# ROMANSBAAI ABALONE FARM

## Prt 2 of Farm 711, Overstrand Municipality

## VISUAL ASSESSMENT

**For consideration in the application for expansion of the facility**

**For**

**Lornay Environmental Consultancy**

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**Report**

**January 2024**

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**Report history:**

| Version | Date | Amendments |
|---|---|---|
| Version 1<br>Ref ROM-000-01 | 16-01-2024 | |
| | | |
| | | |

Report to be cited: Lategan, S.C. 2024. Visual Impact Assessment for expansion of the Romansbaai Abalone farm on Portion 2 of Farm 711, Overstrand Municipal Area. January 2024

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**Relevant Qualifications & Experience of the Author**

Ms Sarien Lategan holds an Honours Degree in Geography as well as a Masters Degree in Town and Regional Planning from the University of Stellenbosch. She has 7 years experience as Town Planner at a local government, 3 years with South African National Parks as planner and project manager of various GEF and World Bank managed, tourist facilities in the Table Mountain National Park and since 2004 as private practitioner involved in inter alia Site Analysis, Geospatial Analysis and Visual Impact assessments for various types of developments ranging from housing, tourism to infrastructure developments.

**Declaration of Independence**

I, Sarah C. Lategan, declare that I am an independent consultant to Lornay Environmental Consultancy and, has no business, financial, personal, or other interest in the proposed project or application in respect of which I was appointed, other than fair remuneration for work performed in connection with the application. There are furthermore no circumstances which compromise my objectivity in executing the task appointed for.

SC Lategan
January 2024

## EXECUTIVE SUMMARY

This report assesses the potential visual impact of the expansion of Romansbaai Abalone Farm, located on Portion 2 of Farm 711 on the Danger Point Peninsula in the Overstrand municipal area. Heritage Western Cape requested a Heritage Impact Assessment (HIA) for the proposed expansion, which includes a Visual Impact Assessment on the Cultural landscape. The purpose of this report is to provide the Heritage authority with sufficient information to consider the application made to them.

The total expansion will comprise 9.5ha with an increased production output of 300 tons wet weight per annum. The report aims to determine the significance of any visual impacts resulting from the construction of the proposed expansions with specific reference to the cultural landscape. The development proposal includes increasing production by 150 tons in phases 1 and 2, construction of a lined reservoir for sea water containment during loadshedding, solar, additional pipelines to the new production area, and an increase in the pumphouse.

The assessment defines the receiving landscape, model the viewshed for the development footprint and then identify potential view receptors within the viewshed. These receptors are then assessed, and the significance of impact defined. Finally, the overall impact is considered and potential mitigation measures, if necessary, proposed.

Peninsulas as landforms are important cultural landscapes that encompasses both physical and intangible elements. Physical elements of a landscape are easily identifiable and can be quantified from a baseline, while intangible elements are held in stories and memories of communities. These intangible elements have a qualitative value, as they support the memories and stories of communities.

The Danger Point Peninsula holds few physical elements creating a recognizable visual cultural landscape, but it has a strong intangible value. The peninsula's history is rooted in pre-colonial settlements represented in shell middens, related objects, and the intertwined marine-terrestrial landscape. The colonial history also has a strong relationship with shipping and shipwrecks, such as the HMS Birkenhead, which is embedded in local stories, place names, and objects passed down through generations.

The Danger Point Lighthouse, a prominent landmark and embodiment of shipwreck history, has become an important tourist destination and preserves the colonial history. Both the Pre-colonial and colonial history are strongly associated with the coastal strip and less prominent in the interior of the peninsula. The cultural landscape thus has a strong intangible character through connections and memories. However, these connections are fading, and the cultural connection to these elements is less prominent among the current community and residents in the various neighborhoods in the peninsula.

The view catchment refers to the area from which a development would potentially be visible. A viewshed was modelled based on topography, excluding existing buildings and urban elements. The viewshed considered a maximum height of 3m for infrastructure elements. Two viewsheds were modelled to provide for the main expansion area located at a height of approximately 25m above sea level and the pumphouse situated about 700m to the west on about 5m above sea level.

Landscape elements and topography hold screening value, which can absorb elements to make them either not visible or intrusive. The extent of the view catchment was tested with ground verification and adapted to accommodate the area most likely to be within the viewshed. The initial view catchment shows potential areas within a 30km radius, but the site is situated in a depression and well-screened from surrounding areas, allowing the viewshed to be reduced to about 5km radius to include whole of the Peninsula. The main development area's catchment does not extend onto the ocean, only the pumphouse include the coast and ocean in its viewshed.

Several potential Receptors were identified, and these were assessed.
The Danger Point Lighthouse, although not within the modelled viewshed, was assessed due to its importance as a landmark on the Peninsula. The proposed development has no visual impact on the lighthouse, as it is screened by the topography.

The intersection between Lord Roberts Street, Van Dyk Street, and Dyer street is an important point of pause for road travelers, but the abalone farm is not visible from this receptor due to the natural landscape. This viewpoint also represents the Penguin Sanctuary. Although on the edge of the viewshed, the abalone farm expansion will not be visible from this point

and thus have no impact there on. The abalone farm is well-screened from roads and routes, such as the R43 and Van Dyk Street corridor, and is only visible for short distance along Van Dyk Street.

Receptors 3, 4 and 5 are located within the Romansbaai Estate. The Romansbaai Estate, located on the Danger Point Peninsula, has primarily coastal views. Only the Tern Street area has partial views across the main expansion facilities. Due to the topography, the facilities are mostly screened which results in it is not intrusive in the view lines. The solar arrays will be oriented to the north, ensuring Tern Street properties have a rear view of the solar arrays, preventing glare effects The coastal properties have no view of the facilities and only a view of the pumphouse. The overall impact from Romansbaai is thus low.

Receptors 6 and 7 are within Blompark to the north of the Abalone farm. Views are primarily screened by the topography and where it is visible the distance to the facilities reduce the impact. The solar arrays will be oriented north and have a potential glare impact. A screening of this impact indicates that the glare impact is of low value and of short duration. The overall impact is thus low.

The coastal strip and Romansbaai beach are crucial elements in the landscape, with cultural, scenic, resource, and recreational value. The Abalone farm is not visible from the coastline due to topography, and only the pump house is visible. The expansion of the pumphouse with 40m² will not significantly change the current visual experience.

The ocean is important as a recreational and tourism viewpoint, with marine safaris around the Danger Point Peninsula focusing on observing marine animals. The main infrastructure is in a depression and not visible from the ocean, with the pumphouse only visible a short distance from the coast.

The shell midden on site is protected as a No-go area, and conserving the coastal landscape character is important to preserve the context of the midden. The expansion of the pumphouse entails a small footprint, and the cumulative size of the footprint will not significantly change the current visual landscape, making the impact low.

The overall visual impact of the proposed abalone farm expansion is low and not of such a nature that it will result in a deterioration of the cultural landscape. No mitigation measures are therefore deemed necessary.

It is my view that the application can receive positive consideration from a landscape perspective.

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# 1 BACKGROUND

The objective of this report is to assess the potential visual impact of the expansion of the Romansbaai Abalone Farm, on Portion 2 of Farm 711, Gansbaai in the Overstrand municipal area. The expansion is within the current property boundaries of the existing Aqunion /Romansbaai Abalone farm.


*Figure 1: Locality*


*Figure 2: The Site*

## 2 TERMS OF REFERENCE

The applicant was requested by Heritage Western Cape to submit a Heritage impact Assessment be submitted for the proposed expansion of the Abalone farm and such HIA should inter alia include a Visual impact Assessment on the Cultural landscape.

The total expansion will comprise 9.5ha with an increased production output by 300 tons wet weight per annum.

The objective of the Visual Impact assessment is to determine the significance of any visual impact which may result from the construction of the proposed expansions with specific reference to the cultural landscape. This assessment will provide a brief overview of potential visual impacts and identify any issues from this perspective which may require more detail assessment or modelling. In this study cultural landscape has a broad definition to include heritage aspects, natural environment and the broad human-landscape sense of place concept.

To determine the potential extent of the Visual Impact Assessment required, the following broad criteria are considered.

*Table 1: Requirements for visual assessment*

| | |
|---|---|
| Areas with protection status, e.g. nature reserves | No specific cultural sites are within 1km from the proposed expansions except the on-site shell midden previously identified and earmarked as a no-go area. |
| Areas with proclaimed heritage sites or scenic routes | None known within 1km from site |
| Areas with intact wilderness qualities, or pristine ecosystems | The coastal zone, however significantly impacted on, still support functioning ecosystems and is identified in the Overstrand Zoningscheme as a conservation zone. The natural vegetation on the site as well as the Romansbaai Estate to the south support quality ecosystems. |
| Areas with intact or outstanding rural or townscape qualities | The area has a natural landscape quality with the coastline as low intensity recreational area (fishing). |
| Areas with a recognized special character or sense of place | Coastal zone as recreational area |
| Areas with sites of cultural or religious significance | Coastal zone with archeological features. |
| Areas of important tourism or recreation value | Coastal zone |
| Areas with important vistas or scenic corridors | Coastline. |
| Areas with visually prominent ridgelines or skylines. | Coastal cliffs |

*Table 2: Nature of intended development*

| | |
|---|---|
| High-intensity type projects including large-scale infrastructure | Most of the infrastructure is within the perimeter of a single storey building height height and can be classified as medium scale infrastructure. |
| A change in land use from the prevailing use | Partially |
| A use that conflicts with an adopted plan or vision for the area | None identified |
| A significant change to the fabric and character of the area | Potentially |

| | |
|---|---|
| A significant change to the townscape or streetscape | Potentially |
| Possible visual intrusion in the landscape | Potentially |
| Obstruction of views of others in the area | Potentially |

From the above, it is clear that the receiving environment holds certain visual elements which may be impacted on by the proposed development. To assist authorities to make an informed decision, the input of a specialist is required to assist in the project design and assess the visual impact of the preferred project proposal.

