LORNAY
ENVIRONMENTAL CONSULTING

BIODIVERSITY OFFSET REPORT

Portion 2 of the Farm 711, Gansbaai

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1. INTRODUCTION

1.1. Background to the project

Lornay Environmental Consulting has been appointed by Aqunion (Pty) Ltd (hereafter referred to as "the applicant") to facilitate the application for Environmental Authorisation in terms of the National Environmental Management Act (NEMA, Act No. 107 of 1998) and the associated Environmental Impact Assessment (EIA) Regulations of 2014, as amended.

The applicant has applied for the expansion of the abalone farming operations on Portion 2 of Farm 711, Gansbaai. The motivation behind the proposed expansion was initially driven primarily by increasing market demands for South African Abalone and Abalone products, a high-value marine resource that contributes significantly to local economic development. The expansion application includes areas for additional grow out tanks as well as specific infrastructural designs in an attempt to reduce the electrical costs of operating the Abalone farm. The average electrical cost per month, to constantly pump the seawater across the farm, is in the range of R 3 000 000.00 alone. Through the strategic use of a seawater holding reservoir and installation of a ground mounted solar array, Romansbaai is attempting to reduce the monthly electrical cost. With the recent crash of the South African Abalone Market, the priority of the application has shifted from increasing the production output, to urgently implementing mechanisms to reduce the monthly costs of operating the farm. The entire South African Abalone industry has experienced severe retrenchments, downscaling and even closure, with a significant threat to the socioeconomics of the Overberg. Therefore, it is a critical priority for Romansbaai Abalone Farm, that the expansion application is successful. It is also important to note that the proposed infrastructure and operational expansion will be largely situated within and directly adjacent to the existing farm footprint, in order to maintain spatial continuity with current operations.

Given the site's regional ecological context, the proposed activities will result in residual impact(s) on biodiversity even after the application of the mitigation hierarchy during the impact assessment phase. With the threat status of the vegetation classified as Endangered and the Residual Medium terrestrial / botanical impact of the proposed seawater reservoir area (only), a Biodiversity Offset in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998): The National Biodiversity Offset Guidelines of 23 June 2023, must be investigated. It is important to note that Biodiversity Offsets are not intended to replace the need for avoidance, minimisation, or on-site rehabilitation, but rather to serve as a last resort when all other reasonable mitigation measures have been exhausted and residual impacts remain.

Figure 1: Location of the study area.

1.2. Process status

The Application for Environmental Authorisation is currently in the "in-process" phase running within the legislated timeframes as per the NEMA EIA Regulations. The draft Biodiversity Offset Application was circulated for comment as part of the public participation process.

The Terrestrial Impact Assessment, which was undertaken for the expansion project, the Botanical specialist recommended that an "Offset" in the form of land allocations / offset sites, should not be pursued but rather that a monetary donation must be made towards an ongoing and reputable alien clearing project in the surrounding area. This recommendation was made by the specialist in his concluding remarks because, although the vegetation type affected is classified as Endangered, the ecosystem extent is at approximately 93 % and well conserved. The justification was that the ecological value of adding more well conserved areas versus the contribution to alien clearing in existing areas, is preferable especially since although well conserved, is under threat by alien vegetation infestation.

Cape Nature reviewed the draft Biodiversity Report (public participation round 2). This report was based on the concept outlined above , and a follow up meeting was held between Lornay Environmental Consulting and Cape Nature on the 6 August 2025. Cape Nature did not support the motivation above and it was recommended that further investigation into Onsite Offset options of 8 ha, in line with the Biodiversity Offset Guideline Document, must be investigated before any final decisions can be made regarding the appropriate mechanism for the offset.

2. ASSUMPTIONS AND LIMITATIONS

The compilation of this Biodiversity Offset Report is based on the best available information at the time of reporting and is subject to several assumptions and limitations, which are important to acknowledge in the interpretation of the findings and recommendations presented herein:

- → The baseline information used in this report is informed by available specialist studies, existing vegetation mapping and Biodiversity Spatial Plans including the South African Vegetation Map 2024 and Western Cape Biodiversity Spatial Plan, 2017 and 2023.
- → The accuracy of the designation of the entire site, including current operational area, as a CBA (BSP 2023) is questioned.
- → The layout and design of the proposed expansion have been constrained by existing operational aspects and requirement to link the existing infrastructure and operations with expansion site.
- → The layout and design are further influenced by physical site constraints which affect the practical implementation of aspects on the farm. Some of these fixed factors have limited the potential to fully avoid all high botanically sensitive areas, resulting in unavoidable residual impacts. The seawater reservoir needs to be, by virtue of its function, at the highest point on the property, to allow for gravity feed during peak tariff periods).
- → The report draws from the findings of various specialists (e.g. Terrestrial Biodiversity and Plant Species, Animal Species Assessments etc), and it is assumed that these specialists have applied appropriate methodologies and that their assessments are accurate within the scope of their field surveys and desktop analyses.
- → The farm has a large existing operational aspect which must tie into the expansion areas.
- → The farm is located within the designated urban edge and is surrounded by Blom Park Residential area, Gansbaai to the North and the Romansbaai Eco Residential Estate to the south.
- → This report provides guidance on potential Biodiversity Offset requirements based on the residual impacts.

