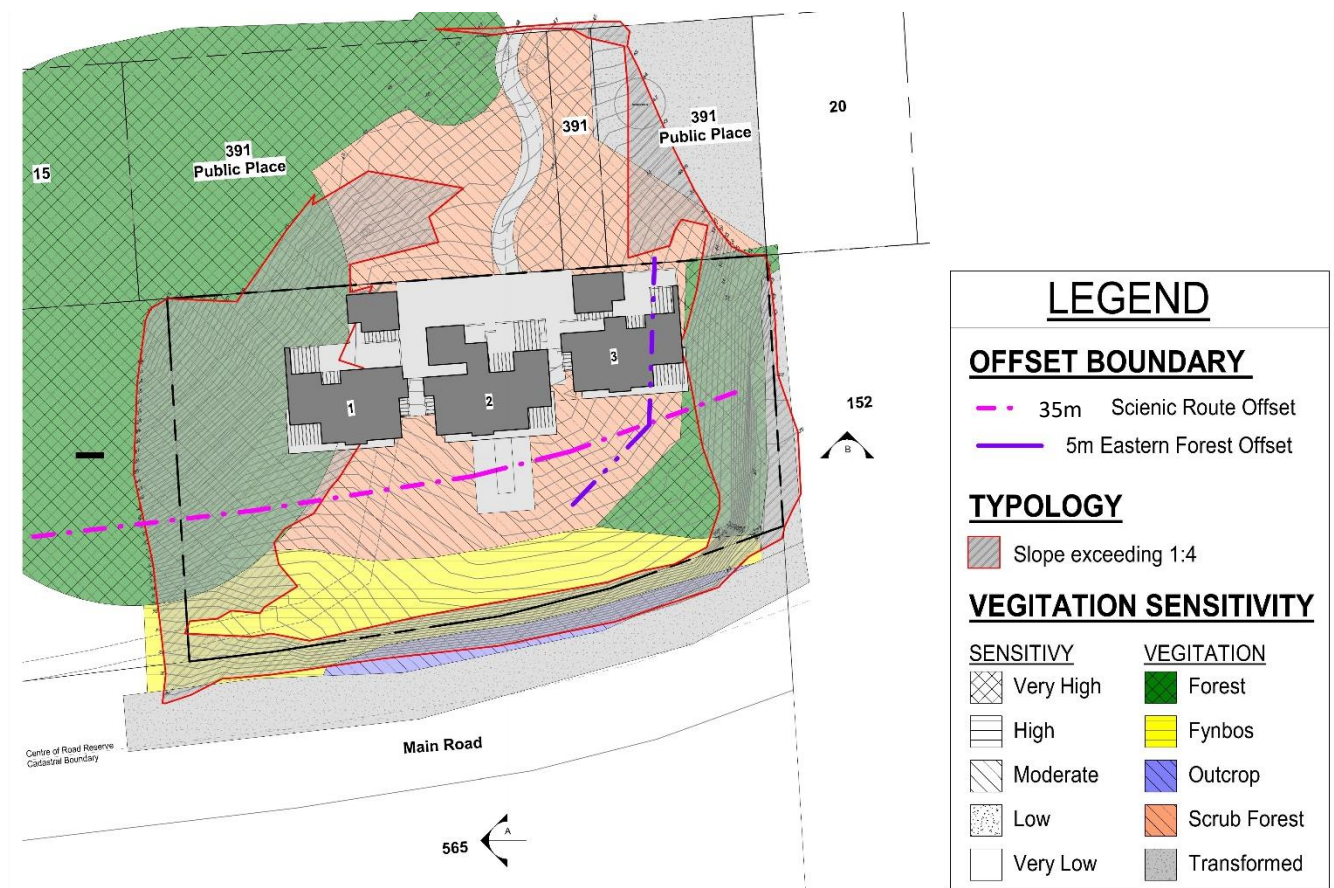


Figure 86: Site Plan of Alternative 1 showing botanical sensitivity, geotechnical and visual sensitivity no-go areas and setbacks/offsets over site contours. (van der Merwe, 2021)

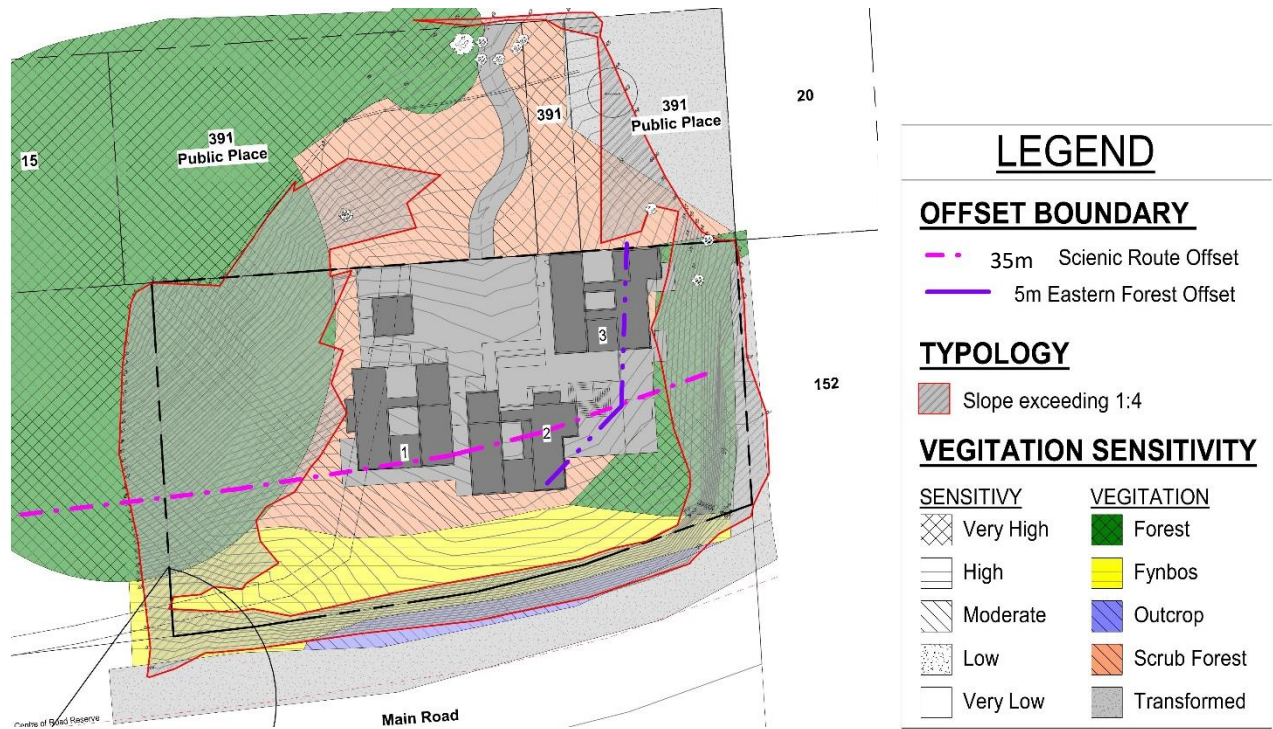


Figure 87: Site Plan of Alternative 2 showing botanical sensitivity, geotechnical and visual sensitivity no-go areas and setbacks/offsets over site contours. (van der Merwe, 2021)