The term visual and aesthetic is defined to cover the broad range of visual, scenic, cultural, and spiritual aspects of the landscape. The terms of reference for the specialist are to:

- Provide the visual context of the site regarding the broader landscape context and site-specific characteristics.
- Provide input in compiling layout/design alternatives.
- To describe the affected environment and set the visual baseline for assessment,
- Identify the legal, policy and planning context related to visual impact,
- Identifying visual receptors,
- Predicting and assessing impacts,
- Recommending mitigation measures.

# 3 Principles and Methodology

## 3.1 Principles

**Table 4: Summary of methodology**

| Task undertook | Purpose | Resources used |
|---|---|---|
| A screening of the site and environment | To obtain an understanding of the site and area characteristics and potential visual elements. Describe the receiving environment. | Photographs<br>Site visit |
| Digital model of potential view catchment area and Identify visual receptors within the catchment. | To assess the visual impact from specific viewpoints | Photographs<br>Digital elevation model |
| Contextualize the site within the visual resources | To present an easy-to-understand context of the site within the visual resource baseline and identify potential impacts. | Specialist: S Lategan<br>Graphic presentation |
| Assess any cumulative impacts | Evaluate the impact of adding the infrastructure to the existing abalone farm. | Specialist: S. Lategan<br>Photos<br>Provincial Guidelines |

Throughout the evaluation the following fundamental criteria applied:

- Awareness that "visual' implies the full range of visual, aesthetic, cultural and spiritual aspects of the environment that contribute to the area's sense of place.
- Consideration of both the natural and cultural (urban) landscape, and their inter-connectivity.
- The identification of all scenic resources protected areas and sites of special interest, as well as their relative importance in the region.
- Understanding of the landscape processes, including geological, vegetation and settlements patterns which give the landscape its character or scenic attributes.
- The inclusion of both quantitative criteria, such as visibility and qualitative criteria, such as aesthetic value or sense of place.

- The incorporation of visual input as an integral part of the project planning and design process, so that the findings and recommended mitigation measures can inform the final design and quality of the project.

### 3.1.1 Principles

The following principles to apply throughout the project:

- The need to maintain the integrity of the landscape within a changing land use process.
- To preserve the special character or 'sense of place' of the area,
- To minimize visual intrusion or obstruction of views,
- To recognize the regional or local idiom of the landscape.

### 3.1.2 Fatal flaw statement

A potential fatal flaw is defined as an impact that could have a "no-go" implication for the project. A "no-go" situation could arise if the proposed project were to lead to (Oberholzer, 2005):

1. Non-compliance with Acts, Ordinance, By-laws and adopted policies relating to visual pollution, scenic routes, special areas or proclaimed heritage sites.
2. Non-compliance with conditions of existing Records of Decision.
3. Impacts that may be evaluated to be of high significance and that are considered by the majority of stakeholders and decision-makers to be unacceptable.

The initial screening of the site did not reveal any of the above issues which may result in a fatal flaw.

### 3.1.3 Gaps, limitations, and assumptions

1. Information provided: The assessment is based on the information provided by the developer.

2. Visual presentation: Photos are taken to closely resemble what the human eye would see from a specific position and at that distance.

3. Level of assessment: Based on the Western Cape Provincial guidelines (Oberholzer, 2005) pertaining to Visual Impact Assessments, a level 3 assessment should suffice to make an informed decision.

## 3.2 Assessment methodology

Visual Impact relates not only to the physical visibility of a structure or development, but the context of that structure within the environment. The assessment therefore firstly describes the receiving environment from a socio-cultural-, heritage- and physical landscape perspective to set a baseline from which to evaluate the appropriateness of a new element in that specific environment. Although every effort is made to rate and explain visual impact, it is not an exact science and holds a significant level of intangible community values.

A broad potential view catchment area is then determined using digital elevation modeling techniques. This provides the area within which specific viewpoints, called visual receptors are identified. Specific views from these receptors are then assessed with the use of photo's and modelling. Profiles may also be used to explain the visibility of the element from certain viewpoints. Based on these, the significance of the impact is then determined through the rating of the exposure level, receptor sensitivity and the intrusion level (Refers Table 3)

*Table 3 Assessment framework to rate impact*

| **Criteria** | **High** | **Moderate** | **Low** |
|---|---|---|---|
| Exposure | Dominant, clearly visible | Recognizable to the viewer | Not particularly noticeable to the viewer |
| Sensitivity | Residential, nature reserves, scenic routes | Sporting, recreational, places of work | Industrial, mining, degraded areas |
| Intrusion/Obstructive | A noticeable change, discordant with surroundings | Partially fits but clearly visible | Minimal change or blends with surroundings |

Exposure is a tangible criterion, which refers to the visibility of the element.
Intrusion or Obstructive is a less tangible criteria which refers to what level an element is "acceptable" within a setting.
Sensitivity deals with the receiving environment and the landscape elements which are appropriate within such an environment.

A sensitive receptor with low exposure and/or low intrusion rate can be regarded as a low significance rating. A receptor of low sensitivity but with high exposure can be of high significance if the intrusion rate is also high but is reduced if the intrusion rate is medium or low.

The overall significance, therefore, depends not only on the sensitivity of the receptor but also on the exposure and intrusion rate and thus a combination of the criteria.

The purpose of mitigation measures is to lower the exposure or intrusion level in order to lower the overall significance of the rating.

## 3.3 Legal Context

### 3.3.1 National Environmental Management Act, 107, 1998 and relevant Guidelines

The relevant application will be submitted. This VIA forms part of the package of application required to be submitted.

### 3.3.2 Western Cape PSDF

No specific references on this scale of development

### 3.3.3 Overberg District Spatial Development Framework, 2014

No relevant guidelines or perimeters

### 3.3.4 Overstrand Spatial Development Framework, Final May 2020

The SDF propose the preservation of the "Wilderness" landscape of the Danger Point Peninsula specifically the lighthouse area and the conservation of visually sensitive coastal promontories.

### 3.3.5 Overstrand Heritage Survey, 2009

No relevant guidelines or perimeters

### 3.3.6 Overstrand Zoning Scheme

The property is zoned as Agricultural I zone in terms of the Overstrand Zoning Scheme Regulations (March 2015). Site is zoned as Agricultural zone I and the land is used in terms of this zoning.

