

Strategic Biodiversity Offset Framework Plan Aalwyndal, Mossel Bay, Western Cape

REPORT 4: Identification, Ground-truthing & Feasibility of Potential Offsite Offsets



**Western Cape
Government**
Economic Development
and Tourism



confluent

This biodiversity offset framework plan was developed with funding from the Western Cape Government's Department of Economic Development and Tourism.

The plan was compiled by Confluent and Eco-Pulse in consultation with the Mossel Bay Municipality, Cape Nature, and the Department of Environmental Affairs and Development Planning.

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Acknowledgements

Jaco Roux (Mossel Bay Municipality), Frances Balayer, Danie Swanepoel and Francois Naude (Department of Environmental Affairs and Development Planning), Megan Simons (Cape Nature), Annelise Vlok (Cape Nature), Delarey Viljoen (DelPlan), Charl Wade and Dirk Smit (Southern Cape Fire Protection Agency).

Report Series Information

This report (in bold) is one of a series of reports produced for this framework plan which are listed below:

1. *Revision of the Aalwyndal Precinct Layout.*
2. *Calculated Size and Characteristics of the Offset.*
3. *Costed Conservation Management Plan for the Onsite Biodiversity Offset.*
4. ***Identification, Ground-truthing and Feasibility of Potential Offsite Offsets.***
5. *Management and Financial Arrangements for Biodiversity Offsets.*

Suggested Citation

Western Cape Department of Economic Development and Tourism (WCDEDT). 2025. *Strategic Biodiversity Offset Framework Plan for Aalwyndal, Mossel Bay, Western Cape. Report 4: Identification, Ground-truthing and Feasibility of Potential Offsite Offsets.*

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GLOSSARY

Biodiversity	The variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems.
Biodiversity Offset	The measurable outcome of compliance with a formal requirement contained in an environmental authorisation to implement an intervention that has the purpose of counterbalancing the residual negative impacts of an activity, or activities, on biodiversity, through increased protection and appropriate management, after every effort has been made to avoid and minimise impacts and rehabilitate affected areas.
Biodiversity Offset Implementation Agreement	Means a legally binding agreement that is entered into between the holder of an environmental authorisation and a third party, or third parties, for the implementation of a biodiversity offset.
Biodiversity Offset Management Plan	Means a plan setting out the management actions to be taken at a biodiversity offset site to achieve and maintain specific conservation outcomes in the long term.
Biodiversity Offset Receiving Area	Means an area identified in an official policy, plan or programme as an optimal area for locating biodiversity offsets.
Biodiversity Offset Report	Means a report prepared by a relevant specialist, or specialists, and submitted to a competent authority together with a basic assessment report, or environmental impact assessment report, setting out the findings of a biodiversity offset study.
Biodiversity Offset Site	Means a suitable area in the landscape which meets the offset requirements in an environmental authorisation and is secured for biodiversity conservation in the long term.
Biodiversity Priority Area	Means an area identified as a priority for biodiversity conservation in a spatial biodiversity plan, and includes Critical Biodiversity Areas, Ecological Support Areas, Freshwater Ecosystem Priority Areas and focus areas for protected area expansion.
Buffer	A strip of land surrounding a wetland or riparian area in which activities are controlled or restricted to reduce the impact of adjacent land uses on the wetland or riparian area. Buffers are land use specific and are calculated for the specific environmental context and proposed land use.
Candidate Biodiversity Offset Site	Means one of the potential biodiversity offset sites identified in a Biodiversity Offset Report.
Characteristics of a watercourse	Means the resource quality of watercourse within the extent of a watercourse.
Delineation of a wetland or riparian habitat	Means delineation of wetlands and riparian habitat according to the methodology as contained in the Department of Water Affairs and Forestry, 2008 publication: A Practical Field Procedure for Delineation of Wetlands and Riparian Areas or amended version.
CBA Map	Means a map of Critical Biodiversity Areas and Ecological Support Areas, based on a systematic biodiversity plan.
Conservation Area	Means an area with a conservation designation that is effective at achieving in-situ conservation of biodiversity outside of protected areas in the long term.
Conservation Authority	Means South African National Parks or the organ of state responsible for the conservation of biodiversity in a province.

Conservation Servitude	Means a servitude registered against the title deed of a property placing restrictions on the landowner and successors-in-title for the purposes of conservation of biodiversity on the relevant property.
Critical Biodiversity Area (CBA)	Means an area that must be maintained in a good ecological condition (natural or near-natural state) in order to meet Biodiversity Targets for ecosystem types as well as for species and ecological processes that depend on natural or near natural habitat, that have not already been met in the protected area network.
Ecosystem	Means an assemblage of living organisms, the interactions between them and their physical environment.
Ecological Condition	Means the extent to which the composition, structure and function of an area or biodiversity feature has been modified from a reference condition of "natural".
Ecosystem Extent	Means the proportion of an ecosystem type that remains intact (i.e. in a natural, near-natural or semi-natural condition) relative to its historical distribution.
Ecological Infrastructure	Means naturally functioning ecosystems that deliver valuable services to people, such as water and climate regulation, soil formation and disaster risk reduction.
Ecosystem Services	Means services and benefits to people and the economy provided by ecosystems, often classified into three broad categories: provisioning services, regulating services and cultural services.
Ecosystem Threat Status	Means the indicator of how threatened an ecosystem type is (in other words the degree to which it is still intact or alternatively losing vital aspects of its function, structure or composition) in which Ecosystem types are categorised as Critically Endangered, Endangered, Vulnerable or Not Threatened, based on the proportion of ecosystem type that remains in good ecological condition relative to a series of biodiversity thresholds.
Fatal Flaw	Means a major defect or deficiency in a project proposal that should result in environmental authorisation being refused, and from a biodiversity perspective, a residual negative impact that would have a Very High significance rating.
Irreplaceable Biodiversity	Means biodiversity identified through a systematic conservation assessment as being essential to meet a biodiversity target.
Regulated area of a watercourse	a) The outer edge of the 1 in 100-year flood line or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, dams and lakes. b) In the absence of a determined 1 in 100-year flood line or riparian area as contemplated in (a) above the area within 100m of distance from the edge of a watercourse where the edge of the watercourse (excluding floodplains) is the first identifiable annual bank fill flood bench. c) In respect of a wetland: a 500m radius around the delineated boundary (extent) of any wetland (including pans).
Rehabilitation	Means the process of reinstating natural ecological driving forces within part or whole of a degraded habitat to recover former or desired ecosystem structure, function, biotic composition, and associated ecosystem services.
Residual negative impacts	Means negative impacts that remain after the proponent has made all reasonable and practicable changes to the location, siting, scale, layout, technology and design of the proposed development, in consultation with the environmental assessment practitioner and specialists (including a

	biodiversity specialist), in order to avoid and minimise negative impacts, and/or rehabilitate any impacted areas within the prescribed timeframes specified for the completion of the rehabilitation in the EA.
Restoration	Means returning a disturbed, degraded or destroyed ecosystem to its natural condition, with the species present being representative of the ecosystem that occurred on the site prior to disturbance, and ecological processes supporting the long-term persistence of the ecosystem and species, and the associated ecosystem services, through active (with interventions) or passive (without interventions) means.
Spatial Biodiversity Plan	Means a spatial plan that identifies one or more categories of biodiversity priority area, using the principles and methods of systematic biodiversity planning.
Resource Quality	Of a watercourse means the quality of all the aspects of a water resource including: (a) The quantity, pattern, timing, water level and assurance of instream flow; (b) The water quality, including the physical, chemical and biological characteristics of the water; (c) The character and condition of the instream and riparian habitat, and; (d) The characteristics, condition and distribution of the aquatic biota.

ABBREVIATIONS

BA	Basic Assessment	FEPA	Freshwater Ecosystem Priority Area
BOCMA	Breede-Olifants Catchment Management Authority	I&AP	Interested and Affected Part
CA	Competent Authority	MEC	Member of the Executive Council for the environment (provincial)
CBA	Critical Biodiversity Area	MBM	Mossel Bay Municipality
CN	Cape Nature	NBA 2018	National Biodiversity Assessment
DFFE	Department of Forestry, Fisheries and Environment	NBF	National Biodiversity Framework
DEADP	Department of Environmental Affairs and Development Planning	NDP	National Development Plan
EA	Environmental Authorisation	NEMA	National Environmental Management Act (Act No. 107 of 1998)
EE	Ecosystem Extent	NEMBA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
EAP	Environmental Assessment Practitioner	NWA	National Water Act (Act No. 36 of 1998)
EIA	Environmental Impact Assessment	NGO	Non-government organisation
EMPr	Environmental Management Programme	NPO	Non-profit organisation
EPL	Ecosystem Protection Level	SCC	Species of Conservation Concern
ESA	Ecological Support Area	SEI	Site Ecological Importance

1. INTRODUCTION

This is the 4th report in the series compiled for the development of a strategic biodiversity offset framework plan for the Aalwyndal precinct, Mossel Bay. This report builds on Report 2 in which the size and characteristics of the offset for developable areas in Aalwyndal was determined. This assessment measured the full extent of areas outside of the Core Area where offset obligations are triggered as 164.08 ha (Table 1). At an offset ratio of 1:4 this creates a total offset target of 656.32 ha. It was concluded that the sustainability and preservation of the Core Area would best be ensured if the area qualified as an onsite offset and therefore attracted funds in the form of biodiversity offset credits.

To determine the area required as an offsite offset, the area protected within the Core Area must be subtracted from the offset target. Following subtraction of the servitude areas within the Core Area, the remaining area measures 296.3 ha. If this is subtracted from the offset target of 656.32 ha, then **360.02 ha must be secured offsite¹**.

Table 1. Indicative offset targets for the Aalwyndal precinct based on the Confluent & Eco-Pulse Precinct Plan (From Table 5 in Report 2).

Vegetation Type	"Offset Required" areas	Offset Ratio	Offset Target
Mossel Bay Shale Renosterveld	19,25	4	76,98
Swellendam Silcrete Fynbos	144,12	4	576,49
Hartenbos Dune Thicket	0,71	4	2,86
Total (ha)	164.08	4	656.32

1.1 Terms of Reference

The terms of reference for this report according to the original scope provided by the Western Cape Government Department of Economic Development and Tourism (WCDEDAT) are provided below:

Identification, ground-truthing and feasibility assessment of potential offset receiving areas outside the precinct, to eventually form part of an offset bank. This will require the service provider to, in consultation with the Department of Environmental Affairs and Development Planning (DEA&DP), CapeNature and the Mossel Bay Municipality:

- Analyse existing information (sensitivity and vegetation maps, MSDF, PSDF, Western Cape Land Use Planning Guidelines: Rural Areas (2019), etc.).
- Identify possible landowner partners with qualifying vegetation to serve as offset receiving areas that could be considered for inclusion in an offset bank, including consideration of offset ratios. Areas to be investigated should also include the properties that were part of the desktop assessment by Brownlie & von Hase (2021).
- Determining the best locations for the offset receiving area footprint to make up an offset bank.
- Initiate engagements with identified partners/landowners in terms of willingness and capacity to accommodate offsets in perpetuity.

¹ For the Core Area to be confirmed as suitable as an onsite offset, a strong commitment in writing to implementing ecological burns as part of an approved Fire Management Plan must be provided by the Mossel Bay Municipality. If ecological burns do not happen, the validity of the Core Area as an onsite offset cannot be upheld.

- v. Site inspections in collaboration with landowners to perform ground-truthing of vegetation type and ecological condition, as well as an assessment of the sites' viability to be included in an offset bank.
- vi. Initial negotiations with landowner(s) and produce a model offset agreement with landowners.

2. PRIORITISING CANDIDATE BIODIVERSITY OFFSET SITES

2.1 Principles Guiding the Offset Site Selection

Principles guiding the prioritisation and selection of offsite offsets were aligned with the National Biodiversity Offset Guideline (NBOG; DFFE, 2023). These are summarised as follows:

- **Ecological equivalence** (like-for-like) is the preferred offset type. Offsets should comprise – or benefit – the same or similar biodiversity components as those components that would be negatively affected by development in Aalwyndal.
- **Trading up** offset types (like-for-better) which secure priority areas of greater importance or priority to biodiversity conservation than the area being impacted may be considered under certain circumstances. This is applicable in exceptional cases but a strong motivation for this choice must be provided (e.g. it can be shown that there are no suitable areas of the same or proxy habitat available).
- The principle of **additionality**. Offset interventions must be additional to, or over and above, biodiversity conservation measures that are already required by law, or that would have occurred had the biodiversity offset not taken place.
- Biodiversity offsets should take the landscape scale into account by embodying the ecosystems approach and **promoting connectivity in the wider landscape**. Conservation benefits from integrated landscape-scale interventions as opposed to a 'patchwork' of small-scale isolated interventions.
- Biodiversity offsets must result in **long-term protection** and management of priority biodiversity in perpetuity.
- Biodiversity offset design must be **evidence-based and transparent** in terms of the size and significance of the residual impacts on biodiversity caused by the proposed activity. This should be based on the best available biodiversity information and sound science. All associated reports should be made publicly available.
- A **risk averse and cautious approach** should be followed taking into account uncertainties relating to the residual impacts of development as well as the successful outcome and timing of the biodiversity offset intervention.
- Offsets must be **fair and equitable**, and the process should be undertaken in an open and transparent manner providing for stakeholder engagement, respecting recognised rights (e.g. existing development rights in Aalwyndal), and seek positive outcomes for affected parties.
- Biodiversity offsets must be **measurable, auditable, and enforceable**. The offsets adequacy must be monitored and audited in terms of clear and measurable management, performance and desired outcome targets and provision must be made for adaptive actions where necessary.

The NBOG further states that the biodiversity offset site should be selected from a portfolio of candidate biodiversity offset sites.

Given the high cost and management inputs required to manage the Core Area within Aalwyndal, a site-specific principle is that onsite offsets would be preferred and prioritised to offsite offsets.

2.2 Desktop Assessment: Identification of Potential Candidate Offset Sites

The initial portfolio of properties assessed at a desktop level numbered 67 properties including those identified in the Brownlie & Von Hase (2021) and additional properties identified through the present assessment which involved consultation with the Mossel Bay Municipality and Department of Environmental Affairs and Development Planning (Figure 1).

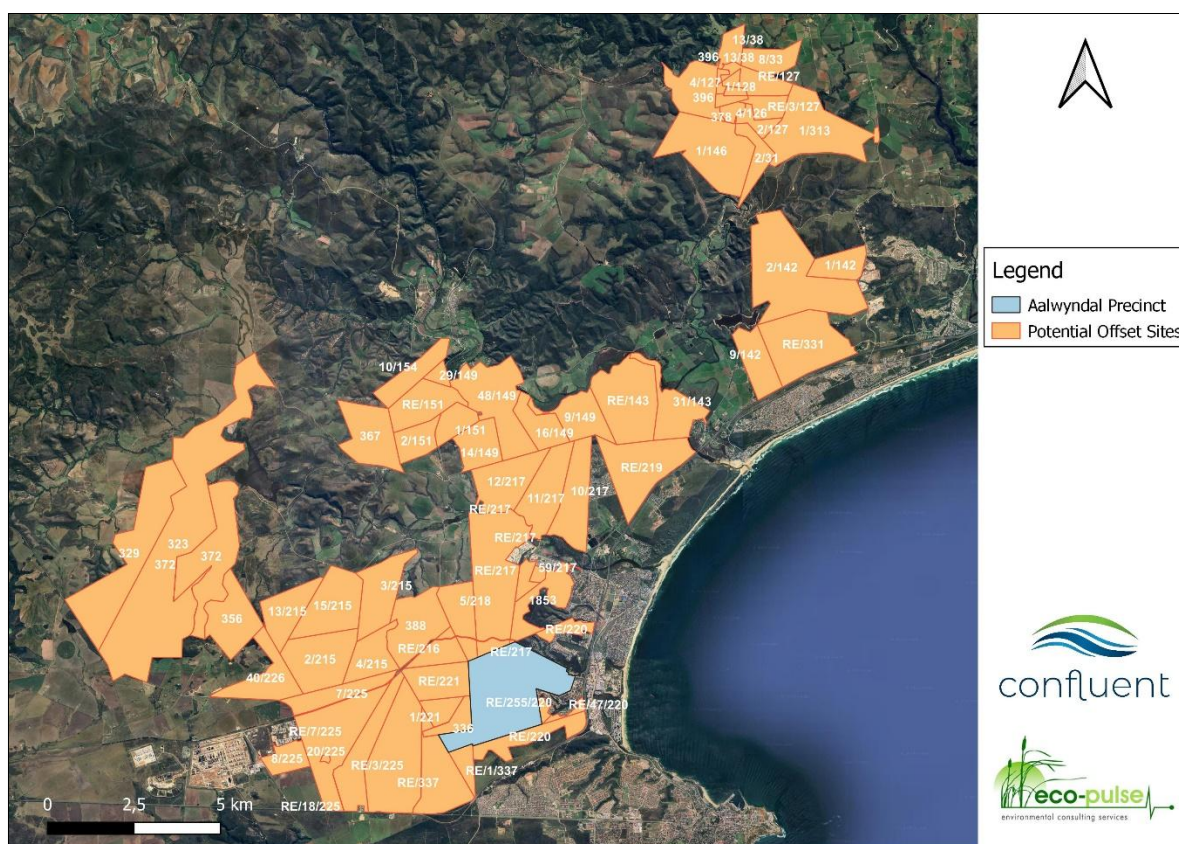


Figure 1. Map showing the Aalwyndal precinct in relation to potential offset properties investigated in this assessment.

2.2.1 Initial Prioritisation of Candidate Offset Sites

Whilst a broad range of site attributes need to be assessed when evaluating the suitability of candidate offset sites, like-for-like criteria and the potential to contribute towards the conservation of species immediately in the vicinity of the Aalwyndal precinct were regarded as most important and provided a practical basis for grouping candidate offset sites into a set of “Tiers” for offset planning purposes (Table 2).

The idea here, is that preference would first be given to securing offset sites on Tier 1 and Tier 2 properties. Only if these landowners were not interested in making their land available for biodiversity offsets, would consideration be given to other Tiers. By approaching offset

planning in this way, we believe that due consideration will be given to optimal properties before investigating properties regarded as less preferable to compensate for the negative impacts to biodiversity within the Aalwyndal Precinct.

Table 2. Summary of criteria used to group sites into a subset of 4 tiers.

Offset Principle ²	Tier 1	Tier 2	Tier 3 (Trading up and Combination sites)	Tier 4 (Only Trading up site) ³
Like for like	- Comparable National Veg Map Type, AND - Comparable Vlok Veg Type. - Flat terrain, immediately adjacent to similar topography being developed in Aalwyndal. - Watercourse present	- Comparable National Veg Map Type, AND - Comparable Vlok Veg Type.	- Comparable National Veg Map Type, OR - Comparable Vlok Type.	- Alternative National Veg Map Type of higher threat status. - No Comparable National VegMap Type, AND Vlok Type.
Connectivity / proximity	- Directly connected to Aalwyndal. - Within 5km of Aalwyndal.	- Part of local corridor, directly connected to Aalwyndal. - Within 5km of Aalwyndal.	- No physical connection to Aalwyndal. - Within 10km from Aalwyndal.	- No physical connection to Aalwyndal. > 10km from Aalwyndal.