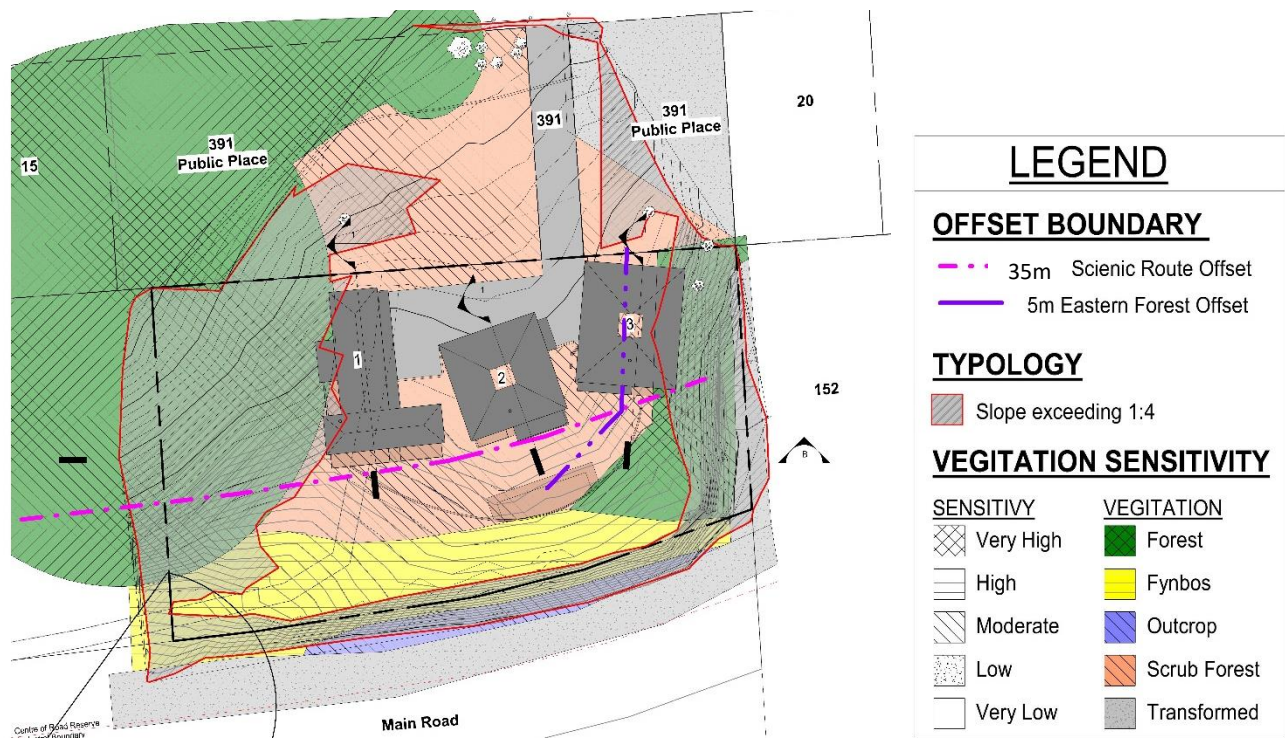


Figure 88: Site Plan of Alternative 3 showing botanical sensitivity, geotechnical and visual sensitivity no-go areas and setbacks/offsets over site contours. (van der Merwe, 2021)

Table 12: Compliance checklist.

Compliance checklist			
Proposal:	Alternative 1	Alternative 2	Alternative 3
Does the proposed development remain within the developable area?	No	No	No
Compliance with Scenic route setback line?	Mostly yes (except swimming pool)	No	Yes
Compliance with eastern forest/slope offset?	No	No	No
Adherence to the height restriction?	Yes	Yes	Yes
Are buildings to be appropriately scaled and seen as an extension of the natural landscape; nestled within vegetation and natural sloping topography?	Not evident	Not evident	Not evident
Balanced approach towards cutting and filling of the site?	No	Improvement on Alternative 1, but still proposes large retained terrace.	Improvement on Alternative 2, but still proposes large retained terrace.
Limit the clearance of vegetation?	Not evident	Not evident	Not evident

The comparative analysis found that none of the Alternatives are compliant.

7. MANAGEMENT ACTIONS AND MITIGATION MEASURES

7.1 Parameters and Principles for Mitigation

In the recommendation of mitigation measure, Filia Visual applies three⁸ parameters:

- **Feasibility:** Mitigation measures should be economically feasible within the scope and nature of the proposed project;
- **Effectiveness:** How long will it take to implement and what provision is made for ongoing management and maintenance;
- **Acceptability:** Is the recommendation an appropriate fit within the framework of the existing landscape and land use policies.

In response to the parameters above, mitigation measures should – in principle – take a site-specific approach and be designed to suit the existing landscape character and needs of the locality and/or proposed project. They should respect and build upon landscape/townscape distinctiveness.

Some mitigation measures such as vegetation rehabilitation and screen planting are not immediately effective and take time to have a mitigating outcome. It should also be kept in mind that even if the proposed development includes visual screening & offsets designed to reduce visual impact, the structures will remain at least partly visible, and therefore the impact after mitigation may not always be significantly less than before mitigation.

7.2 Management actions and Mitigation measures

The Keurbooms River Draft Spatial Development Framework requires all development in this area to be subject to strict urban design, architectural and land use guidelines (Bitou Municipal Spatial Development Framework, 2017, p. 276). Therefore, it is important that these recommendations and mitigation measures are complied with, and included in:

- i. the conditions of approval by authorities;
- ii. in the technical documentation by the professional team for construction or further planning approval purposes;
- iii. and in the Environmental Management Programme (EMPr), as necessary.

It is the responsibility of the client to ensure that the content of this section is included in the further design and construction phase documentation. Mitigation measures must be implemented timeously and fully, especially in terms of the re-establishment of vegetation after disturbance.

The Site Development Plan (SDP) and building plans must demonstrate adherence to:

- the recommendations and conditions outlined in Section 6.7;
- the mitigation measures outlined in Section 7.

Due to the high value and sensitivity of the receiving environment, landscape character and the visual receptors, it is extremely important that a responsible and enforceable design approach be taken for the planning, construction and operational phases of each dwelling unit and the development as a whole, taking care to minimize the visual impact wherever possible.

⁸ Adapted from Young (Draft Visual Impact Assessment Report, 2014, p. 33)

Should the conceptual architectural proposal undergo significant change (especially in terms of height, siting, building envelope and massing, fencing, lighting and perimeter treatment or any feature that would constitute a change to the visual impact of the proposed development), the applicant/land owner will require a Visual statement issued by a suitably qualified visual specialist to determine if the findings of this study remain unchanged.

7.2.1 Additional information required for SDP level approvals

As a condition of approval for the Rezoning and Subdivision Land use planning approval (this approval), this VIA recommends that the following documents and plans be submitted along with SDP and/or building plans to the local municipality for approval, if not yet developed:

- i. A **Landscape Plan and Landscape Guidelines** by a suitably experienced and qualified professional, registered with SACLAP (refer to 7.2.3 for further detail);
- ii. An **Environmental Management Programme (EMPr)** by a suitably experienced and qualified professional (refer to 7.2.4 for further detail).

These management plans and guidelines are to be prepared and read in conjunction with all laws, bylaws and statutes of the Republic of South Africa and relevant local authorities, as well as in conjunction with the recommendations in this document, previous specialist studies, and other relevant local policy specific to the Keurboomstrand context.

7.2.2 General architectural recommendations and mitigation measures

The following must be incorporated into the final proposal (SDP, building plan etc.):

a. Siting, layout of buildings and relationship to landscape features

The whole site should be planned as one entity, with all elements of the development, buildings and outdoor spaces, being conceived and planned together.

- *Buildings and structures must be sited so as to limit alteration of natural topography, alteration of land forms, tree and vegetation removal and the extent of earthworks.*
- *Buildings blend more successfully with the landscape when aligned parallel to contours. The buildings should preferably adhere to the “u-shaped” configuration (a view supported by other specialist), as opposed to a linear configuration that would cause two or all three of the buildings to read as one, larger building.*
- *Large platforms should be kept to a minimum, and new levels should be designed to fit into the surrounding landform, stepping down as the natural topography steps down across the site. Landscaping, soil shaping and low walls can be used to tie buildings into the landscape.*
- *Buildings must be designed to blend with the natural setting (described at length in this document) and outdoor spaces should be designed so that the landscape appears to flow through the site, rather than impose structures on top of it.*
- *Building heights must be compatible with existing development and avoid creating sharp contrasts with neighbouring structures or with the landscape and townscape at large.*
- *The scale of buildings should be appropriate for their uses and should relate to that of the neighbourhood.*

b. Architectural features

The emphasis of the architectural design should be on simplicity, to prevent visual cluttering in the field of vision.

- *All rooftop equipment, air conditioning units, elevator shafts and other mechanical equipment shall be screened from view if visible from the scenic drive or repositioned entirely if screening is insufficient.*
- *Materials should be appropriate for the climate, ecology, texture and scale of the site and should be capable of weathering well over time.*
- *Blank, unarticulated walls and tall chimney columns (especially on the southern and eastern interfaces) should be avoided.*
- *The buildings might step down to the east and the south to ensure that the building envelope massing does not contrast with the site topography.*
- *Light pollution should be carefully avoided during the detailed design phase for interior lighting to minimise visual impact on neighbouring properties, the Scenic route and the cumulative impact of the town's light pollution load. Light fixtures that provide precisely directed illumination to reduce light "spillage" beyond the immediate surrounds of the light source are compulsory.*

c. Materials and colours

Consistency of architectural language and building materials throughout the development is key. The architectural proposal must establish and maintain a palette of appropriate materials and colours to be used throughout the development, to be approved by the local authority at SDP level.

