

THE PROPOSED MOQUINI BEACH ESTATE, WESTERN CAPE PROVINCE, SOUTH AFRICA

Visual Suitability Statement

Draft v_2

DATE: 18 March 2023

Document prepared for Cape EAPrac (Pty) Ltd
On behalf of Moquini Beach Hotel (Pty) Ltd



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LIST OF ACRONYMS

<i>APHP</i>	Association of Professional Heritage Practitioners
<i>BLM</i>	Bureau of Land Management (United States)
<i>BPEO</i>	Best Practicable Environmental Option
<i>CALP</i>	Collaborative for Advanced Landscape Planning
<i>DEM</i>	Digital Elevation Model
<i>DoC</i>	Degree of Contrast
<i>EIA</i>	Environmental Impact Assessment
<i>EMPr</i>	Environmental Management Plan
<i>GIS</i>	Geographic Information System
<i>GPS</i>	Global Positioning System
<i>IDP</i>	Integrated Development Plan
<i>IEMA</i>	Institute of Environmental Management and Assessment (United Kingdom)
<i>KOP</i>	Key Observation Point
<i>LVIA</i>	Landscape and Visual Impact Assessment
<i>MAMSL</i>	Metres above mean sea level
<i>NELPAG</i>	New England Light Pollution Advisory Group
<i>PNR</i>	Private Nature Reserve

<i>SDF</i>	Spatial Development Framework
<i>SEA</i>	Strategic Environmental Assessment
<i>VAC</i>	Visual Absorption Capacity
<i>VIA</i>	Visual Impact Assessment
<i>VRM</i>	Visual Resource Management
<i>VRMA</i>	Visual Resource Management Africa
<i>ZVI</i>	Zone of Visual Influence

GLOSSARY OF TECHNICAL TERMS

Technical Terms Definition (Oberholzer, 2005)

Degree of Contrast	The measure in terms of the form, line, colour and texture of the existing landscape in relation to the proposed landscape modification in relation to the defined visual resource management objectives.
Visual intrusion	Issues are concerns related to the proposed development, generally phrased as questions, taking the form of “what will the impact of some activity be on some element of the visual, aesthetic or scenic environment”.
Receptors	Individuals, groups or communities who would be subject to the visual influence of a particular project.
Sense of place	The unique quality or character of a place, whether natural, rural or urban.
Scenic corridor	A linear geographic area that contains scenic resources, usually, but not necessarily, defined by a route.
Viewshed	The outer boundary defining a view catchment area, usually along crests and ridgelines. Similar to a watershed. This reflects the area, or the extent thereof, where the landscape modification would probably be seen.
Visual Absorption Capacity	The potential of the landscape to conceal the proposed project.

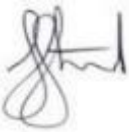
Technical Term Definition (USDI., 2004)

Key Observation Point	Receptors refer to the people located in the most critical locations, or key observation points, surrounding the landscape modification, who make consistent use of the views associated with the site where the landscape modifications are proposed. KOPs can either be a single point of view that an observer/evaluator uses to rate an area or panorama, or a linear view along a roadway, trail, or river corridor.
Visual Resource Management	A map-based landscape and visual impact assessment method development by the Bureau of Land Management (USA).
Zone of Visual Influence	The ZVI is defined as ‘the area within which a proposed development may have an influence or effect on visual amenity.’

1 DFFE SPECIALIST REPORTING REQUIREMENTS

1.1 Specialist declaration of independence

Table 1. Specialist declaration of independence.

<p>All intellectual property rights and copyright associated with VRM Africa's services are reserved, and project deliverables, including electronic copies of reports, maps, data, shape files and photographs, may not be modified or incorporated into subsequent reports in any form, or by any means, without the written consent of the author. Reference must be made to this report, should the results, recommendations or conclusions in this report be used in subsequent documentation. Any comments on the draft copy of the Visual Impact Assessment (VIA) must be put in writing. Any recommendations, statements or conclusions drawn from, or based upon, this report, must make reference to it.</p> <p>This document was completed by Silver Solutions 887 cc trading as VRM Africa, a Visual Impact Study and Mapping organisation located in George, South Africa. VRM Africa cc was appointed as an independent professional visual impact practitioner to facilitate this VIA. I, Stephen Stead, hereby declare that VRM Africa, an independent consulting firm, has no interest or personal gains in this project whatsoever, except receiving fair payment for rendering an independent professional service.</p>  <p>Stephen Stead APHP accredited VIA Specialist</p>
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1.2 Specialist report requirements in terms of Appendix 6 of the EIA Regulations (2014), as amended in 2017

Table 2: Specialist report requirements table (Pending EIA Process)

A specialist report prepared in terms of the Environmental Impact Regulations of 2014 (as amended in 2017) must contain:	Relevant section in report
Details of the specialist who prepared the report	Stephen Stead, owner / director of Visual Resource Management Africa. steve@vrma.co.za Cell: 0835609911
The expertise of that person to compile a specialist report including a curriculum vitae	Registration with Association of Professional Heritage Practitioners
A declaration that the person is independent in a form as may be specified by the competent authority	Table 1

A specialist report prepared in terms of the Environmental Impact Regulations of 2014 (as amended in 2017) must contain:	Relevant section in report
An indication of the scope of, and the purpose for which, the report was prepared	Terms of Reference
A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change	NA
The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment	NA
A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Methodology
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 alternative;	NA
An identification of any areas to be avoided, including buffers	NA
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;	NA
A description of any assumptions made and any uncertainties or gaps in knowledge;	Assumptions and Limitations
The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment	22 February 2024
A description of the findings and potential implications of such findings on the impact of the proposed activity or activities	NA
Any mitigation measures for inclusion in the EMPr	Environmental Management Plan
Any conditions for inclusion in the environmental authorisation	NA
Any monitoring requirements for inclusion in the EMPr or environmental authorisation	NA
A reasoned opinion as to whether the proposed activity or portions thereof should be authorised	Executive Summary
Regarding the acceptability of the proposed activity or activities; and	Conclusion
If the opinion is that the proposed activity 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	It is the recommendation that the proposed development should commence WITH MITIGATION.
A description of any consultation process that was undertaken during the course of carrying out the study	Pending EIA
A summary and copies if any comments that were received during any consultation process	Pending EIA
Any other information requested by the competent authority.	Pending EIA

1.3 DFFE Screening Tool Site Sensitivity Verification

In terms of Part A of the Assessment Protocols published in GN 320 on 20 March 2020, site sensitivity verification is required relevant to the DFFE Screening Tool. Landscape was not raised as an issue in the DFFE Screening Tool.

2 EXECUTIVE SUMMARY

Visual Resource Management Africa CC (VRMA) was appointed by Cape EAPrac (Pty) Ltd to undertake a **Visual Statement** for the proposed amendment to the authorised (unbuilt) Moquini Beach Hotel on behalf of Moquini Beach Hotel (Pty) Ltd. The proponent wishes to development apartment dwellings instead of the hotel complex. VRMA was involved in the assessment of the original hotel complex proposal in 2011. **A site visit was undertaken on 22 February to review if any significant changes have been made to the receiving environment.**

The following actions informed the visual statement:

- Review of the previous VIAs undertaken for the project by VRMA.
- Tabling of amendments made to the original EIAs.
- Planning literature review to assess if any amendments to landscape based planning for the area have taken place subsequent to the previous EIAs.
- Survey of the site and surrounds to assess the nature of the receiving landscape.

POLICY FIT: **High Positive**

In terms of regional and local planning fit for planned landscape and visual related themes, the expected visual/ landscape policy fit of the landscape change is rated High Positive for the following reasons:

- Existing authorisation (unbuilt).
- Development alignment with the final Mossel Bay SDF.

CONCLUSION **Authorisation with Mitigation**

The previous conclusion was: “it is the *recommendation of VRM Africa that the Best Practical Environmental Option (BPEO) for the site is the 2011 proposed Activity Alternative 4 (Revised Preferred Alternative) with mitigation.*”

- The landscape context is strongly associated with linear development (of which approximately 40% is yet to be built).
- The existing development pattern is already linear and will appear more so once the other units in the area are built.
- No visual concerns from I&APs as they have already bought into the planning of the area, which was zoned for a much larger development.” (VRM Africa, 2011).

It is the finding of this Visual Statement that the proposed development should be **authorised with mitigation** for the following reasons:

- High Positive for local planning.
- Higher density alignment with Mossel Bay SDF vision for more affordable units.
- Set back from high sensitivity vegetation.

- The development appears fragmented and stepped as seen from the inland and coastal receptors.
- The visual 'footprint' will more fragmented due to the reduction in the bulk of the hotel area. The development will still generate higher levels of visual contrast to the receiving landscape. This landscape would be acceptable within the current planning of the Mossel Bay SDF and the greater Danabaai Coastal Urban development context.