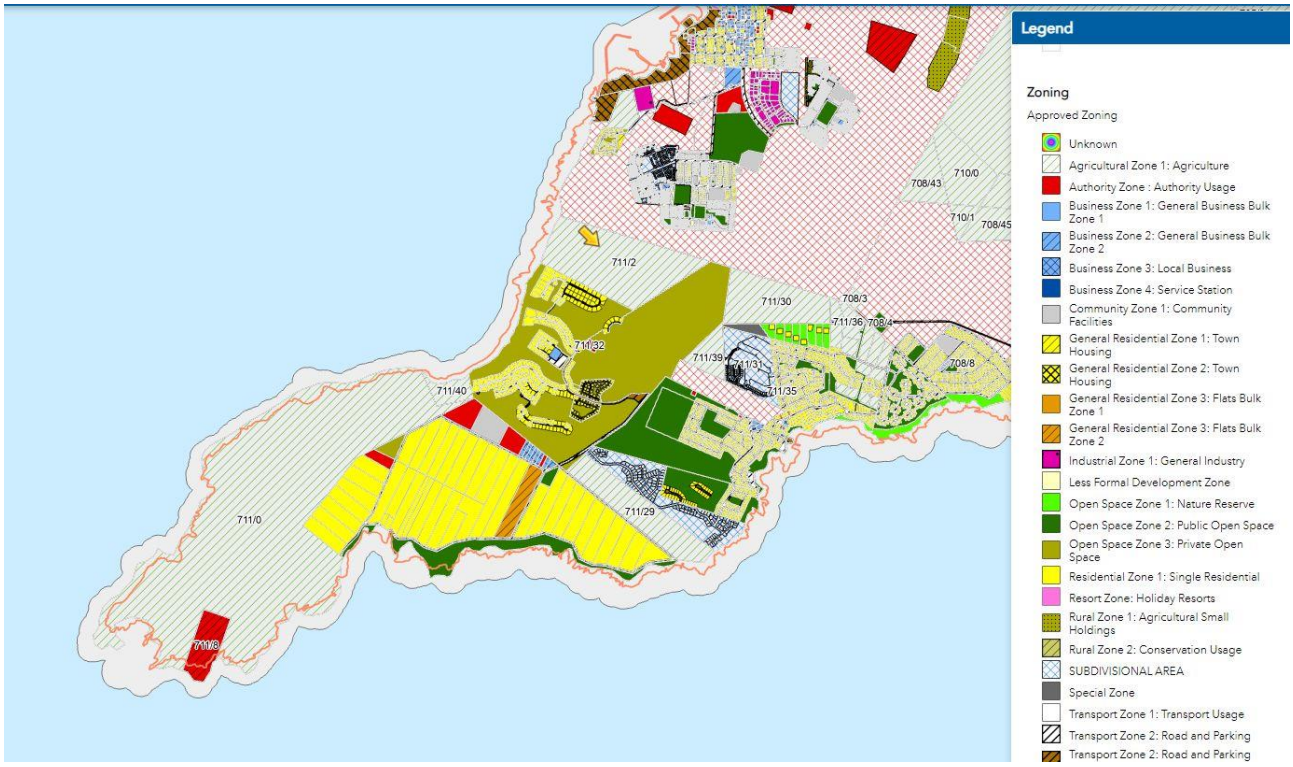


*Figure 3 Zoning map*

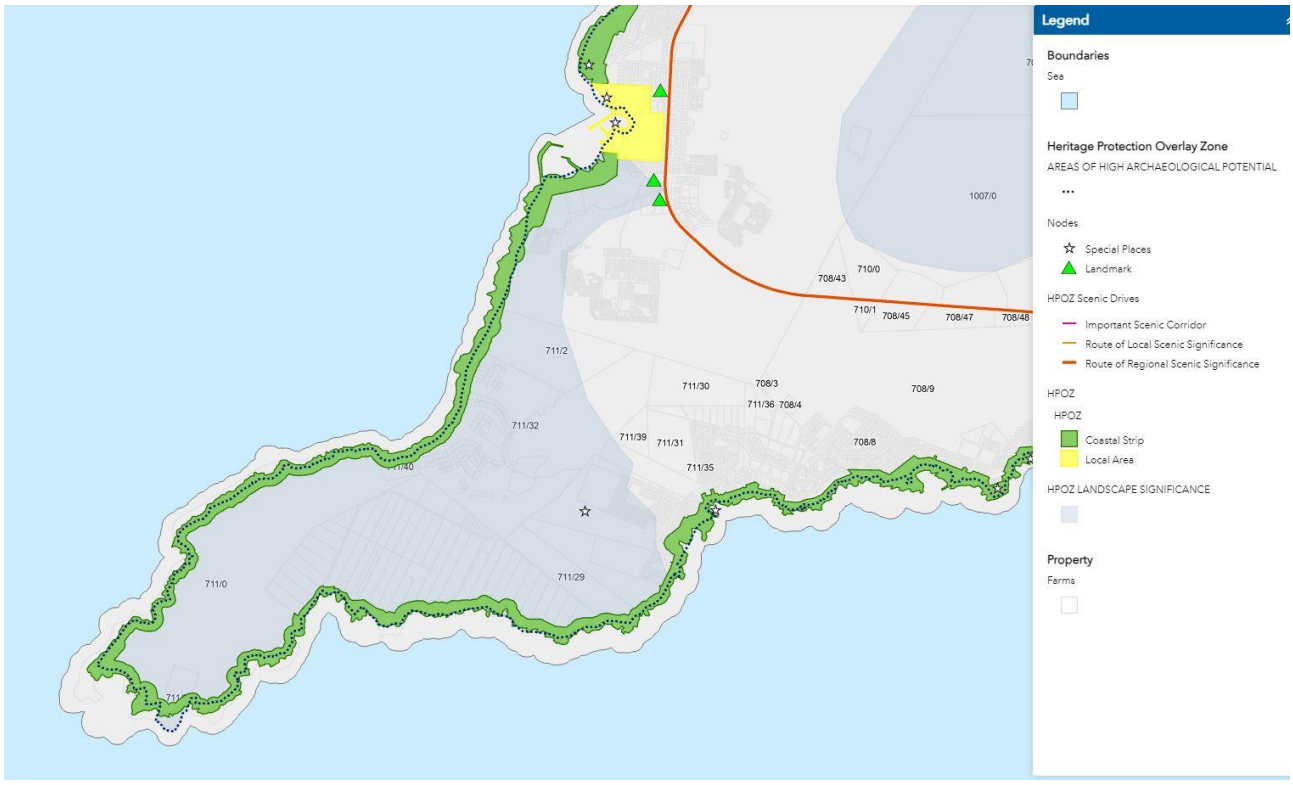


*Figure 4 Heritage Protection Overlay Zone*

The Heritage Protection Conservation overlay map indicates the coastal strip as of importance from a landscape perspective as well as an area potentially containing important archaeological elements. The Danger Point-Kleinbaai area is indicated as an area of Landscape significance. The R43 from Gansbaai to Pearly Beach is identified as a Route of Regional Scenic Significance.

# 4 Development Proposal

The expansion proposal includes the following –

- Increase production by 150 tons phase 1 / 1.75 ha (wet weight per annum)
- Increase production by 150 tons phase 2 / 1.75 ha (wet weight per annum)
- Footprint of the new production area = 1.75 ha + 1.75 ha = 3.5 ha / 300 tons
- Construction of lined reservoir for containment of sea water for use during load-shedding – 410 000 m3 / 2 ha (no dam wall)
- Solar – 4 ha area / 4 MW
- Additional pipelines to new production area to join into existing network – 4 lines @ 600 m x 500 mm, delivering 1600 m3 / hour – located alongside existing pipeline within disturbed area
- Increase pumphouse by 40m²

The total expansion will comprise 9.5ha with an increased production output by 300 tons wet weight per annum.

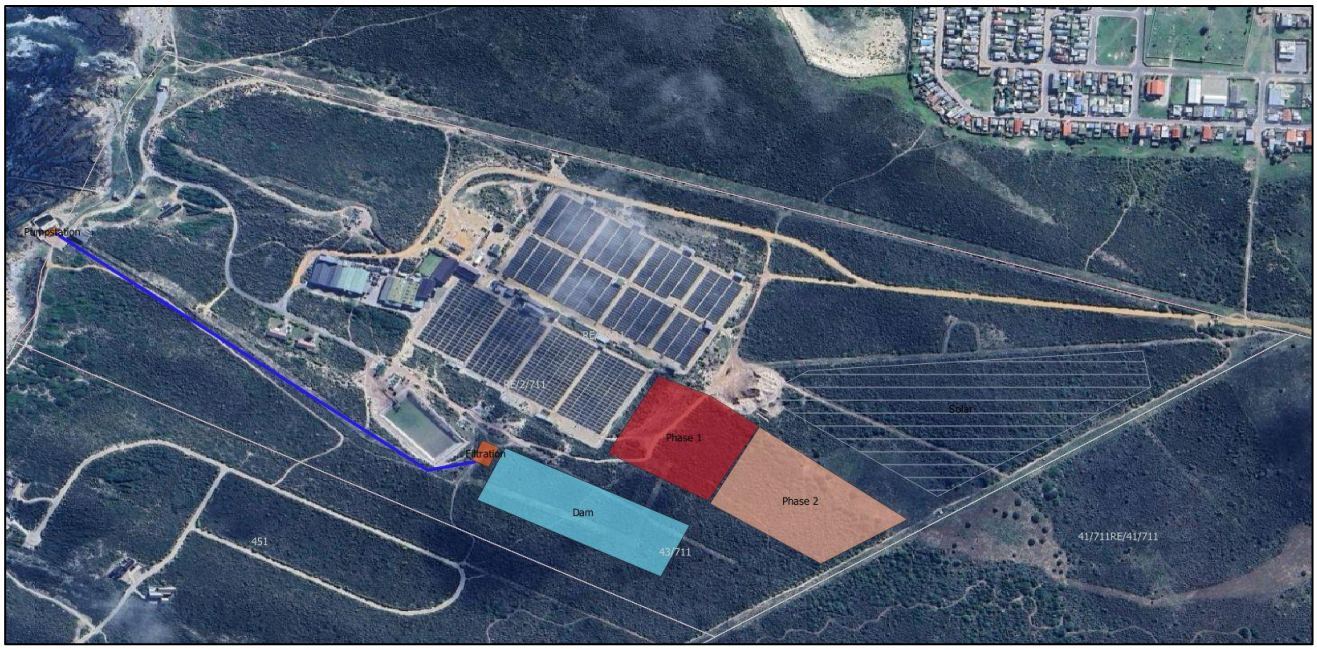


*Figure 5 Site Layout*

## 4.1 Operational elements

The expansion will be managed with the existing farm. The only new element is the solar array which requires very little maintenance apart from seasonal cleaning.

## 4.2 Construction elements

For the construction areas will be cleared and levelled. Earth moving machinery will be used and concrete trucks will deliver the concrete to site. The visual impact of this component is similar to normal building construction. The construction of the solar array will include the use of small trucks and "jerry pickers" at most.

An increase in traffic will be experienced during the construction period. It is however only for a short period of time. Construction will be limited to on-site activities.

# 5 RECEIVING VISUAL ENVIRONMENT

In this study, cultural landscape has a broad definition to include heritage and natural elements and the landscape associated therewith, as well as the broad human-landscape sense of place concept. The site is located on the Danger Point Peninsula which is strongly linked with Gansbaai and the coastal plain to the east (Franskraal to De Damme), yet it forms an entity with its own character within this larger landscape.