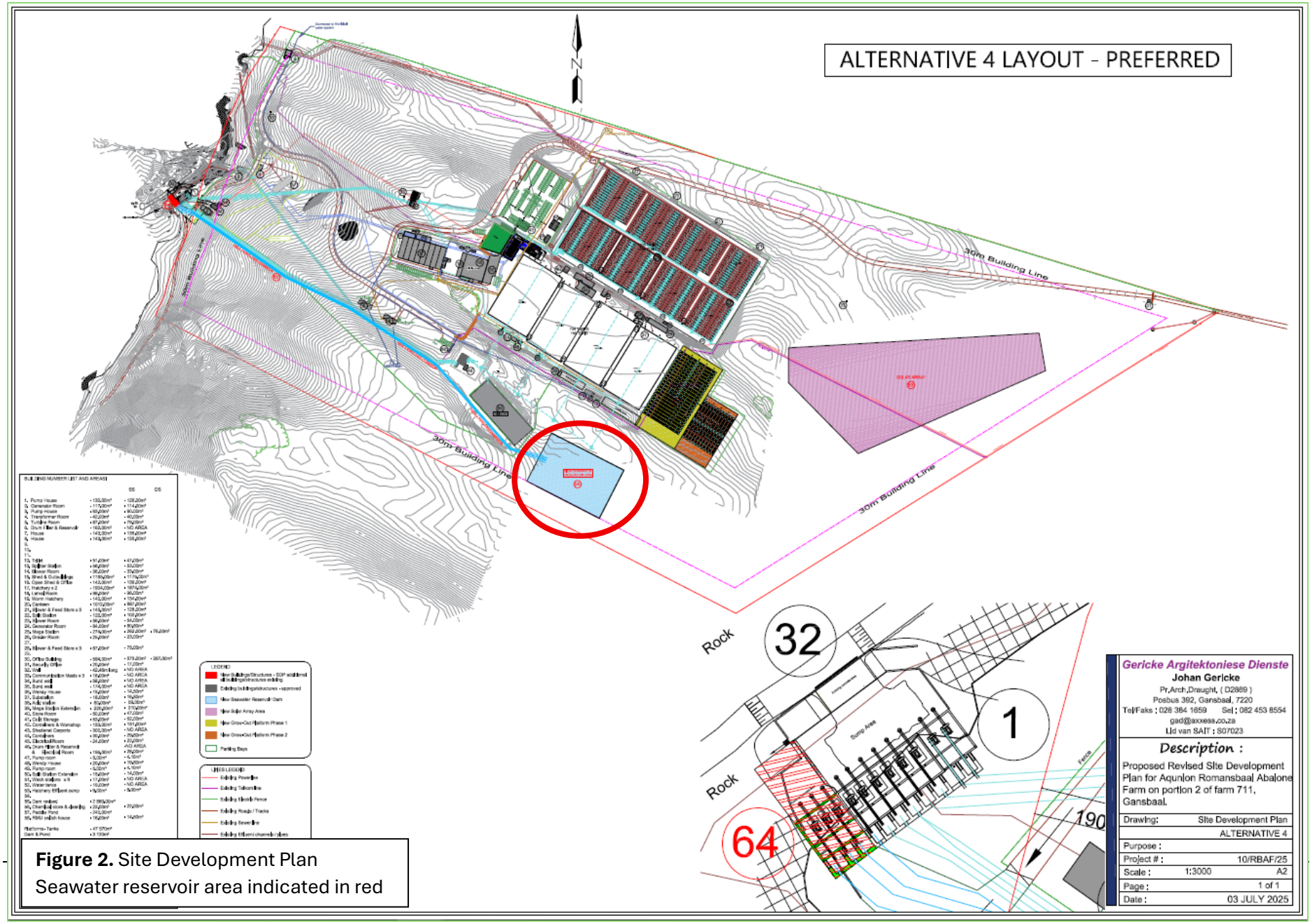

Figure 2. Site Development Plan
Seawater reservoir area indicated in red

3. RECEIVING ENVIRONMENT

3.1. Regional Context

The proposed development site is situated within the South Coastal Fynbos bioregion, which forms part of the Cape Floristic Region (CFR), an internationally recognised Biodiversity Hotspot. The dominant vegetation type mapped on the site is Southwestern Strandveld, as per the updated South African Vegetation Map (2024), formerly known as Overberg Dune Strandveld.

According to Cowling et al. (2023), Southwestern Strandveld occurs across a transitional climatic zone ranging from non-seasonal to weakly winter rainfall regimes. This vegetation type is recognised for its high ecological and conservation value, particularly due to its Endangered status under the National List of Ecosystems That Are Threatened and in Need of Protection (2022). Approximately 90% of the total original extent of Southwestern Strandveld remains intact, approximately 36% is conserved. The National conservation target for this vegetation type is 36% (Rouget et al., 2004), and therefore the conservation target has been met. This vegetation unit is known to support relatively few plant Species of Conservation Concern (Raimondo et al., 2009). Although the conservation targets for this vegetation type have been met and it is considered to be well conserved, it retains an Endangered threat level status due to its infestation by alien vegetation.

3.2. Local Context

The property is located in the town of Gansbaai, within the demarcated urban edge, and spans approximately 57.5 ha. The existing operational footprint of the abalone farm is mostly concentrated in the central portion of the property. Over time, the site has been subject to gradual transformation particularly from the establishment of internal access roads, routine maintenance activities, and operational infrastructure. These activities have resulted in a slight degree of fragmentation across most parts of the property.

Despite this, the property still contains remnants of intact natural vegetation, particularly in areas beyond the core operational footprint and this was also confirmed by specialist studies conducted onsite. These remaining patches still provide valuable ecological function and contain some plant Species of Conservation Concern as identified by the botanical specialist (Helme, 2024). It can also be argued that that remainder of the site contributes to ecological connectivity within the broader landscape, although this is limited due to the property's location within the broader landscape and urban context. None the less, the role of these remaining natural areas is particularly important in supporting the movement of species and the resilience of ecological processes within a coastal system that is increasingly under pressure from urbanisation and land use change.

The expansion application commenced before the change from the 2017 Biodiversity Spatial Plan (BSP) to the 2023 version and therefore initial project planning applied the 2017 BSP. The Cape Nature Spatial Biodiversity Plan (2017) mapped the majority of the site as Other Natural Area (ONA) and northeastern section of the property as a Critical Biodiversity Area (CBA). In 2023, the majority of the property was mapped as a CBA, although the accuracy of this is questioned due the transformed nature of the existing Abalone Farm.

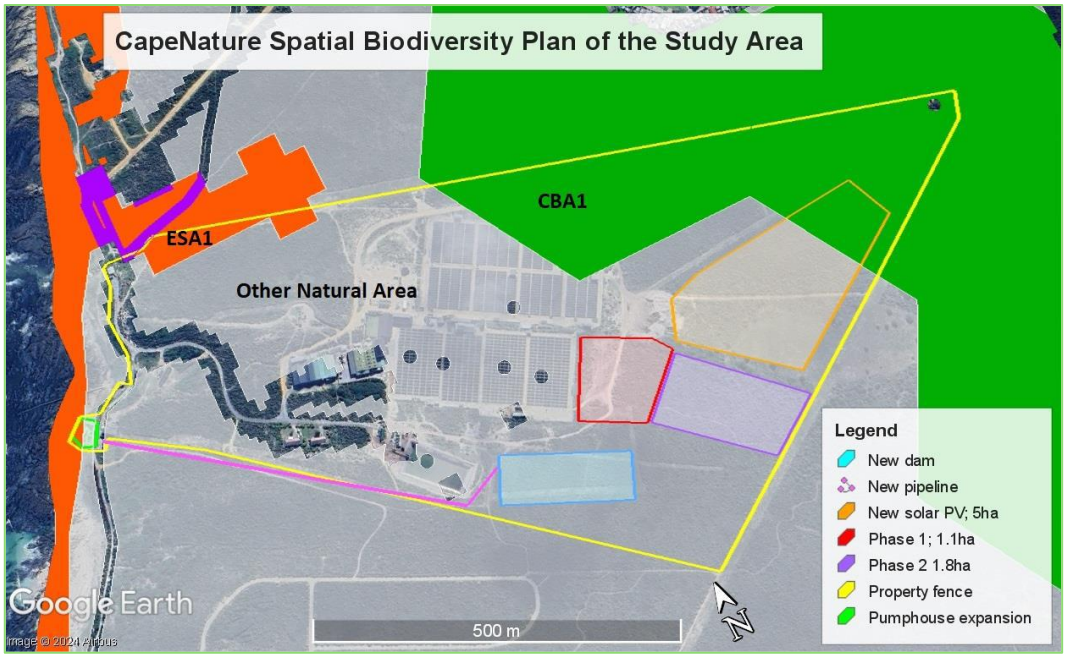

Figure 3. 2017 BSP

The Terrestrial Biodiversity Assessment confirmed that the vegetation on site has not been burnt for at least twenty years. The area has been grazed and trampled in some places by game introduced by the neighbour, as well as day to day operations taking place on the property as part of the existing Aquaculture operation.