PREVIOUS MITIGATION OF RELEVANCE

Infrastructure

- All infrastructure is to be designed to minimise the visual impact and should, as much as possible, be aligned with the contours.
- Access roads and security gates (if necessary) are to be subdued in scale and well screened with indigenous plant material.

Perimeter Fencing

- Fencing should be visually permeable and of a medium to dark grey colour.
- Fencing should, as much as possible, be aligned with the contours and screened with indigenous plant material where possible.
- Fencing cannot cut through the steep slope areas of the primary dune and should not cut through the highly sensitive fynbos areas unless specified by the vegetation specialist.

Boardwalk

- The boardwalk would need to be designed so that it takes the natural landscape into consideration and should meander down the slope and not be constructed in a straight line.
- If possible, the route should make use of existing paths made through the vegetation on the dune.
- The colour of the boardwalk should be grey-green and should be kept as low as possible so as to allow for visual screening by the surrounding vegetation.
- Strict soil erosion and slumping measures should be implemented to ensure that the steep slopes are not eroded.

Signage

- Signage should be subtle with the focus rather on interesting architecture and natural landscaping and should not be visually intrusive or backlit.
- No signage should be visible from the beach.

Architectural Guidelines

- As specified by the architect and depicted in the 3D model examples provided emphasising that a mid-grey hue is a requirement for colour as this allows for a darker, less reflective, colour.

Finishes and Textures

- As specified by the architect.

Lighting (Refer to Annexure C)

- All lighting should be downward facing and be kept to an efficient minimum while still keeping within the safety norms.

- External up lighting should be avoided.
- Street lights should be omitted and replaced with bollard-type down lighting.

Visual Screening of the Structures

- Soft landscaping areas are to be planted with indigenous fynbos species and grasses so as to minimise the need for irrigation and maintenance.
- A landscape architect should be appointed to plan the landscaping so that it looks natural within its environment and to ensure that trees and shrubs are planted along the east side of the hotel to soften the impacts of the walls facing Dana Bay. Intensive screening trees need to be located at base of walls below the 'view corridors'.
- Kikuyu grass is not to be used anywhere on site because it's particular green is not found naturally in the surrounding landscape and large expanses of it can be visually intrusive.
- Design of the open areas must include indigenous shrubs, bushes and small trees in containers / pots to further emphasise the break between the units.

Construction

- Mitigation measures need to be set in place to ensure that dust generated during construction is kept to a minimum.
- Associated infrastructure needs to be located in a designated area, already disturbed or on proposed building footprint. The building site should be enclosed by an opaque fencing with toilets situated inside the enclosure.
- Damage to existing flora and fauna should be a punishable offence.
- Litter is to be strictly controlled.
- The making of fires and the creation of potential paths into fynbos should be a punishable offence.
- The construction camp needs to be fenced off and screened with green shade cloth.

Controlling Future Development

- All future modifications, extensions and enlargements must be subject to a separate visual impact assessment.

3 INTRODUCTION

Visual Resource Management Africa CC (VRMA) was appointed by Cape EAPrac (Pty) Ltd to undertake a **Visual Statement** for the proposed amendment to the authorised (unbuilt) Moquini Beach Hotel on behalf of Moquini Beach Hotel (Pty) Ltd. The proposed development site is located in Western Cape Province, Garden Route District Municipality and within the Mossel Bay Local Municipality.

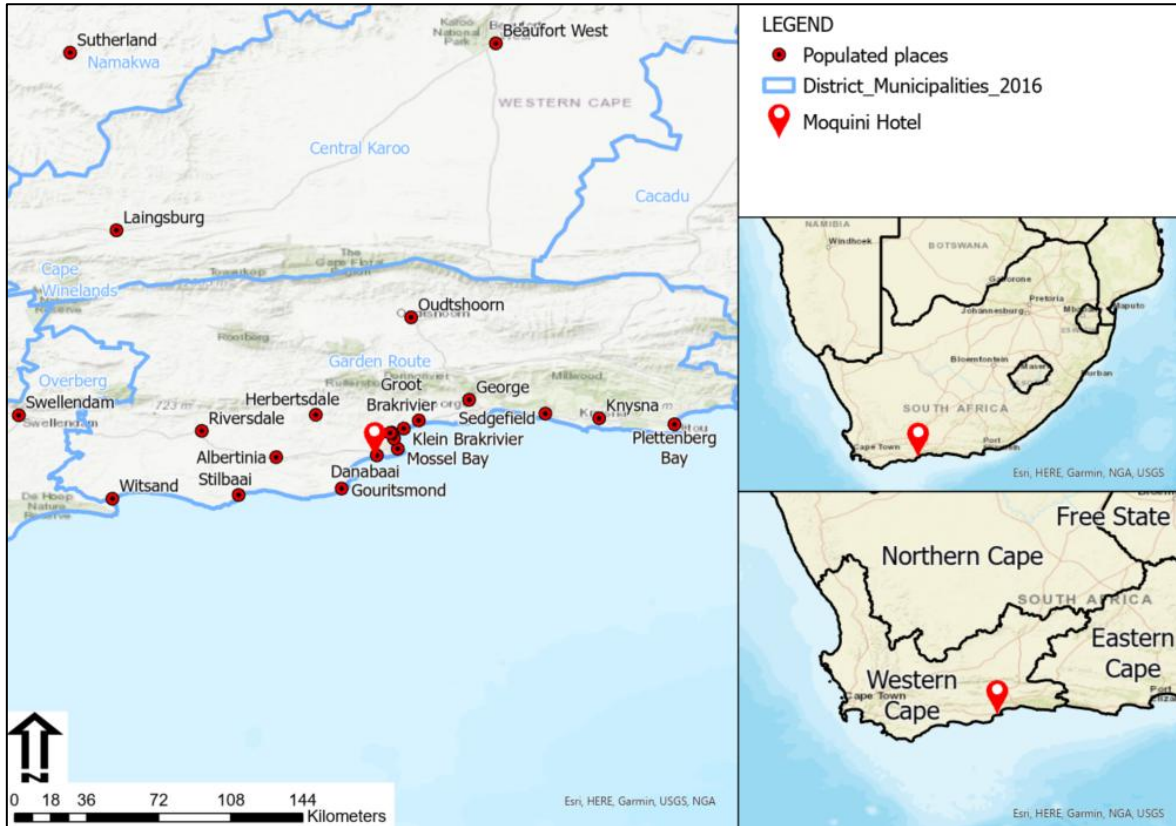


Figure 1: National and regional locality map.

3.1 Terms of Reference

The scope of this study is to cover the entire proposed project area. The broad terms of reference for the study are as follows:

- Review the proposed amendment to the previously authorised Moquini Hotel layout plan.
- Make recommendations on the suitability of the amended layout.
- Review previous mitigations and review suitability, adding additional mitigation if necessary.

3.2 Study Team

Contributors to this study are summarised in the table below.

Table 3: Authors and Contributors to this Report.

Aspect	Person	Organisation / Company	Qualifications
Landscape and Visual Assessment (author of this report)	Stephen Stead MSc Geography, 2023 (UKZN, Pietermaritzburg)	VRMA	<ul style="list-style-type: none"> • 20 years of experience in visual assessments including 230 large scale landscape changes in five sub-Saharan African countries. • Registered with the Association of Professional Heritage Practitioners since 2014.

3.3 Visual Assessment Approach

The full methodology used in the assessment can be found in Annexure B, with this section outlining the key elements of the assessment process. The process that VRM Africa follows when undertaking a VIA is based on the United States Bureau of Land Management's (BLM) Visual Resource Management method (USDI., 2004). This mapping and GIS-based method of assessing landscape modifications allows for increased objectivity and consistency by using standard assessment criteria.

- *“Different levels of scenic values require different levels of management. For example, management of an area with high scenic value might be focused on preserving the existing character of the landscape, and management of an area with little scenic value might allow for major modifications to the landscape. Determining how an area should be managed first requires an assessment of the area’s scenic values”.*
- *“Assessing scenic values and determining visual impacts can be a subjective process. Objectivity and consistency can be greatly increased by using the basic design elements of form, line, colour, and texture, which have often been used to describe and evaluate landscapes, to also describe proposed projects. Projects that repeat these design elements are usually in harmony with their surroundings; those that don’t create contrast. By adjusting project designs so the elements are repeated, visual impacts can be minimized” (USDI., 2004).*

Baseline Phase Summary

The VRM process involves the systematic classification of the broad-brush landscape types within the receiving environment into one of four VRM Classes. Each VRM Class is associated with management objectives that serve to guide the degree of modification of the proposed site. The Classes are derived by means of a simple matrix with the three variables being the scenic quality, the expected receptor sensitivity to landscape change, and the distance of the proposed landscape modification from key receptor points. The Classes are not prescriptive and are utilised as a guideline to determine visual carrying capacity, where they represent the relative value of the visual resources of an area. Classes I and II are the most valued, Class III represents a moderate value; and Class IV is of least value. The VRM Classes are not prescriptive and are used as a guideline to

determine the carrying capacity of a visually preferred landscape as a basis for assessing the suitability of the landscape change associated with the proposed project.