The R43 is a regional road linking the towns of Gansbaai, Franskraal, Pearly Beach, Buffeljagsbaai and De Damme. Van Dyk Street is the main access to the Romansbaai Peninsula giving access to the abalone farm, Danger Point (Lord Roberts Street) and Kleinbaai. Danger Point Lighthouse and Kleinbaai harbour are the main end destinations on the peninsula.


*Figure 6 Danger Point Peninsula*

## 5.1 Cultural landscape

A cultural landscape comprises physical elements as well as intangible elements. Physical elements are easy to describe and observe. The impact that new developments may have

on physical cultural landscape often relates to the preservation of the cultural elements and a sensitivity to not include new elements which may detract from the original. The value can be quantified from a certain baseline and assessed.

Intangible cultural landscape is however more difficult to describe and define, is held in stories and memories of communities, and has a qualitative value. A landscape supports the memories and stories. You can still visualize the events when you stand in the landscape. It is thus not linked to specific historical objects but rather to the landscape experience. Hart 2008, states that "Archaeological sites (including shipwrecks and tidal fish traps) are a non-renewable heritage resource which means that once destroyed, their information value is lost forever. They are also context sensitive, which means that their value is destroyed when the landscape in which they are situated is disturbed."

In assessing such intangible elements, the question is, when does a landscape change to such an extent that it becomes difficult to visualize the historical events and thus result in the disappearance of the memories.

The Danger Point Peninsula holds very few physical elements creating recognizable visual cultural landscape, but it has a strong intangible value. The shell middens are mostly not visible and therefore do not create the visual landscape, but its value is tied to the visual landscape.

Peninsulas are important landforms in human history as they provide *shelter* and access to both land and sea animals as *food* source. The heritage elements relevant to the area are the historical Pre-colonial settlements represented in shell middens and related objects. People's livelihoods depended on the highly intertwined marine-terrestrial landscape. The colonial history has a strong relationship with shipping and shipwrecks of which the most prominent is the HMS Birkenhead. The latter is embedded in local stories; place and business names; and objects from the ship are still commonly found in private homes, passed down through the generations. As part of this history, the Danger Point Lighthouse (Photo 1) is a prominent landmark and has become the embodiment of the shipwreck history. The lighthouse has also become an important tourist destination where colonial history is preserved.

Both the Pre-colonial history and colonial and shipping history is strongly associated with the coastal strip and less prominent in the interior of the peninsula. The cultural landscape thus has a strong intangible character through connections and memories. These connections are, however, fading and the cultural connection to these elements is less prominent amongst the current community and residents in the various neighbourhoods situated in the area. Thus, although the landscape has not changed much, the simple passing of time faded the Pre-colonial history. The elements and objects of this time hold very little value to current communities as there is no living association with it and the cultural experience through traditions, language, religion etc. has disappeared.

A strong emerging association is with the fynbos landscape and the uniqueness thereof.

*Photo 1 Danger Point Lighthouse*

## 5.2 Natural landscape

Current communities and residents have a strong association with nature both the coastal strip, marine landscape, and the Fynbos landscape. The landscape is appreciated for its scenic value, mental and emotional immersive experience, and recreational opportunities. More awareness is raised for the conservation of the coastal strip and the fynbos landscape. Another strong element is the marine area and the protection thereof. From this Marine tourism has developed into a key player in the tourism industry and the terrestrial landscape is an important part of this sector.

*Photo 2 View from Danger Point Lighthouse northward.*

*Photo 4 Natural vegetation*

*Photo 3 Typical coastal landscape of the peninsula*

## 5.3 Landscape and sense of place

The cultural and natural landscape is intertwined to form the *experience* landscape. This landscape holds a different value for different communities and users of the landscape. Traditional local communities still have a stronger bond with the ocean as a provider and resource where more recent "immigrants" to the area values the scenic attributes of the area. The marine-coastal-terrestrial landscape, however, provides shelter and both physical and mental *food* for its people. Communities are still dependent on the landscape for their livelihoods and well-being.

The conservation of marine resources is key to the development of cultured abalone and the presence of such facilities has become an integral part of the landscape. A mental acceptance and tolerance of such facilities which comprise more industrial type infrastructure has developed, based on the conservation and economic benefits. One may even describe abalone farms as contemporary shell middens as it finds it resources in the very same shellfish and people's livelihoods still depends thereon.

Tourism is an important sector providing opportunities for the community and marine tourism has expanded significantly in recent years. Although this industry is focused on the marine environment, the visual appeal of the larger marine-terrestrial landscape is an important component of the overall experience.

The peninsula has a strong terrestrial – marine link with a sense of calm and contentment for its residents and visitors alike. A strong understanding that both terrestrial and marine landscapes are important to the economic survival of the communities reliant on these resources.

It can be concluded that the receiving environment is an intricate, intangible asset and the value difficult to quantify.

# 6 View catchment

The view catchment refers to the area from where the development would potentially be visible. A viewshed was modelled based on the topography but excluding existing buildings and urban elements. The viewshed did consider a maximum height of 3m for any infrastructure elements. Due to the topography of the site and the positioning of the larger footprint on a different height than the small pumphouse close to the beach, two viewsheds were modelled to represent the two areas.

On a flat surface the maximum distance that the human eye can theoretically view an object is 30km due to the curvature of the earth. This is influenced by the size, colour and height of an object. When a viewer is elevated above the level of the object such object will be visible from a greater distance. Landscape elements and the topography hold screening value which can absorb elements to such an extent that they are either not visible or not intrusive.

The extent of the view catchment is thus tested with ground verification and adapted to accommodate the area most likely to be within the viewshed. The initial view catchment as illustrated in Figure 7, show the potential areas within a 30km radius from where the development will potentially be visible. It is clear that the development has a very small catchment and the areas in the distance are too far to be of significance.
The site is situated in a depression (Figure 9) and very well screened from the surrounding areas. The viewshed can thus be reduced to include the Peninsula and a 5km radius beyond the peninsula (Figure 8).

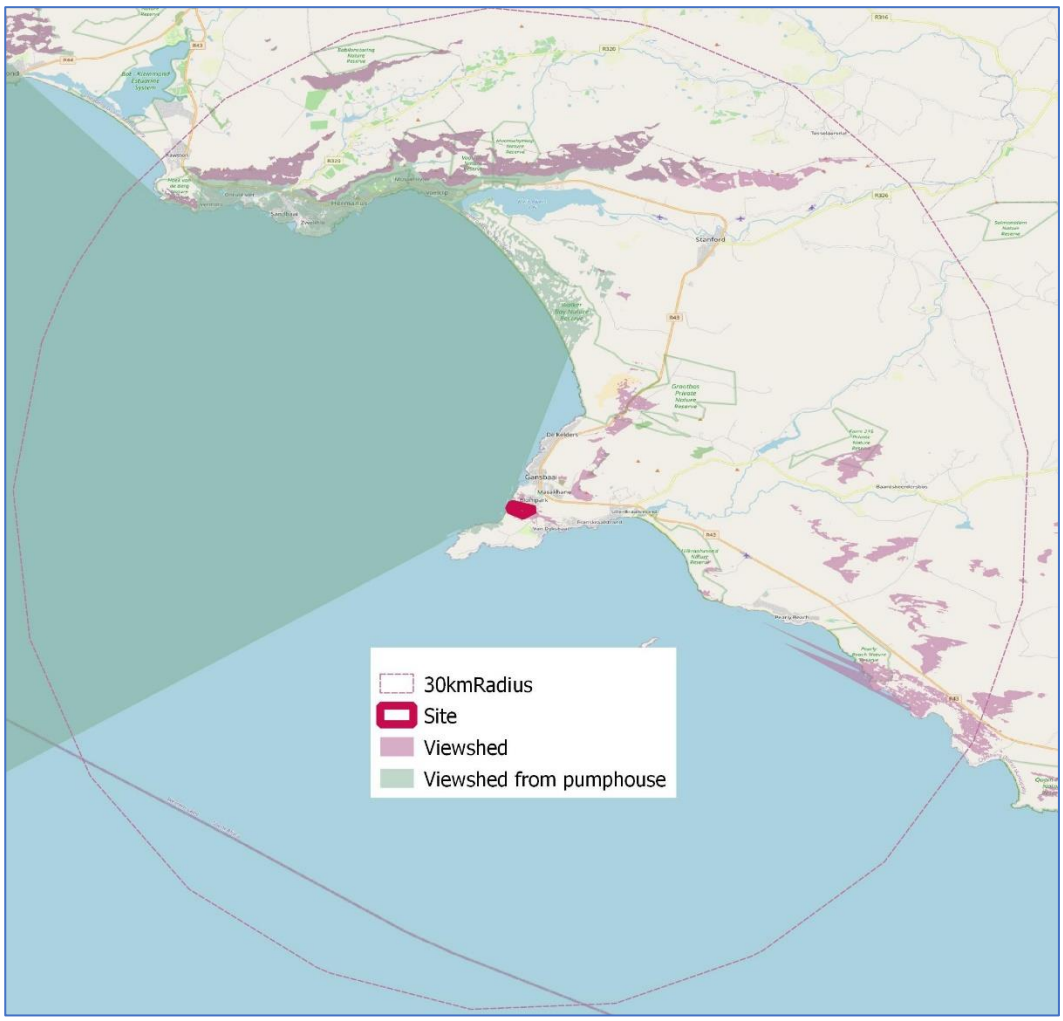


*Figure 7 Potential view catchment within 30km radius*

The catchment of the main development area (solar arrays, reservoirs, and dams) does not extend onto the ocean. Only the pumphouse extensions on the coast will be visible from the ocean and coastal areas.