Tier 1 properties are of the highest priority declining through to Tier 4 which are of a lower priority. The first step of this process involved the desktop delineation of polygons on properties which aligned as far as practically feasible with mapped areas of remaining natural habitat indicated in Figure 6. The emphasis was on delineating areas which could be linked to neighbouring natural areas forming a potential corridor connected to Aalwyndal. As high priority offset sites, Tiers 1 and 2 have more detailed delineations, while no further delineation of polygons was undertaken for Tiers 3 and 4. Possible offset areas for Tiers 3 and 4 were however estimated based on mapped natural fragments according to the 73-class DFFE Land Cover map.

For the comparative National Vegetation Map Type (SANBI, 2018), any areas mapped as Mossel Bay Shale Renosterveld, Hartenbos Dune Thicket, Swellendam Silcrete Fynbos (SSF), or North Langeberg Sandstone Fynbos (NLSF) were indicated at comparable. It must be noted that this step was at a desktop level, and validation as a 'like for like' vegetation candidate for Aalwyndal can only be undertaken during ground-truthing. Ground-truthing was undertaken for several candidate sites, but not all of them. It is acknowledged that despite our

² Properties with no National VegMap Type OR Vlok Type AND No Critically Endangered VegMap Type were excluded from further assessment as they would be rated as Trading Down.

³ To be considered as a Trading Up site the mapped vegetation type on the property must have an ecosystem threat status of Critically Endangered to be qualify as Trading Up.

efforts to get the incorrect NLSF remapped as SSF, this will not be finalised by SANBI within the timescales of this project.

Properties that were located > 10km from the precinct, with neither the Vlok vegetation type (Vlok and de Villiers, 2007) nor VegMap corresponding vegetation types, and a vegetation type that did not equate to trading up (Critically Endangered) were excluded from further consideration.

For Tier 1 and 2 sites, reference was made to historical images of each property over the last two decades to ensure historical disturbance was accounted for. Almost all properties considered are agricultural lands, and historical disturbance generally involves some type of vegetation clearing (See example in Figure 2). If this type of disturbance was observed in historical imagery these areas were excluded unless they represented a feature that represents or could be rehabilitated to an ecologically functional state.

A significant example is RE/216 located at the north-western corner of Aalwyndal. Initially thought to be a good prospective offset site in terms of vegetation cover at present, a review of historical satellite imagery revealed that almost all-natural vegetation was cut in 2005 and maintained in that state for some time, although in the last 15 years or so it appears to have slowly regenerated. After this, it was discovered that the old fields on this particular property as well as others in the vicinity are actively used as foraging areas for Black Harrier (*Circus maurus*) and the old fields therefore represent a functionally relevant ecological habitat for fauna. Sections of the property were therefore included as potential offset receiving areas for consideration.

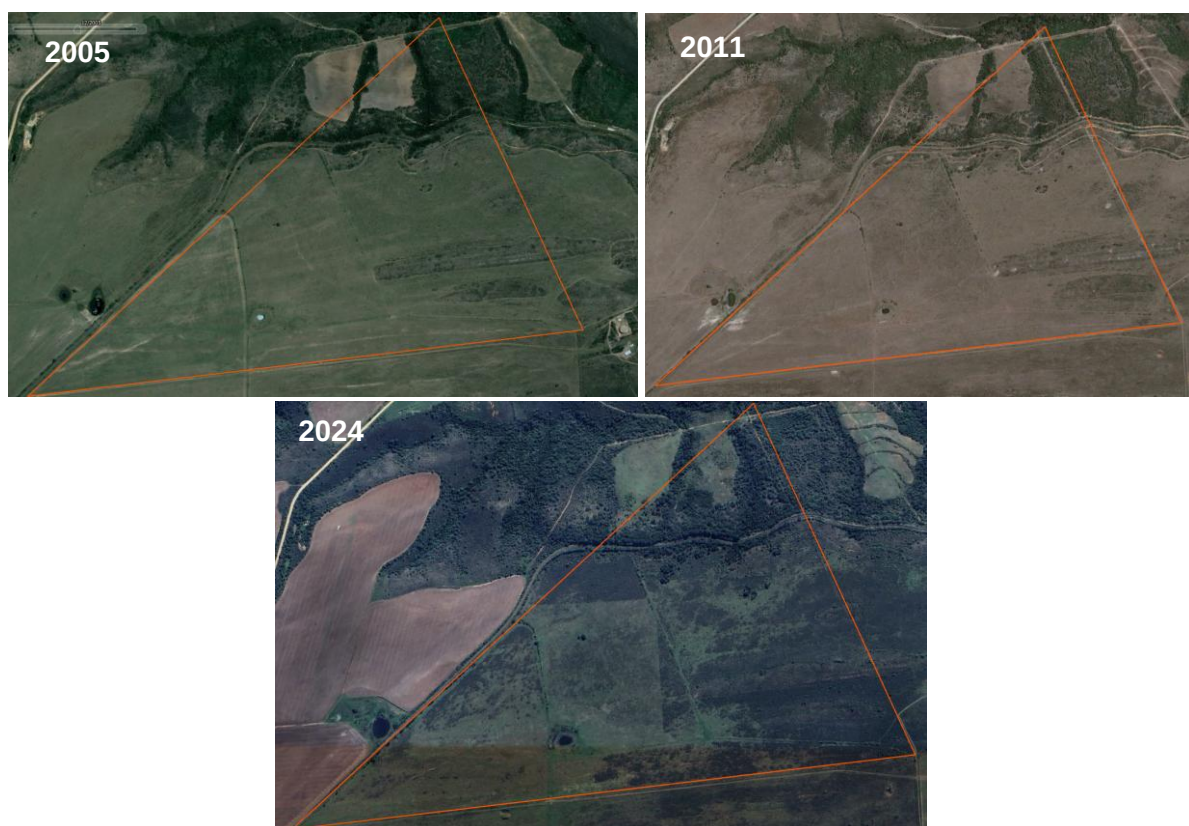


Figure 2. Historical imagery of RE/216 indicating what appears to be mostly natural vegetation in the south-east in 2024 but extensive clearance through cutting of vegetation on the property took place about two decades prior to that.

2.2.2 Overview of Tier 1 and Tier 2 Sites

The Tier 1 and 2 candidate sites presented in Figure 3 form relatively continuous corridors through the south, west, and north-west of Aalwyndal. Minimal opportunities are available for direct connections to the north or north-east. Erf 1853 is currently subject to a development application which was declined, and subsequently appealed. Although if Erf 1853 (or a portion thereof) is eventually formally conserved (if the Environmental Authorisation (EA) then this could form a good connection in that direction. If the EA is not approved, then this would be a positive addition to the Tier 2 candidate offset sites as it potentially covers a large area of Mossel Bay Shale Renosterveld.

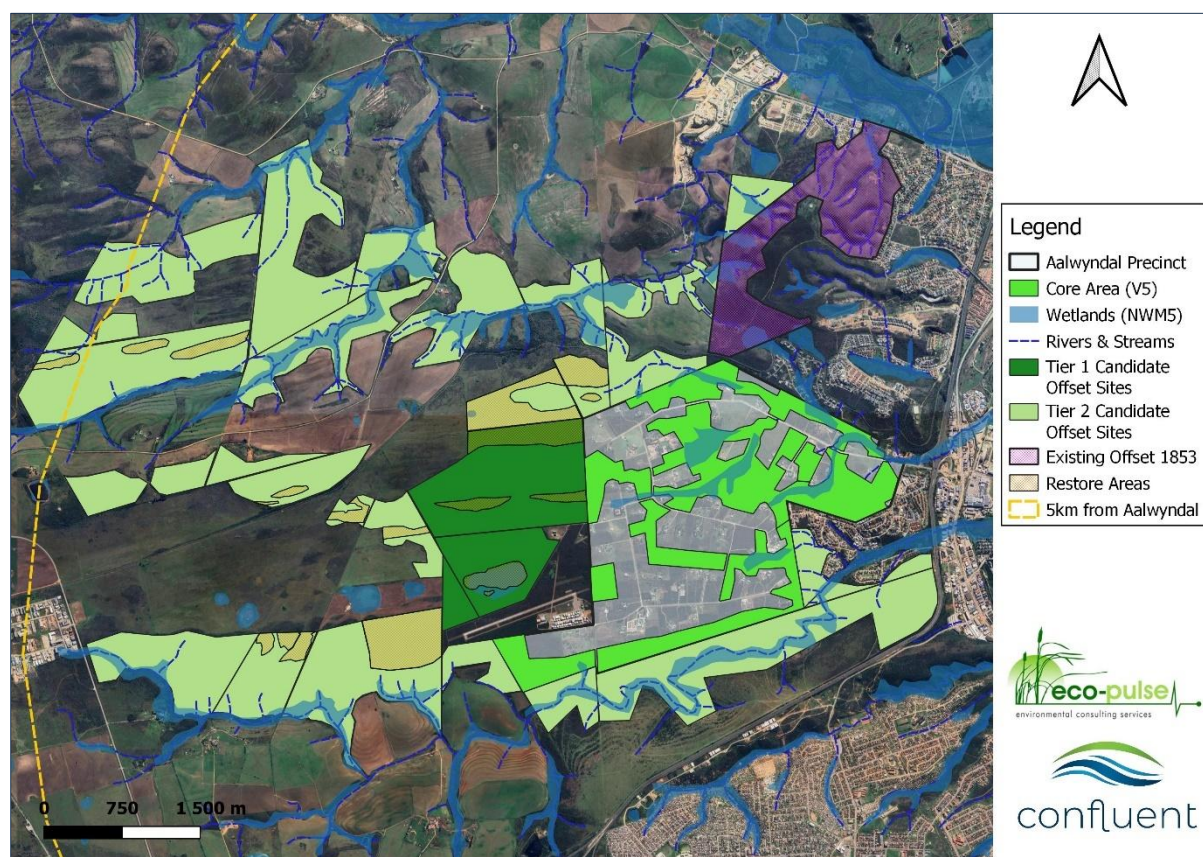


Figure 3. Tier 1 and Tier 2 potential offset sites in relation to the Aalwyndal precinct and Core Area V5. Areas that require restoration are indicated along with mapped watercourses (See Figure 13 for candidate sites that were ground-truthed).

Following prioritisation of the Core Area as an onsite offset, Tier 1 properties are considered of highest priority and landowners should be given preference for selection of their sites as biodiversity offset areas. This should be followed by landowners of Tier 2 properties, particularly those with properties immediately adjacent to Aalwyndal.

Tier 1 properties were considered a very high priority as biodiversity offset sites for Aalwyndal because of the following factors:

- ✓ **The total area covered by the two Tier 1 properties is 218 ha.** This area has a low edge:area ratio, mostly flat terrain, with good access. Which means that management aspects such as alien clearing (which is minimal on this site) and burning should be quite feasible.

- ✓ High similarity of vegetation between this area and Aalwyndal with confirmed presence of habitat and populations of plant SCCs found in Aalwyndal.
- ✓ Established core habitat for foraging and possibly breeding of Black Harrier SCC (*Circus maurus*, Endangered). Important area for foraging and breeding of Blue Crane SCC (*Anthropoides paradiseus*, Vulnerable).
- ✓ Unique and conservation-worthy features on Tier 1 properties include the presence of water in the wetlands on 1/221 and a small hill which is not common in the local landscape. Given that the other wetlands along this hydrological line of features have been seriously transformed, this provides an opportunity to rehabilitate what appears to be a very unique set of depression wetlands for the Mossel Bay area.
- ✓ Immediately adjacent and potentially connected to Aalwyndal through the Core Area.
- ✓ Abundant evidence of animal activity (small mammals like rodents) across the site which provide good foraging for Black Harrier.
- ✓ While many natural areas mapped as North Langeberg Sandstone Fynbos are not indicated as CBAs or ESAs in the Western Cape Biodiversity Spatial Plan (WCBSP) (2024) there is a significant portion of both Tier 1 properties which is a Critical Biodiversity Area (CBA).
- ✓ Matrix of mostly untransformed fynbos-renosterveld with a few old fields which are ideal feeding grounds for Black Harrier and other raptors.
- ✓ One of few level areas of topography with potential for conservation which is a factor considered important as much of the area to be developed in Aalwyndal is on level land. Many of the areas identified as potential offset sites are on higher gradient slopes leading to watercourses. Which is the reason they have not been previously transformed. This makes flatter land available for conservation much more difficult to find (Figure 6).

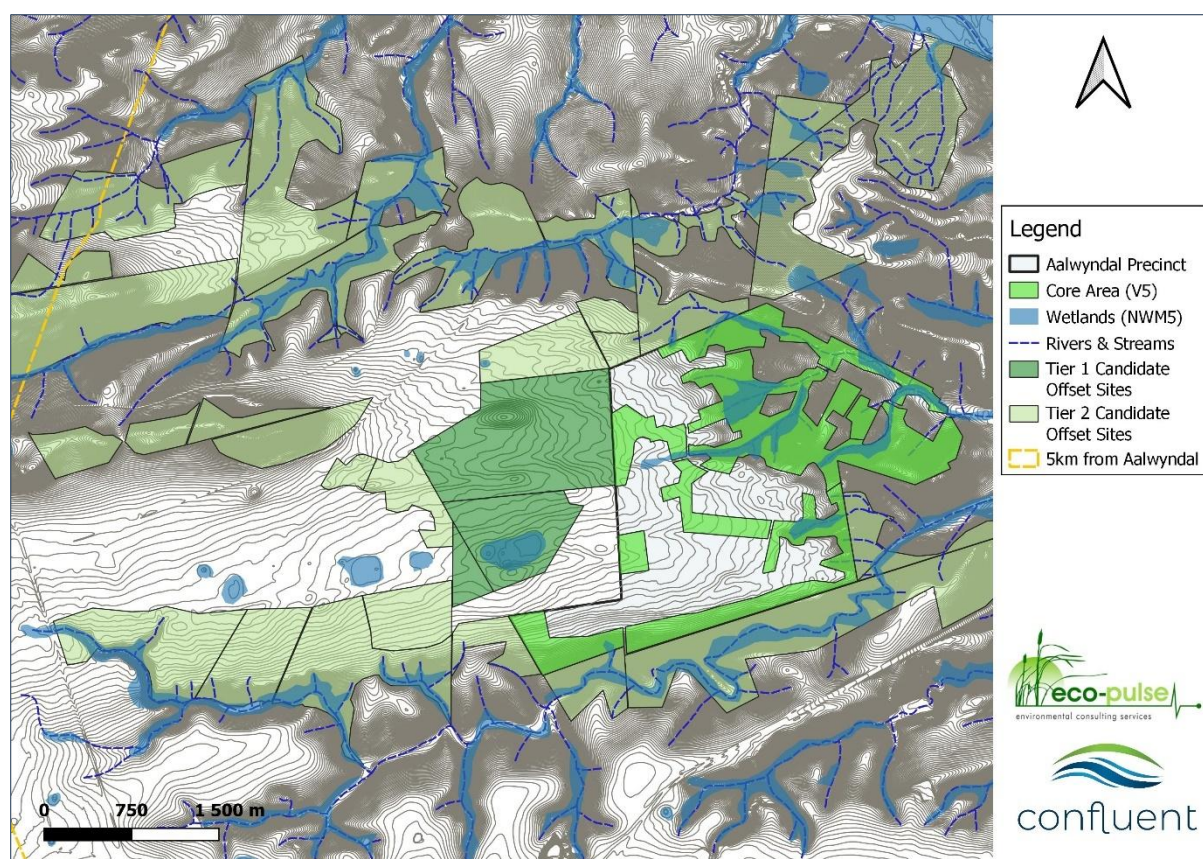


Figure 4. Tier 1 and 2 candidate offset sites depicted with 1 m contours.

Tier 2 properties follow closely in terms of priority to Tier 1 properties. Apart from the prioritisation scores determined for each property, several factors influenced their selection for Tier 2 which include:

- ✓ **The total area covered by Tier 2 properties is 1 263 ha.**
- ✓ The potential for corridors of conserved and mostly untransformed areas of high biodiversity value directly connected to the proposed Core Area (V5) in Aalwyndal.
- ✓ A unique 'koppie' which remains relatively untransformed in the landscape on Portion 7/225 (Figure 15).
- ✓ A continuous corridor of relatively flat to sloping untransformed fynbos-renosterveld (with a few sections of old fields) across RE/337, RE/3/225, RE/18/225 and RE/7/225, south-west of the precinct. This area is ideal habitat for the Black Harrier and other avifaunal SCCs.
- ✓ An important corridor linking to the precinct as well as Tier 1 properties through old fields (last cut around 2005) on RE/216 and 5/218. This area has been identified as an important feeding area for Black Harrier. This corridor forms the only viable connection to an extensive East-West corridor linked to watercourses.
- ✓ Almost every proposed area of land is associated with a watercourse meaning that both aquatic and terrestrial ecosystems would benefit from the proposed corridors (Figure 3). Particular emphasis in this regard on the properties to the south and south-east of the precinct which all surround the Gericke River.
- ✓ While the area proposed as a biodiversity offset on RE/220 is generally on very steep sloping land, the vegetation at this site appears to be in good condition, and along with

the lower gradient corridor identified in the Core Area (V5) represents a sizeable corridor of continuous habitat. It must be noted though, that future plans for expansion of Mossel Bay include the construction of a road across this site.

- ✓ The inclusion of RE/4/217 despite no obvious connection to the precinct is because a proposed conservation area has been set aside on Erf 1853 (Figure 3). The final extent of this is unknown, but once formalised it could create a continuous corridor of natural vegetation north of Aalwyndal that links to RE/4/217.

2.2.3 Tier 3 and Tier 4 Sites

The Tier 3 and Tier 4 candidate sites are presented in Figure 5. Detailed polygons for proposed offset areas were not delineated for these sites given their lower priority. The green areas indicated on each property represent the remaining extent of natural areas according to the 73-class land use map and if these sites were to be further investigated then more detailed delineations that can be practically managed must be defined.

Tier 3 properties are located > 5km from the precinct and included the correct vegetation type according to VegMap and/or Vlok. These sites would potentially qualify in terms of the like for like criteria following verification by ground-truthing. Generally, most natural fragments on these properties had mapped areas of either the target VegMap OR Vlok Map vegetation types. Points highlighted for the Tier 3 properties are indicated below:

- ✓ Sizeable and relatively continuous natural habitat remains further west of Aalwyndal across agricultural properties 13/215, 356, 372, 323, and 329. This corridor could easily connect to the Tier 2 corridor linked to Aalwyndal. It would therefore be a priority if Tier 3 properties were to be considered.
- ✓ The above-mentioned properties coincide with areas mapped as North Langeberg Sandstone Fynbos⁴ and Mossel Bay Shale Renosterveld and are therefore quite likely to contain similar vegetation features and characteristics to those observed in Aalwyndal. However, they are mapped as a different vegetation type according to the Vlok Map (Proteoid Silcrete Mosaic, Renoster, and Thicket).
- ✓ In the group of properties north of Aalwyndal there are properties strongly associated with estuarine habitat of the Klein Brak River (16/149, 9/149, RE/143, 31/143), although they do have small areas mapped as one of the required Vlok vegetation types or as Mossel Bay Shale Renosterveld. In terms of the VegMap however, this area is more dominated by Garden Route Granite Fynbos and Groot Brak Dune Strandveld which are both Critically Endangered and might constitute potential trading up sites (Tier 4) if their vegetation was not considered like for like through ground-truthing.
- ✓ Several of the north-eastern properties are mapped as being part of Botlierskop and include 1/142, 2/142, 2/31, 1/146. As current management practices on the reserve are not consistent with Cape Nature conservation goals these properties have a low likelihood of receiving support as offset sites unless the farm obtained recognised conservation status according to Cape Nature.