Table 4: VRM Class Matrix Table

		VISUAL SENSITIVITY LEVELS								
		High			Medium			Low		
SCENIC QUALITY	A (High)	II	II	II	II	II	II	II	II	II
	B (Medium)	II	III	III/ IV*	III	IV	IV	IV	IV	IV
	C (Low)	III	IV	IV	IV	IV	IV	IV	IV	IV
DISTANCE ZONES		Fore/middle ground	Background	Seldom seen	Fore/middle ground	Background	Seldom seen	Fore/middle ground	Background	Seldom seen

* If adjacent areas are **Class III** or lower, assign **Class III**, if higher, assign **Class IV**

The visual objectives of each of the classes are listed below:

- The Class I objective is to preserve the existing character of the landscape and the level of change to the characteristic landscape should be very low and must not attract attention. Class I is assigned when a decision is made to maintain a natural landscape.
- The Class II objective is to retain the existing character of the landscape and the level of change to the characteristic landscape should be low. The proposed development may be seen but should not attract the attention of the casual observer, and should repeat the basic elements of form, line, colour and texture found in the predominant natural features of the characteristic landscape.
- The Class III objective is to partially retain the existing character of the landscape, where the level of change to the characteristic landscape should be moderate. The proposed development may attract attention, but should not dominate the view of the casual observer, and changes should repeat the basic elements found in the predominant natural features of the characteristic landscape; and
- The Class IV objective is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the landscape can be high, and the proposed development may dominate the view and be the major focus of the viewer's (s') attention without significantly degrading the local landscape character.

Impact Phase Summary

To determine impacts, a degree of contrast exercise is undertaken. This is an assessment of the expected change to the receiving environment in terms of the form, line, colour and texture, as seen from the surrounding Key Observation Points. This determines if the proposed project meets the visual objectives defined for each of the Classes. If the expected visual contrast is strong, mitigation recommendations are to be made to assist in

meeting the visual objectives. To assist in the understanding of the proposed landscape modifications, visual representation, such as photomontages or photos depicting the impacted areas, can be generated. There is an ethical obligation in the visualisation process, as visualisation can be misleading if not undertaken ethically.

3.4 VIA Process Outline

The following approach was used in understanding the landscape processes and informing the magnitude of the impacts of the proposed landscape modification. The table below lists a number of standardised procedures recommended as a component of best international practice.

Table 5: Methodology Summary Table with scope of work highlighted in yellow.

Action	Description
Site Survey	The identification of existing scenic resources and sensitive receptors in and around the study area to understand the context of the proposed development within its surroundings to ensure that the intactness of the landscape and the prevailing sense of place are taken into consideration.
Project Description	Provide a description of the expected project, and the components that will make up the landscape modification.
Reviewing the Legal Framework	The legal, policy and planning framework may have implications for visual aspects of the proposed development. The heritage legislation tends to be pertinent in relation to natural and cultural landscapes, while Strategic Environmental Assessments (SEAs) for renewable energy provide a guideline at the regional scale.
Determining the Zone of Visual Influence	This includes mapping of viewsheds and view corridors in relation to the proposed project elements, in order to assess the zone of visual influence of the proposed project. Based on the topography of the landscape as represented by a Digital Elevation Model, an approximate area is defined which provides an expected area where the landscape modification has the potential to influence landscapes (or landscape processes) or receptor viewpoints.
Identifying Visual Issues and Visual Resources	Visual issues are identified during the public participation process, which is being carried out by others. The visual, social or heritage specialists may also identify visual issues. The significance and proposed mitigation of the visual issues are addressed as part of the visual assessment.
Assessing Potential Visual Impacts	An assessment is made of the significance of potential visual impacts resulting from the proposed project for the construction, operational and decommissioning phases of the project. The rating of visual significance is based on the methodology provided by the Environmental Assessment Practitioner (EAP).
Formulating Mitigation Measures	Possible mitigation measures are identified to avoid or minimise negative visual impacts of the proposed project. The intention is that these would be included in the project design, the

Action	Description
	Environmental Management Programme report (EMPr) and the authorisation conditions.

3.5 Assumptions and Uncertainties

- Digital Elevation Models (DEM) and viewsheds were generated using ASTER elevation data (NASA, 2009). Although every effort to maintain accuracy was undertaken, as a result of the DEM being generated from satellite imagery and not being a true representation of the earth's surface, the viewshed mapping is approximate and may not represent an exact visibility incidence. Thus, specific features identified from the DEM and derive contours (such as peaks and conical hills) would need to be verified once a detailed survey of the project area has taken place.
- The use of open-source satellite imagery was utilised for base maps in the report.
- Some of the mapping in this document was created using Bing Maps, Open-Source Map, ArcGIS Online and Google Earth Satellite imagery.
- The project deliverables, including electronic copies of reports, maps, data, shape files and photographs are based on the author's professional knowledge, as well as available information.
- VRM Africa reserves the right to modify aspects of the project deliverables if and when new/additional information may become available from research or further work in the applicable field of practice or pertaining to this study.
- As access to farms and private property is often limited due to security reasons, limiting access to private property in order that photographs from specific locations are taken. 3D modelling is used to reflect the expected landscape change area where applicable.
- Mapping makes use of the SANBI BGIS webmap (SANBI, 2018)
- The slopes analysis is approximate and is subject to detailed survey and detailed slopes analysis.

4 PROJECT DESCRIPTION

The following project information was provided by the client that will be incorporated into the assessment and proposed infrastructure relating to the project. The following table outlines the scope of the project, with reference to the extent, heights, and expected landscape change depiction as provided by the proponent/ architects involved in the project design and development.

Table 6: Project Information Table

PROPONENT SPECIFICATIONS	
Applicant Details	Description
Applicant Name:	Moquini Beach Hotel (Pty) Ltd
Project Name:	Moquini Beach Estate

Table 7: Project Development Comparison Table.

ZONING TABLE		
ERF 14796, DANA BAY, MOSSEL BAY		
General Residential Zone		
Required by Scheme Regulation	Previously Approved	Ammended Proposal Provides
Building Lines	Building Lines	Building Lines
Street - 4.5m Sides - 4.5m Back - 4.5m	Street - 4.5m Sides - 4.5m & 2m Building line relaxation Back - 4.5m	Street - 4.5m Sides - 4.5m & 2m Building line relaxation Back - 4.5m
Coverage	Coverage	Coverage
Total Erf Area: 46,394m ² Coverage: 25% maximum (3 storeys) 37.4% maximum (2 storeys)	Total Erf Area: 46,394m ² Apartments 2 storeys + basement footprint = 3 738m ² (8%) Hotel 2 storeys-footprint = 2 837m ² (6%) Total Coverage: Hotel +Apartments = 6 575m ² (14%)	Total Erf Area: 46,394m ² Apartments 2 storeys + basement footprint = 6,452m ² (13%) TOTAL
FAR	FAR	FAR
FAR (bluk): 0.75	Apartments 2 storeys + basement = 8 460m ² (0.18) (69 Apartments) Hotel 2 storeys = 3 571m ² (0.8) (64 Rooms) Total FAR- Hotel +Apartments = 12 031m ² (0.26) (133 total)	144 Apartments Total FAR: Apartments = 12 904m ² (0.29)
Height	Height	Height
8m Height restriction Following above general plateau level = 3 Storeys	8m Height restriction Following above general plateau level = 3 Storeys	8m Height restriction Following above general plateau level = 3 Storeys
Parking	Parking	Parking
Apartments -1.25 Parkings /unit Apartment = 80 Parkings required . Hotel : 1 Parking bay per 2 Bedrooms. 1 Parking bay per 5 Bedrooms. + 20 Visitors + 5 Loading bays Parkings required = 64 Total.	Apartment = 114 Parkings provided. Hotel = 86 Parkings provided TOTAL Provided: 200	144 Apartments x 1.25 = 180 required & provided in Basement & Open Total Guest Parkings provided = 35 Total Parkings Provided: 215



Figure 2: Proposed layout plan map overlay onto satellite imagery.