- *The colour palette for materiality and finishes must draw on the colouring of the natural environment, preferencing mid-tone to darker colouring to blend with forest vegetation or lighter (not reflective, light, white, or beige) colouring to blend with fynbos vegetation.*
- *The SDP must include an annexure listing examples of materials and finishes permitted as well as lists of exclusions to allow the local authority to confirm the prohibition on inappropriate materials and finishes. For instance:*
 - *If natural material such as stone is used, the stone must be locally sourced and match the colouring (and, if possible, the geological origins) of the site and receiving environment.*
 - *Materials and finishes may not consist of bright colours, highly reflective surfaces or gratuitous use of glass. Curtain walls, windows, skylights and other glazing features must be shaded/set back under overhangs or similar to prevent glare, especially in the direction of sensitive receptors identified.*
 - *The use of exposed metal must be kept to a bare minimum, and any potentially shiny or reflective surfaces must be avoided altogether, or covered with matte, non-reflective finishes.*

7.2.3 Landscape related recommendations and mitigation measures

A Landscape Plan is recommended to ensure that landscape development is implemented and managed in a consistent, sustainable and visually sensitive way, according to the recommendations of this report and other specialist reports as these relate to potential impacts on vegetation. The following should form

part of the Landscape plan, which should be accompanied by a brief Landscape Guidelines document or Landscape Report (which must extend to the servitude right of way over Erf 152):

- i. Vegetation protection methodology: a basic framework and methodology to protect sensitive vegetation (individuals and areas) during the Construction phase and ensure that the impacts on all existing vegetation on site are minimized before, during and after Construction. This would include guidelines on the re-establishment of vegetation per vegetation type in the case of disturbance. The intention is to ensure the at the existing vegetation retains the maximum Visual Absorption Capacity described in this VIA.

The Landscape Plan must ensure the consistent, sustainable and visually sensitive installation and maintenance of the landscape over time, and inform the EMPr.

The following must be incorporated into the Landscape Plan and Guidelines:

a. The clearing of vegetation

The key mitigation measure regarding existing vegetation is that clearance of vegetation for construction shall not extend beyond 2m of the approved building footprint in every direction. This includes vegetation clearance for the establishment of the construction site office, materials storage, stockpiling and vehicular access to the site etc.

- *All construction activities must be limited to the building footprint and the 2m buffer zone. E.g.: All in-situ material as a result of bulk earthworks and excavations is not to be spoiled outward into the surrounding vegetation.*
- *Any additional disturbance to local vegetation must be recorded and rehabilitated or re-established according to the Vegetation protection methodology.*
- *Where vegetation that would otherwise have contributed to the screening of the buildings is removed, damaged or disturbed to the point that it can no longer function as screening, the vegetation shall be replaced in such a way that the replacement vegetation is functional as screening within 8-10 years.*
- *No additional or temporary roads, driveways, parking or turnaround areas may be established or cleared in addition to those indicated on the Site plan.*
- *No mass clearing of vegetation to establish flat lawn areas (with specific reference to those requiring retaining walls to create flat areas) should be permitted. Small lawned areas may be accommodated, with measures to prevent the establishment of domesticated grass species in any other part of the site.*
- *Limited and appropriate soft landscaping may extend further than the 2m offset around the buildings within the Moderate and Low sensitivity areas (refer to the Sensitivity map), but should avoid the protected forest and fynbos vegetation areas (High and Very high sensitivity).*

b. Landscape/outdoor lighting

The landscape plan must demonstrate that light pollution has been addressed in the detailed design phase. Exterior lighting must be kept to a minimum where necessary for safety and security. Exterior lighting must be carefully directed away from the Scenic route, neighbouring properties and other sensitive receptors in this VIA. The negative impacts of exterior night lighting should be mitigated in the following ways:

- *All exterior lighting shall be located and controlled so as to avoid direct illumination, glare or reflection onto any adjoining property or the scenic drive*
- *Install light fixtures that provide precisely directed illumination to reduce light “spillage” beyond the immediate surrounds of the light source for all outdoor areas (pathways, driveways, roads, decks etc.).*
- *Low level ‘bollard’ type lights or limited downlighting on steps and pathways may be appropriate to illuminate key routes for safety and security reasons.*
- *No post top lighting, flood lights, peripheral/boundary security lights or uncovered luminaires of any kind should be allowed.*
- *Security and other lighting should preferably be movement activated.*

c. Fencing

The development proposal assessed in this VIA did not include interior or perimeter fencing proposals (i.e.; type and height of fences, walls, entrance gates or security barriers). The assessment was conducted on the assumption that no fencing would be installed, except for an entrance gate on the property boundary between Erf152 and Erf 155. The position, height and type of fences and wall should be carefully designed in light of the visual and environmental sensitivity of the proposed project site.

- *The Landscape plan must provide clarity on this aspect, indicating the dimensions and materials of the entrance gate and all other fencing.*
- *All fencing must be visually permeable.*
- *The landscape plan and guidelines must also indicate the dimensions and materials of all other fencing, making a note of the exclusion of fences if none are indicated, to prevent inappropriate and discordant structures in the landscape in the future. Solid and masonry walls are to be avoided, as they tend to erode visual and townscape character in this context.*
- *No fence or wall should be permitted adjacent to and/or within view of the Scenic route, or within the 35m setback area as indicated on the Visual Sensitivity map.*
- *If perimeter security fencing is proposed, it is not permitted to be located at the top of the slope where it will be visible in silhouette from the Scenic Route (all fencing should preferably be located below the skyline and screened by vegetation where it will be less conspicuous).*

d. Materials and finishes

The landscape plan must establish and maintain a palette of muted colours in materiality and finishes, drawing on the colouring of the natural environment for accents where necessary. The landscape guidelines must include lists and examples of materials and finishes permitted as well as lists of exclusions to make certain inappropriate materials and finishes explicitly prohibited.

- *If natural materials such as stone is used, the stone must be locally sourced and match the colouring (and, if possible, the geological origins) of the site and receiving environment.*
- *Materials and finishes may not consist of light or bright colours, highly reflective surfaces or gratuitous use of glass.*
- *The use of exposed metal must be kept to a bare minimum, and any potentially shiny or reflective surfaces must be avoided altogether, or covered with matte, non-reflective finishes.*

- *No tar/asphalt road surfaces are permitted, and material choice must adhere to the overall materiality guidelines (i.e.: locally sourced materials with natural colouring to match the existing landscape).*
- *Careful planning of stormwater runoff must ensure that roads and other hard landscape surfaces do not trigger scouring or erosion in the landscape.*

e. Plant species and landscape installation

The landscape plan must indicate all soft and hard landscaping areas, and all other standard information as per the requirements of the local municipality. The vegetation types mapped as High and Very High sensitivity on the subject site should not be further impacted by any kind of development or transformation (Keurbooms and Environs Local Area Spatial Plan, 2013).

- *Areas immediately alongside buildings or within areas already disturbed by construction activities (e.g.: within the 2m disturbance concession area) should be permitted, provided that locally indigenous plant species are specified.*
- *Limited and appropriate soft landscaping may extend further than the 2m offset around the buildings within the Moderate and Low sensitivity areas.*
- *Plant species established on site must be compatible with the surrounding vegetation and micro-climate conditions, specific to the vegetation type encountered in that area of the site. Please refer to the Botanical survey, and the plant lists provided in the 2012 Habitat mapping and sensitivity analysis by Ken Coetzee listing species permitted within each vegetation type (TV3 Architects and Town Planners, 2013, p. 44)*
- *The Landscape plan must show screening on the southern side of the buildings as necessary for visual impact mitigation for the Scenic route. Screening and softening with vegetation must be specified to address any disturbance of the soil, embankments to be vegetated and to re-establish vegetation in the case of the removal or disturbance of scrub forest and/or fynbos vegetation during construction phase activities.*
- *Screening on the southern side of the buildings should aim to screen the first storey of the proposed development from the Scenic route views up the slope.*
- *The expectation is not that the building will be hidden, but rather that the screening vegetation allows the buildings to blend into the visual context more easily by reducing the starkness of new built features; especially where these meet the surrounding landscape.*
- *The landscaping of large areas, traditional gardens and large lawns should not be allowed, to maintain the integrity of the landscape character and the local vegetation patterns.*
- *The landscape guidelines must include lists of permitted and prohibited plants both for re-establishment of vegetation after soil disturbance and the installation of other landscape features such as shrubs for screening and/or garden areas.*

f. Alien control and management

All declared Alien and Invasive Species according to the lists as promulgated (GN R.599, dated 1 August 2014) in terms of section 97(1) of the National Environmental Management: Biodiversity Act (Act 10 of 2004) may not be used or brought onto or leave the site in any shape or form.