⁴ Areas mapped as North Langeberg Sandstone Fynbos are included as like-for-like because we made the assumption that they are incorrectly mapped, as they are in Aalwyndal. The assumption is that they have a high likelihood of representing like-for-like vegetation when compared to Aalwyndal. But as in all offset sites, ground-truthing must be undertaken to affirm whether this assumption is correct.

- ✓ The remaining two properties in the above grouping are 9/142 and RE/331. Both properties are located along the southern extent of the Klipheuwel Dam. If commitment to management aligned with conservation outcomes approved by Cape Nature could be assured, then these two properties would be located adjacent to Botlierskop and could potentially be incorporated. However, even if conserved in isolation they would benefit from proximity to areas managed in a more natural state than alternative land uses.

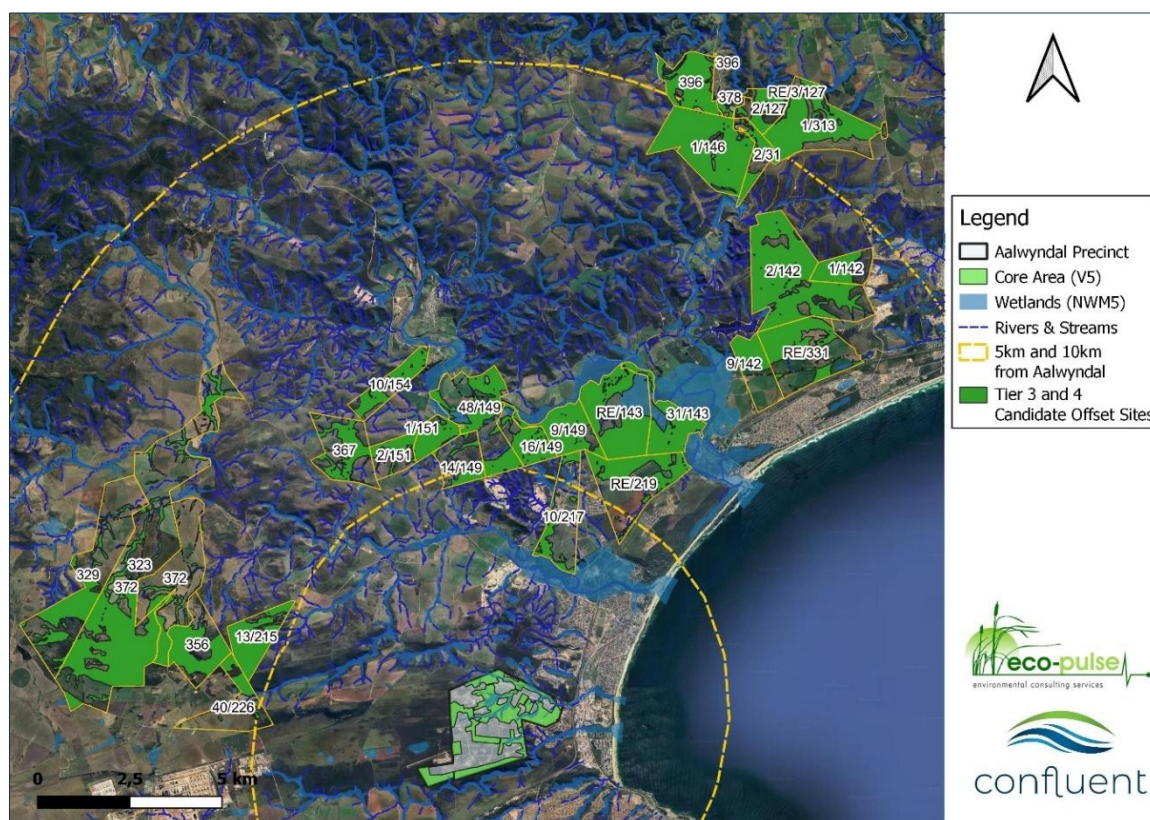


Figure 5. Tier 3 and Tier 4 candidate sites in relation to Aalwyndal.

Tier 4 properties are located > 10 km from the precinct in vegetation which is not mapped as either of the VegMap or Vlok Map types required. It is however, mapped as Garden Route Granite Fynbos which is Critically Endangered and would qualify the sites as Trading Up options. These properties are however not without challenges, which are summarised below:

- ✓ The central band of properties is very small, mostly transformed and fragmented, and several properties were excluded from further analysis. A few of the larger properties (8/33, RE/127, and 13/38) transition into a different vegetation type (Garden Route Shale Fynbos) which is classified as Endangered and would therefore not qualify as Trading Up.
- ✓ Two of the larger properties are already included in Botlierskop, being 396 and 1/313. As this would carry the same issues previously mentioned and described in Appendix 1, it is unlikely that these would be considered as potential offset sites.
- ✓ The three remaining properties in Tier 4 are not currently included in Botlierskop but are located adjacent. These are RE/3/127, 2/127 and 378. While 378 appears to be somewhat fragmented and farmed, the other two properties have fairly extensive coverage of what appears to be natural vegetation which could be confirmed as Garden Route Granite Fynbos through ground-truthing.

2.2.4 Further Desktop Screening of Candidate Biodiversity Offset Sites

Whilst the “Tiers” described above provide a starting point for prioritizing sites and engaging landowners, a range of additional considerations also need to be taken into account. For this reason, a scoring system aligned with the principles guiding offset selection (Section 2.1) was applied to the full suite of candidate offset sites.

Each of the candidate offset properties was screened at a desktop level through a scoring system aligned with the principles guiding offset selection (Section 2.1).

The initial screening of each property included the following spatial assessments using QGIS:

- **Total property area** (ha);
- **Remaining natural extent** (ha; determined using 2023 winter crop census (Elsenburg) and the 2022 73-class land cover map (DFFE)). See Figure 6.
- **Area within natural extent of each mapped vegetation type** (ha; determined using the 2017 SANBI VegMap and Vlok Vegetation Map of variants)
- **Site Excluded from further assessment Yes/No:** This was based on comments from key stakeholders (e.g. developments already approved), zoning that is incompatible (e.g. transport), levels of very high transformation or fragmentation, or no comparable vegetation types or types considered as trading up.

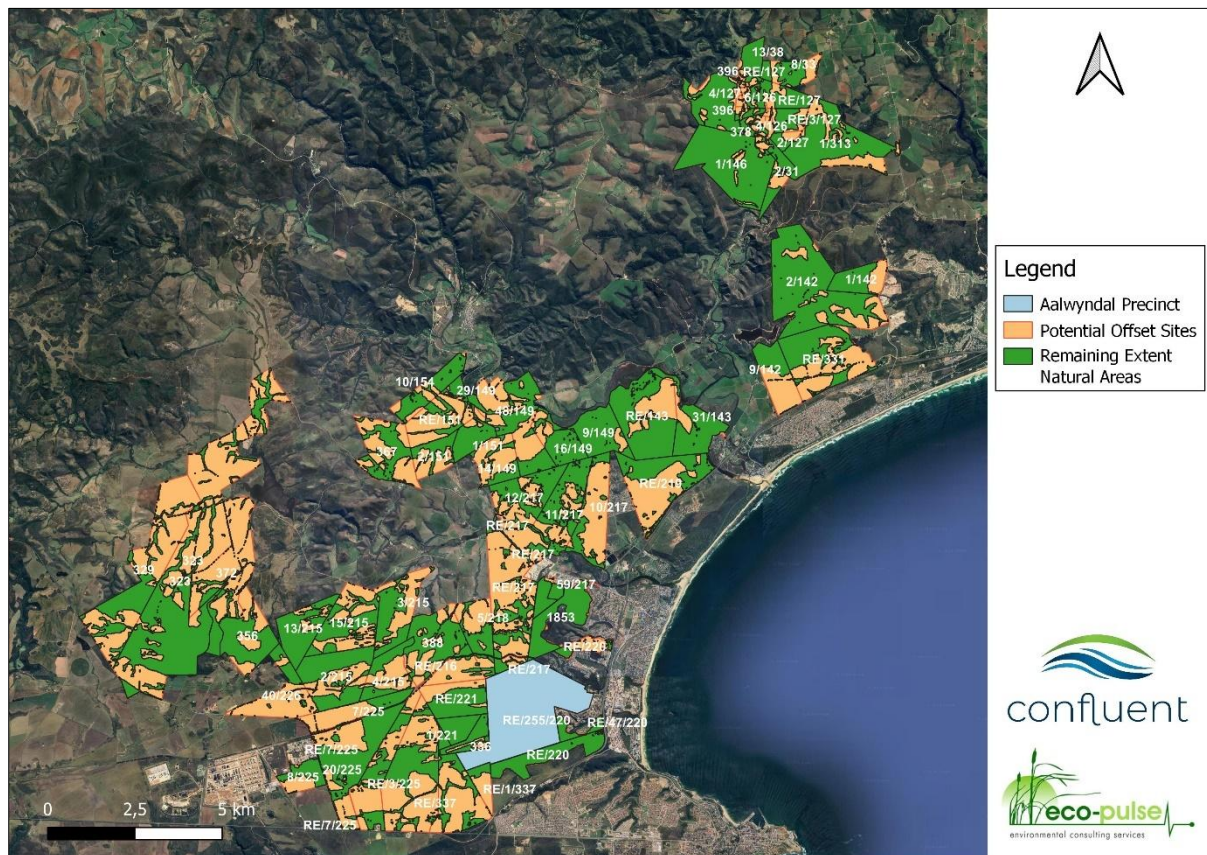


Figure 6. Map showing the Aalwyndal precinct in relation to potential offset properties showing the remaining extent of natural vegetation on each property (based on 73-class land use map).

Several spatial layers were used to further assess and prioritise candidate sites objectively. The spatial layers used to inform the prioritisation were:

- Cape Nature Protected Areas and Stewardship Sites (none were identified anywhere near the project area, so this was not further assessed).
- Mossel Bay Municipality Open Space Network and other relevant layers (Figure 7).
- DFFE 73-class land cover map (active, fallow, and weed fields were excluded; Figure 6)
- Western Cape Biodiversity Spatial Plan (2017) for the presence of Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs). Although this was not heavily weighted due to the under-representation of biodiversity priority areas resulting from the incorrect fynbos classification and associated threat status around Aalwyndal (Figure 10).
- Mapped vegetation types according to both the SANBI VegMap (2018) and Vlok Map of vegetation variants.

The remaining extent of natural vegetation is depicted in the edited version of the 73-class land cover map (Figure 6). This provides a reasonable desktop assessment of the extent of remaining natural vegetation on each property. It must be noted however, that where the extent of natural remaining vegetation per property has been quantified, this includes all remnant patches, even those that would be too small and isolated to consider including in a biodiversity offset site, which is therefore an overestimate of what could be practically conserved. Therefore, further delineation of priority sites (Tier 1 and 2, explained later) was undertaken to better define units that could be feasibly managed for conservation.

Mossel Bay Municipality spatial layers are presented in Figure 7. Two important areas to note from the municipality's perspective are the game farms Botlierskop and Gondwana. These properties are located around 10 km from Aalwyndal, and several candidate properties were considered in the assessment which are proximal to or located within these two areas. While our assessment considered a wide range of factors that could influence the priority level assigned to a property, the perspective from Cape Nature regarding these two game farms is that their management is not consistent with conservation management goals.

One of the aspects scored in the assessment of properties was the percentage alignment of potential offset areas (natural extent) with municipal open space, given that this represents areas more likely to be supported as biodiversity offset sites by the municipality, and unlikely to receive development approvals by landowners as a result. As a general observation, some of the areas covered by the municipal open space layer included degraded lands which would not be considered as biodiversity offset sites.

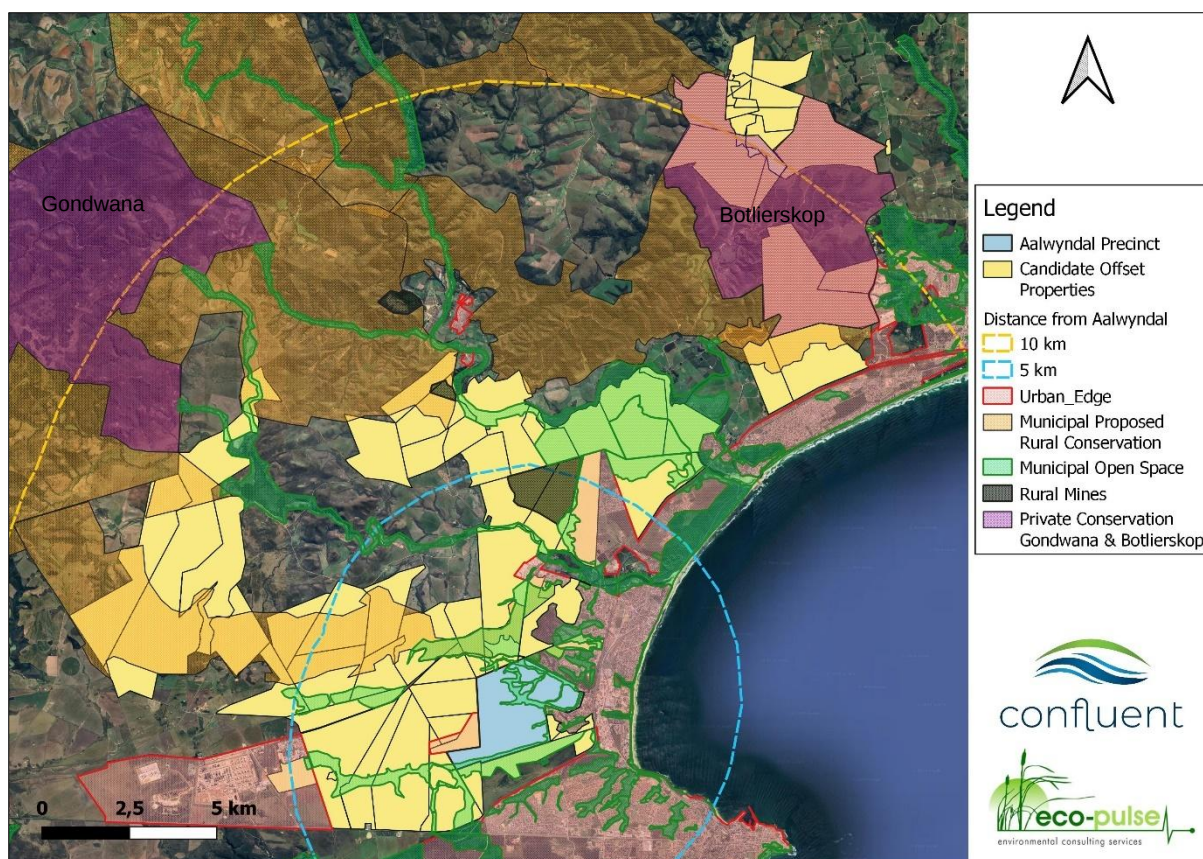


Figure 7. Mossel Bay Municipality spatial layers considered in the desktop assessment and prioritisation of candidate offset sites for Aalwyndal (Provided by Mossel Bay Municipality).

Vegetation mapped by SANBI (VegMap, 2018) in association with each of the properties investigated is presented along with its current ecosystem threat status in Figure 8. It has already been widely acknowledged in this report series that the fynbos-dominated areas of Aalwyndal are incorrectly mapped as North Langeberg Sandstone Fynbos with a threat status of Least Concern. A proposal to change this vegetation type within Aalwyndal and in areas immediately west of the precinct to Swellendam Silcrete Fynbos with a threat status of Endangered has been lodged with SANBI and was under review at the time of writing.

While it is widely acknowledged by botanical specialists that the fynbos vegetation in and around Aalwyndal is not consistent with North Langeberg Sandstone Fynbos, we could not fully exclude consideration of this vegetation type on the basis of its classification alone. In Report 1 the motivation to try and formally change the vegetation type from NLSF to SSF was provided with the primary aim to reclassify this vegetation type IN Aalwyndal (with associated levels of legal protection) utilising a fairly simple existing polygon in the VegMap layer that happened to extend to the west. The purpose of this reclassification was not to accurately map the full extent of SSF beyond the boundaries of the precinct. It is a safe assumption to make that the incorrect classification was applied to a similar vegetation type with the same features and characteristics as shown in a continuous unit mapped as NLSF in Figure 8. If the mapped extent of NLSF in the vicinity of Aalwyndal were to be excluded given that it has no offset requirement, then a large area of land immediately adjacent, and well connected to Aalwyndal with high conservation potential and like for like vegetation would be excluded from this assessment.

The main mapped vegetation types within the precinct are Mossel Bay Shale Renosterveld (MBSR) which is Critically Endangered, and the disputed fynbos vegetation type with is allocated a threat status of Endangered until it is more definitively assessed by SANBI. Small areas of the precinct have been identified as Hartenbos Dune Thicket (HDT) which is Endangered, although these areas have been indicated by botanical specialists as opposed to being effectively mapped in the VegMap.

Most of the candidate offset properties to the South, West, and North within a 5km radius of the precinct are mapped as having one of these three vegetation types. It is important to note that the same reasons NLSF was highlighted as incorrectly mapped for the Aalwyndal precinct are likely to apply in areas mapped as NLSF within a 10km radius of the precinct. This is because the entire area bears little resemblance to the northern slopes of the Langeberg Mountains. However, as with all mapped vegetation types, this aspect must be ground-truthed to confirm whether the assumption is valid and the vegetation can be considered like-for-like with Aalwyndal.

Beyond 5km and up to 10km from the precinct, the vegetation types begin changing and the fynbos vegetation type changes to Garden Route Granite Fynbos (GRGF) north of the precinct and Albertinia Sand Fynbos (ASF) South-West of the precinct. Properties more than 10km from the precinct contain Garden Route Shale Fynbos (GRSF) to the North, and elements of Swellendam Silcrete Fynbos (SSF) to the west, both of which are Endangered. Potential offset sites with GRGF or Groot Brak Dune Strandveld could potentially be considered as they would meet the criteria of 'trading up' due to the Critically Endangered threat status of both vegetation types.