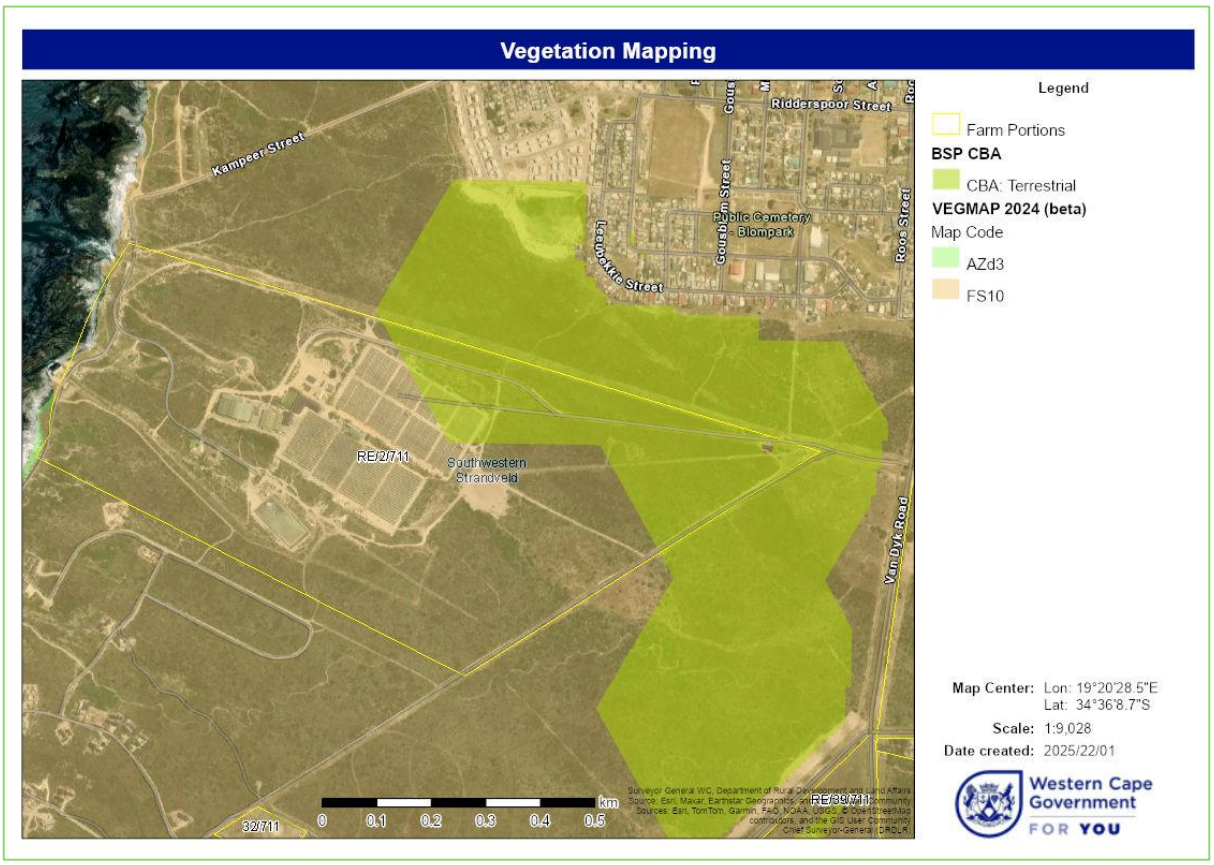

Figure 4: The vegetation composition and distribution on the property.

4. IMPACT ANALYSIS

4.1. Terrestrial Biodiversity Impact Assessment

A detailed Terrestrial Impact Assessment was undertaken in 2024 by Nick Helme to evaluate the potential terrestrial and plant species impacts of the proposed expansion of the Romansbaai Abalone Farm. The study included a full site survey and mapping of vegetation sensitivity and Species of Conservation Concern, which served as the basis for the application of the Mitigation Hierarchy and the evolution of the layout alternatives in the impact assessment process. It is important to highlight that the expansion application contained some fixed aspects which were unavoidable and limited the implementation of the Mitigation Hierarchy to some degree. Notably, the seawater reservoir and its location within the high botanical sensitivity area. By virtue of its purpose, it is required that this infrastructure must be located at the highest point on the farm which would allow for the seawater to be gravity fed to the rest of the farm during peak tariff periods. The aim of which is to reduce the cost of constantly pumping "fresh" seawater across the farm 24/7. Options to avoid this area were investigated but the impact could not be fully avoided. Through the application of the Mitigation Hierarchy and investigation of alternatives, the final preferred layout saw the reduction in the footprint of the reservoir from ~2 ha to 8000 m^2. Regardless however, the Residual Medium impact for this aspect could not be mitigated and hence the need for the Biodiversity Offset investigation was triggered. The Botanist noted the following in his site assessment:

- → Two areas of High botanical sensitivity are identified on the northeastern and southeastern portions of the property, where key infrastructure components are proposed.
- → The northeastern area, earmarked for the installation of a solar photovoltaic (PV) array, partially overlaps with a Critical Biodiversity Area (CBA1), as per the Western Cape Biodiversity Spatial Plan (BSP) 2017. The impact of the solar array was not flagged as significant as vegetation clearance would not be required for its installation.
- → The southeastern area, where the seawater reservoir is proposed, supports high-sensitivity vegetation
- → Other areas were classified as having Medium Low botanical sensitivity (i.e between low and medium, but not medium), including portions intended for the grow-out tanks and access infrastructure.
- → A Milkwood Forest patch was identified within a medium sensitivity zone, however this area will be completely avoided in the preferred layout (Alternative 4).
- → The site has not experienced fire in over twenty years and has been subjected to light grazing and trampling by indigenous game species such as eland, bontebok, springbok, and zebra. Importantly, the vegetation is in good condition, with a low invasive alien species cover of less than 0.5%, primarily *Acacia cyclops* (rooikrans) and *Myoporum spp.* (manatoka).

Despite the reduced development footprint in Alternative 4, the expansion will lead to the complete loss of indigenous vegetation within the seawater reservoir footprint and the production (grow-out tank) area. The PV array and pipeline corridor are expected to cause temporary vegetation disturbance, but not complete loss. In the PV area, taller woody species will be brushcut to a maximum of 1 metre to allow solar panel installation, while lower-growing vegetation will be retained and is expected to benefit from reduced canopy competition. No significant vegetation loss is expected from the pumphouse expansion.

The residual impact of Medium was allocated to the proposed seawater reservoir area with an extent of 8000 m^2 and the investigation of the Biodiversity Offset is in response to this.