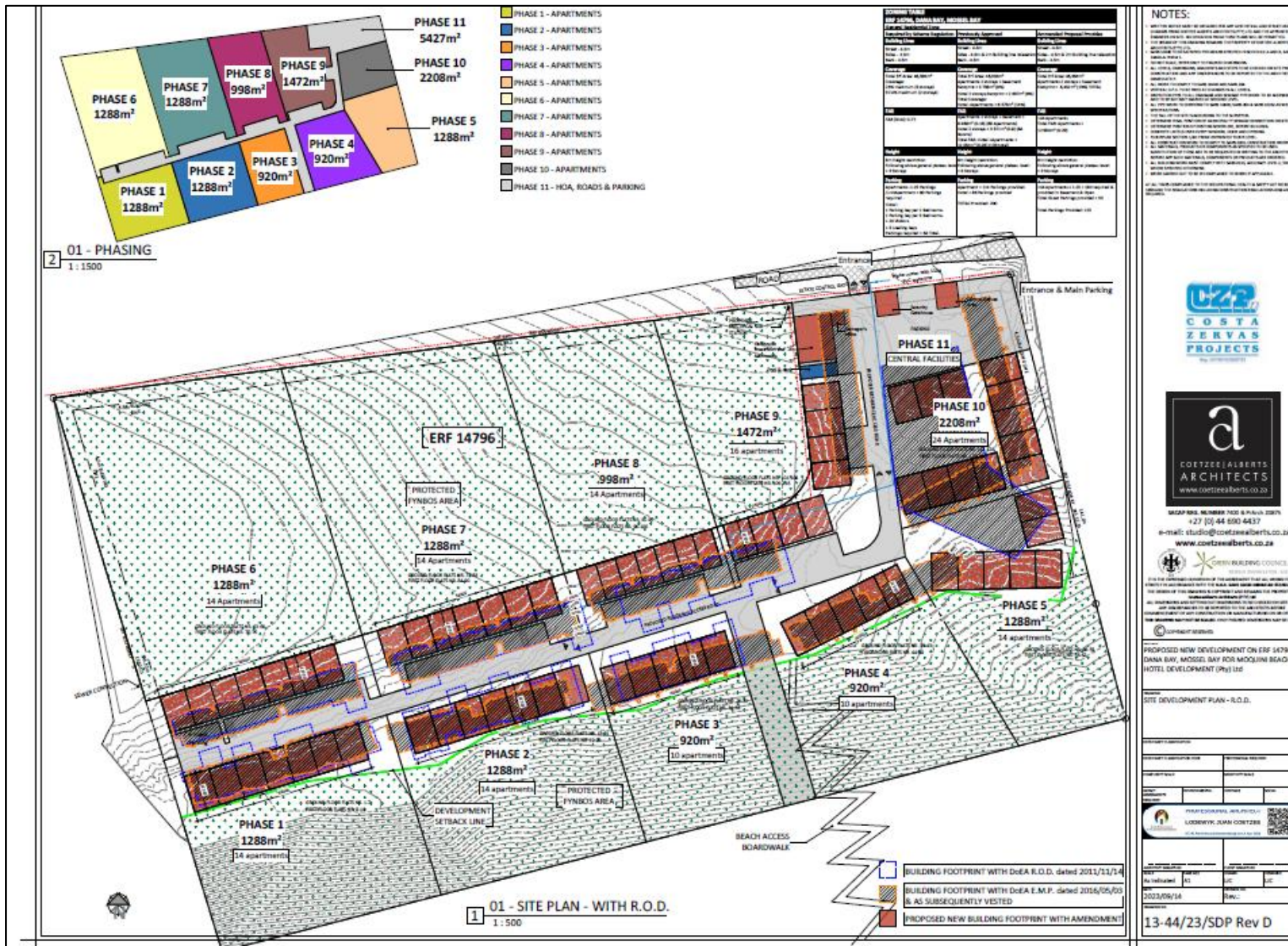


Figure 3: Proposed Site Development and Phasing Plan.



Figure 5: Previous Authorised 3D Model Perspective View.



Figure 6: Proposed Development 3D Model Perspective View.

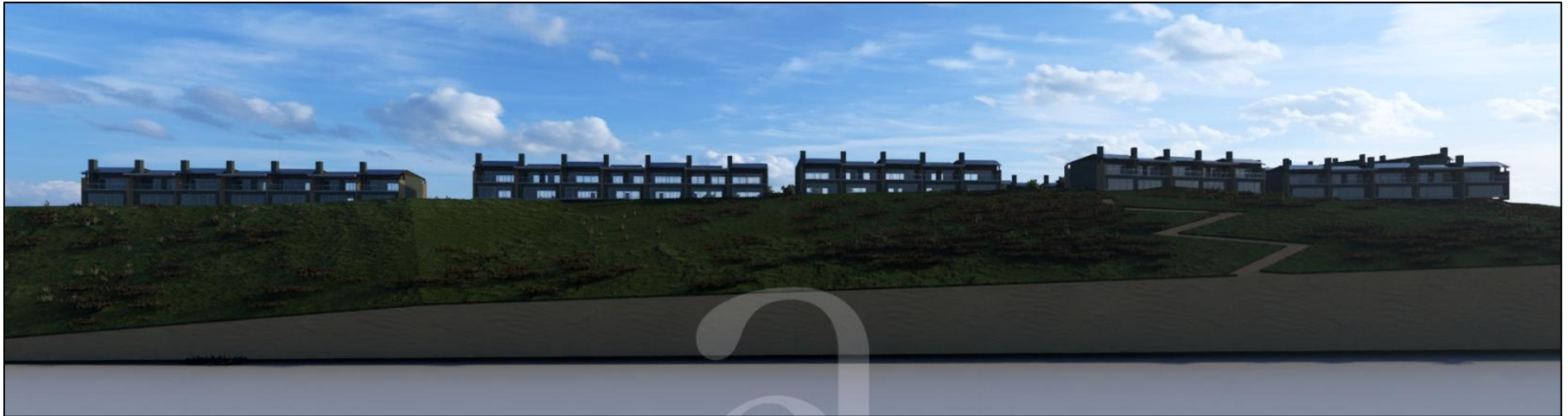


Figure 7: Proposed 3D Model Perspective Beach View to North.



Figure 8: Proposed 3D Model Perspective Beach View North-east.

5 LEGAL FRAMEWORK

In order to comply with the Visual Resource Management requirements, it is necessary to relate the proposed landscape modification in terms of international best practice in understanding landscapes and landscape processes. The proposed project also needs to be evaluated in terms of 'policy fit'. This requires a review of International, National and Regional best practice, policy and planning for the area to ensure that the scale, density and nature of activities or developments are harmonious and in keeping with the planned sense of place and character of the area.

5.1 International Good Practice

For international good practice in assessment of landscapes, the following documentation as relevance, specifically:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA), Second Edition.

5.1.1 Guidelines for Landscape and Visual Impact Assessment, Second Edition

The Landscape Institute and the Institute of Environmental Management and Assessment (United Kingdom) have compiled a book outlining best practice in landscape and visual impact assessment. This has become a key guideline for LVIA in the United Kingdom. "The principal aim of the guideline is to encourage high standards for the scope and context of landscape and visual impact assessments, based on the collegiate opinion and practice of the members of the Landscape Institute and the Institute of Environmental Management and Assessment. The guidelines also seek to establish certain principles and will help to achieve consistency, credibility and effectiveness in landscape and visual impact assessment, when carried out as part of an EIA" (The Landscape Institute, 2003);

In the introduction, the guideline states that 'Landscape encompasses the whole of our external environment, whether within village, towns, cities or in the countryside. The nature and pattern of buildings, streets, open spaces and trees – and their interrelationships within the built environment – are an equally important part of our landscape heritage" (The Landscape Institute, 2003: Pg. 9). The guideline identifies the following reasons why landscape is important in both urban and rural contexts, in that it is:

- An essential part of our natural resource base.
- A reservoir of archaeological and historical evidence.
- An environment for plants and animals (including humans).
- A resource that evokes sensual, cultural and spiritual responses and contributes to our urban and rural quality of life; and
- Valuable recreation resources. (The Landscape Institute, 2003).

In term of international best practice for Landscape and Visual Impact Assessment, no issues pertaining to the above listed landscape resources were identified within the project zone of visual influence.

5.1.2 International Finance Corporation (IFC)

The IFC Performance Standards (IFC, 2012) do not explicitly cover visual impacts or assessment thereof. Under IFC PS 6, ecosystem services are organized into four categories, with the third category related to cultural services which are defined as "the non-material

benefits people obtain from ecosystems” and “may include natural areas that are sacred sites and areas of importance for recreation and aesthetic enjoyment” (IFC, 2012).

However, the IFC Environmental Health and Safety Guidelines for Electric Power Transmission and Distribution (IFC, 2007) specifically identifies the risks posed by power transmission and distribution projects to create visual impacts to residential communities. It recommends mitigation measures to be implemented to minimise visual impact. These should include the siting of powerlines and the design of substations with due consideration to landscape views and important environmental and community features. Prioritising the location of high-voltage transmission and distribution lines in less populated areas, where possible, is promoted.