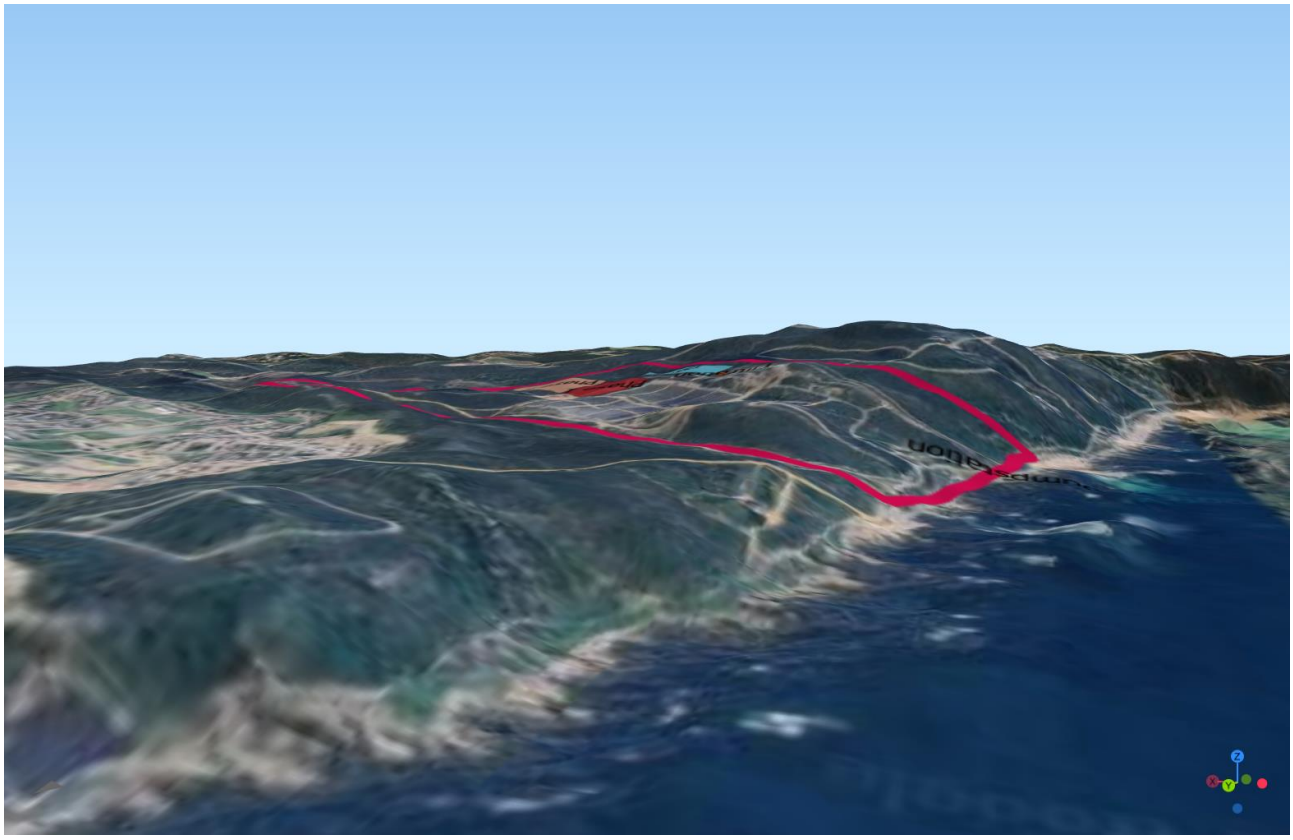

*Figure 9 Topography of the area*

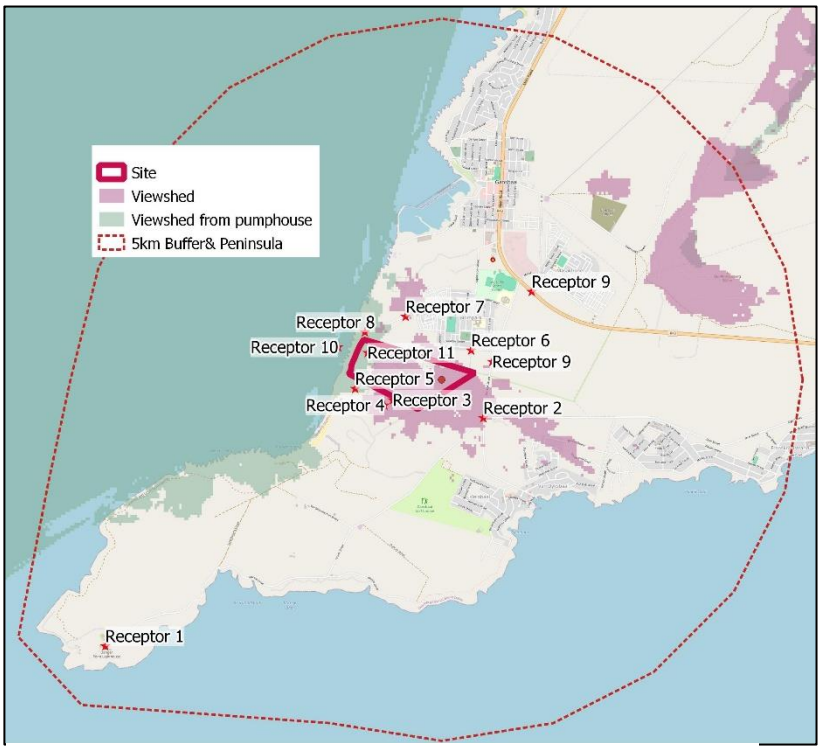


*Figure 8 View catchment within 5km from site.*

# 7 VISUAL RECEPTORS

Visual receptors are those positions from where the development is potentially visible and that are sensitive to a change in the visual environment. Generally, residential areas, tourism-related destinations and routes and heritage elements, are sensitive to visual intrusions as they relate to the well-being of residents and the tourism quality of the area.

## 7.1 Potential Receptors

The following potential visual receptors have been identified (refer Figure 10):

| **Receptor** | **Detail** |
|---|---|
| Receptor 1 | Danger Point Lighthouse |
| Receptor 2 | Intersection & Penguin sanctuary |
| Receptor 3 | Romansbaai Estate - Tern Place. |
| Receptor 4 | Tern Crescent |
| Receptor 5 | Tern Close – Coastal view |
| Receptor 6 | Blompark Southern border area |
| Receptor 7 | Blompark Kampeerstreet |
| Receptor 8 | Romansbaai Beach and coastline |
| Receptor 9 | Roads and Routes |
| Receptor 10 | Ocean |
| Receptor 11 | Shell Middens |