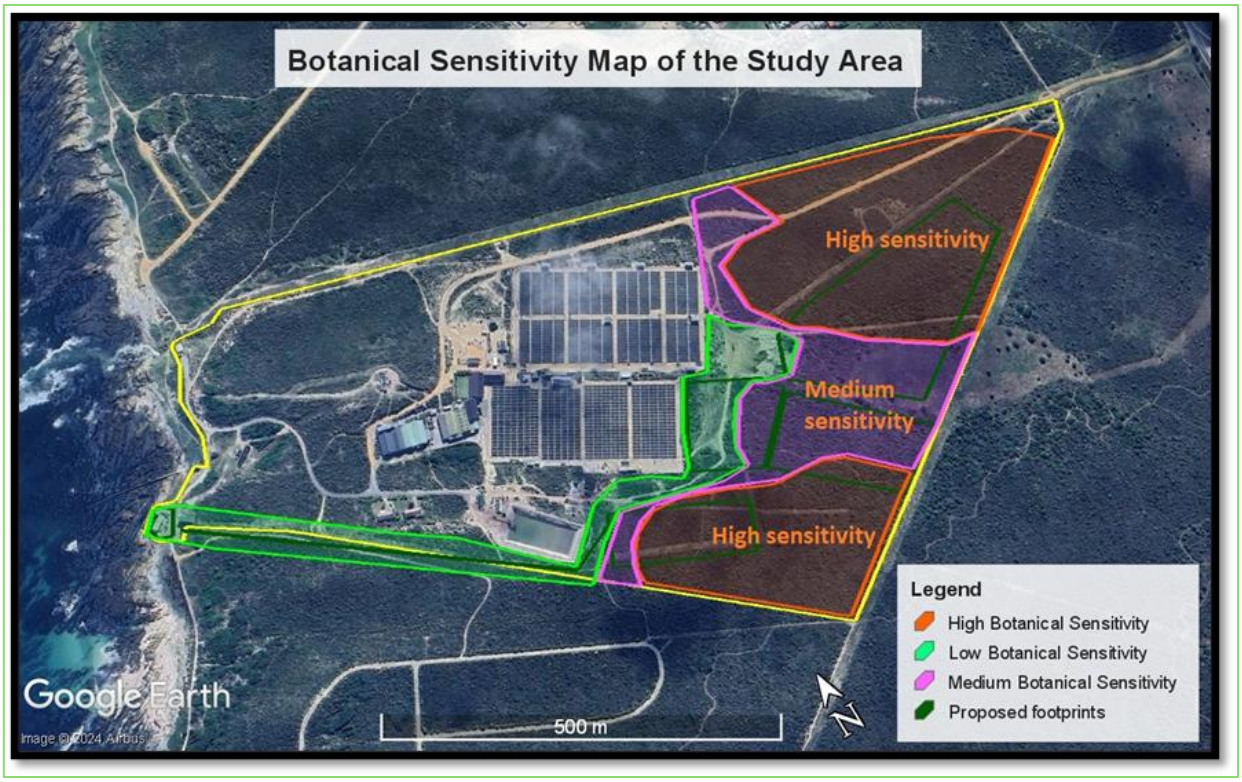

Figure 4: Botanical sensitivity map for the portion of the property with proposed development footprints (property outline in yellow).

4.2. Ecological Impact Summary

The primary ecological impacts during the construction phase include:

- → Loss of vegetation in areas mapped as Low, Medium, and High botanical sensitivity, including parts of an Endangered ecosystem (Southwestern Strandveld);
- → Direct loss of five plant Species of Conservation Concern;
- → Permanent transformation of approximately 0.8 ha of indigenous vegetation in the seawater reservoir footprint resulting in a Residual Medium negative impact.

Although previous versions of the layout resulted in a greater ecological loss, the refinement of the site layout has significantly reduced the impacted area. Nonetheless, Residual Medium negative biodiversity impacts persist in the final layout for the 8000 m^2 area where the seawater reservoir will be located.

5. OFFSET REQUIREMENT DETERMINATION

The Terrestrial Specialist found that even after thorough application of the Mitigation Hierarchy, the reduction of footprints and amendments in the layouts, a Residual Medium negative impact for the proposed Seawater reservoir remained.

5.1. Extent calculation

In accordance with the National Biodiversity Offset Guideline (2023), an Offset is required where significant Residual impacts remain after applying the Mitigation Hierarchy.

Given that the seawater reservoir will result in the permanent loss of 0.8 ha of Southwestern Strandveld, classified as Endangered, a 10:1 offset ratio has been applied, without modifiers.

Proposed development component	Offset Ratio	Size (ha)	Offset Required (ha)
Seawater reservoir	10:1	0.8 ha	8

5.2. Additional considerations

In the Terrestrial Impact Assessment, the botanist provided the following concluding statement regarding the applicability of the Biodiversity Offset Regulations to the proposal:

"The overall reduced botanical impact (Low to Medium negative, with the seawater reservoir being Medium negative) reduces the quantum of the possible biodiversity offset that may be required. The following section is adapted and updated from my November 2024 report:

This level of post mitigation botanical impact does potentially trigger a biodiversity offset requirement (Department of Forestry, Fisheries & the Environment. 2023), notably for the Phase 2 grow out area (Low to Medium negative impact) and the dam area (Medium negative impact) – a total footprint area of about 1.5ha (for Alternative 4). However, given that the vegetation type is relatively well conserved (100% of national target already set aside), at least on paper, no further land additions to the conservation of Overberg Dune Strandveld are advised, especially given Cape Nature's management constraints. Given that even the formally conserved areas of this vegetation type are under severe threat from invasive vegetation, such as in the nearby Walker Bay Nature Reserve (Cape Nature), it is suggested that any biodiversity offset be in the form of funding for alien invasive plant management in these already declared but poorly managed conservation areas. A biodiversity offset specialist should calculate the appropriate quantum of the contribution, and this should ideally be enough to fund alien clearing operations in at least a 15ha area (Alt 4) in perpetuity (based on approx. 1.5ha footprint of Medium and High significance, at an offset ratio of 10:1 for Endangered habitats, as per offset guidelines, Department of Forestry, Fisheries & the Environment 2023)."

NOTE: The Botanical specialist refers to both the grow out platform and the seawater reservoir areas as possible triggers for the Biodiversity Offset process. However, after consultation with Rhett Smart at Cape Nature (06/06/25), it was confirmed that only Residual impacts of Medium and above are applicable. Residual Impacts of Low Medium are not applicable as they are not high enough to be rated as Medium but not low enough to qualify as only Low. **Therefore, and as agreed with by Cape Nature (R. Smart) only the Residual impact of the seawater reservoir is required for further Biodiversity Offset assessment (8000 m^2).**

In this same meeting, it was also agreed that sufficient remaining area is available on the subject property (Portion 2 of 711) which would qualify as an **onsite Offset.** No offsite areas were therefore assessed.

5.3. Onsite area selection

In consultation with Cape Nature and using the site-specific sensitivity data provided by the Botanist as per **Figure 4** above, it was agreed that there was sufficient suitable area available Onsite to obtain the required 8 ha Biodiversity Offset in line with the guideline document and that an Offsite Biodiversity Offset investigation was not appropriate or required.

This onsite area must fulfil the requirements of the Guidelines and as such available areas Onsite were identified as follows:

- → An area of acceptable ecological condition
    - Areas rated as high and medium sensitivity as per the Botanical mapping on site (**Figure 4**)
    - Away from operational aspects and areas at risk of operational impacts
    - Classified as CBA as per 2023 BSP
- → Vegetation type equivalence (i.e., same ecosystem as the impacted area)
- → Allows for a degree of Ecological connectivity with the adjacent property and its designated open spaces
- → Manageability under current land ownership and operations

6. OPTIONS FOR THE ROMANSBAAI ABALONE BIODIVERSITY OFFSET

Once the extent of the Biodiversity Offset was determined and it was confirmed that the Biodiversity Offset could be applied onsite (if required / pursued), several mechanisms for where and how this would be implemented, were investigated in consultation with Cape Nature, the project proponent (Aqunion (Pty) Ltd), and the appointed botanical specialist, using the guidelines above. It is important to note that this report also investigates the option of following a Financial Contribution Option for alien clearing at an appropriate area offsite. We are aware that the Monetary Contribution Option, without a formal Offset Bank, is not in line with the Biodiversity Offset Guidelines, however in this particular case, this option warrants further investigation and due consideration for the various reasons provided in this report.