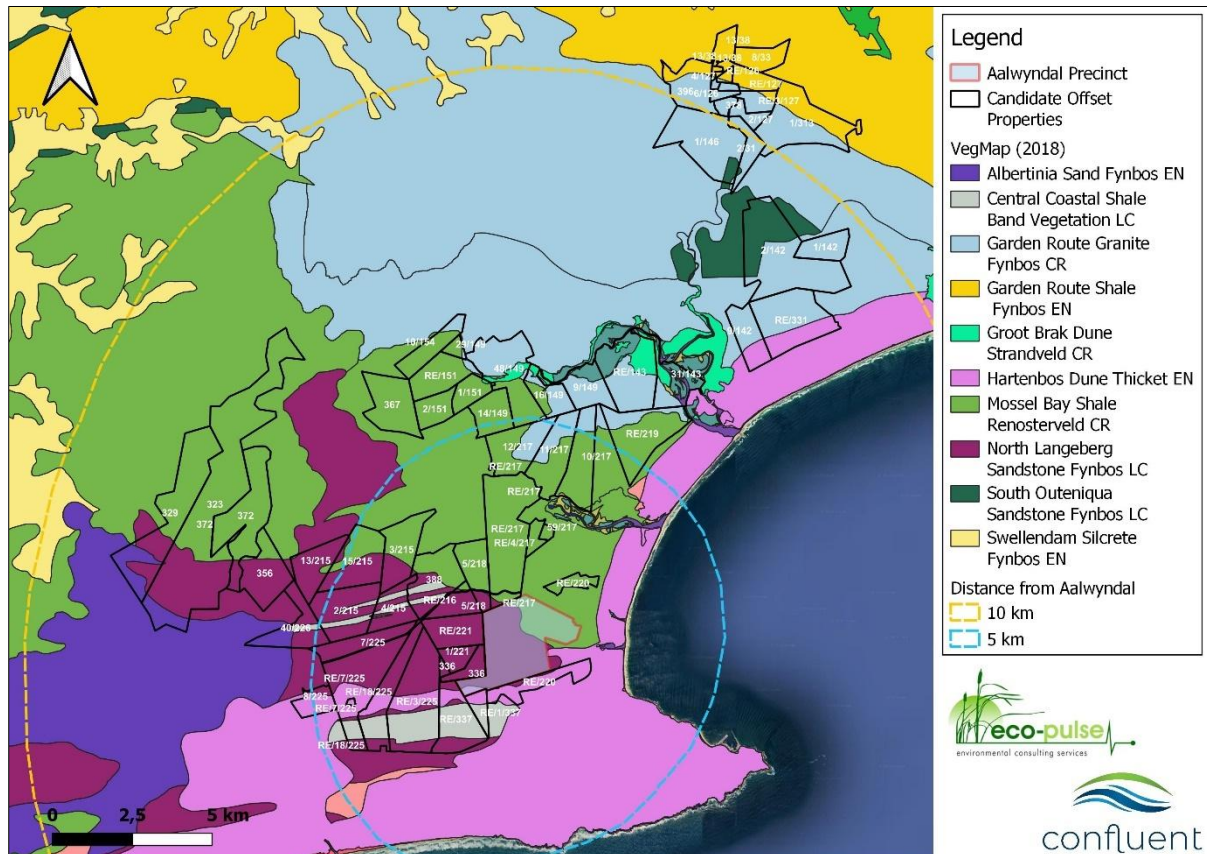


Figure 8. Vegetation types and their associated threat status mapped by SANBI (2018) relative to candidate offset properties. (CR=Critically Endangered; EN =Endangered; LC=Least Concern).

Given the acknowledged uncertainty of the vegetation classification and threat status for the fynbos-dominated vegetation type in Aalwyndal, it was determined that the Vlok Map would be included in the site assessment. A property could therefore score a point each for having the targeted vegetation type according to both the VegMap and the Vlok Map. The vegetation types mapped in and immediately adjacent to Aalwyndal are presented in Figure 9.

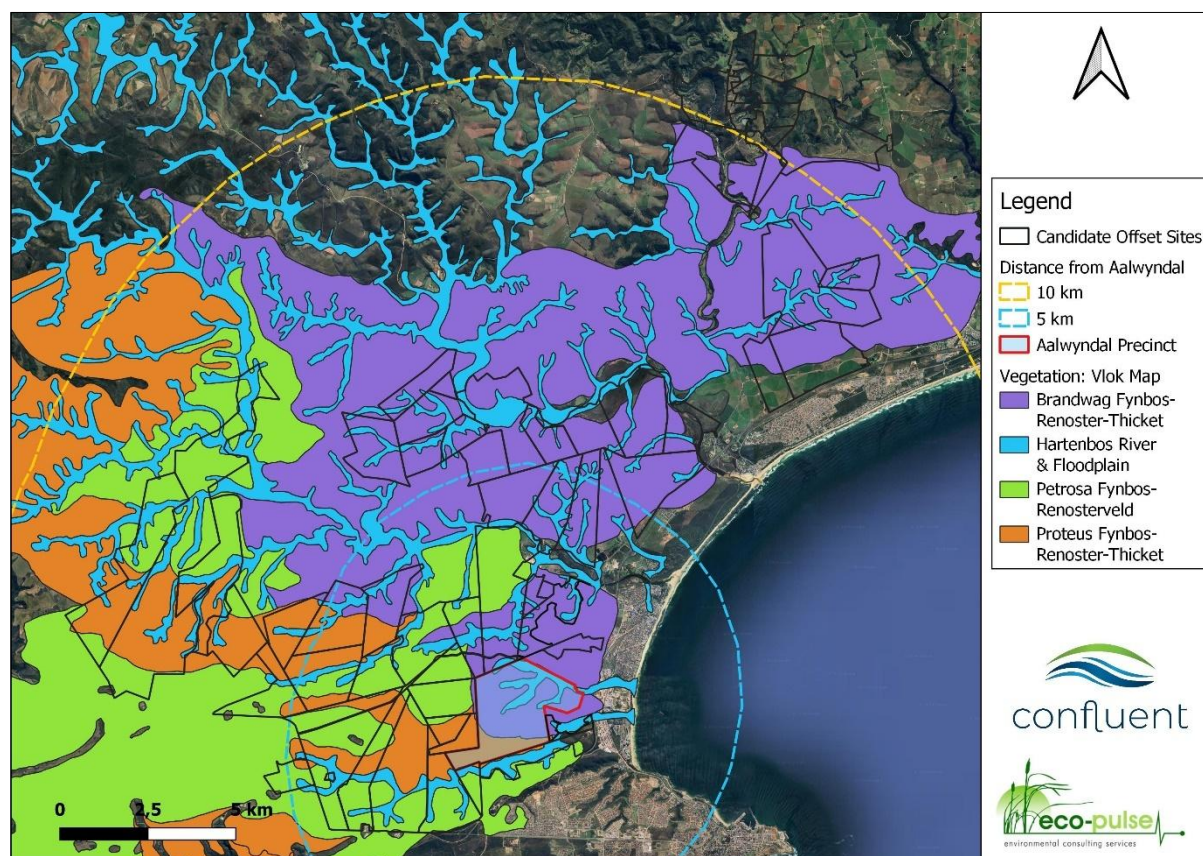


Figure 9. Vegetation types defined in the Vlok Map that are present in the Aalwyndal precinct and their distribution relative to candidate offset sites.

Biodiversity priority areas identified in the Western Cape Biodiversity Spatial Plan (updated, 2024) are one of the preferential features recommended in the selection of biodiversity offset sites. The mapped Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) are presented in relation to the candidate offset properties in Figure 10. While some features such as wetlands and drainage lines are routinely included in this layer, an important factor driving the selection of terrestrial areas is the ecosystem threat status associated with the mapped vegetation type (according to VegMap). A general pattern that can be observed in Figure 10 is an increase in CBAs north and east of the precinct. This is because the vegetation types are mapped as Mossel Bay Shale Renosterveld (CR) and Garden Route Granite Fynbos (CR) in this direction. While to the west is mapped as North Langeberg Sandstone Fynbos (LC) which is a poor reflection of the perceived ecosystem threat status of the fynbos-dominated areas around Aalwyndal. Therefore, the presence/absence of mapped biodiversity priority areas on potential offset sites was rated but would not result in a site being excluded from consideration if in an area with incorrectly mapped vegetation.

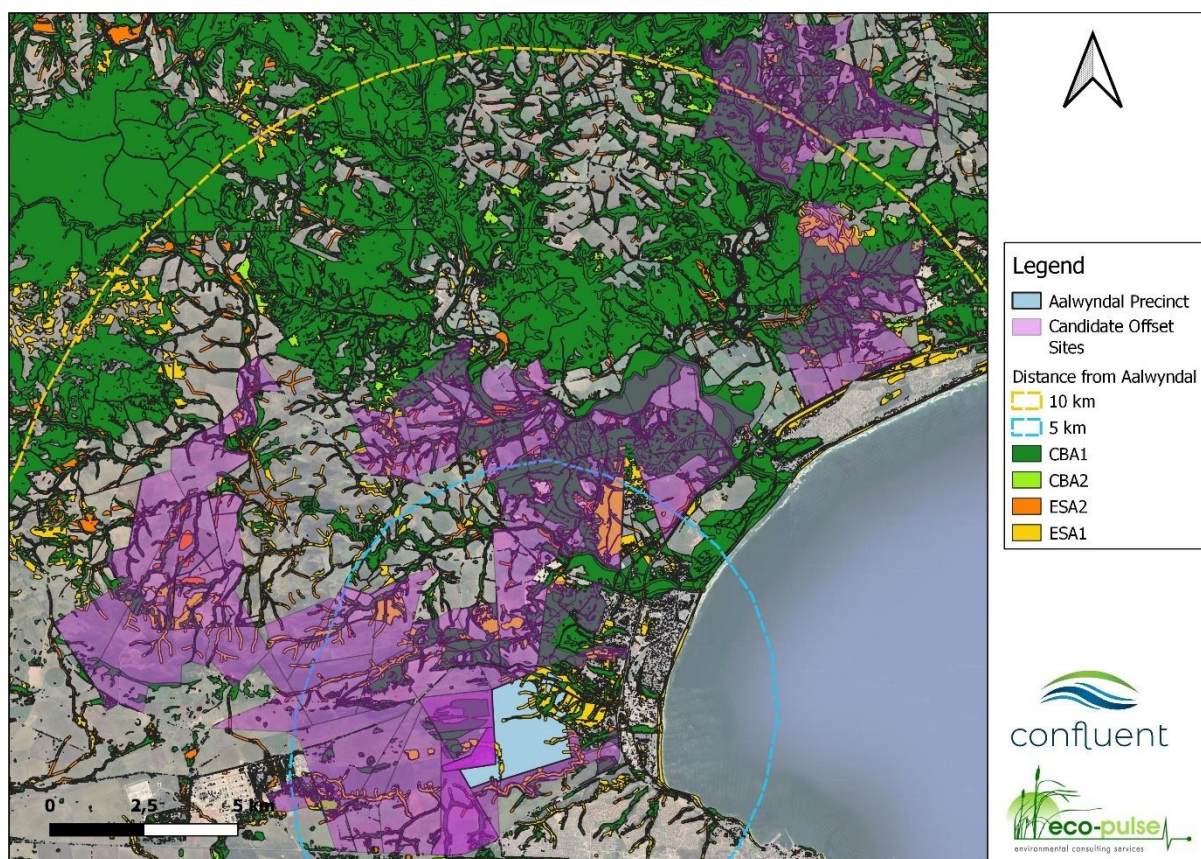


Figure 10. Candidate offset sites in relation to Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs).

A scoring system was developed for 9 criteria aligned with the site selection principles of the NBOG (DFFE, 2023). The system was divided into two categories covering Biodiversity and Practical Considerations. The individual criteria that were rated within each category are provided in Table 3 and the resulting scores for each property were mapped and presented in Figure 11 and Appendix 1.

A noteworthy point is that while municipal ownership of land may appear at first to be a positive factor, it was determined through various stakeholder engagements that municipal ownership presents a unique set of challenges which make this option less appealing than private ownership. This is mainly related to procurement aspects of the Municipal Financial Management Act that create lengthy and onerous requirements for transactions relating to municipal land.

Table 3. Overview of site selection criteria used to inform the prioritisation of candidate offset sites for further investigation.

Criterion		Relevance	Site attributes	Acceptability Guidelines	Score
BIODIVERSITY CONSIDERATIONS	Like for Like	Candidate offset sites should ideally be of the same vegetation types as recorded in the SANBI National Vegetation map.	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Silcrete Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Ideal	1
			Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Acceptable	0,5
			Property contains habitat of the same or a lower threat status (trading down)	Generally unacceptable	0
		Candidate offset sites should ideally be of the same vegetation types as recorded in the Vlok Vegetation map.	Site contains the following vegetation types mapped by Vlok (Brandwag Fynbos-Renoster-Thicket or Proteus Fynbos -Rensoster-Thicket or Hartenbos River & Floodplain)	Ideal	1
			Site does not contain like-for-like habitat according to Vlok	Generally unacceptable	0
	Offset site location relative to impacted site	Candidate offset sites should ideally be located as close to the impacted site as possible. This is particularly relevant in this case where there are concerns with the accuracy of vegetation mapping. Sites closer to the impact site are also likely to provide protection for animal species of conservation concern that occur within targeted impact sites.	Target property is located within 5km of the development site.	Ideal	2
			Target property is located within 10km of the development site.	Acceptable	1
			Target property is located >10km from the development site.	Generally not preferred, but may be suitable if there are clear benefits in prioritizing this site	0,5
	Regional Conservation Importance	Candidate offset sites should be aligned with biodiversity priority areas identified in regional or national conservation plans.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	Ideal	1
			Habitat remnants have been identified as important for meeting conservation objectives (mix of CBAs & ESAs).	Acceptable	0,5
			Habitat remnants have not been flagged as a priority for conservation (no CBAs present).	Generally unacceptable	0
	Viability of maintaining conservation values	The size of habitat remnants and ecological connectivity are critical to the long-term viability of ecosystems. In the case of fynbos and renosterveld, the potential to implement effective	The candidate site provides an opportunity to consolidate / expand existing protected areas. No constraints to fire management are expected.	Ideal	2
			The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Acceptable	1

Criterion		Relevance	Site attributes	Acceptability Guidelines	Score
		ecological burns, is critical, particularly within the urban edge where burning restrictions may be imposed for social or safety reasons.	The candidate site is poorly connected with other intact ecosystems / major constraints to managing fire is expected.	Not ideal. Only likely to be acceptable if a clear conservation case can be made.	0,5
PRACTICAL CONSIDERATIONS	Ownership	Sites that are under private ownership are preferred since they are expected to be easier to be secured with a view to facilitating development in the Aalwyndaal precinct.	Private (Individual ownership)	Ideal	1
			Private (More complex ownership structure, e.g. Trust)	Acceptable	0,5
			Existing Municipal Ownership	Potentially Acceptable	0,25
			Other government land or land under communal ownership	Generally unacceptable	0
	Zoning / intended landuse	Properties already zoned for development, or identified for development within strategic plans are regarded as less suitable as offset sites than those located either in the agricultural landscape or zoned or flagged as conservation.	Target areas zoned for conservation or identified for conservation in an existing strategic plan	Ideal	1
			Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	Acceptable	0,5
			Target areas zoned as an incompatible landuse (e.g. industry, residential)	Generally unacceptable	0
	Identified in existing municipal open space network	Areas already included as part of the municipalities open space network have not been identified as priorities for future development. As such, they represent potentially suitable low-conflict areas for conservation use.	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>60%)	Ideal	1
			Moderate proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>30%)	Acceptable	0,5
			Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%)	Potentially Acceptable	0,25
	Practical Management Considerations	Sites that include large patches of land with a low edge-area ratio are generally easier to manage than landholdings with either narrow remnant patches or numerous small and isolated patches.	Property contains large blocks of habitat with low edge: area ratio	Ideal	1
			Property includes a mix of areas including some portions with high edge: area ratios	Acceptable	0,5
			Property is characterised by remnants with high edge: area ratios	Not ideal. Only likely to be acceptable if a clear conservation case can be made.	0,25
	Compatibility of landuses with conservation objectives	Properties where long-term landuse activities and management aspirations is not expected to be compatible with conservation objectives should not be considered	Properties with compatible landuses (linked to maintenance of indigenous flora)	Ideal	1
			Properties with incompatible landuses (linked to maintenance of indigenous flora)	Potentially Acceptable	0,25

There was a generally decreasing trend in scores associated with increased distance from Aalwyndal. This is partially due to the scoring system which rated properties within 5km of the precinct higher than those up to 10km or > 10km away. But also relates to the increasing difference in mapped vegetation types as distance from the precinct increases. Properties within 5km of the precinct generally scored between 70 and 100%, while scores decreased to between 40 and 70% in areas beyond. The points already mentioned relate to biodiversity considerations influencing the like for like criteria. But practical considerations also played an important role in scoring properties. While a property may appear to have the right vegetation types in close proximity to the precinct, it may have a combination of complex ownership and / or natural areas with a high edge to area ration, making management more challenging (and scoring lower).

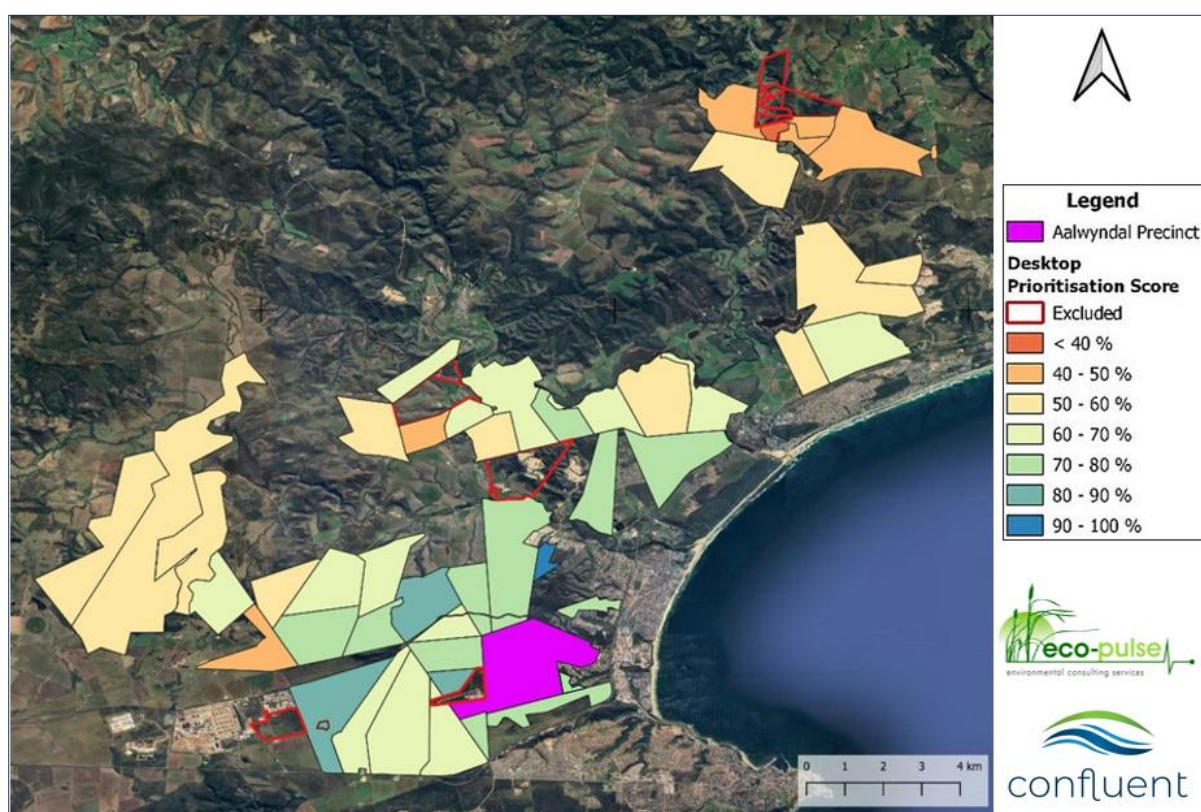


Figure 11. Candidate offset properties mapped according to their scores determined following criteria for both biodiversity and practical considerations as indicated in Table 3.

2.2.5 Rehabilitation of Disturbance in Offset Areas

Some of the delineated polygons included patches of disturbance that were not considered significant enough to exclude the site as an offset. Disturbed patches considered suitable for rehabilitation are indicated in a separate layer and were only delineated for Tier 1 and Tier 2 properties. In most cases these relate to old borrow pits, diggings, quarries, and old fields. Generally, these disturbances occurred at least 10 – 15 years ago if not more, were small and/or isolated in nature, and appear to be revegetating. These areas will, however, require further ground-truthing to establish the extent of present disturbance, and inputs required for passive or more active rehabilitation. An additional disturbance that could not always be indicated at a desktop level is that of alien vegetation which must be assessed during ground-

truthing. The most common invader in the area is Rooikrans (*Acacia cyclops*) which is often indistinguishable from mature stands of *Proteas* on satellite imagery.