- *Any topsoil, compost, manure or other growing medium/soil additive must be sourced from an approved supplier and certified weed-free.*
- *The use of chemical pesticides, ground poisons and traps should be strictly prohibited, and environmentally friendly organic fertilizer must be used at all times.*

g. Relationship to open space system and public realm

The Landscape site analysis must include a brief overview of the impact of the proposed development on the public realm and open space system, if any. The Heritage and Scenic Resources Inventory and Policy Framework for the Western Cape states that ensuring access to resources is a key conservation management principle, especially where the public has traditionally enjoyed rights of access (Western Cape Government, 2013, p. 36).

While not falling within a protected area as such, the scenic sensitivity of the receiving environment, the value of the resources and the proximity of the site to a public open space area alongside may require the applicant to contribute to continuity of the public realm and open space system in some form, to offset the potential fragmentation of the public realm and/or open space system. This is outside of the scope of this VIA to determine, but should be addressed in the Landscape Plan.

In terms of protected natural areas, public open spaces and patterns of access, the following guidelines are noted and may be applicable, based on the findings of the Landscape Architect. Proposed development in this context should:

- *Prevent fragmentation and provide continuity within conservation networks, ensuring long term viability of ecosystems and areas of high scenic value.*
- *Prevent privatization of natural places forming part of the historical public open space resource network.*
- *Facilitate public access, education and interpretation to places of natural amenity by means of recreation trails and tourism facilities.*

7.2.4 Environmental Management Programme (EMPr)

The EMPr must be submitted along with the building plan for approval by the local municipality, and provide a framework within which environmental sensitivity compliance can be monitored in the context of a visually sensitive area. At this stage, limited information detailing the construction phase is available.

For this reason, the following recommendations are made to guide the drafting of the EMPr in terms of managing visual impact during the construction phase. Ideally, the Landscape Plan should inform the EMPr, and these two documents must be read together in the Construction and Operational phases of the proposed project.

a. Content and focus of the EMPr for visual mitigation and management

The client and landowner must put formal and enforceable measures in place to ensure that the visual impact of construction activities is limited and reduced wherever possible. Ideally, this would form part of the EMPr.

- *Dust management, waste management, the placement of screens and hoarding, as well as the location and management of access to the site must be proactively managed to reduce visual clutter and limit visual impacts associated with construction activity before, during and after each phase (demolition, excavation, project execution, close-out etc., establishment, etc.).*
- *Storage on site must be limited, and one approved route to the construction site must be delineated and marked clearly to prevent disturbance to the surrounding vegetation.*
- *All site operatives to receive training in awareness of the issues of fires, litter, and contaminants as these pertain to visual impacts. No fires are to be allowed on site; no litter*

and no contaminants to be allowed to enter the environment by any means. These substances may include amongst other things, diesel, curing compounds, shutter oil and cement. Utilization of such substances should be controlled on site, especially in relation to potential discharge or spillage.

- *For the duration of the various construction phase contracts (main and sub-contracts), the contract time should be kept to the minimum, and night-time construction with its concomitant lighting impacts must not be allowed, or allowed for within strict parameters deemed appropriate by the local authority.*
- *Signage on site during construction to be limited to the absolutely necessary safety and information signage, excluding advertising in all forms.*
- *Fencing/hoarding and signage must adhere to local policy relating to signage construction-phase fencing and ensure that no views are impacted by large, illuminated, or numerous signage.*
- *Sensitive vegetation must be marked clearly and the rootzones of protected species must be demarcated and made off limits to prevent compaction of soil and damage to the root zone.*
- *Appropriate fencing should screen the construction site where possible, but only if it results in no vegetation disturbance. Lay down areas and the construction camp should have temporary screen fencing, as necessary.*
- *Dust and debris control must be implemented to minimize the impacts on the neighbouring properties and other sensitive receptors. Where necessary, access routes and the site itself should have an effective dust suppression management programme applied, such as the use of non-polluting chemicals that will retain moisture in the exposed site surfaces.*
- *At the outset of construction for each of the units, the clearing of vegetation and removal program must take care to prevent the spread of exotics and alien invasive species both to and from site.*
- *Grading shall be permitted only to the extent necessary to construct buildings and access roads, and shall not adversely affect views from the scenic drive.*
- *Graded slopes shall be rounded to blend with the existing topography, to fit in with the natural colours of the land, and to establish a transition between constructed and existing slopes. The natural surface drainage system shall be maintained.*
- *Cut and fill surfaces shall be stabilised by planting low maintenance, indigenous or locally appropriate ground cover and shrubs.*
- *All Construction phase impacts must be managed in accordance with an approved Environmental Management Plan.*

8. CONCLUSION AND VISUAL IMPACT STATEMENT

This VIA is drafted to ensure that the visual & aesthetic consequences of the proposed project are understood and adequately considered in the environmental and land use planning process. The purpose of this study was to determine the potential Visual Impact of the proposed development on the visual and scenic environment, and to address the specific requirements of the VIA outlined by the Bitou Municipality (refer to Section 2.2 for the full list). The Heritage and Scenic Resources Inventory and Policy Framework for the Western Cape (Western Cape Government, 2013) encourages a pre-cautionary approach to development applications within landscapes with high scenic value and sensitivity.

The findings of this VIA demonstrate that the Value of the Visual Resource (Scenic Quality of the Receiving Environment) is **High**, and the receiving environment has a **strong Landscape character** and **distinctive Sense of place**. The greater receiving environment contains recognizable landmarks, landscape features and vistas as part of the Garden Route (a locally and internationally recognized destination place for scenic beauty and leisure/recreational and tourism activities); while the local receiving environment of Keurboomstrand is unique and distinctive within the coastal belt, based on both the local townscape character and the value of the natural and scenic resources. Eastward and toward the conservation areas, the landscape takes on a distinct coastal wilderness Sense of place. Westward, Sense of place within the dune slack area is more rural, becoming increasingly transformed towards Plettenberg Bay.

The Landscape Quality of the Receiving Environment is **High**, and Landscape Integrity can be described as **Moderate to High**, considering the pre-existing visual impacts on the base landscape brought about by the development of Keurboomstrand into a small, coastal resort town over time. Key elements of the landscape character are:

- The dramatic coastal scenery in the form of mountainous forests (in places seemingly untouched) offering a backdrop to long sandy beaches, estuaries and river valleys, and open views of the ocean.
- The landscape and natural resources (including scenic resources) as a setting and container for tourism, recreation, leisure etc.

The RE is generally **sensitive to change** and will be detrimentally affected if change is inappropriately dealt with. The findings of the visual analysis are supported by 3D modelling, Line of Sight testing in the 3D environment and in the field, as well as viewshed analysis and Simulations.

Table 13: Concluding summary - Visual Analysis

Zone of Potential Visual Influence	Approximately 800m (the Foreground distance zone)
Landscape Character Sensitivity	Moderate to High (generally sensitive to change)
Local sensitive receptors & View corridors; Sensitivity of Visual Receptors	The Sensitivity of Visual Receptors is High . (Refer to section 5.3.4 and 5.4 of this report or a full list of sensitive receptors)
Visibility	Moderate to Low
Visual Exposure	Visual Exposure is Low overall. <ul style="list-style-type: none"> • High for Immediate Foreground views (<u>up to 100m</u>) • Moderate for a minority of Foreground views (<u>up to 800m</u>); • Low for the majority of Foreground views (<u>up to 800m</u>); • Insignificant for the Middle and Background distance zones (800m +)
Visual Absorption Capacity	High to Moderate ⁹
Relative Compatibility	Medium compatibility, with aspects of Low compatibility.

⁹ Please note that a high VAC is desirable.

8.1 Visual Impact Assessment summary of findings

The Department of Environmental Affairs and Development Planning have stated that development in Keurboomstrand **must have low visual impact**. At the outset of this study, the DEA&DP Guidelines were used to predict Moderate visual impact based on the classification of a Category 2 development within an area (or route) of high scenic, cultural, historical significance.

See table below providing a comparison between the categories listed as expected issues per impact classification.