6.1. Offset alternatives

The following Offset options were investigated and detailed below:

1. Monetary contribution – Preferred option

This entails the allocation of financial resources to support the clearing and long-term management of alien invasive plant species within an already declared, but poorly managed conservation area in the vicinity. The objective of this would be to contribute toward improving ecological management in priority conservation areas, which reflect the vegetation type in question, but that are currently under threat due to limited capacity and resources for effective management. This option is supported by the botanist via his conclusions in his Terrestrial Impact Assessment.

Further consultation was undertaken with Sean Privett of the Grootbos Foundation. The Grootbos Foundation have confirmed that an agreement can be set up between the applicant and the Grootbos Foundation regarding the financial contribution towards the targeted alien clearing and management within existing and declared conservation areas or servitudes in the area. The agreement will between the Grootbos Foundation and the holder

and will outline the financial requirements as well as a basic management plan for the implementation of this type of "Offset" strategy. See **Appendix B** for Letter of Confirmation from the Grootbos Foundation.

We as the Environmental Assessment Practitioner (EAP) and Biodiversity Offset Facilitator, confirm this option as the preferred mechanism in this case, due the case specific constraints and challenges outlined in this report.

In line with the National Biodiversity Offset Guideline (2023), Onsite Offset options have also been investigated. The best possible areas on site and the mechanism for how this could be implemented and maintained, has been investigated. After consultation with the applicant and Cape Nature, as well as through the consideration of the sensitivity areas identified by the Terrestrial specialist, a preferred area for the 8 ha Onsite Offset area was identified. However, through further investigation it became evident that the real challenge with this specific Onsite Offset related to mechanisms for implementation and how to secure the Offset area in the long term. These details are outlined below:

2. Onsite Biodiversity Offset

2a. Registration of a Conservation Servitude (8 ha) in title, on a suitable portion of the property in favour of a recognised conservation entity such as Cape Nature, Overberg Renosterveld Conservation Trust or Grootbos Foundation

This mechanism would provide for the permanent legal protection of onsite areas of biodiversity value, along with associated land use restrictions to maintain or enhance ecological functioning. In other development scenarios, this is the preferred mechanism for the securing of a Biodiversity Offset, however in this particular case, a number of implementation challenges were identified:

i. Conservation entities do not accept servitude sites which are linked to development and active industrial operations
ii. The Overberg Renosterveld Conservation Trust (ORCT) do not prioritise this vegetation type and therefore are not in favour of this particular Conservation Servitude.

Given the above, it was concluded in consultation with Cape Nature, that this option was not viable.

2b. Stewardship Site

The designation of the Offset area as a Stewardship Site in Agreement with Cape Nature was also considered. However, this option is not feasible, as the proposed offset area does not fall within a Priority Area or present as a high value asset for Cape Nature and therefore given capacity and financial constraints at Cape Nature, this site does not qualify as a Stewardship site.

2c. Subdivision and Rezoning to Open Space

The option of allocating the 8 ha of the site to a rezoned Open Space designation was investigated. After consultation with both the appointed Town Planning Consultants (Plan Active) and the Overstrand Municipality's Town Planning Department (Senior Town Planner: Mr Schalk van der Merwe), it was confirmed that both the Overstand Municpality and the National Department of Agriculture (NDA) will not support the removal of 8 ha from the 57 ha Agriculture Zone 1 Property, to be rezoned to Open Space. In addition to this, Spot Zoning will also not be supported as confirmed by the Overstrand Municipality. The Overstrand Municipality had advised that the only option which would be supported by them, would be via the submission and subsequent approval of a Site

Development Plan with the Biodiversity Offset area indicated on it. This municipal approval would include specific conditions of authorisation relating to what is and is not permitted in the Offset Area.

In summary and following from the investigations above, only 2 viable options are available in this scenario, for achieving some type of "Offset" option:

1. In the absence of a local offset banking system, a financial contribution in agreement with Grootbos Foundation should be pursued and is preferred in this scenario, although not strictly in line with the Biodiversity Offset Guidelines. This option has the ability to provide for a more valuable and tangible ecological benefit in this area for the affected ecosystem type, as opposed to assigning an island of 8ha on an operational industrial site which is flanked by other development and is located within the municipal urban area.

2. Approval of an updated Site Development Plan (SDP) by the Overstrand Municipality, which indicates the applicable area on site designated as the Biodiversity Offset Area will be surveyed or marked by GPS reference points. This will aim to ensure that the biodiversity sensitive area is formally acknowledged and spatially defined in the approved SDP, in line with best practice and municipal requirements. This can be formalised through the submission of an amendment to the SDP, accompanied by a condition of approval explicitly specifying the 8-ha conservation area. This approach removes the need for subdivision, rezoning or the registration of a servitude area.

6.2. Additional information

This Biodiversity Offset Report has considered Section 7.4.2 of the National Biodiversity Offset Guideline (2023), "Assessing the potential for securing candidate Biodiversity Offset Site". Note the following case specific comments relative to the generalised mechanisms provided in the above Section:

6.2.1. The declaration of a Protected Area in terms of NEMPAA:

The project site is located more than 6 km from the Walker Bay Nature Reserve and falls within the urban edge of Gansbaai. The property abuts the Masakhane and Blom Park Informal settlements located to the north and is surrounded by existing and ongoing residential development to the south. In addition, the site itself is a large scale, long standing and intensively operated Aquaculture site for the production of abalone.

The location of the site within the built-up townscape of Gansbaai, coupled with its distance to other existing Protected Areas, as well as the fact that it is a large-scale operation site, makes formal declaration under the National Environmental Management Protected Areas Act (NEMPAA) (Act 57 of 2003) unlikely and of low priority and significance. Local Town Planning Policies further limit this option.

In addition to the above, discussions with the Overstrand Municipality's Senior Town Planner (Mr Schalk van der Merwe) confirmed that subdivision and rezoning to Open Space would not be supported in this scenario due to existing policy restrictions relative to the Offset size, location and current land use of the site.

6.2.2. Conservation servitudes

The option of securing the site through a Conservation Servitude is also recommended in the guideline document, as a mechanism for securing a Biodiversity Offset site. Upon investigation, it was confirmed that entities such as the Grootbos Foundation do not accept sites linked to development approvals, and Cape Nature confirmed that the site does not fall within a provincial biodiversity priority area, further limiting the viability of this option.

6.2.3. Purchasing credits from a recognised Biodiversity Offset Bank

The possibility of purchasing biodiversity credits from a registered Offset Bank specifically for ecosystems or habitats aligned with the Southwestern Strandveld vegetation type was also considered. However, there is currently no locally declared Offset Bank in the region, rendering this option unavailable. *As a side note, the need for a suitable Offset Bank in this area has been identified, particularly since the Overberg is currently experiencing a development "boom" with smaller scale type developments where purchasing Offset areas is not financially possible for the developer.*

6.2.4. Handover of BO

Should the Biodiversity Offset be implemented for Romansbaai Abalone Farm (i.e 8 ha Onsite Offset), there will be no provision for the handover for this area to a outside party. The reasons for this are as follows:

- → The Offset is linked to the operation of the Romansbaai Abalone Farm
- → The Biodiversity Offset area in an Onsite Offset and is not a priority area for any local conservation bodies and will not be secured under a Conservation Servitude or Stewardship site.
- → The Overstrand Municipality has confirmed that no rezoning and subdivision or spot rezoning for the 8-ha area will be supported.
- → The area is designated via an approved Site Development Plan in favour of the operator and would not be physically able to delink from the parent far, due to landuse planning limitations.