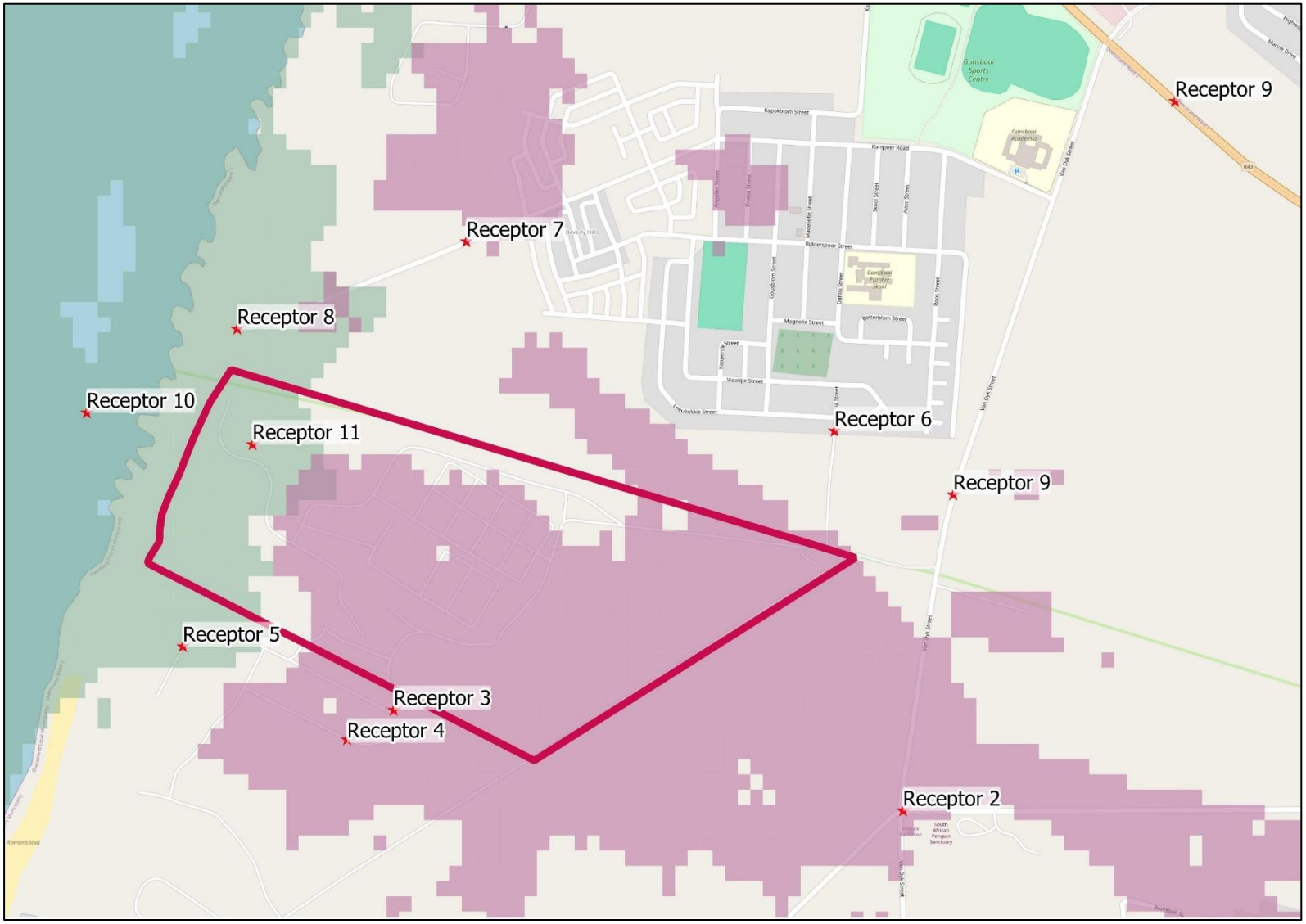


*Figure 10 Potential Receptors within view catchment*

## 7.2 Assessment of Receptors

### 7.2.1 Receptor 1, Danger Point Lighthouse

The Danger Point Lighthouse is about 5km from the site. It is situated at a height of 26m above sea level and the structure is 18m high resulting in a view level of 44m above sea level which is 10m higher than the highest ground level of the development area. Due to the height of the viewpoint and its heritage and tourism significance it is included as a receptor to be assessed.

Photo 5 shows the view from the lighthouse towards the Romansbaai Abalone farm. Houses

*Photo 5 View from lighthouse in direction of Abalone farm.*

in the Romansbaai Estate is visible in the distance. The abalone farm is screened by the ridge on which the houses are located and thus not visible from the lighthouse.

The proposed development thus has no visual impact on the lighthouse.

### 7.2.2 Receptor 2, Intersection between Lord Roberts Street, Van Dyk street and Dyerstreet

Van Dyk Street – Lord Roberts Street is the main access to Danger Point and Kleinbaai. Kleinbaai is an important tourism node from where Marine expeditions are launched. This road intersection is thus an important point of pause for the road traveller and thus a point

where for a short moment, the landscape is observed from a static position. This receptor is on the edge of the modelled viewshed.


*Photo 6 Receptor 2 - Van Dyk & Lord Roberts Street intersection*


*Photo 7 View from Receptor 2 towards Abalone farm*

This point is also representative of the Penguin Sanctuary which is an important tourist destination.

Due to the topography, the abalone farm is not visible from this receptor. Photo 7 illustrated the natural landscape namely indigenous vegetation of medium height and undulating topography. This topography has a high visual absorption level.

There is thus no impact on Receptor 2.

### 7.2.3 Receptor 3 and 4 , Romansbaai Estate, Tern street area

Portions of the Romansbaai Estate is within the modelled viewshed. Receptor 3 and 4 represent different height viewpoints in the northern section of the estate which has a higher potential to be impacted by the development proposals due to the proximity to the proposed facilities.

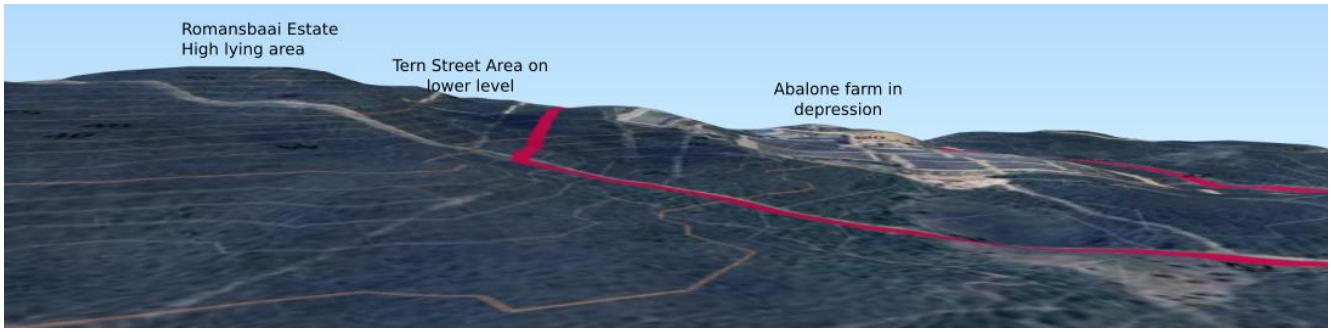


*Figure 11 3D illustration of the topography from Romansbaai Estate towards Abalone farm*

Figure 11 illustrates the topography from of the landscape and that the Romansbaai Estate is situated on a higher level than the abalone farm. The stepped profile provides good screening where the view from each "terrace" is over the lower level and the lower level is barely visible or at least not obstructive.


*Photo 8 Visible area from Tern Street*

Photo 8 illustrates how the topographical "terrace" screens a large section of the abalone farm. Only parts of the expansions will be visible. The upper Tern Street area will have a larger

view of the expansions. The planned infrastructure is however compatible with single storey buildings in height. The solar arrays will be orientated to the north and therefore the Tern Street properties will have a rear view of the solar arrays. There should thus be no glare effect from these arrays.

### 7.2.4 Receptor 5, Romansbaai Estate, Coastal view

Properties within the Romansbaai Estate primarily focus their views toward the ocean. Given the topography of the estate and its location on the Danger Point Peninsula, ocean views range from the west through south to the east. The coastal properties focus however primarily to the west.

Due to the topography the coastal properties are not within the viewshed of the main facilities of the abalone farm. It is only the pumphouse located on the coast that is visible from the coastal properties. The views of the properties are however not directed towards the pumphouse and thus the pumphouse is slightly to the side view range of these properties. The pumphouse is also not a large intruding structure and thus not intrusive or obstructive.

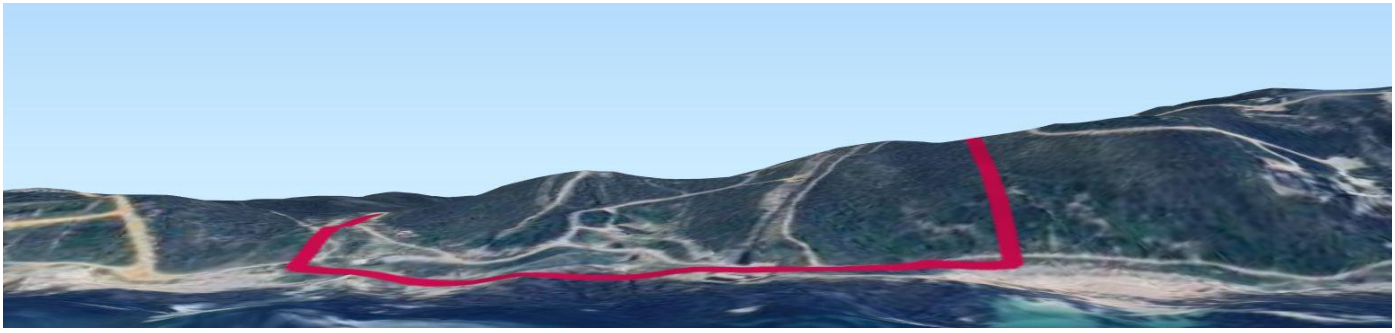

*Figure 12 Coastal topographical profile*

Figure 12 illustrates the topography of the site from the coast. It is clear that the main facilities of the abalone farm are not visible from the coastal properties.

*Photo 9 View from Receptor 5 (Tern Street/close area)*

Photo 9 provides a representative view from the coastal properties towards the pumphouse site. It illustrates that the pumphouse is a small element in the landscape and not intrusive or obstructive.

### 7.2.5 Receptor 6 , Blompark, southern border properties

The Blompark neighbourhood provide a range of housing options mostly within the middle to lower price bracket as well as social housing. Most residents are locally employed, and the various abalone farms and fishing industry is an important job provider. This community has a strong link to the ocean and the resource use and industrial components linked to it. Proximity to such employment opportunities is thus important and this provide a high level of tolerance and acceptance of such facilities.

The southern areas within Blompark, i.e. the Leeubekkie street area, is only about 300m from the proposed expansions of the abalone farm. The abalone farm is however hardly visible from this area due to a ridgeline that screen Blompark from the abalone farm as illustrated in Figure 13. The ridgeline is 30m above sea level and thus screen facilities below this level.

The solar array area will be below this level, and it is only sections of the dams and reservoir which will be above 30m and thus becomes visible from Blompark.

As the solar arrays (25m above sea level), will be oriented north with a maximum height of 3m (thus total structure height of 28m above sea level) the arrays will still be below the ridge and Blompark will be screened from any glare effect off the arrays.