Categories of Issues		
High Visual impact	Moderate Visual impact	Minimal (Low) Visual impact
<ul style="list-style-type: none"> • Potential intrusion on protected landscapes or scenic resources; • Noticeable change in visual character of the area; • Establishes a new precedent for development in the area. 	<ul style="list-style-type: none"> • Potentially some effect on protected landscapes or scenic resources; • Some change in the visual character of the area; • Introduces new development or adds to existing development in the area. 	<ul style="list-style-type: none"> • Potentially low level of intrusion on landscapes or scenic resources; • Limited change in the visual character of the area; • Low-key development, similar in nature to existing development.

The VIA has determined that visual impacts will result from the development of the proposed Erf 155 Keurboomstrand project. Please refer to Chapter 6 for Visual Impact Assessment of the three Alternative proposals.

The subsequent findings of this study have determined that the visual impact predicted will be:

- i. **Low** for the Alternative 1;
- ii. **Medium** for Alternative 2;
- iii. and **Low to Medium** for Alternative 3.

The findings of the Visual Impact assessment indicate that Alternative 1 will have the lowest visual impact overall. Alternative 2 will have higher visual impact on the scenic route, while Alternative 3 will most likely have higher visual impact on sensitive receptors (locals and neighbours). Alternative 1 (sans the swimming pool) remains the most responsive to the visual sensitivities of the site; is the least visible from the surrounding receiving environment; and will impact minimally on key aspects of Landscape Character and Sense of Place.

The Cumulative visual impact of all three Alternatives on sensitive features, hills and ridgelines will be comparable; but Alternative 2 is the most visually intrusive, especially at the threshold of the town, along the scenic route. While a measure of urbanity that develops over time may be acceptable within the town proper, an entrance to what has been described as a resort town with a distinctive local character has a much lower tolerance for large, intrusive and visually dominant structures that are not embedded in the local forest and scrub forest vegetation.

The VIA does not support any one of the Alternatives outright, as none of the proposals comply substantially with both the recommendations of the Draft VIA and the visual sensitivity setbacks provided (refer to Section 6.7.2 and Table 12).

8.2 Summary of conditions, recommendations and mitigation measures

8.2.1 Visual Sensitivity parameters for all Alternatives

To augment the botanical and geotechnical sensitivity mapping, the following visual sensitivity parameters have been established and should be adhered to in the final proposal:

- a) A **35m Scenic route setback (offset)** that delineates a no-go area for development on the site from the part of the receiving environment with the highest exposure and sensitivity;
- b) Additional **5m offset** from the eastern ecological and slope sensitivity exclusion area, to ensure that the dense forest vegetation screening views of the proposed development from the east remains unaffected by development.
- c) Adherence to the key parameters of the Architectural Guidelines, which includes:
 - Adherence to the height restriction;
 - Adherence to Single Residential II Zoning Scheme Regulations;
 - Adherence to 1:4 slope no-go areas, the botanical and geotechnical development limitations;
 - Offsets and restrictions described in the VIA (scenic route and slope/vegetation offsets)
 - Specification of appropriate finishes (Material, colour and texture)
 - Use of local materials, products and indigenous plants;
 - Approach to site-wide design: buildings to be appropriately scaled and seen as an extension of the natural landscape; to be nestled within vegetation and natural sloping topography;
 - Avoid large retaining structures, plinths and building platforms i.e.; a balanced approach towards cutting and filling of the site;
 - Limit visual impact, visibility and light pollution in relation to neighboring properties;
 - Limit the clearance of vegetation during construction phase and beyond;

Due to the high value and sensitivity of the receiving environment, landscape character and the visual receptors, it is extremely important that a responsible and enforceable design approach be taken for the planning, construction and operational phases of each dwelling unit and the development as a whole, taking care to minimize the visual impact wherever possible. The Site Development Plan (SDP) and building plans must demonstrate adherence to the recommendations of this report in order for visual impact to be managed successfully.

Given that none of the Alternatives are compliant with the visual sensitivity parameters, the proposal should be revised to avoid biodiversity and visual impacts, by proposing buildings within the developable area only (indicated by the Botanical, Geotechnical and Visual sensitivity offsets and no-go areas).

8.2.2 Additional information required for SDP level approvals

As a condition of approval for the Rezoning and Subdivision Land use planning approval (this approval), this VIA recommends that the following documents and plans be submitted along with SDP and building plans to the local municipality for approval:

- i. A Landscape Plan and Landscape Guidelines by a suitably experienced and qualified professional, registered with SACLAP;
- ii. An Environmental Management Programme (EMPr) by a suitably experienced and qualified professional.

Potential impacts will be reduced by adherence to the management actions and mitigation measures outlined in Section 7, which are to be incorporated into either the Landscape Plan and Landscape Guidelines or the EMPr (or both). Please note that there are general architectural recommendations and mitigation measures that speak to (a) siting, layout of buildings and relationship to landscape features; (b) architectural features, and (c) materials and colours. These are reinforced in the August 2021 Architectural Guidelines.

These are followed by Landscape related recommendations and mitigation measures that speak to (a) the clearing of vegetation; (b) landscape/outdoor lighting; (c) fencing; (d) materials and finishes; (e) plant species and landscape installation; (f) alien control and management, and finally the relationship of the proposed development to the open space system and public realm.

Lastly, recommendations and mitigation measures to be incorporated into the EMPr are provided. The landscape guidelines and the EMPr should be mutually supportive, where guidelines set up by the Landscape Plan and Guidelines document are implemented or enabled by the EMPr, and vice versa.

Should the conceptual architectural proposal undergo significant change during further design processes, a visual impact statement must be issued by a suitably qualified specialist to re-assess the potential visual impact and determine if the findings of this study remain unchanged.

References

- Buskes, M. (2020, October 27). Proposed Rezoning and Subdivision: Erf155 Keurboomstrand. Bitou Municipality.
- City of Cape Town. (2003). *Scenic Drive Network Management Plan* (Vol. 3). Cape Town.
- City of Cape Town. (2003). *Scenic Drive Network Management Plan*.
- CNDV Africa (Pty) Ltd. (2017). *Bitou Municipal Spatial Development Framework*. Bitou Municipality.
- DEAT. (2002). *Integrated Environmental Management Information Series 1: Screening*. Pretoria: Department of Environmental Affairs and Tourism (DEAT).
- GAPP Architects, Urban Designers and Spatial Planners. (2017). *Eden District Spatial Development Framework*.
- Garden Route District Municipality . (2020). *Draft Integrated Development Plan 2020 - 2021*. Garden Route District Municipality.
- Heritage Western Cape. (2020, July 31). Response to NID: HIA Required. *Case Number: 20071602SB0716E*. Cape Town.
- Hull, R., & Bishop, I. (1988). Scenic impacts of electricity transmission towers: The influence of landscape type and observer distance. *Journal of Environmental Management*.
- Lynch, K. A. (1976). *Managing the sense of a Region*. Cambridge: MIT Press.
- Mucina, L. R. (2018). *The Vegetation Map of South Africa, Lesotho and Swaziland*. South African National Biodiversity Institute.
- Oberholzer, B. (2005). *Guideline for involving visual & aesthetic specialists in EIA processes*. CSIR Report No ENV-S-C 2005 053 F, Provincial Government of the Western Cape, Department of Environmental Affairs and Development Planning, Cape Town.
- Royal Haskoning DHV. (2018). *The Eden District Coastal Management Lines Situational Analysis*. Western Cape Department of Environmental Affairs and Development Planning.
- Sullivan, R., Abplanalp, J., Lahti, S., & Beckman, K. (2014). Electric Transmission Visibility and Visual Contrast Threshold Distances in Western Landscapes. *National Association of Environmental Professionals 2014 Annual Conference*.
- The Department of Environmental Affairs . (2010). *National Environmental Management Act (107 of 1998): Sector Guidelines for the EIA Regulations*. The Department of Environmental Affairs .
- The Landscape Institute. (2011). *Photography and photomontage in Landscape and visual impact assessment*. London: The Landscape Institute.
- TV3 Architects and Town Planners. (2013). *Keurbooms and Environs Local Area Spatial Plan*.
- Urban Design Services. (2013). *Draft Scenic Drive Network Management Plan Review: Phase 1*. Cape Town: City of Cape Town- Spatial Planning and Urban Design Department.
- Virdus Works (Pty) Ltd. (2020). *Motivation in Support of Land Development Application for: Erf 155, Keurboomstrand*.