6.3. Circumstantial factors and motivations

It is important to note that identifying a viable Offset Site or Offset Strategy for smaller scale developments such as this, has proven to be an arduous task and one might question the practical implementation possibility of the National Biodiversity Offset Guidelines to regular day to day applications for Environmental Authorisation.

In this particular scenario, the timing of the application has coincided with a significant crash in the South African Abalone Market, with many local Abalone Farms implementing major retrenchments, downscaling and even full closure. The crisis currently faced in the Hermanus and Gansbaai areas as a result of the Abalone crash and the eminent and significant impacts it would have on local communities is substantial. Romansbaai Abalone Farm has also undergone wide scale cutbacks, downscaling and retrenchments, however, still employs approximately 250 people from the local Gansbaai community and beyond, and contributes significantly to the local economy. The NEMA Application for the expansion initially went from the need to keep up with the market demand, to a shift to prioritizing methods to reduce resource use and cost. Abalone farms require a constant supply of sea water and work on a flow through system. The electricity costs to constantly pump new seawater across the farm is in the range of R 3 million per month. Therefore, the expansion application has now shifted from expansion, to prioritising ways to reduce this overhead operational cost as a means to survive the South African Market Crash. Should the outcome of the Environmental Authorisation be solely based on the strict implementation of the Biodiversity Offset Guideline, it could risk the collapse of the farm as a whole, as it struggles to maintain the pumping costs currently.

The seawater reservoir aspect of the development (8000 m^2) for which the Biodiversity Offset has been triggered, forms an important mechanism to reduce the pumping costs of the farm, by utilising a gravity feed system during peak tariff periods. The reservoir therefore needs to be located higher than the rest of the farm and therefore cannot be shifted to a less sensitive area on the property. Through the impact assessment process, the reservoir was reduced in size from 2ha to 8000 m^2, but the Residual Impact remained Medium negative for this aspect. There are no further mitigating options for this impact.

With the current financial capacity of the applicant limited due to the current Abalone Market crash, it is not feasible for the applicant to secure an Offsite Biodiversity Offset. With an acceptable, but not ideal, area found on site, the mechanism for securing the required Onsite Offset area has proven challenging.

Please note that the expansion application, regardless of the current South African Abalone market crash, is still required entirely so that it is available if and when the market changes and / or recovers.

7. OFFSET JUSTIFICATION

Given the investigation outlined above and the various limitations and constraints highlighted herein (urban-edge location, lack of proximity to priority conservation areas, municipal policy limitations, financial constraints and absence of an operational Offset Bank), all standard Biodiversity Offset mechanisms are found to be impractical or unachievable for this site and this case. These factors therefore then further support the original recommended mechanism for offsetting via a calculated Financial Contribution through an Agreement with the Grootbos Foundation and not via the provisions of the Biodiversity Offset Guideline document (2023).

Should option 2, Onsite Offset be pursued, a mechanism for long term security would need to be confirmed via the SDP Amendment and approval process with the Overstrand Municpality. This is not in line with typical conservation servitudes, stewardship areas or full Protected Area security. However, the Onsite Offset approach could:

- → Directly compensates for the measurable loss of 0.8 ha of Endangered vegetation at a 10:1 ratio, in line with the National Biodiversity Offset Guideline (2023);
- → Avoid the need for complex external agreements and oversight arrangements.
- → Ensures continuity of land ownership, which facilitates easier implementation and monitoring;

8. IMPLEMENTATION MECHANISMS

8.1. Monetary contribution – Agreement with Grootbos Foundation – Preferred

This option will be implemented through a partnership with the Grootbos Foundation's Fynbos Land Legacy Fund. The Grootbos Foundation has been a leading conservation pioneer in the Walker Bay region for more than two decades, with extensive experience in Biodiversity Stewardship, Land Acquisition, and Ecological Restoration. Their track record includes facilitating the establishment of the 24 000 ha Walker Bay Fynbos Conservancy and the 4 500 ha Walker Bay Protected Environment, securing Conservation Servitudes, and supporting alien clearing and restoration across priority sites.

Alien invasive plant species represent one of the most significant ecological threats in the Western Cape. They outcompete indigenous fynbos vegetation, alter fire regimes, reduce water availability, and accelerate biodiversity loss. In fact, research indicates that alien vegetation infestation is among the leading causes of ecosystem degradation and water scarcity in the province. The scale of the challenge requires innovative partnerships and sustainable funding mechanisms to supplement existing initiatives.

Environmental Impact Assessment (EIA) processes, which guide responsible development, provide an opportunity to establish financial vehicles that can contribute to regional conservation efforts. By linking development approvals to targeted ecological interventions, private sector contributions can complement public and NGO initiatives, ensuring that Biodiversity Conservation and Ecosystem Restoration are addressed in a proactive and tangible manner.

Through this mechanism, alien clearing serves as more than a simple management intervention: it becomes a cornerstone of landscape-level conservation in the Western Cape. By restoring and securing threatened vegetation types, the initiative enhances ecological integrity, safeguards ecosystem services such as water security, and creates meaningful socio-economic opportunities for local communities. Partnering with the Grootbos Foundation provides a credible, transparent, and sustainable framework for invasive alien plant management, ensuring both ecological and social benefits while contributing to the broader regional conservation mandate. It is important to note that the vegetation type in question is well conserved, however the threat to it is linked to alien vegetation infestation and inadequate resources to do so.

Alien clearing contributions channelled through the Grootbos Foundation will directly support:

- → Alien vegetation clearing and restoration of priority habitats within already conserved areas of the Walker Bay Fynbos Conservancy.
- → Employment creation and skills development through the Foundation's community-focused stewardship programme, which currently provides training, jobs, and entrepreneurial opportunities for local women from Gansbaai and Pearly Beach.
- → Long-term conservation management of high-priority ecological sites, ensuring offset funds result in measurable, lasting biodiversity gains in the region.
- → Potential land acquisition for conservation, should offset resources allow, securing additional threatened fynbos habitats into the conservation estate.

8.2. Onsite offset

8.2.1. Site Demarcation

The Offset Site, particularly since it is located on an Operational Agri-Industrial site, needs to be clearly demarcated, however the creation of a solid barrier between this area and the surrounds must be avoided. The demarcation of the Offset Site should be via a soft barrier with the primary aim to prevent accidental and unauthorised access as well as unregulated spread from operational activities. Appropriate signage and education of employees is also recommended.

8.2.2. Alien Clearing

Targeted clearing of invasive alien plant species will be undertaken within the designated Offset area and other remaining ecologically sensitive zones on the property. This activity should be guided by an Alien Invasive Plant Management Plan, which outlines species-specific control methods, timelines, and responsible parties. Key invasive species identified for control include *Acacia cyclops* (rooikrans) and *Myoporum sp*. (manatoka). Ongoing follow-up clearing and ecological monitoring should be implemented to ensure the long-term suppression of invasive species and the recovery of indigenous vegetation.

Romansbaai Abalone Farm already implements annual alien clearing on the entire site and therefore it is expected that this intervention will be implemented successfully by the holder.