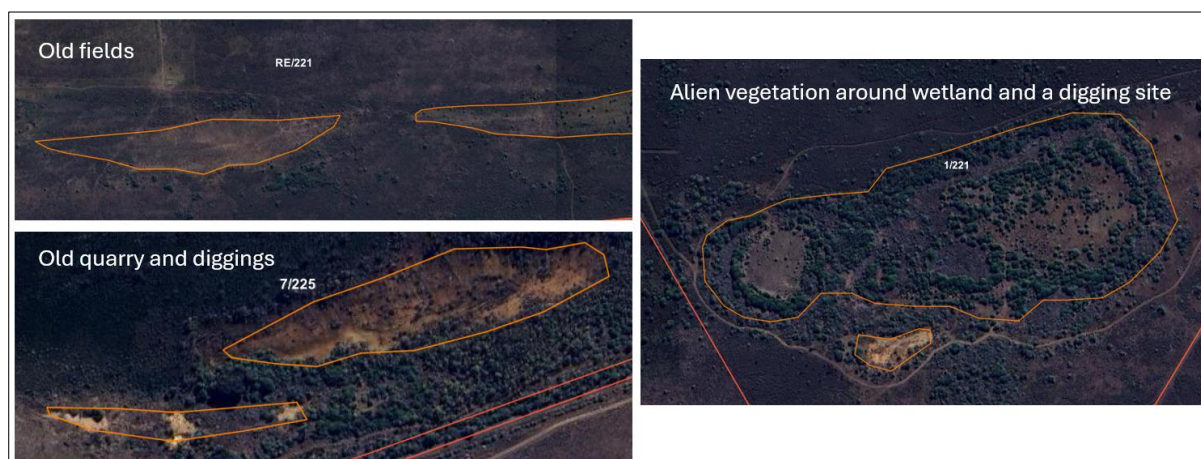


Figure 12. Examples of disturbance within Tier 1 and 2 candidate offset areas where rehabilitation may be required.

3. EVALUATING THE FEASIBILITY OF MEETING OFFSET TARGETS

For offset planning purposes, it is critical to evaluate the feasibility of meeting offset obligations. Without doing so, it may prove unfeasible to meet offset obligations which would then compromise the implementation of the precinct plan. Whilst further work is required, initial findings are presented in this section of the report

3.1.1 Expected Contributions of Candidate Offset Sites

An indication of potential offset contributions was obtained by calculating the areas of untransformed habitat that would ideally be conserved across all mapped candidate offset sites. This was based on desktop mapping, as noted previously, with more accurate mapping undertaken for Tier 1 and Tier 2 sites. The results of this assessment are presented in Table 4 and suggest that more than 2 400 ha of potentially like-for-like habitat is available to meet offset obligations in candidate biodiversity offset sites whilst these sites could also contribute towards the conservation of more than 3000 ha of other important habitats.

Table 4. Initial indication of offset contributions linked to identified candidate offset sites

	Tier				
Vegetation Type	1	2	3	4	Grand Total
Like-for-Like					
Mossel Bay Shale (Ha)	0	269	936	0	1205
Swellendam Silcrete Fynbos (Ha)	218	708	0	0	926
Hartenbos Dune Thicket (Ha)	0	285	31	0	316
Sub-Total					2 447
Out-of-kind (trading up)					
Other Vegetation Types (Ha)	0	34	2849	530	3413
Grand Total	201	1194,3	3816	530	5 860

3.1.2 Evaluation Against Offset Targets

Preliminary biodiversity offset targets are outlined in the 2nd Report and suggest that residual offset obligations in the region of 656 ha could arise if revised precinct plan is accepted. Furthermore, if recommendations to utilise the Core Area in Aalwyndal as an onsite offset this would reduce the offsite offset obligation to approximately 360 ha. Under such a scenario, it will be feasible to meet offsite offset obligations with Tier 1 and Tier 2 properties which currently provide a total of 1 480 ha of suitable vegetation types.

4. GROUND-TRUTHING OF CANDIDATE OFFSET SITES

Further to the Terms of Reference provided at the beginning of this report (Section 1.1) the project required site ground-truthing and engagement with at least five landowners of candidate offset sites. Since the decision was taken to accept and prioritise the Core Area as an onsite offset, direct engagement with offsite offset landowners has been downscaled. This is to ensure that expectations and timeframes are effectively managed given that offsite offset areas may only be required for Aalwyndal in the longer term.

A written request to access and assess biodiversity on each property was jointly compiled with the Mossel Bay Municipality and sent to each of the Tier 1 and Tier 2 landowners in August 2024. A copy of this correspondence is provided in Appendix 2. A limited number of landowners responded to this request with formal written approval. Several Tier 1 and Tier 2 landowners were subsequently contacted by phone or email to follow up on their response to the request which provided the opportunity to further explain aspects of the project which may have been unclear. This communication generally yielded a positive response with permission to access properties for ground-truthing from enough landowners to meet the project commitment.

A map showing the properties that have been inspected to a degree considered sufficient to confirm their suitability as candidate biodiversity offset sites is provided in Figure 13. Included is a GPS track indicating the path covered by specialists during each site assessment.

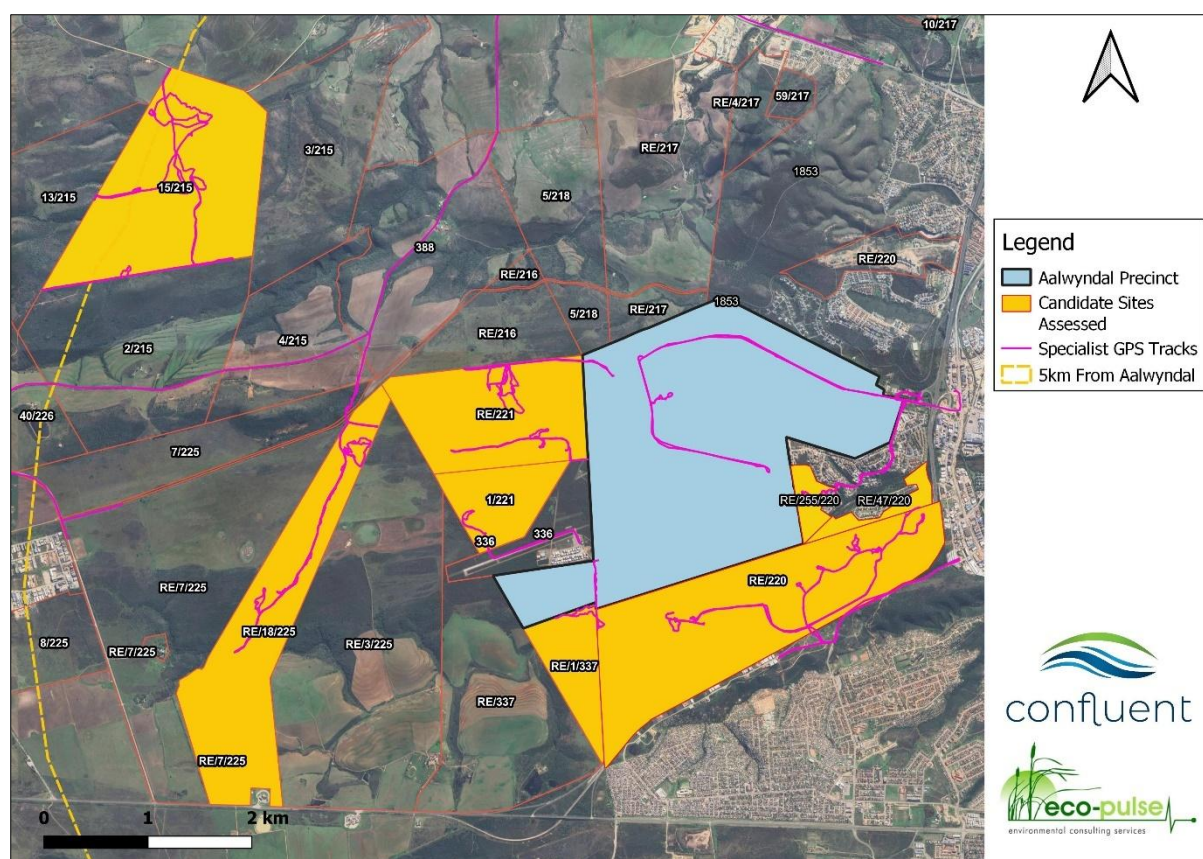


Figure 13. Candidate biodiversity offset sites that have been assessed by biodiversity specialists.

4.1 Site Assessment Methods

Prior to each site visit, a desktop assessment was undertaken by each of the specialists visiting the site. This followed the same approach as that described in Section 4.2 of the revised precinct plan report (Report 1) and utilised the Department of Forestry, Fisheries and Environment (DFFE) screening tool along with desktop mapping and biodiversity inventory resources to guide the assessment.

In all cases the same approach was taken when each of the properties were assessed. Sites were assessed through a combination of viewing from the vehicle and on foot. Where possible, a drone was used to capture representative images of the property. This was sometimes impossible due to a no-fly zone around the airport which disabled the drone in places. Additional discipline-specific methods are explained in the following sections.

4.1.1 Aquatic Assessment Methods

For several reasons, the presence of a watercourse(s) on candidate offset sites was considered an important criterion during assessment. While limited direct impacts are expected to watercourses in Aalwyndal, the future development scenario for the precinct and surrounding areas will ultimately result in extensive hardening and transformation of catchment areas, and increasingly restricted movement of wildlife, with access to water resources considered critical for their survival.

Any mapped watercourses or landscape lows indicated by contours were ground-truthed for verification and classification during the site assessment. Watercourses (wetlands, rivers,

streams) add to habitat heterogeneity and the resulting biodiversity that can be supported by a site, and their presence therefore increases the potential value of a biodiversity offset site.

4.1.2 Terrestrial and Botanical Assessment Methods

Seven candidate offset sites were ground-truthed. Of the seven properties, only two were assessed on two separate field days, while the remaining assessments were all single surveys. The dates for each site assessment are presented below:

- 22 May 2024 – RE/221
- 01 October 2024 – 15/215 & RE/220
- 16 October 2024 – RE/01/337 & RE/220
- 05 Nov. 2024 – RE/255/220 & RE/18/225

RE/47/220 was assessed from adjacent properties and was not directly accessed.

Desktop Assessment Methods

The desktop assessment was performed using Cape Farm Mapper and QGIS version 3.28.3 “Firenze”. Plant species data was sourced from the following sources:

- The DFFE screening tool listed SCC.
- Information on plant occurrence prior to the site visit was sourced from SANBI's Botanical Research and Herbarium Management System (BRAHMS) for the Plants of Southern Africa (POSA) database.
- iNaturalist observations of the property and surrounding areas.
- Past specialist reports and insight into the species likely present in the area.
- Information gathered as part of the 2024 offset project for the wider Aalwyndal Precinct.

Ecosystem/ vegetation type data was sourced from:

- The 2018 updated South African National Vegetation Map from SANBI's Biodiversity GIS (BGIS) database, and the National Biodiversity Assessment report of 2018 (Skowno et al., 2018).
- Shapefiles for the Western Cape Biodiversity Spatial Plan (WC-BSP) i.e., information on PAs, CBAs, ESAs, and ONAs were downloaded from BGIS database (CapeNature, 2017; Pool-Sandvliet et al., 2017).
- Cape Farm Mapper for additional spatial information required for the site.
- Chief Directorate: National Geo-spatial Information (CD: NGI) Geospatial Portal and Google Earth for the acquisition of historical aerial imagery of the site.
- The conservation status of ecosystems was found in the Revised National List of Ecosystems that are Threatened and in need of protection, published under the National Environmental Management: Biodiversity Act (Act No. 10, 2004, as revised in Nov. 2022), and also using the Vegetation of South Africa, Lesotho, and Swaziland (Mucina & Rutherford, 2006).

Field-based Assessment Methods

The site assessments were mostly conducted between October and November which is considered late winter to early spring.

- In fynbos, late winter and spring surveys are considered the most important periods for detecting geophytes and most plant species that flower annually that are not easily identified outside of their flowering season. It is true that some species may flower at different times of the year, however the assessments here was relevant for most flowering plant species, making it the ideal season for surveys.
- In renosterveld, late winter / early spring is significant for identifying annuals and geophytes, which are most visible after winter rains.
- In thicket, seasonal variation is less pronounced, but spring allows for better observation of flowering shrubs etc.

At each of the offsite offset sites, the top ten dominant plant species were noted to provide a general sense of the vegetation composition; however, their percentage cover was not recorded, unlike the more detailed assessment conducted at Aalwyndal. This approach, while less quantitative, still facilitates comparison of like-for-like habitats by providing insight into species presence / absence and allows for the broad classification of the vegetation into fynbos, renosterveld, or thicket. Observations from these surveys contribute to evaluating habitat similarity, species overlap, and vegetation type alignment between Aalwyndal and the offset sites.

In addition to recording dominant species, the method for identifying species was similar to a BioBlitz, also described as a “timed meander”, where the specialist records plant species composition of the site, and actively searches for rarer and threatened species. Some Red Listed Plant species are found more easily during a site survey than other species. This survey method is an attempt to account for the short and single survey period, where detection probability of some rare and threatened species (e.g., geophytes, small succulents, small perennials etc.) are low (Garrard et al., 2008; Wintle et al., 2012). Observations of individual species and general environmental characteristics were photographed (Figure 14).

Once the fieldwork for each site was completed, a table of all plant species identified on Aalwyndal compared to each of the properties assessed was compiled with a comparison of observations. Observations were recorded during fieldwork as well as using iNaturalist, as many observers have recorded plant species in the area. This comparison provided an assessment of species occurrence overlap between Aalwyndal and each of the properties assessed. While not a reflection of relative species dominance, this provided an additional more measurable assessment of species composition between properties, which was used to motivate the like for like criteria for offset sites. The full table of species is provided in Appendix 3.



Figure 14. Typical site assessment involving active searching, drone photos, vegetation, and faunal assessments by the field team.

4.1.3 Faunal Assessment Methods

For the expected species that could occur on candidate offset sites, a comparison was made between the DFFE screening tool results for the Aalwyndal precinct and the sites assessed at a desktop level. This list was augmented with observations of Species of Conservation Concern (SCC) on the following publicly available resources:

1. iNaturalist (all taxa) within 2 km x 2 km of the project area
2. Virtual Museum for herpetofauna, mammals, and invertebrate taxa within the Quarter Degree Square (QDS): DungBeetleMAP, FrogMAP, LacewingMAP, LepiMAP, MammalMAP, OdonataMAP, ReptileMAP, ScorpionMAP, SpiderMAP.
3. South African Bird Atlas Project (SABAP2).

Some SCC reported on the platforms were highly unlikely to occur at any of the sites given either clearly unsuitable habitat or being deemed a vagrant/transient animal. For example, species that are fully adapted to marine environments would not occur at the site. For the purposes of this report these animals were excluded from further assessment. The list of SCC possibly occurring in Aalwyndal and the candidate offset sits are listed in Table 6. This information shows a high overlap between predicted SCCs in Aalwyndal and on the offset sites assessed, which indicates that from a desktop perspective, at least, similar species are expected to occur in these areas.

Fieldwork focussed on ground-truthing suitable habitat for SCCs that have been confirmed as present in Aalwyndal. While Aalwyndal likely supported many more SCCs historically, the present partially developed and fragmented nature of the precinct means that many SCCs predicted to occur there do not persist at present.

Following the Species Environmental Assessment Guidelines (SANBI, 2020) taxa-specific sampling techniques were conducted in habitats where SCC were likely to occur. This was interspersed with a meander across the proposed offset area to collect additional opportunistic data for all fauna and inspect all habitat types (Table 5). The same methods were used in both Aalwyndal and at the candidate offset sites in suitable, comparable habitats.

Table 5. Sampling techniques conducted for potential SCC occurring in Aalwyndal and Candidate Offset sites.

Taxa	Field methods	Public platform where observations were reported
Avifauna	• Meander* across site for direct observations. • Point counts (5-minute bird counts).	iNaturalist (photos)
Mammals	• Meander* across site for direct observations, tracks, scats, and signs. • Camera trapping	iNaturalist (photos)
Amphibia	• Meander* across site for direct observations. • Active searching in and around watercourses.	iNaturalist (photos)
Invertebrates	• Meander* across site for direct observations. • Active searching. • Sweep netting.	iNaturalist (photos)

* Meandering involved slow walking across the site through various habitat types and key landscape features. Active observations took place for all fauna throughout this walk which was then supplemented by taxa specific sampling methods in habitats deemed most suitable for SCC.

The likelihood of occurrence for all predicted animal SCC is provided in Appendix 4 and is based on observations during fieldwork as well habitat availability, condition and current land use practices.

Table 6. Checklist of expected Species of Conservation Concern flagged for Aalwyndal and the Candidate Offset Sites with species flagged by the DFFE Screening Tool indicated with an asterisk.

Species	Common name	Regional Assessment status	Aalwyndal	15/215	RE/220	RE/1/337	225/220	RE/47/220	RE/18/225	1/221	RE/211
AMPHIBIANS											
<i>Afraxalus knysnae</i>	Knysna Leaf-folding Frog	Endangered	X								
AVIFAUNA											
<i>Afrotis afra</i>	Southern Black Korhaan*	Vulnerable	X	X	X				X	X	
<i>Aquila verreauxii</i>	Verreaux's Eagle	Vulnerable	X								
<i>Bradypterus sylvaticus</i>	Knysna Warbler*	Vulnerable	X	X	X	X	X	X	X	X	
<i>Buteo trizonatus</i>	Forest Buzzard	Least Concern, Near Threatened (global)	X								
<i>Calidris ferruginea</i>	Curlew Sandpiper	Least Concern, Near Threatened (global)	X								
<i>Campethera notata</i>	Knysna Woodpecker	Near Threatened	X								
<i>Certhilauda brevirostris</i>	Agulhas Long-billed Lark	Near Threatened	X								
<i>Ciconia nigra</i>	Black Stork	Vulnerable	X								
<i>Circus maurus</i>	Black Harrier*	Endangered	X	X	X	X	X	X	X	X	
<i>Circus ranivorus</i>	African Marsh Harrier*	Endangered	X	X		X	X	X	X	X	
<i>Crithagra leucoptera</i>	Protea Canary	Near Threatened	X								
<i>Falco biarmicus</i>	Lanner Falcon	Vulnerable	X								
<i>Grus paradisea</i>	Blue Crane	Near Threatened	X								
<i>Neotis denhami</i>	Denham's Bustard*	Vulnerable	X	X	X	X	X		X	X	
<i>Oxyura maccoa</i>	Maccoa Duck	Near Threatened	X								
<i>Phoenicopterus roseus</i>	Greater Flamingo	Near Threatened	X								
<i>Polemaetus bellicosus</i>	Martial Eagle*	Endangered	X	X	X	X	X	X	X	X	
<i>Sagittarius serpentarius</i>	Secretarybird	Vulnerable	X								
<i>Stephanoaetus coronatus</i>	Crowned Eagle	Vulnerable									
<i>Turnix hottentottus</i>	Fynbos Buttonquail	Endangered	X								
TERRESTRIAL INVERTEBRATES											
<i>Aloeides pallida littoralis</i>	Knysna Pale Copper	Near Threatened	X								
<i>Aloeides thyra orientis</i>	Rooi-Kopervlerkie, Brenton*	Endangered	X	X			X	X	X		
<i>Aloeides trimeni southeyae</i>	Trimen's Copper	Endangered	X		X						
<i>Aneuryphymus montanus</i>	Yellow-winged Agile Grasshopper*	Vulnerable	X	X	X	X	X	X	X	X	X

Species	Common name	Regional Assessment status	Aalwyndal	15/215	RE/220	RE/1/337	225/220	RE/47/220	RE/18/225	1/221	RE/211
<i>Ceratogomphus triceraticus</i>	Cape Thorntail	Near Threatened	X								
<i>Lepidochrysops littoralis</i>	Coastal Nimble Blue*	Endangered	X	X	X	X	X	X	X	X	X
<i>Spesbona angusta</i>	Ceres Featherlegs	Endangered	X								
MAMMALS											
<i>Amblysomus corriae</i>	Fynbos Golden Mole	Near Threatened	X								
<i>Aonyx capensis</i>	African Clawless Otter	Near Threatened	X								
<i>Chlorotalpa duthieae</i>	Duthie's Golden Mole	Vulnerable	X								
<i>Damaliscus pygargus pygargus</i>	Bontebok	Vulnerable	X								
<i>Panthera pardus</i>	Leopard	Vulnerable	X								
<i>Poecilogale albinucha</i>	African Striped Weasel	Near Threatened	X								
	Sensitive species 8*	Vulnerable	X	X	X	X	X	X	X	X	X
	Sensitive species 5*	Vulnerable	X	X	X	X	X	X	X	X	

4.1.4 Assumptions and Limitations

This assessment is subject to a few assumptions, uncertainties, and limitations, as listed below:

- Multiple surveys for each offset site visited was outside of the scope of this project, although some of the properties were visited more than once.
- Selection of offset sites for assessment was largely driven by landowner responses and communication. In some cases, landowner contact details are non-existent or incorrect, or ownership has changed. In other cases, landowners declined the request to conduct the assessment.
- The species observed and reported are not exhaustive, and more species would undoubtedly be added to the list should more sampling effort, and sampling in different seasons occur.
- Sampling effort on Aalwyndal was higher than the sampling effort on offsite offset properties due to the multiple assessments within Aalwyndal, compared to fewer assessments (one or two) per candidate offset site.