- Western Cape Government. (2013). *Heritage and Scenic Resources Inventory and Policy Framework for the Western Cape*. Cape Town: WCG: Environmental Affairs and Development Planning.
- Western Cape Government. (2014). *Western Cape Provincial Spatial Development Framework (PSDF)*. Cape Town.
- Western Cape Government. (2015). *Bitou Municipality: Land Use Planning By-Law*.
- Western Cape Government. (2018). *Coastal Management Lines for Eden District: Project Report*. Department of Environmental Affairs & Development Planning.
- Young, G. (2014, June). *Draft Visual Impact Assessment Report*. Newtown Landscape Architects.

Table of Figures

Figure 1: Erf 155, Keurboomstrand locality. Note surrounding erven and existing cadastral extents of Erf 155 that include the Mare Nostrum resort at the western end of the property (Cape Farm Mapper, 2021).	26
Figure 2: Plan indicating the proposed subdivision of Erf 155. Note the extents of the subject site (Portion A), the Erf 391 public place directly north, the cancelled pipeline servitude and the 25m road reserve allocated to the MR 394 (Virdus Works (Pty) Ltd, 2020)	27
Figure 3: Vegetation and sensitivity map showing initial development restrictions (Blue Sky, 2020).....	28
Figure 4: Aerial image of site alongside the site survey (Smit, 2021).....	32
Figure 5: Site maps indicating vegetation types and CBA overlaid with the vegetation sensitivity areas (Smit, 2021).....	33
Figure 6: Site map indicating slope aspect, slope classification and the results of the slope analysis (Smit, 2021)	34
Figure 7: Graphic showing slope analysis overlaid approximately over a photogrammetry model provided by Snee Architects (Smit, 2021).	34
Figure 8: Site photograph taken from the junction of Game and Main Streets, approximately 50m from the subject property boundary. The vegetation in the foreground is growing on Erf391 upslope to the north (Smit, 2021).....	35
Figure 9: Site photograph from within the Forest Vegetation type (Smit, 2021).....	35
Figure 10: Site photograph from the Scrub-forest vegetation type looking west toward the Forest vegetation type area containing Milkwood trees (Smit, 2021)	36
Figure 11: Site photograph taken from within the Fynbos vegetation type, looking north toward the Scrub-forest vegetation type (Smit, 2021)	36
Figure 12: Photograph of the site taken from the parking area of the lookout point on the ocean side of the MR 394 scenic route. Note the steep cutting and density of vegetation covering the site (Smit, 2021)	37
Figure 13: Bitou Municipal Spatial Development Framework (CNdV Africa (Pty) Ltd, 2017, p. 213).....	39
Figure 14: MSDF map showing local and regional scenic routes (CNdV Africa (Pty) Ltd, 2017)	40
Figure 15: Keurbooms & Environs LASP: Floodline and Coastal Setback mapping. Note the purple line indicating 100m CML in the map above (TV3 Architects and Town Planners, 2013).....	41
Figure 16: The LASP Spatial planning proposals. Note the conceptual boundary between the rural hinterland and the coastal corridor (Bitou Municipal Spatial Development Framework, 2017, p. 71).....	42
Figure 17: LASP Environmental Sensitivity Mapping (TV3 Architects and Town Planners, 2013).....	42
Figure 18: The receiving environment study area (van der Merwe, 2021)	47
Figure 19: Site photograph of the N2 freeway just before the Keurboomstrand access road turnoff (left), demonstrating the typical inland topography and vegetation cover (Smit, 2021)	48
Figure 20: Site photograph illustrating topographical and landform features: mountain backdrop, deeply incised forested river valleys on the inland plateau; estuaries, lagoons and either dune systems or rocky headlands at the coast (Smit, 2021).....	49
Figure 21: Site photograph taken from within the Robberg Nature Reserve (a Provincial Heritage site) of the southern side of the rocky peninsula (Smit, 2021).....	49

Figure 22: Site photograph at the outskirts of the Keurboomstrand village at approximately the point that no further views of the sea or the town are visible, showing the condition of local vegetation at the edge of the rural hinterland forestry area (Smit, 2021).....	50
Figure 23: Site photograph taken from the old N2 (a scenic route), showing a view of the study area as the road winds its way down the outside of the hill slope overlooking the floodplain and estuary. These dramatic views are not enjoyed by the “new” N2 route, which passes through a cutting further inland (van der Merwe, 2021).....	50
Figure 24: Site photograph showing the view from the Keurboomstrand main beach boardwalk towards Plettenberg bay and Robberg (van der Merwe, 2021).....	51
Figure 25: Area defined as Keurboomstrand (Smit, 2021)	52
Figure 26: Site photograph (looking west) along the MR349, showing the roadway and the paved pedestrian route alongside. Note also the height of the vegetation alongside, typical of this stretch of road (Smit, 2021).	53
Figure 27: Site photograph showing typical landform (flat dune slack area and steep vegetated foothill). Note the pedestrian pathway and the remnants of forestry activities on the ridge (Smit, 2021)	53
Figure 28: Site photograph of the Keurboomstrand town welcome sign (at the entrance of Keurboomstrand east) (Smit, 2021).....	54
Figure 29: Site photograph showing the older gated development, from Erf 15 on Main road. Note the consistent building typology and extent to which the vegetation absorbs visual intrusion (Smit, 2021)	54
Figure 30: Site photograph from the small cove beach at low tide, looking up toward the second gated development. Note the building typology and visually exposed position on the rocky promontory (Smit, 2021)	54
Figure 31: Site photograph of Keurboomstrand Main road within the town proper (Smit, 2021)	55
Figure 32: Site photograph showing "whale watching" local tourism signage, at the threshold between Keurboomstrand east and west (Smit, 2021)	55
Figure 33: Site photograph taken from the Keurboomstrand public beach at the western end of Keurboomstrand east. Note the buildings visible on the ridge and the dense vegetation of the steeply sloped foothill (Smit, 2021)	56
Figure 34: Site photograph overlooking the 5km long Keurboomstrand beach, looking toward Keurboomstrand west and Plettenberg Bay in the distance (van der Merwe, 2021).....	56
Figure 35: Site photograph showing the use of the rocky promontories for recreational pursuits (van der Merwe, 2021)	56
Figure 36: View from the hiking trail within Annex Arch Nature Reserve west (Smit, 2021)	57
Figure 37: Example of an existing building in Keurboomstrand with high visual exposure (due to size & height of building and position on slope) and little vegetation screening (center of image) (van der Merwe, 2021)	57
Figure 38: Examples of existing buildings in the Mare Nostrum development with moderate visual exposure (due to size & height of building and position on slope) and little vegetation screening (van der Merwe, 2021)	58
Figure 39: Example of existing building in Keurboomstrand with low visual exposure (due to size & height of building and position on slope) and effective use of the surrounding vegetation for screening (Smit, 2021)	58
Figure 40: Example of existing building in Keurboomstrand with very low visual exposure supported by architectural form and material colouring, and effective use of the surrounding vegetation for screening (Smit, 2021)	58
Figure 41: 3D model in Google Earth showing Development option A from a bird's eye view (van der Merwe, 2021)	64
Figure 42: 3D model in Google Earth showing Development option B from a bird's eye view (van der Merwe, 2021).....	65
Figure 43: 3D model in Google Earth showing Development option C from a bird's eye view (van der Merwe, 2021).....	65
Figure 44: Development Option A - layout and sections (van der Merwe, 2021).....	66
Figure 45: Development Option B - layout and sections (van der Merwe, 2021).....	68
Figure 46: Development Option C - layout and sections (van der Merwe, 2021).....	69
Figure 47: Site Plan of Development option A showing botanical sensitivity and geotechnical no-go areas (prior to updated survey) over site contours (van der Merwe, 2021)	70
Figure 48: Site Plan of Development option B showing botanical sensitivity and geotechnical no-go areas (prior to updated survey) over site contours (van der Merwe, 2021)	71
Figure 49: Site Plan of Development option C showing botanical sensitivity and geotechnical no-go areas (prior to updated survey) over site contours (van der Merwe, 2021)	72
Figure 50: Erf 155 proposed development Alternative 1 – 3D image (Virdus Works, Slee Architects 2020).....	73
Figure 51: Site Layout – Alternative 1 (Slee Architects, 2020)	74