8.2.3. Terrestrial Biodiversity Assessment Recommended site impact management measures

The following recommendations were made in the Terrestrial Impact Assessment, and these must also be carried into the management of the Offset site:

→ Any approved development footprints should be clearly demarcated on site prior to any development. No disturbance of natural vegetation outside of these demarcated areas should be allowed, during construction and operation and clear operational areas must be put in place to prevent sprawl.

→ All listed invasive alien plant species should be removed from the site within one year of any project authorisation, using approved methodology (see Martens et al 2021). The main invasive species are rooikrans (*Acacia cyclops*) and manitoka (*Myoporum serratum* and *M. tenuifolium*).

→ Search and Rescue of all translocatable bulbs (geophytes) and succulents (including *Lampranthus fergusonaiae*) should be undertaken from the approved development footprints for Phases 1 & 2 and the new dam prior to construction. This should be done at the end of the flowering season for the relevant species (ranges from April to October). Material should be translocated to other parts of the property where it will not be disturbed in future, and which is ecologically similar.

→ No large-scale soil disturbance or site clearing should happen in the proposed PV area, and instead vegetation can be trimmed to a maximum height of 1m, maintaining the bulk of the plant cover, whilst allowing for the solar panels to be positioned at a minimum of 1m above ground level. If the vegetation grows above the panels, it may be trimmed on a regular basis, as needed, but should never be cut below 300 mm above the ground. Cut material can be used as mulch to stabilise and cover any loose sand nearby.

→ Any biodiversity contribution to be applied should be in the form of funding for alien invasive plant management and not the official Biodiversity Offset Regulation process.

9. OFFSET CONDITIONS

The following conditions are proposed to guide the implementation of the chosen "Biodiversity Offset" and ensure its long-term success. Given the current status of the Romansbaai Abalone Farm and the crash of the Abalone market, should any of the 2 Offset Options be required for the finalised of the Environmental Authorisation, the following must be noted and conditional:

1. Option 1 – Monetary contribution in associated with the Grootbos Foundation is preferred. However, consideration should also be given to the need for the application of the guidelines at all. Case by case specifics are critical to decision making.
2. The implementation of any Offset option is only triggered when the applicant breaks ground at the seawater reservoir site, the area with the Residential Medium impact. Cape Nature agreed to this as the trigger for implementation of the Offset process.

OPTION 1 – Preferred
Monetary contribution in conjunction with the Grootbos Foundation

→ A written agreement between Grootbos Foundation and Applicant must be drafted prior to groundbreaking at the seawater reservoir site. The agreement must define the extent, location, and objectives of alien clearing activities to be funded or undertake, as well as the financial contribution required calculated relative to the 8000 m^3 loss at the seawater reservoir site.

→ The Grootbos Foundation shall provide the Applicant (and the competent authority, if required) with annual progress reports demonstrating how the Offset funds are being utilised, including measurable ecological outcomes achieved through alien clearing, habitat restoration, or conservation management.

- → The Applicant shall make the agreed monetary contribution in accordance with the payment schedule outlined in the agreement and prior to breaking ground at the seawater reservoir site only.
- → Alien clearing shall focus on high-priority ecological areas within the Walker Bay Fynbos Conservancy or other priority sites identified by the Grootbos Foundation, in alignment with the Fynbos Land Legacy Fund priorities.
- → Alien clearing activities shall commence within 12 months of the trigger event (ground-breaking for the seawater reservoir) and continue for a minimum period of five years, or as otherwise agreed in writing with the competent authority and / or the Grootbos Foundation relative to financial cost of the loss of 8000 m^2.
- → The Grootbos Foundation shall submit annual progress reports to the Applicant (and to the competent authority, if required), detailing the extent of alien clearing achieved, follow-up operations conducted, and measurable ecological outcomes (e.g., recovery of indigenous vegetation).
- → Independent ecological audits may be conducted at intervals agreed upon with the competent authority to verify the effectiveness of alien clearing and restoration efforts funded by the Applicant, if deemed necessary.

OPTION 2
8 ha Onsite Offset

- → An 8-ha onsite Biodiversity Offset site has been identified on the subject property at the area indicated on the attached plan - See **Appendix A.**
- → An Amended Site Development Plan (SDP) must be submitted to the Overstrand Municipality inline with the trigger point outlined above, which clearly indicates the Biodiversity Offset area and coordinates as well as the conditions of this area. The SDP must be submitted before vegetation clearance begins for the seawater reservoir (or earlier) and must be approved by the Overstrand Municipality.
- → The Biodiversity Offset area must be excluded from any current or future development and open access must be restricted to only permitted personnel for conservation management purposes / security.
- → The Offset Area (and remaining undeveloped areas on site) must be cleared of invasive alien plant species, primarily *Acacia cyclops* and *Myoporum sp*., and maintained through ongoing follow-up clearing.
- → The Offset Area must be physically demarcated with signage and soft barriers to prevent encroachment from farming operations
- → No infrastructure, vehicle access, or other disturbance should occur within the Offset Site without prior approval.
- → A Biodiversity Management Plan (or Similar) must be developed and implemented for the Offset Area, detailing actions for habitat maintenance, rehabilitation, monitoring of vegetation condition, alien clearing, and any fire management which might be required. This is only required prior to groundbreaking at the seawater reservoir site.
- → Annual monitoring / audit reports must be submitted to the Competent Authority and / or Cape Nature as required, evaluating the condition and effectiveness of Offset interventions. Indicators should include vegetation recovery, alien plant cover and density, and evidence of ecological stability and presence of SoCC.
- → Management actions must follow an adaptive management approach, with periodic review and revision of the Biodiversity Management Plan based on monitoring results and any new conservation priorities or threats.
- → The Biodiversity Management Plan can form an addendum to the existing Environmental Management Plan for the property and its operations.
- → The proponent must allocate sufficient funding and resources to implement and sustain offset activities over the long term, including maintenance, monitoring, and reporting costs.

These conditions aim to ensure that the nominated Offset meaningfully contributes to Biodiversity Conservation goals and supports the long-term ecological sustainability of the surrounding landscape.

10. CONCLUSION

The proposed expansion of the Romansbaai Abalone Farm on Portion 2 of Farm 711, will result in the loss of indigenous vegetation within areas of Low, Medium, and High botanical sensitivity. The only Residual Medium Impact will occur within the footprint of the proposed seawater reservoir, which is located within an area classified as Southwestern Strandveld, an Endangered vegetation type.

Although the Mitigation Hierarchy has been applied through layout refinement (Alternative 4), reduced development footprint, and the protection of ecologically sensitive features such as the milkwood forest, the Residual Medium Impact for the seawater reservoir remained. Based on these findings, and in line with the National Biodiversity Offset Guideline (2023), a Biodiversity Offset is required to address the residual loss of ecological function and species habitat. Using a 10:1 Offset ratio (as recommended for Endangered ecosystems), the estimated Offset requirement for the 0.8 ha impact is 8 ha.

The extent of the applicability of the Biodiversity Offset Guidelines (2023) to this specific case, has proved challenging as outlined in this report, and coupled with the Abalone Market crash in South Africa and globally, which is linked to the production of China's own hybrid species, strict implementation and affordability have been limiting. Options for achieving the most practical opportunity to achieve a impactful "Offset" have been investigated in this document. Should it be decided that the implementation of any Offset is required, which, given the timing, may not be appropriate, then the preferred option is for Option 1 – Monetary contribution in the favour of Grootbos Foundation.