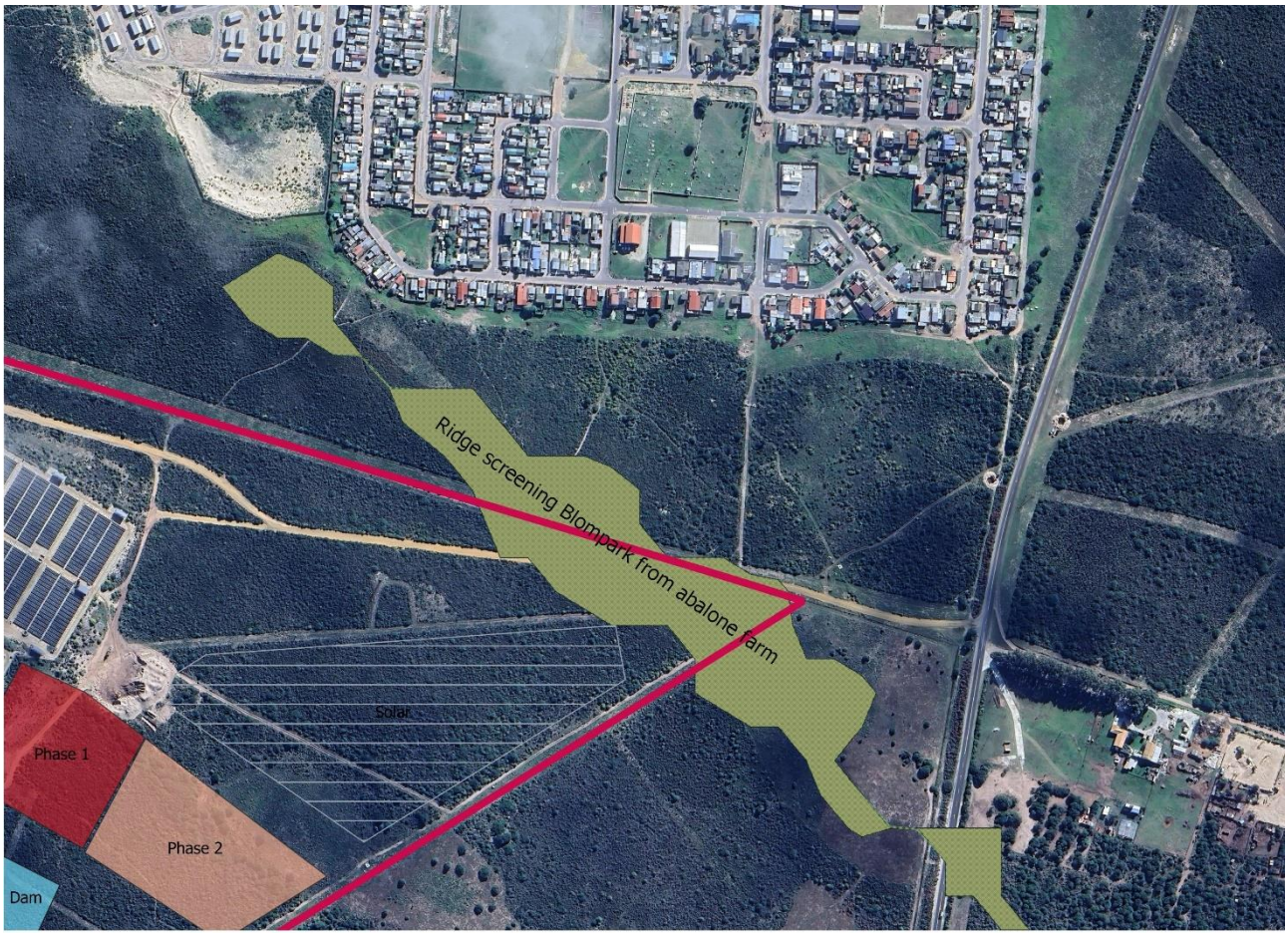


*Figure 13 Ridge screening Blompark*

*Photo 10 View from Leeubekkie street*

Photo 10 show the view from the Leeubekkie street area illustrating that the abalone farm is not visible due to the topography.

### 7.2.6 Receptor 7, Blompark, Kampeer Street

Kampeer Street is the main access through Blompark to the beach. It is also representing the higher lying area of Blompark although Blompark rise to a maximum of about 30m above sea level. From the point marked as Receptor 7 (Figure 14), the Abalone farm is visible as will most of the expansion areas.

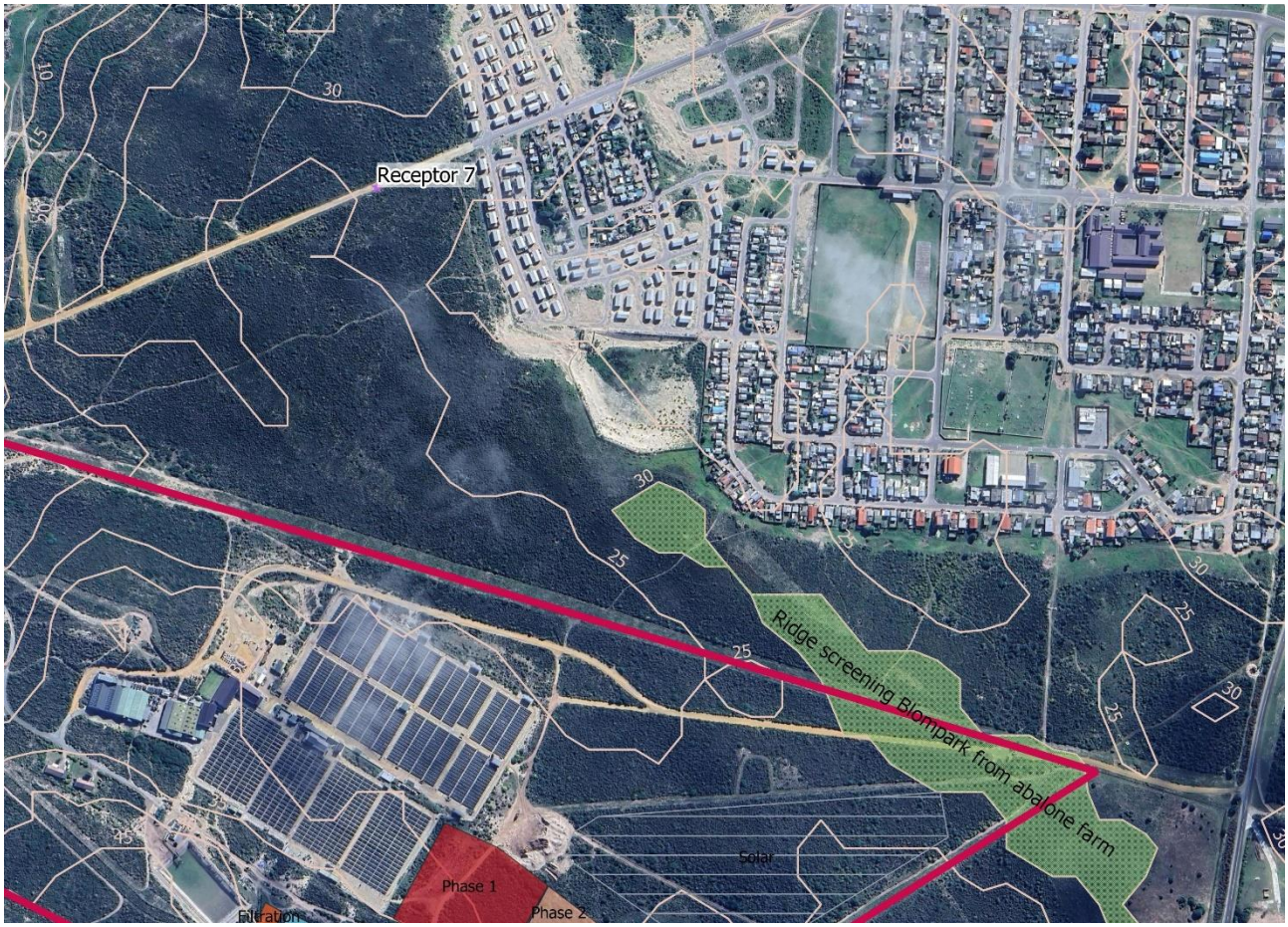


*Figure 14 Receptor 7 context*

Photo 11 shows the view from Kampeer Street with the abalone farm visible in the background. Although the existing facilities are clearly visible it is not intrusive of obstructive because the buildings are within scale with the buildings in Blompark. The expansions will have similar view profile.

*Photo 11 Kampeer Street view towards abalone farm*

The solar arrays may have a slight glare impact. A screening of the glare element as illustrated in Figure 15 shows that a potential exists for Green and Yellow impact during November, December and January. The impact is however low and of short duration.