Figure 52: 3D view of the Alternative 2 (including retaining wall) from the south west (scenic route), modeled by the authors of this report and based on the project architect's concept sketch. The materials are indicative (van der Merwe, 2021)	74
Figure 53: 3D model in showing the Alternative 2 proposal from a bird's eye view (van der Merwe, 2021)	75
Figure 54: 3D model in showing the Alternative 3 proposal from a bird's eye view (van der Merwe, 2021)	76
Figure 55: Alternative 1 footprint (in dark grey) overlaid onto the Alternative 3 plan (light grey) to illustrate the difference in form, arrangement on site and footprint.(van der Merwe, 2021)	76
Figure 56: Alternative 3 plan (Slee Architects, 2021)	77
Figure 57: Graphic illustrating the location of photographs taken during fieldwork in the study area (up to 15km) to test visibility (van der Merwe, 2021)	79
Figure 58: Graphic illustrating the location of photographs taken during fieldwork in the study area (up to 100m) to test visibility (van der Merwe, 2021)	80
Figure 59: Site photograph taken from the northern Robberg lookout point, located 13km south east of the project site (Smit, 2021)	80
Figure 60: Site photograph taken from Plettenberg Bay Central beach nearby the Beacon Island complex. This view is located approximately 9,5km from the site, looking north east (Smit, 2021)	81
Figure 61: Site photographs taken from Plettenberg Bay Lookout beach, approximately 8km from the site. The second photograph is enlarged to illustrate visibility more accurately (Smit, 2021)	81
Figure 62: Site photograph taken from Lagoon View Point on Beacon Way, an elevated view from within the town of Plett. The photograph is taken looking north east at a distance of 9,2km from the site (Smit, 2021)	81
Figure 63: Site photographs taken from the pedestrian walkway alongside N2 traffic circle at the intersection of Theron street and Marine Way, located 10,2km from project site. Please note the lower photograph is enlarged (Smit, 2021)	82
Figure 64: Site photograph taken from the western bank of the estuary at approximately 6km, looking east. Note early morning light reflecting off the buildings at Keurboomstrand that are located high on the slopes (van der Merwe, 2021)	82
Figure 65: Site photograph taken from 3km away, looking north east towards the site across the Keurboomstrand beach. Note that the lower photograph is enlarged (Smit, 2021)	83
Figure 66: Site photograph taken from the MR394 scenic route at 1,5km away, looking east (Smit, 2021)	83
Figure 67: Site photograph taken from MR394 scenic route pedestrian pathway 800m away, looking east (Smit, 2021)	83
Figure 68: Site photograph taken from the elevated pedestrian walkway alongside the MR394 scenic route at 500m from the project site, looking east (Smit, 2021)	84
Figure 69: Site photograph taken from the pedestrian walkway alongside the MR394 scenic route at 150m from the project site, looking east (Smit, 2021)	84
Figure 70: Site photograph taken from the pedestrian walkway alongside the MR394 scenic route, at a distance of 50m from the project site boundary, looking west (Smit, 2021)	84
Figure 71: Site photograph taken from the publicly accessible private staircase across the small cove beach from the site, at 180m, looking west (Smit, 2021)	85
Figure 72: Site photograph taken from the central beach at 500m, looking west (Smit, 2021)	85
Figure 73: Site photograph taken from Main street at 500m, looking west (Smit, 2021)	85
Figure 74: Site photograph taken from the public boardwalk at a distance of 700m from the project site, looking west (Smit, 2021)	86
Figure 75: Site photograph taken from the hiking trail within the Annex Arch Rock Nature Reserve, at a high point of the trail at a distance of 1,3km, looking west (Smit, 2021)	86
Figure 76: Site photograph taken from the mouth of the Matjiesrivier within the Nature Reserve, at 1,5km and looking west (Smit, 2021)	86
Figure 77: Viewshed indicating visibility within a 15km radius of the project site (van der Merwe, 2021)	87
Figure 78: Viewshed indicating visibility within a 2km radius of the project site (van der Merwe, 2021)	88
Figure 79: Location of Simulations A, B, C and D (van der Merwe, 2021)	90

Figure 80: Simulation View A: 500m east, from Keurboomstrand beach just below the parking lot (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)	91
Figure 81: Simulation View B: 100m SSE (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)	93
Figure 82: Site photograph taken at 250m ESE illustrating the typical visibility of existing buildings relating to vegetation and topography from eastern views (Smit, 2021)	94
Figure 83: Simulation View C: 200m E (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)	95
Figure 84: Simulation Alternative 1 - View D: 700m E (Photograph: Smit 2021; Simulation: R. van der Merwe, 2021)	97
Figure 85: Visual Sensitivity offsets and setback lines (Smit & van der Merwe, 2021)	117
Figure 86: Site Plan of Alternative 1 showing botanical sensitivity, geotechnical and visual sensitivity no-go areas and setbacks/offsets over site contours. (van der Merwe, 2021)	119
Figure 87: Site Plan of Alternative 2 showing botanical sensitivity, geotechnical and visual sensitivity no-go areas and setbacks/offsets over site contours. (van der Merwe, 2021)	120
Figure 88: Site Plan of Alternative 3 showing botanical sensitivity, geotechnical and visual sensitivity no-go areas and setbacks/offsets over site contours. (van der Merwe, 2021)	120

Annexure A: Curriculum Vitae and Experience of the visual specialist

EXPERIENCE OF VISUAL SPECIALIST/AUTHOR

Name:	Fioné (Fi) Smit
Qualification:	Bachelor of Science in Landscape Architecture (BSc.LArch, University of Pretoria, 2011) Master of Landscape Architecture (MLA, University of Cape Town, 2017)
Professional registration:	Registered as a Professional Landscape Architect with the South African Council for the Landscape Architectural Profession (SACLAP #20245).
Track record:	<p>Fi is a Cape Town based Landscape Architectural professional with 7 years of experience in the industry in a wide range of roles. She obtained her Bachelor of Science in Landscape Architecture from the University of Pretoria (2009 – 2011) and worked for Newtown Landscape Architects (NLA) under the mentorship of Graham Young and Johan Barnard in 2012. She obtained professional registration from SACLAP in 2014 while working under the mentorship of Francois van Rooyen of Red Landscape Architects from 2012 to 2015.</p> <p>After relocating to Cape Town, she graduated from the UCT Master of Landscape Architecture program in 2017. From 2018 to 2020 she was employed by Viridian Consulting Landscape Architects under the leadership of Rene Maria Brett. In 2019, she began consulting independently in addition to her work in partnership with Viridian. Fi also presents and co-convenes post-graduate lectures at UCT for Honours and Masters Students in Professional Practice and History & Theory of Landscape Architecture. She is the Director of Filia Visual (Pty) Ltd.</p>
Experience and associations:	<p>Fi worked under the mentorship of Graham Young, Yonanda Martin and Mitha Cilliers conducting Visual Impact Assessments for NLA from 2012 – 2013. While consulting independently as a Landscape Architectural Professional for Viridian, she undertook Visual studies and related specialist work. Filia Visual, a company specializing in Visual Impact Assessments and Visual Studies, was registered in 2020.</p> <p>Filia Visual's professional associates and collaborators include:</p> <ul style="list-style-type: none"> • Karen Hansen (Independent Consultant & Landscape Architect) • Liana Jansen (Landscape Architect & Heritage Practitioner, director Cape Winelands Professional Practices in Association) • Rene Maria Brett (Landscape Architect and Urban Designer, director Viridian Consulting Landscape Architects)
Projects	Fi has experience in authoring and co-authoring a wide range of visual & Aesthetic specialist reports. These include Visual Statements, Pre-application Visual Studies, Scoping and Screening reports and Visual Impact Assessments.

Please note that some of the below listed projects are ongoing and should be treated with confidentiality.