APPENDIX A – GROOTBOS LETTER

GROOTBOS FOUNDATION

CONSERVATION RESEARCH UNIT | GREEN FUTURES EDUCATION | ENTERPRISE DEVELOPMENT | SPORTS DEVELOPMENT

grootbosfoundation.org

Michelle Naylor
Lornay Environmental Consulting
Hemel & Aarde Wine Village – Unit 5/1F
PO Box 1990, Hermanus, 7200

20 August 2025

Subject: Biodiversity offsets and the Grootbos Foundations Fynbos Land Legacy Fund

Dear Michelle

The Grootbos Foundation has been driving landscape level conservation in the Walker Bay region of the Cape for over twenty years. The Foundation has supported the development of the 24 000-hectare Walker Bay Fynbos Conservancy, the establishment of the 4500-hectare Walker Bay Protected Environment, securing priority sites through conservation servitudes and the proclamation of private nature reserves. Through this support and associated stewardship mechanisms approximately half of the Walker Bay Fynbos Conservancy (12 500ha) is now formally conserved. The Grootbos Foundation has in depth knowledge of the regions biodiversity and threats and has developed an ecological priority index to identify and prioritise ecologically valuable or threatened properties for land purchase.

The Grootbos Foundation has also raised funding and established a community focused program for the conservation management of these properties. The Foundations Biodiversity Stewardship program currently provides skills training, employment and entrepreneurial opportunities to twenty women from Gansbaai and Pearly Beach. These teams have been hard at work clearing aliens, assisting with management burns, undertaking erosion control and trail maintenance in the protected areas of the Conservancy since 2022. The Foundation has the capacity to expand this program and thereby provide more opportunities for skills development and employment and a greater impact in terms of alien vegetation clearing and restoration of high priority habitat in protected areas.

The Grootbos Foundations Fynbos Land Legacy Fund provides a mechanism whereby offset funding could be channelled to support the restoration and conservation management of existing conserved high priority sites and/or the purchase of high priority land for conservation in the region. For more information, please contact Sean Privett (sean@privett.co.za).

Yours sincerely,

Sean Privett
Conservation Director
Grootbos Foundation

Grootbos Foundation
Registered Section 21, non-profit company (#2003/014519/08)

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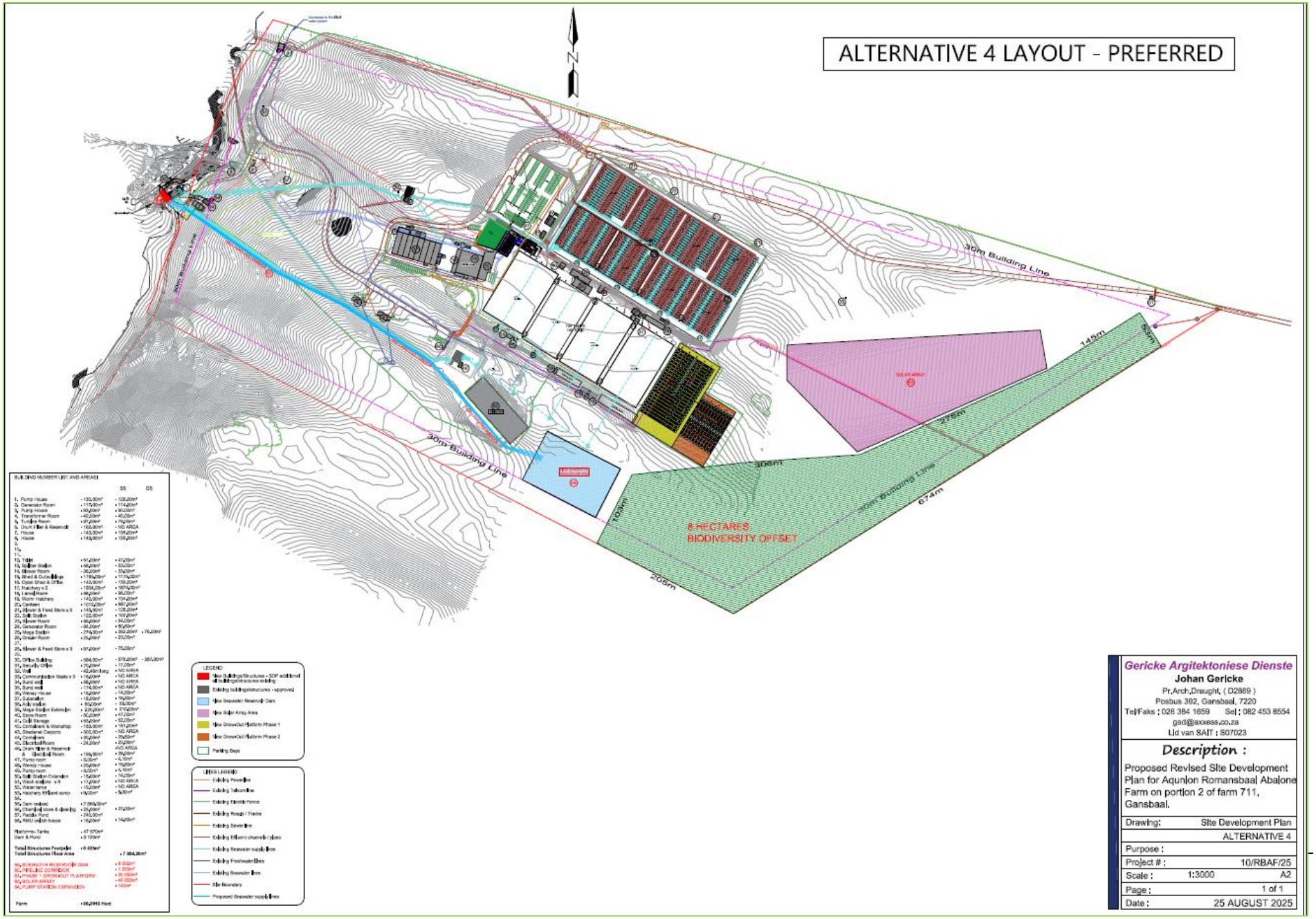
Grootbos Foundation
Grootbos Nature Reserve

APPENDIX B – EXPANSION SDP WITH ONSITE OFFSET AREA


ALTERNATIVE 4 LAYOUT – PREFERRED
N
30m Building Line
30m Building Line
30m Building Line
8 HECTARES
BIODIVERSITY OFFSET
145m
276m
308m
674m
103m
208m
BUILDING NUMBER LIST AND AREAS
LEGEND
Gericke Argitektoniese Dienste
Johan Gericke
Pr,Arch,Draught, (D2889)
Posbus 392, Gansbaai, 7220
Tel/Faks : 028 384 1859 Sel : 082 453 8554
gad@axxess.co.za
Lid van SAIT : S07023
Description :
Proposed Revised Site Development Plan for Aqunlon Romansbaai Abalone Farm on portlon 2 of farm 711, Gansbaai.
Drawing: Site Development Plan
ALTERNATIVE 4
Purpose :
Project # : 10/RBAF/25
Scale : 1:3000 A2
Page : 1 of 1
Date : 25 AUGUST 2025