IFC PS 8 recognises the importance of cultural heritage for current and future generations and aims to ensure that projects protect cultural heritage. The report defines Cultural Heritage as “(i) tangible forms of cultural heritage, such as tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls” (IFC, 2012). The IFC PS 8 defines Critical Heritage as “one or both of the following types of cultural heritage: (i) the internationally recognized heritage of communities who use or have used within living memory the cultural heritage for long-standing cultural purposes; or (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation” (IFC, 2012).

Legally protected cultural heritage areas are identified as important in the IFC PS 8 report. This is for “the protection and conservation of cultural heritage, and additional measures are needed for any projects that would be permitted under the applicable national law in these areas”. The report states that “in circumstances where a proposed project is located within a legally protected area or a legally defined buffer zone, the client, in addition to the requirements for critical cultural heritage, will meet the following requirements:

- Comply with defined national or local cultural heritage regulations or the protected area management plans.
- Consult the protected area sponsors and managers, local communities and other key stakeholders on the proposed project; and
- Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area”. (IFC, 2012).

5.1.3 Millennium Ecosystem Assessment

In the Ecosystems and Human Well-being document compiled by the Millennium Ecosystem Assessment in 2005, Ecosystems are defined as being “essential for human well-being through their provisioning, regulating, cultural, and supporting services. Evidence in recent decades of escalating human impacts on ecological systems worldwide raises concerns about the consequences of ecosystem changes for human well-being”. (Millennium Ecosystem Assessment, 2005)

The Millennium Ecosystem Assessment defined the following non-material benefits that can be obtained from ecosystems:

- Inspiration: Ecosystems provide a rich source of inspiration for art, folklore, national symbols, architecture, and advertising.

- Aesthetic values: Many people find beauty or aesthetic value in various aspects of ecosystems, as reflected in the support for parks, scenic drives, and the selection of housing locations.
- Sense of place: Many people value the “sense of place” that is associated with recognised features of their environment, including aspects of the ecosystem.
- Cultural heritage values: Many societies place high value on the maintenance of either historically important landscapes (“cultural landscapes”) or culturally significant species; and
- Recreation and ecotourism: People often choose where to spend their leisure time based in part on the characteristics of the natural or cultivated landscapes in a particular area. (Millennium Ecosystem Assessment, 2005)

The Millennium Ecosystem Assessment Ecosystems and Human Well-being: Synthesis report indicates that there has been a “rapid decline in sacred groves and species” in relation to spiritual and religious values, and aesthetic values have seen a “decline in quantity and quality of natural lands”. (Millennium Ecosystem Assessment, 2005)

5.2 National and Regional Legislation and Policies

In order to comply with the Visual Resource Management requirements, it is necessary to clarify which National and Regional planning policies govern the proposed development area to ensure that the scale, density and nature of activities or developments are harmonious and in keeping with the sense of place and character of the area as mapped in Figure 9 below.

- DEA&DP Visual and Aesthetic Guidelines.
- REDZ Planning.
- Regional and Local Municipality Planning and Guidelines.

Table 8: List of key planning informants to the project.

Theme	Requirements
Province	Western Cape
District Municipality	Garden Route
Local Municipality	Mossel Bay

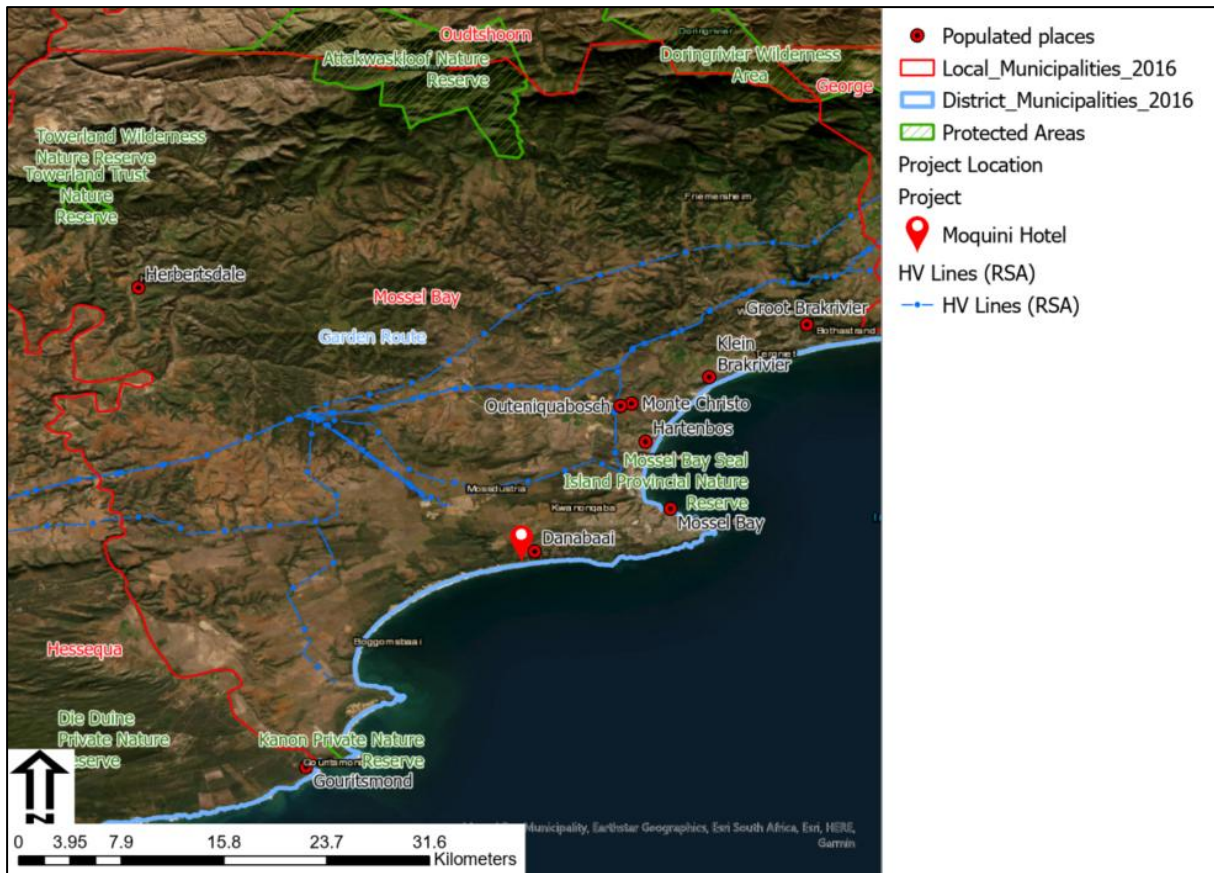


Figure 9: Planning locality map depicting the local, district and national planning zones.

5.2.1 DEA&DP Visual and Aesthetic Guidelines

Reference to the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) Guideline for involving visual and aesthetic specialists in Environmental Impact Assessment (EIA) processes is provided in terms of southern African best practice in Visual Impact Assessment. The report compiled by Oberholzer states that the Best Practicable Environmental Option (BPEO) should address the following:

- Ensure that the scale, density and nature of activities or developments are harmonious and in keeping with the sense of place and character of the area. The BPEO must also ensure that development must be located to prevent structures from being a visual intrusion (i.e., to retain open views and vistas).
- Long term protection of important scenic resources and heritage sites.
- Minimisation of visual intrusion in scenic areas.
- Retention of wilderness or special areas intact as far as possible.
- Responsiveness to the area's uniqueness, or sense of place.” (Oberholzer, 2005)

5.2.2 Conservation Planning

As can be seen in Figure 9 above, the closest nature reserve areas are Mossel Bay Seal Island to the east, Kanan Private Nature Reserve and Die Duine Private Nature Reserve to the west. This area is totally outside of the project ZVI. The Danabaai area and Mossel Bay as a coastal area, is an important tourist destination. However, the area is well developed, and the attraction is the coastline that reflects and existing coastal urban landscape context. The beach areas of the Danabaai suburban area are a significant landscape resources, but views from the beach are strongly associated with urban, single residential development.

5.2.3 Local and Regional Planning

The following tables list key regional and local planning that has relevance to the project pertaining to landscape-based tourism, and renewable energy projects.

Table 9: District Planning reference table relevant to the project.