2011 – 2012: Newtown Landscape Architects

VIA work under NLA included site visits, EIA specialist meeting inputs, documentation of landscape quality, character, value and visual resource value etc. (according to NLA procedure and visual study theory developed by Graham Young); draft and final Baseline and Visual Assessment report writing, preparation and creation of Visual Impact Simulations. These VIA's were predominantly for mines, solar farms and other large-scale infrastructure, including:

- Congo saltwater purification plant
- KiPower Independent Power Plant
- Paardeplaats Coal mine
- Mafikeng Cement factory
- Grootvlei mine
- Vlakplaats Solar park
- Vosloorus residential development
- Skukuza solar Park
- Sintokoula Coal mine
- Kinsenda Coal mine
- Zandkopsdrift minerals mine
- Gamsberg Mine

2018 – 2020: Viridian Consulting Landscape Architects

- Railway Mews (Visual Statement for proposed Social Housing development, Stellenbosch, 2019)
- Helderberg Integrated Waste Management Facility (Visual statement, mitigation and Simulations, City of Cape Town Solid Waste Management, 2019)
- Tannery Park Visual Study (pre-application Visual study (detailed, including simulations), Rawson Property Group, 2018 – 2020)
- Ronsyn Visual Study (pre-application Visual study (detailed, including simulations), FPG Property Group, 2018 – 2020)
- Stellenbosch Municipality Heritage Inventory and Conservation Management Plan (Mapping and Viewshed analysis of Scenic routes for the Cape Winelands Professional Practices in Association, 2018)
- UCT North Stop (3D modeling and graphic renderings/simulations of proposed new UCT North Bus stop and Landscape Proposal, UCT, 2020)

2020 – present: Filia Visual

- Fijnbosch Estate, Stellenbosch (Scoping Report, Reset Properties, 2020)
- Diamant Development, Paarl (VIA, Lazercor Developments, 2020)
- Victoria Road, Camps Bay (VIA, The I-Group, 2020)

- Schrywershoek, West Coast National Park (VIA, Wiehahn International Holdings (Pty) Ltd., 2021)
- Proposed development at De Hoop Farm, Tulbagh (Visual Statement, Guillaume Nel Environmental Consultants, 2021)
- Rhinos High Performance Sport Centre, Strand (VIA, Rhinos Sports Academy, 2020)
- Eskom Kimberley Strengthening Phase 3: Transmission Corridors, Northern Cape and Northwest Province (VIA, Margen Industrial Services, 2021)
- Groot Phesantekraal Phase 5 (VIA, Abland Property, 2021)
- Hermanus Cliff Path Connection (Visual Statement, Cliff Path Action Group, 2021)
- Ptn 43 of Farm 159 Meerendal (Visual Statement, Canto wines, 2021)
- Proposed Libertas development (Visual Statement, Reset Properties, 2021)
- Sudor Coal Mine Ext., Mpumalanga (VIA, NTC Group, 2020 – ongoing)
- Sonlia Fruit Packhouse (Visual Statement, FRAME Engineers, 2021 – ongoing)
- Stanhope BMW (Visual Study, Rawson Property Group, 2021 – ongoing)
- Strawberry Lane (Visual Statement, Schumacher Real Estate (Pty) Ltd, 2021 – ongoing)
- Proposed development Erf 878, Riebeek Kasteel (VIA, Silver Solutions 3571, 2021 – ongoing)
- Proposed development Farm 845 (VIA, DaxCon, 2021 – ongoing)
- Proposed development 25&37 Victoria Road (VIA, The Castle Group, 2021 – ongoing)
- Farm 1252 Bo Helderberg (Screening and site sensitivity report, Arch Town Planners, 2021 – ongoing)



Fi Smit

Director, Filia Visual (Pty) Ltd
Professional Landscape Architect (SACLAP # 20245)

Annexure B: Definition of Terms and Acronyms

Terminology

Aesthetic Value	Aesthetic value is the emotional response derived from the experience of the environment with its natural and cultural attributes. According to Ramsay (1993), 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. Thus, aesthetic value encompasses more than the seen view, visual quality or scenery, and includes atmosphere, landscape character and sense of place (Young, 2014).
Compatibility	This refers to the extent to which the proposed development and land usage is aligned with the surrounding development and land usage, current and future.
Cumulative Effects	Cumulative landscape and visual effects (impacts) result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future. This aspect deals with accretion or attrition in terms of the visual effects of similar developments over time.
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 Character Sensitivity	The sensitivity of a landscape or visual resource is the degree to which a particular landscape type or area can respond to and where appropriate, accommodate change arising from a particular development without detrimental effects on its character. Key elements of Landscape Character are evaluated to determine if and how they are likely to be affected, & the degree to which elements or characteristics can be replaced or substituted (Young, 2014, p. 7).
Mitigation	Measures, including any process, activity, or design to avoid, reduce, remedy or compensate for adverse landscape and visual impacts of a development proposal.
Scenic Corridor	The unfolding area defined by a major edge condition such as ridge lines and coastlines which constitute a visual entity.
Scenic Road Envelope	The carriageway and the road reserve of a Scenic route, immediately adjacent public land and the first erven abutting any of these.
Sense of Place (or Genius loci)	The Sense of Place is the unique quality or character of a place, whether natural, rural or urban (Oberholzer, 2005, p. 28) allocated to a specific place or area through the cognitive experience of the user or viewer. 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”. Our sense of a place depends not only on spatial form and quality but also on culture, temperament, status, experience and the current purpose of the observer (Lynch, 1992). Central to the idea of ‘sense of place’ or Genus Loci (translated literally to “Sense of Place”) is identity. An area will have a stronger sense of place if it can easily be identified, unique and distinct from other places.
Visual Receptors	Visual Receptors are views and viewers of the proposed development. This can be persons or viewer groups that will experience a visual and aesthetic impact.
Study Area	The initial study area is delineated by a 10km radius around and including the subject site. The term Receiving Environment is used interchangeably with “Study Area” in the VIA report,

	referring to the geographic area with which the VIA is concerned. The study area is later reduced to the geographic area described as the Zone of Potential Visual Influence (ZOVI).
Viewshed	The viewshed refers to the theoretical outer-most extent of the area from which an object may be seen. Visibility can be obscured in part or in whole by objects within the viewshed such as existing buildings, trees, or landform. Also referred to as the View Catchment Area, it is the geographic area defined by the context's topography, from which the project will be visible.
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 NGL (Young, 2014).
Visibility	This describes the actual places and extent to which a proposed development can be seen. Visibility depends upon general topography, aspect, tree cover or other visual obstruction, elevation and distance.
Visual Absorption Capacity	This refers to the ability of the surrounding area to visually absorb, conceal or mitigate the impact of the proposed development through existing natural or man-made features in the landscape. It describes the ability of the RE or study area to accommodate physical and visual changes without transformation in its visual character and quality. In this assessment, high is a positive and low is a negative.
Visual Exposure	Visual exposure refers to the visibility of the project based on distance zones from project to selected viewpoints. Exposure or visual impact tends to diminish exponentially with distance.
Visual Impact	This refers to the visual effects which relate to changes brought about by a proposed development in the composition of affected views. Visual impacts are brought about through changes to the landscape, people's responses to the changes, and to the overall effects of the project with respect to visual amenity. These can be positive (i.e. beneficial or an improvement) or negative (i.e. adverse or a detraction). Residual visual impacts are those that occur or persist after mitigation measures have been put in place.
Visual Intrusion	Describes the level of compatibility or congruence of the project with the particular qualities of the area, landscape and surrounding land uses, or its 'sense of place', measured against the degree to which it is in discord, or contrasts with these. This is related to the idea of context and maintaining the integrity of the landscape or townscape. Visual intrusion diminishes within landscapes of higher complexity and as distance increases (i.e. the object becomes less of a focal point and more of a visual distraction).
Zone of Potential Visual Influence	Determined through Line of Sight testing and visibility analysis (both Desktop and through fieldwork), the ZoVI describes the areas that are actually visible and visually influenced by the proposed development. It is marked by the radius around an object (the proposed development) beyond which the visual impact of its most visible features will be insignificant primarily due to distance. The true ZoVI of the project is most often smaller and more highly articulated than the area demarcated by the Viewshed because of screening by existing trees, topography, and buildings.

Abbreviations and Acronyms

3D	Three-dimensional
ASL	Above Sea Level
BAR	Basic Assessment Report
CA	Competent Authority
CBA	Critical Biodiversity Areas
CBD	Central Business District
CFM	Cape Farm Mapper
CT	Cape Town
DEAD+DP	Department of Environmental Affairs & Development Planning
DEM	Digital Elevation Modelling
DTM	Digital Terrain Modelling
EIA	Environmental Impact Assessment
ESA	Ecological Support Areas
EMP	Environmental Management Plan
FA	Focus Area
FGL	Finished Ground Level
GIS	Geographic Information System
Ha	Hectares
HIA	Heritage Impact Assessment
HOZ	Heritage Overlay Zones
HWC	Heritage Western Cape
IA	Impact Assessment
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
LC	Landscape Character
LoS	Line of Sight
NEMA	National Environmental Management Act
NGL	Natural Ground Level
NHRA	National Heritage Resources Act
POA	Property Owner's Association
PSDF	Provincial Spatial Development Framework
RE	Receiving Environment
SACLAP	South African Council for the Landscape Architectural Profession
SDF	Spatial Development Framework
SDP	Site Development Plan
Sp.	Specie
SPLUMA	Spatial Planning and Land Use Management Act
Spp.	Species
VAC	Visual Absorption Capacity
VIA	Visual Impact Assessment
VR	Visual Receptors
WCG	Western Cape Government
ZoVI/ ZoPVI	Zone of Potential Visual Influence