- Some rare and threatened plant species are difficult to locate and easily overlooked in the field (e.g., geophytes, small succulents, small shrubs, and cryptic spp.). Furthermore, many plant species flower seasonally and are therefore difficult / not likely to be identified outside of their flowering season.
- Environmental factors such as the prevailing fire regime, successional stage of the vegetation present, previous cultivation of the land, and the level of alien infestation at the site affects the species visible at the time of assessment.
- Site visits took place during daylight hours so the likelihood of encountering nocturnal species was limited.
- Evidence of animals in the form of tracks, scats, and signs always brings with it a level of uncertainty, but best efforts were made in this regard and uncertainties are highlighted.

4.2 Tier 1 Site Assessment: RE/221 and Portion 1/221 Kleinzuirkop

These sites were visited on 22 and 23 May, 24 May (accompanied by M. Simons and A. Vlok from Cape Nature). Access was gained via tracks and prior to the municipality sending out access request letters. Subsequently, these landowners have indicated they are not interested in engagement around offsets at this stage. The results of the site assessment are included because the biodiversity on these sites is considered of very high importance and sensitivity.

Several drone images were taken, mostly of RE/221 so as to avoid the airport adjacent to 1/221. As a general rule, vegetation on both Tier 1 sites can be considered continuous with that in the western area of the Aalwyndal precinct, as can be seen in Figure 15. As most of the proposed area of transformation in Aalwyndal is in the upper, flatter terrain, these properties represent very similar terrain and habitat to large areas of Aalwyndal that would be transformed based on the revised Precinct Plan.

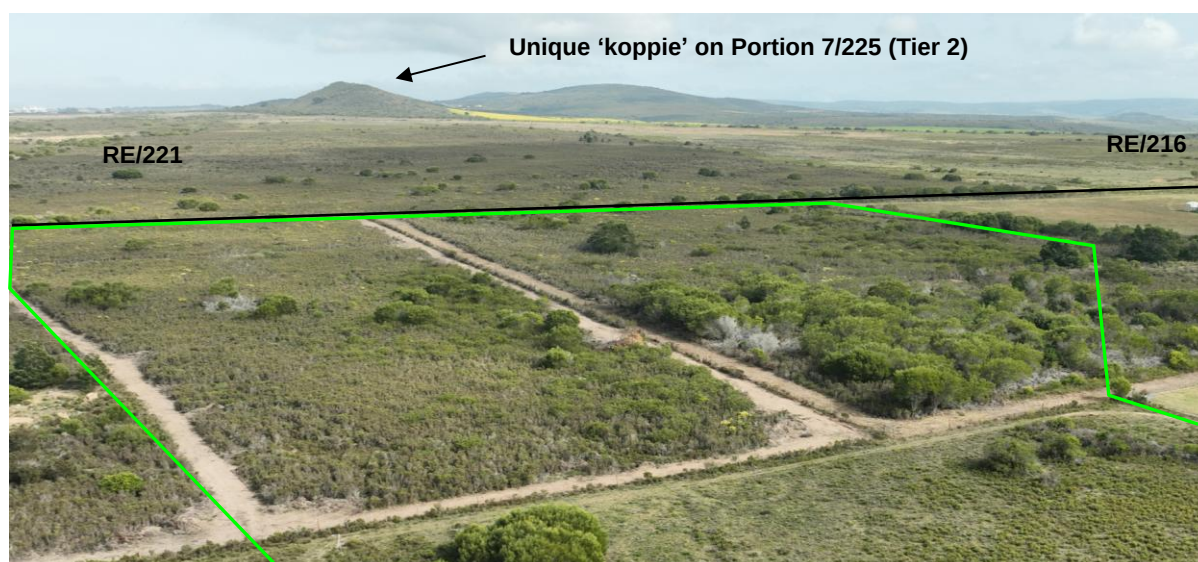


Figure 15. Image showing the edge of the Aalwyndal precinct (black line) and proposed offset area on RE/221. The green polygon indicates where part of the proposed Core Area (V5) connects from within the precinct to the area beyond.



Figure 16. View west across the proposed Tier 1 offset site on RE/221. Two old fields are visible on the right of the photo.



Figure 17. View South across Tier 1 candidate sites RE/221 and 1/221 towards the airport (white buildings).



Figure 18. View North across RE/221 with RE/216 (Tier 2) in the distance beyond the black line.



Figure 19. Location of RE/221 and Portion 1/221 in relation to the Mossel Bay Airport, other potential offset areas, and the Aalwyndal precinct.

4.2.1 Aquatic Ecosystems

There are no aquatic features present on RE/221.

On neighbouring Portion 1/221 there are at least two elliptical depression wetlands which could also be described as pans. These are mapped as Depression Wetlands in the Southern Fynbos Bioregion. The western section of the wetlands is mapped as an aquatic Critical Biodiversity Area (CBA1) and the eastern section as an aquatic Ecological Support Area (ESA1). Given these wetlands are currently in vegetation incorrectly mapped as North Langeberg Sandstone Fynbos with a Least Concern threat status, the fact that they are still highlighted as Biodiversity Priority Areas emphasises their conservation value in the broader landscape. The condition of these wetlands according to NFEPA is AB (Natural or Good) which means they have a natural land cover greater than 75%.

The western of the two wetlands was visited during May 2024. It is noted that in historical imagery the wetland visited and pictured (Figure 21 & Figure 22) was frequently dry and more pan-like in appearance. The extensive die-back of Rooikrans trees around this wetland indicates that it may have recently been flooded beyond background levels (Figure 20). It is possible that a water source was obtained (e.g. borehole) which is now pumping water into the wetland (pure speculation). If this is the case, this practice should be discouraged because ephemeral pans are home to many unique, poorly described, and sensitive species of branchiopods and aquatic plants which are dependent on a cycle of drying and rewetting for survival. The permanent flooding / inundation of these habitats can lead to local extinctions of these unique fauna and flora.



Figure 20. Comparison of Google Earth imagery showing wetlands on Portion 1/221 before and after inundation of the western pan. In all imagery pre-dating May 2024 the pan is dry with a 120 sqm drinking hole.

These wetlands form an intermittent line of depressions extending west towards Mossdustria, numbering in the region of at least 6 large pans. Most of these features are embedded in actively farmed areas on adjacent properties, but on Portion 1/221 appear to be in a largely natural state for the most part (apart from possible inundation and Rooikrans invasion).

The western depression wetland measures approximate 100m in diameter. When this site was visited a significant amount of birdlife was present utilising the water for feeding and presumably breeding at the site. Water quality was not assessed in detail, but what appeared to be a bloom of green or blue-green unicellular algae was present at the time. The GPS-tagged female Black Harrier in the area frequently moves between this wetland and other areas west of Aalwyndal.



Figure 21. Large depression wetland complex on Tier 1 candidate site Portion 1/221. Dead trees are predominantly Rooikrans (*Acacia cyclops*) which would need to be controlled.

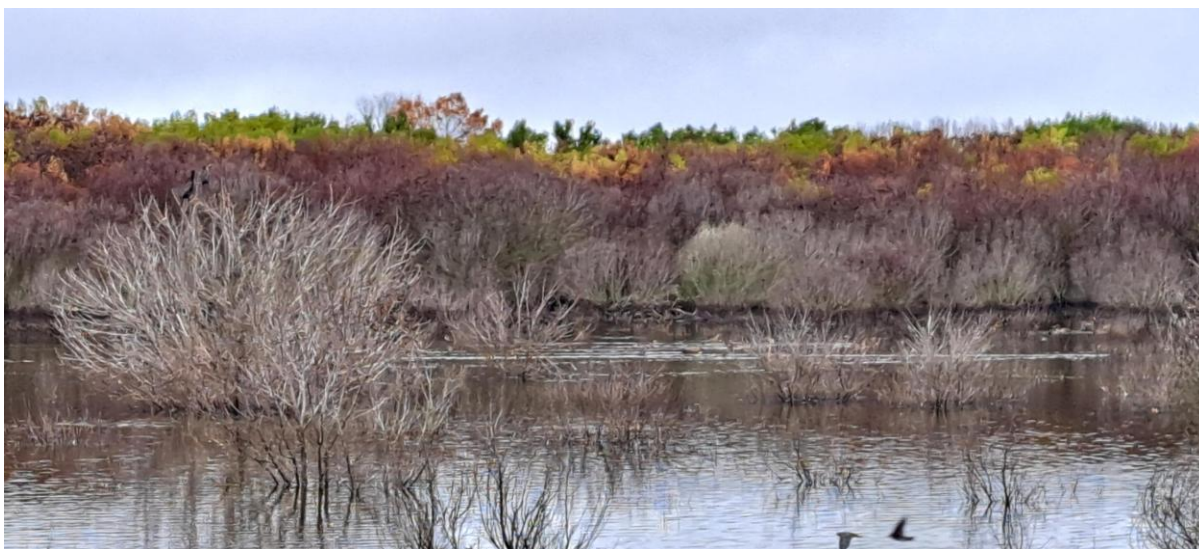


Figure 22. An alternative view of the depression wetland on portion 1/221. Extensive areas of dead Rooikrans are possibly indicative of recent high-water levels leading to death of the trees.

While no similar pan / depression wetlands are present within Aalwyndal itself, this aquatic ecosystem provides an important ecosystem service in the form of water supply and habitat which could provide a range of animal species with the support they need for survival and reproduction in the potential offset areas west of Aalwyndal. Prolific birdlife at this site indicates a level of habituation to the noise and disturbance associated with the airfield. However, any future plans to expand the airport would need to carefully consider the impacts to specific faunal groups such as avifauna, including species of conservation concern, to ensure thresholds of disturbance are not surpassed that drive species away from this habitat.

4.2.2 Terrestrial and Botanical Assessment

Substantial stretches of fynbos-dominated vegetation exist across both Tier 1 sites that is very similar to the senescent fynbos observed on Aalwyndal. Like Aalwyndal, the dominance structure is also altered due to the age of the vegetation, and the fact that the overstory is

causing significant shading effects. The overstory is also dominated by very few species when the vegetation is in a senescent state – and this is not a true reflection of the diversity that would be present if the fynbos is of a younger age post-fire. In the current senescent state, the vegetation is dominated by dry and large shrubs, including *Erica peltata*, *E. quadrangularis*, and *Dicrothamnus rhinocerotis* (Renosterbos).

In some areas, stands of *Bobartia robusta*, or Proteas (mainly *Protea lanceolata*, *P. repens*, & *P. neriifolia*) dominate, or small patches of thicket are found. The small thicket patches of RE/221, as also observed in Aalwyndal, are prone to invasion by Rooikrans (*Acacia cyclops*). The hypothesis of the author for this is that small thicket patches establish and outcompete fynbos in deeper soils (possible due to differential weathering of the otherwise shallow sandstone geology), and that these pockets of deeper soil also represent the best suited conditions for invasive Rooikrans to establish. All of this is very similar to the patterns observed for the fynbos and fynbos-renosterveld mosaic vegetation within Aalwyndal (Figure 23).

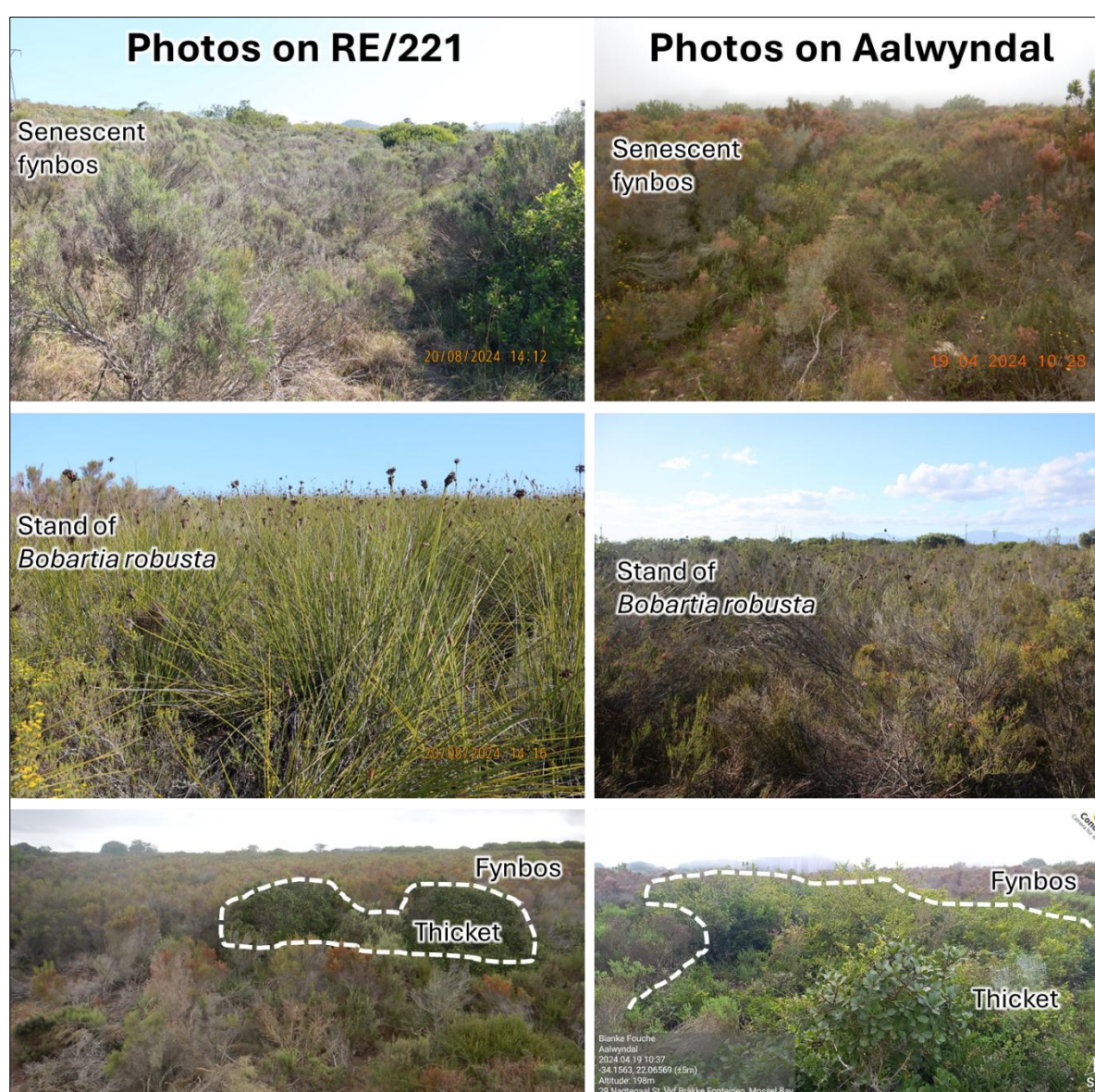


Figure 23. Comparative photos of the fynbos vegetation observed on RE/221 and within Aalwyndal. Invasions by Rooikrans are not shown, as these monoculture stands look alike wherever there are situated.

In addition to the broader vegetation patterns being near-identical on RE/221, the plant species and SCC represented here are very similar. The habitat is near perfect for two Sensitive Species of *Haworthia* that have both been found at very specific and limited locations in Aalwyndal. One *Haworthia* sp. was found on two erven along the western boundary of Aalwyndal, and a population was also confirmed above the airfield west of Aalwyndal. The fynbos between the airfield and the old fallow fields in Aalwyndal has not been explored or surveyed in detail, and it is highly likely that *Haworthia* spp. and Sensitive Species 268 occur in patches here.

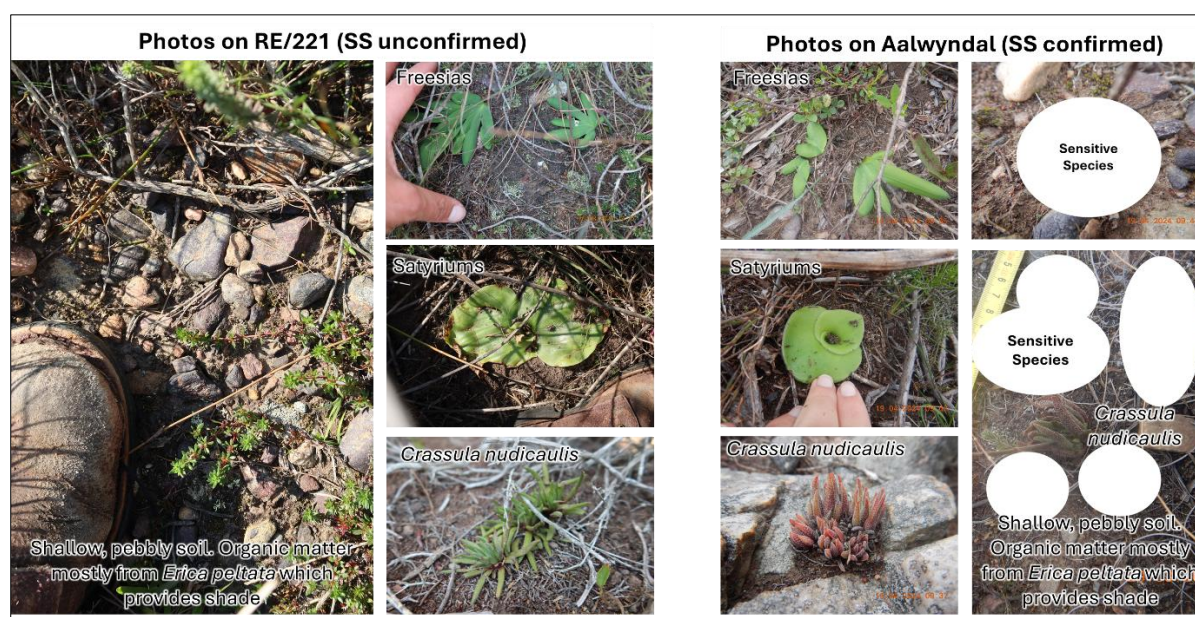


Figure 24. Substrate and associated species that were found next to known locations of SS, as well as the substrate and species found on RE/221.