Garden Route District Municipality (Eden District Municipality) SDF (Garden Route District Municipality, 2017)		
Theme	Requirements	Page
Tourism	Garden Route District Municipality defined mandate: <ul style="list-style-type: none"> • Promotion of local tourism for the area of the district • municipality 	21
	The Southern Cape region is identified as being a provincial leisure and tourism coastal belt and priority urban functional region.	25

Garden Route District Municipality 2020_2021 Draft Reviewed Integrated Development Plan (Garden Route District Municipality, 2020)		
Theme	Requirements	Page
Business Development	The Western Cape Provincial Government has identified employment and economic growth as its first strategic goal. There are a number of priority initiatives identified to achieve this goal. The 'game-changers' that relate to economic development are focused on energy security, broadband, infrastructure, and skills development.... In addition to this, partners intends to collaborate on economic infrastructure; entrepreneurship, business development and integration; and investment promotion.	203
	The Garden Route Regional Economic Development aims to achieve the following objectives: <ul style="list-style-type: none"> • Regional business retention and expansion • Increase skills and economic development through alignment • Support local municipalities to minimize Red Tape to promote economic development 	204

Table 10: Local Planning reference table relevant to the project.

Mossel Bay Municipality SDF 2022 (Mossel Bay Municipality, 2022)		
Theme	Requirements	Page
Tourism	<p>Mossel Bay IDP 2022 confirms the Spatial Vision of the Municipality</p> <ul style="list-style-type: none"> • Conserves the Mossel Bay municipality’s significant rural resources for the biodiversity conservation of its rivers, wetlands, estuaries and coastline, natural vegetation, scenic landscapes, and extensive and intensive agriculture resources. • To support rural tourism and agricultural economic growth and employment creation. The Municipality places a greater focus on leveraging its history, heritage and sense of place of the natural scenic areas and old town to revive its underperforming tourism economy; and • Promotes inclusionary, efficient, urban growth that provides comfortable and convenient access to urban opportunities and livelihoods for all its existing and future residents; while at the same time; 	16
Environmental Landscape	<ul style="list-style-type: none"> • The Danabaai area is classified as a General Residential area and bordered by various coastal risk lines, coastal setback lines, coastal management lines and critical biodiversity areas. Several coastal access points exist in the area and access to them must be ensured. 	90
	<ul style="list-style-type: none"> • The development parameters and parking requirements for these uses must ensure that the character of the area is not adversely affected. Mitigating conditions of approval can be used to manage the area 	91
	<ul style="list-style-type: none"> • The Danabaai area is bordered or adjacent to the coastal zone and open space network. Expansion of the urban footprint along the coastline (within 100 m) is not permitted. Encroachments onto the open space network is not permitted except for limited infrastructure provision. Building plan approval for buildings on erven adjacent to the coast and open space network must discourage encroaching into the said areas. The open space network in Danabaai is an asset to the community and must be conserved for future generation 	90
Economic Development	<ul style="list-style-type: none"> • Danabaai area mainly comprises a large plot, low-density suburb developed in the 1970s as a coastal estate separated from the remainder of Mossel Bay town and Kwanonqaba, at that point in time - a relatively small settlement over 5 km away. Subsequently, Moquini coastal estate developed on 	87

	Dana Bay's western periphery and Paradise Coast (+/- 930 units) were developed to the east	
	<ul style="list-style-type: none"> The trend to work from home and semi-gration have all contributed to the increasing number of permanent residents in the area. The need for housing, social facilities, economic opportunities and municipal services is consequently increasing as well. An Intensification Corridor (as indicated on figure 13) along the Flora Road extension is proposed to provide space for these facilities. The intensification corridor will allow for the creation of job opportunities and optimal use of existing municipal infrastructure. Business opportunities 	90
	<ul style="list-style-type: none"> Danabaai has relatively high permanent population for a coastal holiday housing suburb, suggests that its population may be becoming more integrated into the Mossel Bay local economy 	87

5.3 Landscape Planning Policy Fit

Policy fit refers to the degree to which the proposed landscape modifications align with International, National, Provincial and Local planning and policy.

In terms of international best practice, the proposed landscape modification will not trigger any issues as there are no significant cultural/ landscape visual resources found on the site or immediate surrounds that are flagged by international landscape guidelines.

In terms of regional and local planning fit for planned landscape and visual related themes, the expected visual/ landscape policy fit of the landscape change is rated High Positive for the following reasons:

- Existing authorisation (unbuilt).
- Development alignment with the final Mossel Bay SDF.
- The beach areas of the Danabaai suburban area are a significant landscape resources, but views from the beach are strongly associated with urban, single residential development.



Figure 10: Anticipated landscape change as seen from the Beach parking area (Approximate Scaling).



Figure 11: Anticipated landscape change as seen from the Beach parking area (Approximate Scaling).



Existing view of property (View south east)



Photomontage of all existing erven with development rights and proposed hotel

Approximate scaling for illustrative purposes only

PLATE 12: PHOTO MONTAGES: VIEWPOINT 3

Figure 12: **Previous** VIA Photomontage for the **hotel complex** depicting existing and **future development context** once all surrounding plots are developed.

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7 ANNEXURE A: SITE VISIT PHOTOGRAPHS AND COMMENTS

The following photographs were taken during the field survey as mapped below. The text below the photograph describes the landscape and visual issues of the locality, if applicable.



Figure 13: Survey point and project locality map.

Table 11. Site Visit Landscape Risks Table.

ID	NAME	REMARKS	REC_TIME	LAT	LONG	RISK	MOTIVATION
1	Receptor	Pinea Street	02/21/2024 09:46:19.00 0 GMT+02:00	-34.2041	22.02963	Medium	Landscape character is built in context but single residential with larger plots. High density development will change the local landscape context but will not be significantly different from the previous development plan.
2	Site	Dune	02/21/2024 09:51:46.00 0 GMT+02:00	-34.2066	22.02725	Low	Careful management of the embankment is required.
3	Site	Dune	02/21/2024 09:57:51.00 0 GMT+02:00	-34.2071	22.02642	Low	While the development will be clearly visible and will break skyline, the existing Danabaai precedent for double story dwellings will be retained.
4	Receptor	Second beach	02/21/2024 10:05:42.00 0 GMT+02:00	-34.2074	22.02959	High	Skyline intrusion will take place but with some topographic screening from the front of the dune, with development site back from the front of the dune. A new (but authorised) built context will be established but will not be repeated due to cadastral containment.

_NAME	Receptor
_REMARKS	Pinea Street
PhotoDir	W
Photo	\Photos\Moquini_20240221_094709208.jpg

_NAME	Site
_REMARKS	Dune
PhotoDir	W
Photo	\Photos\Moquini_20240221_095310678.jpg

_ID	3
_NAME	Site (Outside of development footprint)
_REMARKS	Dune
PhotoDir	E
Photo	\Photos\Moquini_20240221_095848349.jpg



_ID	4
_NAME	Receptor
_REMARKS	Second beach with likely upper story visible due to topographic screening and setback from the dune edge.
PhotoDir	NW
Photo	\Photos\Moquini_20240221_100657514.jpg



8 ANNEXURE B: SPECIALIST INFORMATION

8.1 Professional Registration Certificate



8.2 Curriculum Vitae (CV)

1. **Position:** Owner / Director
2. **Name of Firm:** Visual Resource Management Africa cc (www.vrma.co.za)
3. **Name of Staff:** Stephen Stead
4. **Date of Birth:** 9 June 1967
5. **Nationality:** South African
6. **Contact Details:** Tel: +27 (0) 44 876 0020
Cell: +27 (0) 83 560 9911
Email: steve@vrma.co.za
7. **Educational qualifications:**
 - University of Natal (Pietermaritzburg):
 - Bachelor of Arts: Psychology and Geography
 - Bachelor of Arts (Hons): Human Geography and Geographic Information Management Systems.
 - MSc Geography (2023): Land use and land-use change.
8. **Professional Accreditation**
 - Association of Professional Heritage Practitioners (APHP) Western Cape
 - Accredited VIA practitioner member of the Association (2011)
9. **Association involvement:**
 - International Association of Impact Assessment (IAIA) South African Affiliate
 - Past President (2012 - 2013)
 - President (2012)
 - President-Elect (2011)
 - Conference Co-ordinator (2010)
 - National Executive Committee member (2009)
 - Southern Cape Chairperson (2008)
10. **Conferences Attended:**
 - IAIAAsa 2012
 - IAIAAsa 2011
 - IAIA International 2011 (Mexico)
 - IAIAAsa 2010
 - IAIAAsa 2009
 - IAIAAsa 2007
11. **Continued Professional Development:**
 - Integrating Sustainability with Environment Assessment in South Africa (IAIAAsa Conference, 1 day)
 - Achieving the full potential of SIA (Mexico, IAIA Conference, 2 days 2011)

- Researching and Assessing Heritage Resources Course (University of Cape Town, 5 days, 2009)

12. Countries of Work Experience:

- South Africa, Mozambique, Malawi, Lesotho, Kenya and Namibia

13. Relevant Experience:

Stephen gained six years of experience in the field of Geographic Information Systems mapping and spatial analysis working as a consultant for the KwaZulu-Natal Department of Health and then with an Environmental Impact Assessment company based in the Western Cape. In 2004 he set up the company Visual Resource Management Africa that specializes in visual resource management and visual impact assessments in Africa. The company makes use of the well-documented Visual Resource Management methodology developed by the Bureau of Land Management (USA) for assessing the suitability of landscape modifications. Stephen has assessed of over 150 major landscape modifications throughout southern and eastern Africa. The business has been operating for eighteen years and has successfully established and retained a large client base throughout Southern Africa which include amongst other, Rio Tinto (Pty) Ltd, Bannerman (Pty) Ltd, Anglo Coal (Pty) Ltd, Eskom (Pty) Ltd, NamSolar and Vale (Pty) Ltd, Ariva (Pty) Ltd, Harmony Gold (Pty) Ltd, Millennium Challenge Account (USA), Pretoria Portland Cement (Pty) Ltd

14. Languages:

- English – First Language
- Afrikaans – fair in speaking, reading and writing.