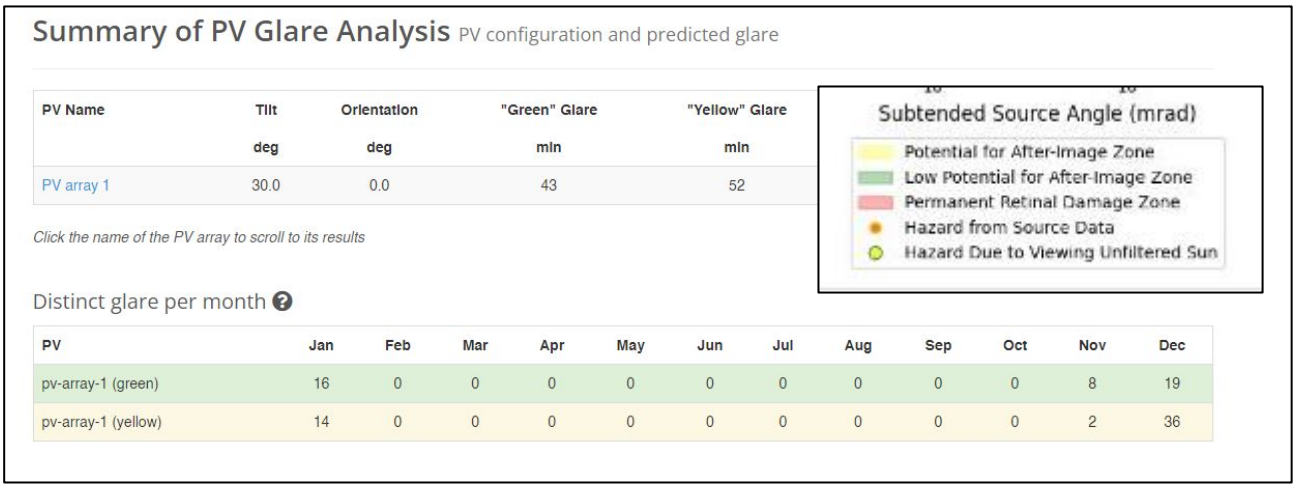


*Figure 15 Potential glare impact on Blompark*

### 7.2.7 Receptor 8, Coastal strip and Romansbaai beach

The coastal strip is a very important element in the landscape, for its cultural, scenic, resource and recreational value.

Figure 12 illustrates that due to the topography, the Abalone farm is not visible from the coastline. It is only the pump house which is situated on the coast that is visible. The pumphouse is a small building and the expansion with 40m² will not create a significant change to the current visual experience.

*Photo 12 View from beach access point towards the south*

*Photo 13 View from beach access point towards the north*

Photo 12 shows the view from the beach access point towards the south with the existing pump station and water intake infrastructure in view. These infrastructure elements are fairly small, and the scale thereof is not intrusive or obstructive.
Photo 13 shows the view towards the north with the public parking area in the foreground. The beach is within reach of the Blompark community and a popular recreational spot.

### 7.2.8 Receptor 9, Roads and Routes

As stated in Paragraph 6.2.2 the only roads and routes of relevance is the R43 as regional distributer and Van Dyk Street corridor. The abalone farm is well screened from these routes and is only visible for very short distances and thus for short periods when visitors travel on these routes.

### 7.2.9 Receptor 10, Ocean

The ocean is important as a recreational and tourism viewpoint. Marine safaris are offered around the Danger Point Peninsula. These offerings area primarily focussed on observing marine animals such as sharks, whales, dolphins. The total experience however also values the view towards the land and any intrusive or obstructive elements on land, may impact on the quality of the marine experience. As indicated in paragraph 7.2.7, the main infrastructure is in a depression and not visible from the ocean. It is only the pumphouse which will be visible a short distance from the coast, but the scale is small and will thus not be intrusive or obstructive.

### 7.2.10 Receptor 11 Shell Midden

The shell midden on site identified by Webley, 2008 is protected as a No-go area. As Hart, 2008 indicated, such heritage element can only maintain its value if the landscape context is protected. The shell midden is not within the viewshed of the main expansion infrastructure (solar array, dams and reservoirs) and should not be negatively affected by these facilities. The shell midden and other middens along the coast may be within the viewshed of the pumphouse. Conserving the coastal landscape character is thus important in preserving the context within these middens were created and within which their value needs to be preserved. The expansion of the pumphouse entails a small footprint. The cumulative size of the pumphouse footprint would still be small and the scale such that it will not create a

significant change from the current visual landscape. The impact can thus be regarded as low.

### 7.2.11 Night view

Abalone farms are subject to security issues and for this reason well light at night. The expansions will however not increase the lighting as it is within the existing property boundary and not significant increase in the lighting of the site is anticipated.

## 7.3 Conclusion

Table 4 provides a summary of the assessment of the various identified receptors and the overall impact is low. Although most receptors are sensitive to visual change of the experiential landscape, the overall impacts are low due to the high absorption level of the landscape and the low vertical extend of the infrastructure. Solar arrays have the potential to create a glare effect which can amplify the visual impact but due to the screening of the ridge to the north, the glare is effectively screened from the receptors.

*Table 4 Assessment of receptors*

| Receptor | Detail | Exposure | Sensitivity | Intrusion/ Obstructive | Conclusion |
|---|---|---|---|---|---|
| Receptor 1 | Danger Point Lighthouse | N/A | | N/A | The site is not visible from the top of the lighthouse. No impact. |
| Receptor 2 | Intersection & Penguin sanctuary | | | | Medium to Low |
| Receptor 3 & 4 | Romansbaai Estate - Tern Place. Vacant erven. | | | | The Estate value scenic quality and thus the sensitivity is high. Exposure and Intrusion is however low and thus the overall anticipated impact is low. |
| Receptor 5 | Romansbaai, Tern Close | | | | Low due to topography |
| Receptor 6 | Blompark Leeubekkiestr | N/A | | N/A | No impact due to topography |
| Receptor 7 | Blompark Kampeerstreet | | | | Low due to distance and partial screening |
| Receptor 8 | Romansbaai coastal strip | | | | Low |
| Receptor 9 | Roads and Routes | | | | Low |
| Receptor 10 | Ocean | | | | Low |
| Receptor 11 | On-site shell midden | | | | Low |

# 8 CUMULATIVE IMPACT

## 8.1 Methodology

The Department of Environment and Tourism issued a guideline document in terms of which cumulative impacts should be assessed[1] and these can be equally applied to assessing the cumulative visual impact on the cultural landscape. This guideline document identifies types and characteristics of different cumulative effects as summarized in the table below.

*Table 5: Types and characteristics of cumulative effects*

| TYPE | CHARACTERISTIC | IDENTIFY POTENTIAL IMPACT (only relating to visual impact) |
|---|---|---|
| Time Crowding | Frequent and repetitive effects. | Activity remains at same pace, frequency and intensity over time. No time crowding impacts. |
| Time Lags | Delayed effects. | No time lag impacts. |
| Space Crowding | High spatial density of effects. | Expansions within the existing property with little visual expansion Due to the topography the site is screened to such an extent that the expansion will hardly be noticed by surrounding communities. Pumphouse expansion very small. |
| Cross-boundary | Effects occur away from the source. | Most visual impacts are away from the source. The expansion does not increase the cross boundary impact and stays within the total viewshed of the site. |
| Fragmentation | Change in landscape pattern. | Expansion is within the overall footprint area already demarcated for the abalone farm. |
| Compounding Effects | Effects arising from multiple sources or pathways. | No compounding impacts. |
| Indirect Effects | Secondary effects. | No impact |
| Triggers and Thresholds | Fundamental changes in system functioning and structure. | None identified |

[1] DEAT (2004) Cumulative Effects Assessment, Integrated Environmental Management, Information Series 7, Department of Environmental Affairs and Tourism (DEAT), Pretoria

### 8.2 Conclusion

The expansions have a potential space crowding effect, but due to the sheltered nature of the property, the additional infrastructure will not increase the viewshed and the cumulative impact is thus low to insignificant.

## 9 CONSTRUCTION

During construction, various types of vehicles and equipment will be transported to the site and work on the site. This will impact on the general experience of viewers. This impact is however temporary and not uncommon during construction of infrastructure.
The visual impact during construction is therefore low and temporary.

## 10 FINDINGS

The Danger Point Peninsula still provides shelter and resources to its community important to their livelihood and well-being. It is not only an important tourist destination but is also valued by its diverse communities for its heritage and visual landscape. Any intrusions in this landscape have the potential to have a negative impact on communities' experience value.

Abalone farms, however, make an important contribution to the conservation of this very landscape although it has an industrial type of character. Protecting the natural resources, the very resources that supported the first peoples of the area, can thus be regarded as a contemporary way of utilizing the land as our predecessors did. For this reason, communities are tolerant of such facilities as they still sustain life simply in a different manner.

The topography of the area with its steep coastal edge and hills to the west, creates an area with a high visual absorption level. This very topographic characteristic resulted in the small viewshed. The Romansbaai Abalone farm is furthermore situated in a depression which screens the facility from the surrounding area.

An evaluation of the potential receptors confirmed the above and no receptors have been identified with a high visual impact. The overall visual impact is thus low and the heritage landscape will not be altered through the expansion of the facility.

The overall impact is rated as low, and no mitigation measures are deemed necessary

**REFERENCES**

DEAT (2004) Cumulative Effects Assessment, Integrated Environmental Management, Information Series 7, Department of Environmental Affairs and Tourism (DEAT), Pretoria

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Webley, L. 2008. PHASE 1 Archaeological Impact Assessment: Proposed expansion Roman Bay Sea Farm (Portion 2 of the Farm Klipfonteyn 711), Gansbaai, Overstrand Municipality, Western Cape