Species of Conservation Concern that have been confirmed west of Aalwyndal that are also abundant in Aalwyndal include *Hermannia lavandulifolia*, *Freesia fergusoniae*, *Polygala pubiflora*, *Selago* cf. *glandulosa*, and *Selago ramosissima*. Increased sampling effort will very likely result in an increase in the number of shared SCC between RE/221 and Aalwyndal. A *Satyrium* sp. (a species of Orchid which currently is not confirmed as a SCC, but which could be) is also abundant in some places, and the species is likely the same as those present on Aalwyndal. In fact, most of the geophyte species of Aalwyndal are also present to the west on RE/221, such as *Crossyne guttata*, *Moraea tripetala*, *Babiana fourcadei*, several *Oxalis* spp., *Eriospermum* spp., *Drimia* spp., and *Massonia setulose*.

The vegetation and species composition of RE/221 closely resembles that of Aalwyndal. Both areas share similar fynbos patterns, with the same dominant species, especially in their senescent states. Despite past disturbances in the fynbos of RE/221, most SCC as well as various geophytes found within Aalwyndal are also abundant on RE/221. Given this ecological similarity, RE/221 offers a very good like-for-like match, supporting the preservation of the unique biodiversity associated with Aalwyndal.

Old Fields

Small areas of fallow (old) fields are present on the Tier 1 sites and a short survey of this vegetation was undertaken to establish the dominant species and value of this habitat in the broader landscape.

Few plant species dominate the fallow field area. The most notable are the graminoid species, such as *Eragrostis curvula*, *Cynodon dactylon*, and *Sporobolus africanus*. Other plants that were abundant here included *Gnidia chrysophylla*, *Helichrysum rosum*, and stands of *Oedera genistifolia* (Figure 25).

Several *Hermannia* species (commonly and collectively called Dollsroses) were also common in the old fallow fields (*Hermannia lavandulifolia* which is a Vulnerable SCC, *H. salviifolia*, and *H. flammula*). All these dollrose species are also present in the natural fynbos vegetation to the south, as well as at Aalwyndal. Dollsroses are often found in disturbed areas due to their adaptability and certain ecological traits that allow them to thrive in such environments. All the other species mentioned so far are also in the fynbos vegetation, however in the fynbos the dominance and abundance of these species is altered. It is clear that with continued disturbance, these areas will become completely transformed (so that fynbos is no longer the “stable state” of the ecological system).

Stachys sublobala was also found in the fallow fields, and this is a species that has been observed in Aalwyndal in disturbed vegetation. Another unique species observed in the old fallow fields was *Gomphocarpus cancellatus* (Wild cotton, 1 plant), which is not a species that has been observed elsewhere to date, however this species is associated with fynbos in the Western Cape. Wild cotton prefers disturbed environments, often germinate in exposed soil, and thrive where there is reduced competition from other fynbos species. This might explain why both the *Gomphocarpus* and *Stachys* species are observed in areas associated with past anthropogenic disturbance, rather than more intact fynbos.



Figure 25. View of an old field on RE/221. The transitional area dominated by *Oedera genistifolia*, as well as the fynbos south of the old fallow fields is indicated.

The Terrestrial / Botanical specialist has not visited Portion 1/221. However, satellite imagery indicates that the vegetation appears to be continuous within minimal disturbance from the neighbouring RE/221. The main difference being a substantial invasion of Rooikrans around the depression wetlands indicated by the aquatic specialist.

4.2.3 Terrestrial Animal Assessment

General observations of fauna have taken place during each site visit. Note was taken of any tracks and signs of animals and a camera trap was placed on the hill adjacent to a clear pathway on RE/221 for approximately 1 week.

Abundant animal activity is obviously present on both Tier 1 properties. Sub-surface tunnels of a species of golden mole occur at very high densities throughout the natural fynbos vegetation but are especially concentrated around the base of the small hill on RE/221. Tunnels were also observed in the vicinity of the wetland on portion 1/221. It is not straightforward to confirm which species of golden mole it could be, but based on the habitat and location it is most likely the Fynbos Golden Mole (*Amblysomus corriae*) which is classified as Threatened according to the IUCN Red List. It could possibly be the Cape Golden Mole (*Chrysochloris asiatica*) which is listed as Least Concern, but the area would be in the eastern limits of its range. Angulate tortoises (*Chersina angulata*) are commonly encountered in the area and are more easily observed in the old fields where vegetation is shorter. Whether they prefer this habitat is not certain as they may just be more easily seen where the vegetation is shorter.



Golden Mole sub-surface tunnels



Animal path, mongoose scat, and porcupine quill



Figure 26. Fauna and flora-related photos taken from Tier 1 candidate offset sites.

Avifaunal Species

During early August 2024 we observed a Black Harrier (*Circus maurus*; Red List Status = Endangered) actively foraging at a low level over fynbos habitat on 214/220 in Aalwyndal. The sighting was reported to Cape Nature and subsequently passed on to the FitzPatrick Institute of African Ornithology at University of Cape Town. Black Harrier movements are being actively monitored through GPS-tagged birds in the area by this group with possible nesting sites in the Tier 1 and Tier 2 properties west of Aalwyndal. This is not the first time that Black Harriers have been reported in the vicinity of Aalwyndal, as a sighting was made to the north of precinct

during an impact assessment by avifaunal specialist Steven Evans in October 2021 along with other sightings which have been recorded on Bird Lasser (Figure 27).

Black Harriers depend on pristine, unfragmented patches of vegetation within fynbos and renosterveld and their presence is considered a good indicator for mammal species richness and small bird abundance (Jenkins et al., 2013). With a global population of approximately 1 000 individuals, the Black Harrier is considered southern Africa's scarcest endemic raptor (Taylor et al., 2015). Habitat loss and degradation are the primary drivers of the decline in Black Harrier numbers. Adult birds frequently return to their former breeding areas during the breeding season, so once an area has been identified as breeding habitat, it is likely that birds will keep returning. While they prefer nesting in fynbos-renosterveld of a high quality, they actively forage in old fields which is frequently observed from the GPS-tagged birds. Therefore, while the old fields do not represent very high diversity of plant species, their structure is ideal foraging habitat for birds SCCs in the area, making them an important habitat for conservation alongside more pristine vegetation units.

Habitat west of Aalwyndal in Tier 1 sites is considered of high suitability for breeding and feeding for Black Harrier with the result that it should be considered Very High Sensitivity. This has important implications for development around the Tier 1 properties, as a 1-3 km buffer is typically recommended around single nesting sites for wind farms (Simmons et al., 2020). Proposed development in Aalwyndal was discussed with a number of specialists working on Black Harriers and a buffer in the vicinity of the high activity area was recommended. This recommendation has been incorporated into the 5th version of the revised precinct plan for Aalwyndal.



Figure 27. Extract from S. Evans avifaunal assessment for Erf 21238 Aalwyndal showing the location of threatened and near threatened birds including Black Harrier observations (green arrows). Extracted information is for pentad 3405_2200 by SABAP2 for the time period 2014 until 31 August 2021.

While no direct observations have been made yet, the habitat is considered highly suitable for Denham's Bustard (Red List Status = Vulnerable) and this species has been recorded on Bird Lasser in several agricultural areas proximal to proposed Tier 2 biodiversity offset sites and it was directly observed further west of the Tier 1 sites on RE/18/225 Rietvalley.

Blue Cranes (*Anthropoides paradiseus*; Red List Status = Vulnerable) are known to be actively breeding and foraging on Tier 1 and Tier 2 properties around Aalwyndal in areas overlapping with the Black Harrier, which further increases the importance of this area from an avifaunal conservation perspective.

4.3 Tier 2 Assessment: Portion 15/215

No drone photos were taken of this site, and it was visited by the botanical and faunal specialist only. Therefore, no aquatic features were ground truthed during the site assessment.

4.3.1 Aquatic Ecosystems

From a desktop perspective the proposed offset area has a network of non-perennial streams flowing in a north-eastern direction towards a larger valley bottom wetland in the more actively farmed area (Figure 28). The highlighted area proposed for the offset has a high gradient which slopes towards these drainage lines, which based on local knowledge of the area, means they are unlikely to contain much in the way of permanent water or wetland habitat. However, the vegetation is often distinct along drainage lines in that it is riparian in nature and more developed.

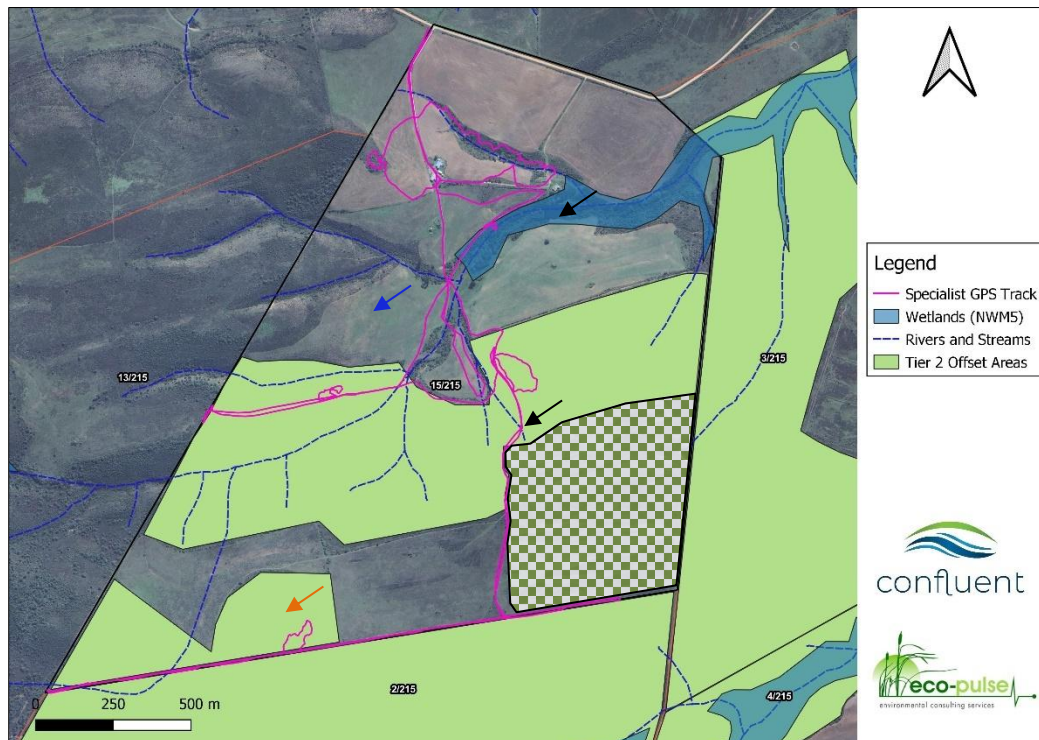


Figure 28. Mapped watercourses on Portion 15/215 Welbedagt with instream dams indicated by black arrows. Area of patterned fill represents potential additional areas for inclusion as they have been partially mowed and would still support most bird SCCs. Brown arrow is our observation of Denham's Bustard, and blue arrow is for Blue Cranes.

Two instream dams are indicated in Figure 28. The dam within the proposed offset area is very small and located at the top of the catchment, but it does provide a limited amount of water for drinking and habitat for a few amphibians as observed by the faunal specialist. The larger instream dam within the mapped wetland could still support wildlife provided the riparian vegetation connecting all watercourses remains intact and well maintained.



Figure 29. One of the small, headwater excavations that hold water in drainage lines on Portion 15/215.

4.3.2 Terrestrial and Botanical Assessment

The majority of this property is transformed fields (especially the northern half) for agricultural use. However, the natural vegetation that persists is consistent with renosterveld (majority of the observed vegetation), thicket (mostly along drainage lines) and fynbos (Ericaceous fynbos was observed in the southern section of the Portion). The fynbos and renosterveld on the site can be considered a mosaic, and this is very similar to the vegetation found in Aalwyndal (Figure 30). The thickets found on Portion 15/215 were mostly along drainage lines, and in some places smaller thicket clumps were found in the middle of renosterveld. This too is similar to Aalwyndal.

This property is a very good like-for-like candidate as it shared many of the heterogeneous landscape features and species that are also present in Aalwyndal. Portion 15/215 also contains habitat that is suitable for the sensitive species observed in Aalwyndal, and several SCC recorded in Aalwyndal were also confirmed on the site.

This portion is not directly adjacent to Aalwyndal; however, it is relatively nearby (ca. 4km north-west), and it can be connected to the natural areas of other offset areas and the precinct itself via drainage lines and remaining natural vegetation that forms a continuous corridor to Aalwyndal (ignoring fences that define farm portion boundaries). The landscapes surrounding Portion 15/215 are largely natural, with no residential developments bordering this farm portion. This is an improvement from the state of the landscapes surrounding the Aalwyndal Precinct.



Figure 30. Landscape images taken on Portion 15/215 illustrating the similarity with Aalwyndal.

The same pebbly substrate was observed in the renosterveld and fynbos on the site, with patches of *Crassula nudicaulis* present (Figure 31). These characteristics have been associated with species of conservation concern that have been found on Aalwyndal. Some of the shared SCC are highlighted in Figure 31, such as *Polygala pubiflora* (VU), *Freesia cf. fergusoniae* (VU), *Hermannia lavandulifolia* (VU), *Selago ramosissima* (EN), and along drainage lines populations of NT *Watsonia aletroides* was also observed. During site assessments, no *W. aletroides* have been observed on Aalwyndal, however other iNaturalist users have observed this species within Aalwyndal. Therefore, it is assumed that *W. aletroides* is also a shared species between these two areas. This was the only assessed offset site where this NT *W. aletroides* was observed.



Figure 31. Images of some observations on Portion 15/215, which is similar to features and species within the Aalwyndal precinct.

An additional potential area for inclusion as an offset is indicated in Figure 28. This is embedded between more natural areas highlighted to the north, east and south, connecting to candidate offset areas located on neighbouring properties. Vegetation in this area was recovering renosterveld although it has been mowed in the past. This type of vegetation makes for ideal feeding grounds for the larger-bodied bird SCCs including Black Harrier and Denham's Bustard.

4.3.3 Terrestrial Animal Assessment

The property is dominated by pasture, but some natural vegetation persists in areas proposed as offset sites. Carnivore droppings (suspected of being Cape Grey Mongoose, *Herpestes pulverulentus*) were found in a fynbos area. Two SCC were directly observed: A Denham's bustard (*Neotis denhami*) was seen at the site in an elevated area with fynbos vegetation (Figure 32) and a pair (possibly a breeding pair) of Blue Cranes (*Anthropoides paradiseus*; Figure 33) was spotted in the pastures at this site. Six bird counts were conducted around the property (See Figure 28 for location of SCC observations).

Table 7. Species observed directly or indirectly (through tracks and signs) at 15/215. SCC in red, species commonly observed in Aalwyndal that would benefit from offsets in bold.

Taxon	Scientific Name	Common Name
Amphibians	<i>Cacosternum nanum</i>	Bronze caco
Avifauna	<i>Anthropoides paradiseus</i>	Blue Crane
Avifauna	<i>Bubulcus ibis</i>	Cattle egret
Avifauna	<i>Buteo rufofuscus</i>	Jackal Buzzard
Avifauna	<i>Cinnyris afer</i>	Greater Double-collared Sunbird
Avifauna	<i>Dicrurus adsimilis</i>	Fork-tailed drongo
Avifauna	<i>Gallus gallus domesticus</i>	Domestic Chicken
Avifauna	<i>Lanius collaris</i>	Fiscal shrike
Avifauna	<i>Neotis denhami</i>	Denham's bustard
Avifauna	<i>Numida meleagris</i>	Helmeted Guineafowl
Avifauna	<i>Passer diffusus</i>	Southern Grey-headed Sparrow
Avifauna	<i>Ploceus capensis</i>	Cape weaver
Avifauna	<i>Pycnonotus capensis</i>	Cape bulbul
Avifauna	<i>Streptopelia capicola</i>	Ring-necked dove
Avifauna	<i>Vanellus coronatus</i>	Crowned lapwing
Invertebrates	<i>Apis mellifera</i>	Honeybee
Invertebrates	<i>Cochlitoma zebra</i>	Zebra Agate Snail
Invertebrates	<i>Crematogaster peringueyi</i>	Black Cocktail Ant
Invertebrates	<i>Dictyophorus spumans</i>	Koppie Foam Grasshopper
Invertebrates	Harpactirinae	Southern Baboon Spiders
Invertebrates	<i>Melampias huebneri</i>	Boland brown
Invertebrates	<i>Mylothris agathina agathina</i>	Common dotted border
Invertebrates	<i>Pieris</i> sp.	Cabbage white
Invertebrates	Termitidae	Higher Termites
Mammal	Bathyerigidae	African Molerats
Mammal	<i>Bos taurus</i>	Domestic Cattle
Mammal	<i>Herpestes pulverulentus</i>	Cape grey mongoose
Mammal	<i>Potamochoerus larvatus</i>	Bushpig



Figure 32. The fynbos area where Denham's bustard (*Neotis denhami*) was observed.



Figure 33. Blue Cranes (*Anthropoides paradiseus*) observed at the flat areas of the site.

Based on these field observations of fauna, this property would be a suitable offset area for the Aalwyndal development and can be considered like-for-like from a faunal perspective. The species found during the site visit have been found widely in Aalwyndal. Additionally, SCC have been found at Portion 15/215 such as Denham's Bustard, which had been assigned a high likelihood of occurrence in Aalwyndal but never been observed in the precinct.

Portion 15/215 is ca. 4km from the precinct and connected to it by riparian and terrestrial habitats through multiple properties. Proposed offset areas at the site are intact and in very good condition. Vegetation resembles that of Aalwyndal very closely (mosaic vegetation) which would support an even and comparable diversity of faunal species. The distance of this site from Aalwyndal precinct is an advantage since it is also further away from developments around Aalwyndal and the disturbance they cause (noise and light). Sites situated further into more natural or agricultural landscape offer refuge to faunal species (especially sensitive species) from the negative effects of these urbanised spaces. This is illustrated by the presence of Denham's bustard at this site rather than in the Aalwyndal precinct.

4.4 Tier 2 Assessment: RE/220

This candidate offset site is ideally located south of Aalwyndal immediately adjacent to the boundary where part of the Core Area has been proposed which would ideally connect to this property. Two site visits have been undertaken to this property and drone photos were taken to provide a broader perspective of the site in relation to Aalwyndal (Figure 34) along with a map of key features (Figure 35).

From a connectivity perspective this property is well connected both to Aalwyndal, as well as to neighbouring candidate sites with landowners who have a positive outlook for offsets on their properties. While much of this property is very steep, inclusion of the adjacent Core Area in Aalwyndal on flatter land, and some flatter areas above the valley on RE/220 make this a good site with heterogenous topography and associated habitat.