15. Projects:

A list of **some** of the large-scale projects that VRMA has assessed has been attached below with the client list indicated per project (Refer to www.vrma.co.za for a full list of projects undertaken).

Table 12: VRM Africa Projects Assessments Table

DESCRIPTION	COUNT	DESCRIPTION	COUNT
Dam	1	UISP	8
Mari-culture	1	Structure	8
Port	1	OHPL	12
Railway	1	Industrial	12
Power Station	3	Wind Energy	22
Hydroelectric	4	Battery Storage	14
Resort	4	Mine	20
Golf/Residential	1	Residential	45
Road Infrastructure	5	Solar Energy	62
Substation	5	TOTAL	237

9 ANNEXURE C: GENERAL LIGHTS AT NIGHT MITIGATIONS

Mitigation:

- Effective light management needs to be incorporated into the design of the lighting to ensure that the visual influence is limited to the project, without jeopardising project operational safety and security (See lighting mitigations by The New England Light Pollution Advisory Group (NELPAG) and Sky Publishing Corp in 14.2).
- Utilisation of specific frequency LED lighting with a green hue on perimeter security fencing.
- Directional lighting on the more exposed areas of operation, where point light source is an issue.
- No use of overhead lighting and, if possible, locate the light source closer to the operation.

Mesopic Lighting

Mesopic vision is a combination of photopic vision and scotopic vision in low, but not quite dark, lighting situations. The traditional method of measuring light assumes photopic vision and is often a poor predictor of how a person sees at night. The light spectrum optimized for mesopic vision contains a relatively high amount of bluish light and is therefore effective for peripheral visual tasks at mesopic light levels. (CIE, 2012)

The Mesopic Street Lighting Demonstration and Evaluation Report by the Lighting Research Centre (LRC) in New York found that the 'replacement of white light sources (induction and ceramic metal halide) were tuned to optimize human vision under low light levels while remaining in the white light spectrum. Therefore, outdoor electric light sources that are tuned to how humans see under mesopic lighting conditions can be used to reduce the luminance of the road surface while providing the same, or better, visibility. Light sources with shorter wavelengths, which produce a "cooler" (bluer and greener) light, are needed to produce better mesopic vision. Based on this understanding, the LRC developed a means of predicting visual performance under low light conditions. This system is called the unified photometry system. Responses to surveys conducted on new installations revealed that area residents perceived higher levels of visibility, safety, security, brightness, and colour rendering with the new lighting systems than with the standard *High-Purity Standards* (HPS) systems. The new lighting systems used 30% to 50% less energy than the HPS systems. These positive results were achieved through tuning the light source to optimize mesopic vision. Using less wattage and photopic luminance also reduces the reflectance of the light off the road surface. Light reflectance is a major contributor to light pollution (sky glow).' (*Lighting Research Centre. New York. 2008*)

'Good Neighbour – Outdoor Lighting'

Presented by the New England Light Pollution Advisory Group (NELPAG) (<http://cfa/www.harvard.edu/cfa/ps/nelpag.html>) and Sky & Telescope (<http://SkyandTelescope.com/>). NELPAG and Sky & Telescope support the International Dark-Sky Association (IDA) (<http://www.darksky.org/>). (NELPAG)

What is good lighting? Good outdoor lights improve visibility, safety, and a sense of security, while minimizing energy use, operating costs, and ugly, dazzling glare.

Why should we be concerned? Many outdoor lights are poorly designed or improperly aimed. Such lights are costly, wasteful, and distractingly glary. They harm the night-time environment and neighbours' property values. Light directed uselessly above the horizon creates murky skyglow — the "light pollution" that washes out our view of the stars.

Glare Here's the basic rule of thumb: If you can see the bright bulb from a distance, it's a bad light. With a good light, you see lit ground instead of the dazzling bulb. "Glare" is light that beams directly from a bulb into your eye. It hampers the vision of pedestrians, cyclists, and drivers.

Light Trespass Poor outdoor lighting shines onto neighbours' properties and into bedroom windows, reducing privacy, hindering sleep, and giving the area an unattractive, trashy look.

Energy Waste Many outdoor lights waste energy by spilling much of their light where it is not needed, such as up into the sky. This waste results in high operating costs. Each year we waste more than a billion dollars in the United States needlessly lighting the night sky.

Excess Lighting Some homes and businesses are flooded with much stronger light than is necessary for safety or security.

How do I switch to good lighting?

Provide only enough light for the task at hand; don't over-light, and don't spill light off your property. Specifying enough light for a job is sometimes hard to do on paper. Remember that a full Moon can make an area quite bright. Some lighting systems illuminate areas 100 times more brightly than the full Moon! More importantly, by choosing properly shielded lights, you can meet your needs without bothering neighbours or polluting the sky.

Good and Bad Light Fixtures

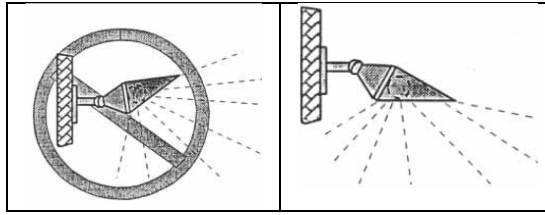
<p>Typical "Wall Pack"</p>	<p>Typical "Shoe Box" (forward throw)</p>
<p>BAD Waste light goes up and sideways</p>	<p>GOOD Directs all light down</p>
<p>Typical "Yard Light"</p>	<p>Opaque Reflector (lamp inside)</p>
<p>BAD Waste light goes up and sideways</p>	<p>GOOD Directs all light down</p>
<p>Area Flood Light</p>	<p>Area Flood Light with Hood</p>
<p>BAD Waste light goes up and sideways</p>	<p>GOOD Directs all light down</p>

- Aim lights down. Choose “full-cut-off shielded” fixtures that keep light from going uselessly up or sideways. Full-cut-off fixtures produce minimum glare. They create a pleasant-looking environment. They increase safety because you see illuminated people, cars, and terrain, not dazzling bulbs.
- Install fixtures carefully to maximize their effectiveness on the targeted area and minimize their impact elsewhere. Proper aiming of fixtures is crucial. Most are aimed too high. Try to install them at night, when you can see where all the rays actually go. Properly aimed and shielded lights may cost more initially, but they save you far more in the long run. They can illuminate your target with a low-wattage bulb just as well as a wasteful light does with a high-wattage bulb.
- If colour discrimination is not important, choose energy- efficient fixtures utilising yellowish high-pressure sodium (HPS) bulbs. If “white” light is needed, fixtures using compact fluorescent or metal-halide (MH) bulbs are more energy-efficient than those using incandescent, halogen, or mercury-vapour bulbs.
- Where feasible, put lights on timers to turn them off each night after they are no longer needed. Put home security lights on a motion-detector switch, which turns them on only when someone enters the area; this provides a great deterrent effect!

What You Can Do To Modify Existing Fixtures

Change this . . .

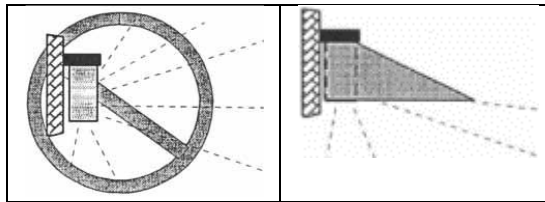
to this
(aim downward)



Floodlight:

Change this . . .

to this
(aim downward)

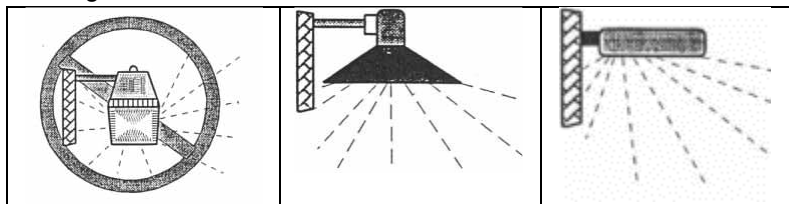


Wall Pack

Change this . . .

to this

or this



Yard Light

Opaque Reflector

Show Box

Replace bad lights with good lights.

You'll save energy and money. You'll be a good neighbour. And you'll help preserve our view of the stars.

10 ANNEXURE D: METHODOLOGY DETAIL

10.1 Baseline Analysis Stage

In terms of VRM methodology, landscape character is derived from a combination of **scenic quality**, **receptor sensitivity** to landscape change and **distance** from the proposed landscape change. The objective of the analysis is to compile a mapped inventory of the visual resources found in the receiving landscape, and to derive a mapped Visual Resource sensitivity layer from which to evaluate the suitability of the landscape change.

10.1.1 Scenic Quality

The scenic quality is determined making use of the VRM Scenic Quality Checklist that identifies seven scenic quality criteria which are rated with 1 (low) to 5 (high) scale. The scores are totalled and assigned an A (High), B (Moderate) or C (low) based on the following split:

A = scenic quality rating of ≥ 19 ;

B = rating of 12 – 18,

C = rating of ≤ 11

The seven scenic quality criteria are defined below:

- **Land Form:** Topography becomes more of a factor as it becomes steeper, or more severely sculptured.
- **Vegetation:** Primary consideration given to the variety of patterns, forms, and textures created by plant life.
- **Water:** That ingredient which adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration.
- **Colour:** The overall colour(s) of the basic components of the landscape (e.g., soil, rock, vegetation, etc.) are considered as they appear during seasons or periods of high use.
- **Scarcity:** This factor provides an opportunity to give added importance to one, or all, of the scenic features that appear to be relatively unique or rare within one physiographic region.
- **Adjacent Land Use:** Degree to which scenery and distance enhance, or start to influence, the overall impression of the scenery within the rating unit.
- **Cultural Modifications:** Cultural modifications should be considered and may detract from the scenery or complement or improve the scenic quality of an area.

10.1.2 Receptor Sensitivity

Receptor sensitivity to landscape change is determined by rating the following factors in terms of Low to High:

- **Type of Users:** Visual sensitivity will vary with the type of users, e.g. recreational sightseers may be highly sensitive to any changes in visual quality, whereas workers who pass through the area on a regular basis may not be as sensitive to change.
- **Amount of Use:** Areas seen or used by large numbers of people are potentially more sensitive.
- **Public Interest:** The visual quality of an area may be of concern to local, or regional, groups. Indicators of this concern are usually expressed via public controversy created in response to proposed activities.
- **Adjacent Land Uses:** The interrelationship with land uses in adjacent lands. For example, an area within the viewshed of a residential area may be very sensitive, whereas an area surrounded by commercially developed lands may not be as visually sensitive.

- **Special Areas:** Management objectives for special areas such as Natural Areas, Wilderness Areas or Wilderness Study Areas, Wild and Scenic Rivers, Scenic Areas, Scenic Roads or Trails, and Critical Biodiversity Areas frequently require special consideration for the protection of their visual values.
- **Other Factors:** Consider any other information such as research or studies that include indicators of visual sensitivity.

10.1.3 Exposure

The area where a landscape modification starts to influence the landscape character is termed the Zone of Visual Influence (ZVI) and is defined by the U.K. Institute of Environmental Management and Assessment's (IEMA) '*Guidelines for Landscape and Visual Impact Assessment*' as 'the area within which a proposed development may have an influence or effect on visual amenity (of the surrounding areas).'

The inverse relationship of distance and visual impact is well recognised in visual analysis literature (*Hull, R.B. and Bishop, I.E., 1988*). According to Hull and Bishop, exposure, or visual impact, tends to diminish exponentially with distance. The areas where most landscape modifications would be visible are located within 2 km from the site of the landscape modification. Thus, the potential visual impact of an object diminishes at an exponential rate as the distance between the observer and the object increases due to atmospheric conditions prevalent at a location, which causes the air to appear greyer, thereby diminishing detail. For example, viewed from 1000 m from a landscape modification, the impact would be 25% of the impact as viewed from 500 m from a landscape modification. At 2000m it would be 10% of the impact at 500 m.

Distance from a landscape modification influences the size and clarity of the landscape modification viewing. The Bureau of Land Management defines three distance categories:

- Foreground / Middle ground***, up to approximately 6km, which is where there is potential for the sense of place to change;
- Background areas***, from 6km to 24km, where there is some potential for change in the sense of place, but where change would only occur in the case of very large landscape modifications; and
- Seldom seen areas***, which fall within the Foreground / Middle ground area but, as a result of no receptors, are not viewed or are seldom viewed.

10.1.4 Key Observation Points

During the Baseline Inventory Stage, Key Observation Points (KOPs) are identified. KOPs are defined by the Bureau of Land Management as the people (receptors) located in strategic locations surrounding the property that make consistent use of the views associated with the site where the landscape modifications are proposed. These locations are important in terms of the VRM methodology, which requires that the Degree of Contrast (DoC) that the proposed landscape modifications will make to the existing landscape be measured from these most critical locations, or receptors, surrounding the property. To define the KOPs, potential receptor locations were identified in the viewshed analysis, and screened, based on the following criteria:

- Angle of observation.
- Number of viewers.
- Length of time the project is in view.
- Relative project size.

- Season of use.
- Critical viewpoints, e.g., views from communities, road crossings; and
- Distance from property.

10.2 Assessment and Impact Stage

The analysis stage involves determining whether the potential visual impacts from proposed surface-disturbing activities or developments will meet the management objectives established for the area, or whether design adjustments will be required. This requires a contrast rating to assess the expected DoC the proposed landscape modifications would generate within the receiving landscape in order to define the Magnitude of the impact.

10.2.1 Contrast Rating

The contrast rating is undertaken to determine if the VRM Class Objectives are met. The suitability of landscape modification is assessed by comparing and contrasting existing receiving landscape to the expected contrast that the proposed landscape change will generate. This is done by evaluating the level of change to the existing landscape by assessing the line, colour, texture and form, in relation to the visual objectives defined for the area. The following criteria are utilised in defining the DoC:

- **None:** The element contrast is not visible or perceived.
- **Weak:** The element contrast can be seen but does not attract attention.
- **Moderate:** The element contrast begins to attract attention and begins to dominate the characteristic landscape.
- **Strong:** The element contrast demands attention, will not be overlooked, and is dominant in the landscape.

As an example, in a Class I area, the visual objective is to preserve the existing character of the landscape, and the resultant contrast to the existing landscape should not be notable to the casual observer and cannot attract attention. In a Class IV area example, the objective is to provide for proposed landscape activities that allow for major modifications of the existing character of the landscape. Based on whether the VRM objectives are met, mitigations, if required, are defined to avoid, reduce or mitigate the proposed landscape modifications so that the visual impact does not detract from the surrounding landscape sense of place.

Based on the findings of the contrast rating, the Magnitude of the Landscape and Visual Impact Assessment is determined.

10.2.2 Photomontages

As a component in this contrast rating process, visual representation, such as photo montages are vital in large-scale modifications, as this serves to inform Interested & Affected Parties and decision-making authorities of the nature and extent of the impact associated with the proposed project/development. There is an ethical obligation in this process, as visualisation can be misleading if not undertaken ethically. In terms of adhering to standards for ethical representation of landscape modifications, VRMA subscribes to the Proposed Interim Code of Ethics for Landscape Visualisation developed by the Collaborative for Advanced Landscape Planning (CALP) (Sheppard, 2000). This code states that professional presenters of realistic landscape visualisations are responsible for promoting full understanding of proposed landscape changes, providing an honest and neutral visual representation of the expected

landscape, by seeking to avoid bias in responses and demonstrating the legitimacy of the visualisation process. Presenters of landscape visualisations should adhere to the principles of:

- Access to Information
- Accuracy
- Legitimacy
- Representativeness
- Visual Clarity and Interest

The Code of Ethical Conduct states that the presenter should:

- Demonstrate an appropriate level of qualification and experience.
- Use visualisation tools and media that are appropriate to the purpose.
- Choose the appropriate level of realism.
- Identify, collect and document supporting visual data available for, or used in, the visualisation process.
- Conduct an on-site visual analysis to determine important issues and views.
- Seek community input on viewpoints and landscape issues to address in the visualisations.
- Provide the viewer with a reasonable choice of viewpoints, view directions, view angles, viewing conditions and timeframes appropriate to the area being visualised.
- Estimate and disclose the expected degree of uncertainty, indicating areas and possible visual consequences of the uncertainties.
- Use more than one appropriate presentation mode and means of access for the affected public.
- Present important non-visual information at the same time as the visual presentation, using a neutral delivery.
- Avoid the use, or the appearance of, 'sales' techniques or special effects.
- Avoid seeking a particular response from the audience.
- Provide information describing how the visualisation process was conducted and how key decisions were taken (Sheppard, 2000).