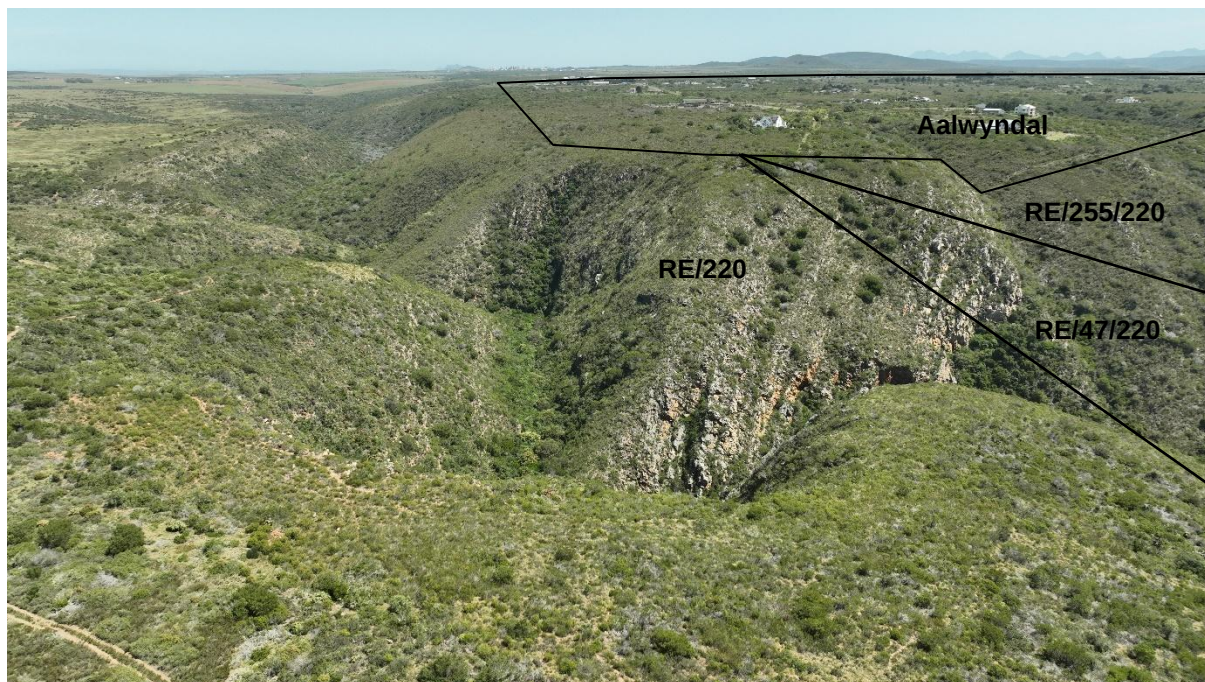


Figure 34. Drone photo of RE/220 in relation to other properties and Aalwyndal. Most of the area depicted is proposed as an offset.

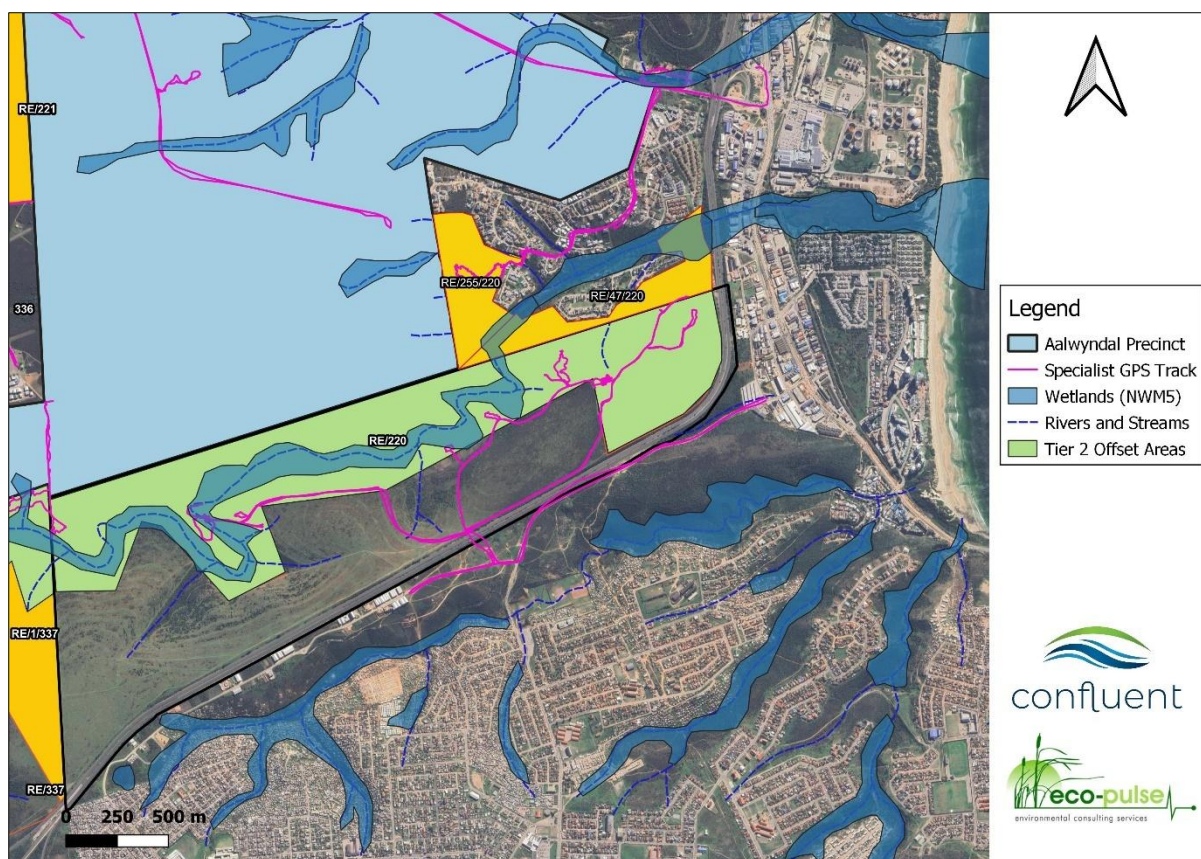


Figure 35. Map of RE/220 in relation to neighbouring properties and Aalwyndal.

4.4.1 Aquatic Ecosystems

The main watercourse on RE/220 is the valley-bottom wetland which is mapped and confirmed as present through ground-truthing. This is a significant aquatic ecosystem with a wide variety of habitats including standing and flowing water, as well as associated unchanneled wetland areas. Unlike many of the micro-estuaries in Mossel Bay that are largely canalised through urban areas (such as the Tweekuilen River/Estuary beyond Aalwyndal), this watercourse has a minor area of restriction between the N2 and Louis Fourie Road before opening out to the Gericke Estuary under fairly natural conditions. **Protection of this watercourse is therefore considered a priority within the urbanised context of Mossel Bay.** The proposed location of the offset is ideal for this purpose, as much of the catchment area would be protected under this scenario. Furthermore, the watercourse provides a continuous connection between several neighbouring properties along which offset sites have been proposed. Only small parts of this watercourse are mapped as CBA1 with most of the aquatic ecosystem mapped as an aquatic ESA according to the WCBSP.

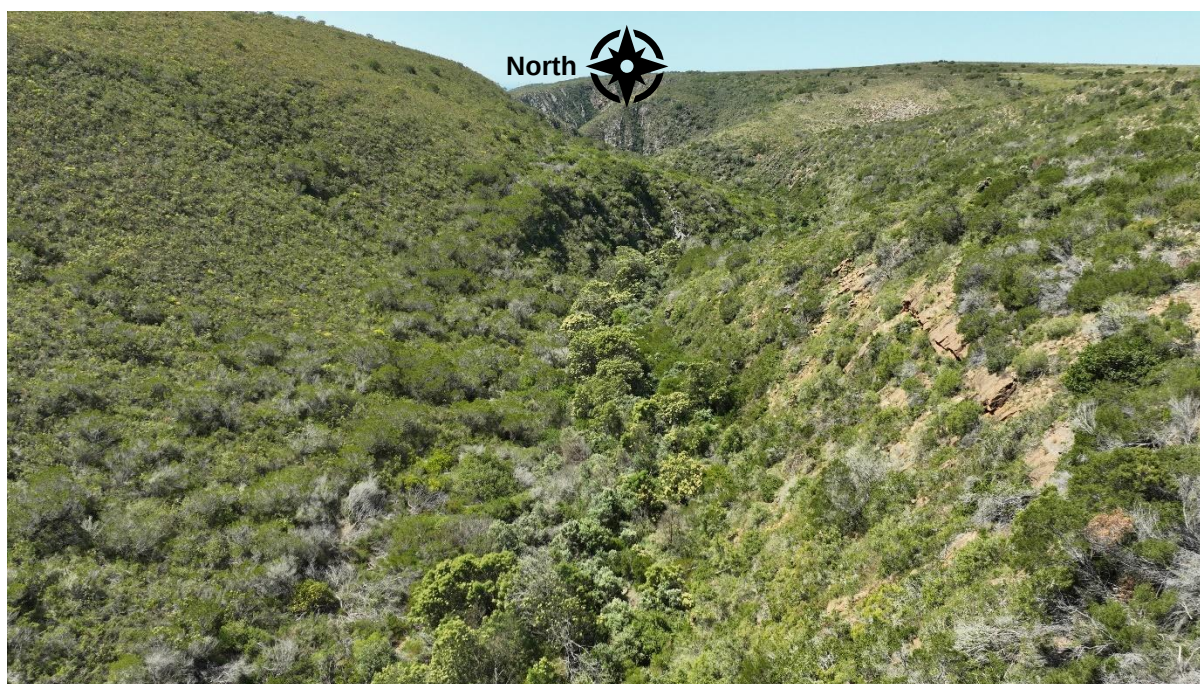


Figure 36. Drone photo of the valley bottom (view East towards the sea) showing dense vegetation along the watercourse, and different vegetation structure on the south-facing slope (protea-dominated fynbos) compared to the north-facing slope (renosterbos-dominated) which is typical of Aalwyndal.

Depending on the amount of standing water present, different parts of the watercourse are dominated by either more terrestrial riparian thicket, alternating with *Phragmites australis* and *Cyperus textilis* dominated wetland areas.

Unfortunately, a moderate area of the watercourse is invaded by Rooikrans although there is some evidence that this has been controlled in the past. Access for the control of aliens along this watercourse will be challenging and the removal of material for burning or chipping may be impossible.

4.4.2 Terrestrial and Botanical Assessment

This property is connected to natural fynbos areas in Aalwyndal and its close proximity to the precinct means there is a high likelihood that vegetation and ecosystems are very similar. It is important to note that RE/220 did have some unique features that are not associated with Aalwyndal. This is likely due to the steep gorges and cliffs that bisect this Portion from East to West (Figure 37). For example, a small forest habitat (likely distinct from Hartenbos Dune Thicket) was observed on south facing slopes of the cliffs, which represents a unique habitat not yet observed in Aalwyndal (Figure 37).

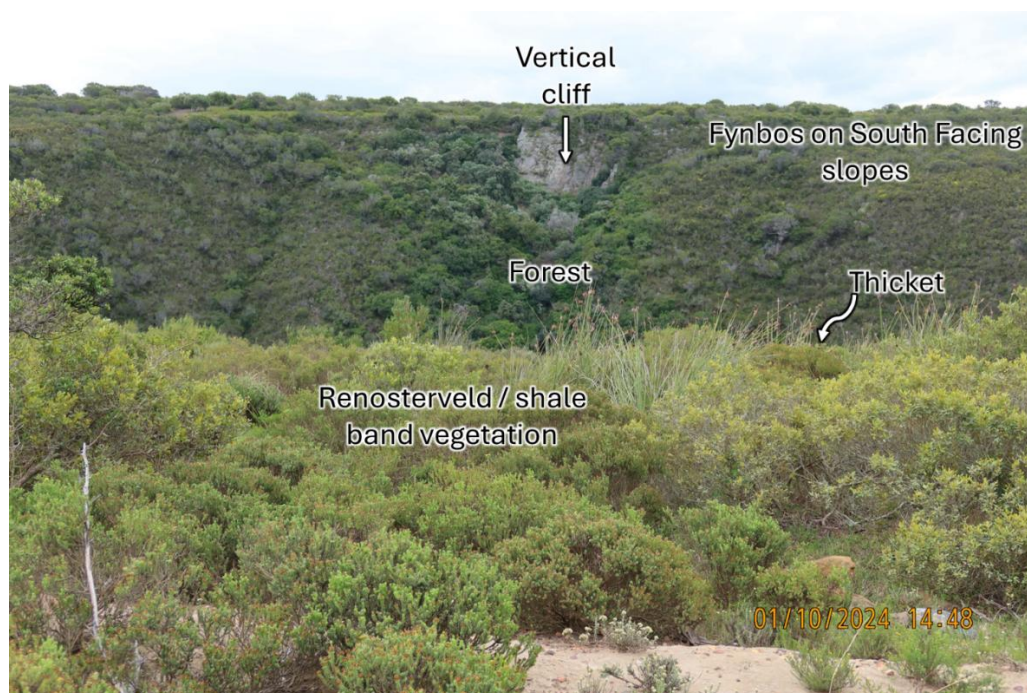


Figure 37. An image illustrating the majority of the vegetation units that were observed on RE/220. Thickets were more common along valley slopes; however, thicket clumps were also observed within the renosterveld / shale band vegetation.

RE/220 is directly north of a large area of informal settlement associated with Kwanonqaba in Mossel Bay. This means that the site is often used by people with associated domestic animals (dogs) and livestock. Cattle and other livestock are informally grazed in the area. Despite the disturbances on the site, the vegetation surrounding the main valley / gorge on the site was largely natural and represents vegetation that is very similar to Aalwyndal. Again, several SCC are shared between this site and Aalwyndal. The habitat also seems suitable for the sensitive species found within Aalwyndal due to the shallow pebbly soils observed and the presence of *Crassula nudicaulis*. Fewer *Freesia* bulbs were observed compared to the fynbos sections of Aalwyndal, but there were many *Babiana fourcadei* observed in the renosterveld vegetation.

There is a good diversity of plant species in the riparian areas of sections of the Gericke River, including *Gladiolus tristis* (LC), the marsh afrikaner. Many of the riparian plant species found were halophilic and would normally be associated with more estuarine environments (Fig. 10). In addition to the natural areas that were observed on RE/220, some transformed and highly invaded areas also persist on RE/220. Along the valley bottom, there were large stands of black wattle, and around the quarry in the easternmost section of RE/220 Rooikrans (*Acacia cyclops*) had become the dominant species.



Figure 38: Some of the vegetation observed along a tributary of the Gericke River on RE/220

The Renosterveld observed here could be classified as Central Coastal Shale Band vegetation. It is therefore important to attempt understanding the difference between Mossel Bay Shale Renosterveld and Central Coastal Shale Band vegetation. The main difference lies in species composition, vegetation structure, and location on the landscape. Mossel Bay Shale Renosterveld is associated with shale derived soils and is not confined to narrow shale lenses. Central Coastal Shale Bank vegetation also contains more thicket elements compared to its renosterveld cousin (e.g., *Euclea racemosa*, *Searsia* spp, *Aloe ferox*). While thicket elements were abundant in the Renosterveld of RE/220, renosterbos (*Dicerothamnus rhinocerotis*), geophytes (such as the Babianas) and grasses were dominant, which is more characteristic of Mossel Bay Shale Renosterveld. The shrubland was also relatively low across the majority of RE/220, whereas the shale band vegetation is characterised by a more varied structure with transitions between shrubland and small patches of thicket-like vegetation. While thicket clumps were observed, typical renosterveld vegetation was dominant south of the gorge. Where thicket and renosterveld became more blended, the north-facing slope also steepened, so that the varied vegetation structure was likely more a product of slope than geology. The renosterveld on RE/220 may be intermediate between Mossel Bay Shale Renosterveld and Central Coastal Shale Band vegetation, however it is the opinion of the author that it is more representative of Mossel Bay Shale Renosterveld.

RE/220 includes fynbos, renosterveld, and thicket that is very similar to Aalwyndal. In some places, thicket clumps were observed within renosterveld, and fynbos was visibly thriving on south facing slopes while the renosterveld was more dominant on north facing slopes. Even so, in some places a mosaic of fynbos and renosterveld formed, which is also similar to Aalwyndal. RE/220 also contained several unique features that were not present on Aalwyndal, but which adds to the biodiversity and conservation value of the site. These unique features were mostly due to the steep gorges and valley that defines a large section of the property and proposed offset area.

4.4.3 Terrestrial Animal Assessment

The property is directly adjacent to the Aalwyndal precinct site making it ideally placed to find like-for-like habitat. It can be defined as open access dryland pasture where movement of people and cattle is only obstructed by the topography in the northern half of the site. The owner notes the presence of Grysbok (*Raphicerus melanotis*) at an adjacent property years ago.

Scat observed at the site was consistent with Sensitive species 8 (Figure 39) and cattle. Field observations and camera trap footage (Figure 40) shows that the area is used often by people for a variety of reasons (grazing cattle, throughfare, dog-walking off leash) which does make the presence of Sensitive Species 8 (a small antelope sensitive to poaching) unlikely.



Figure 39. Comparison of small antelope dung found at the property (right) to documented shape and size of dung from Sensitive Species 8 (left) taken from Walker, C. 1996. Signs of the wild. A field guide to the spoor and signs of the mammals of southern Africa. Struik Nature).



Figure 40. Camera trap footage showing the presence of people at the site. The camera trap was placed near the watercourse.

Several ostriches are kept at the site. Seven bird counts were conducted and a list of animal species observed at the site is provided in Table 8. Species sensitive to human disturbance may not be present at the site under present conditions but could move into it should it be secured as an offset. Fencing would likely be required to minimise human disturbance at this

site. Modified environments can, however, serve as habitat for some SCC and this is reflected in the table in Appendix 1.

Table 8: Species observed directly or indirectly (through tracks and signs) at RE/220. Species commonly observed in Aalwyndal that would benefit from offsets in bold.

Taxon	Scientific Name	Common Name
Avifauna	Alaudidae	Lark
Avifauna	<i>Apalis thoracica</i>	Bar-throated apalis
Avifauna	<i>Buteo rufofuscus</i>	Jackal Buzzard
Avifauna	<i>Cinnyris afer</i>	Greater Double-collared Sunbird
Avifauna	<i>Cinnyris chalybeus</i>	Lesser collared sunbird
Avifauna	<i>Cisticola tinniens</i>	Levaillant's cisticola
Avifauna	<i>Colius striatus</i>	Speckled mousebird
Avifauna	<i>Corvus albus</i>	Pied crow
Avifauna	<i>Corvus capensis</i>	Cape Crow
Avifauna	<i>Falco rupicolus</i>	Rock kestrel
Avifauna	<i>Halcyon albiventris</i>	Brown-hooded kingfisher
Avifauna	<i>Lanius collaris</i>	Fiscal shrike
Avifauna	<i>Motacilla capensis</i>	Cape wagtail
Avifauna	<i>Nectarinia famosa</i>	Malachite sunbird
Avifauna	<i>Numida meleagris</i>	Helmeted guineafowl
Avifauna	<i>Passer melanurus</i>	Cape sparrow
Avifauna	<i>Prinia maculosa</i>	Karoo Prinia
Avifauna	<i>Promerops cafer</i>	Cape Sugarbird
Avifauna	<i>Struthio camelus australis</i>	Southern Ostrich
Avifauna	<i>Sturnus vulgaris</i>	European starlings
Avifauna	<i>Telophorus zeylonus</i>	Bokmakierie
Avifauna	<i>Vanellus coronatus</i>	Crowned lapwing
Mammals	<i>Bos taurus</i>	Domestic Cattle
Mammals	<i>Capra hircus</i>	Domestic goats
Mammals	Cephalophini	Duiker
Mammals	<i>Hystrix africaeaustralis</i>	Cape Porcupine
Mammals	<i>Lepus capensis</i>	Cape Hare
Mammals	<i>Procavia capensis</i>	Rock Hyrax
Mammals	*<i>Raphicerus melanotis</i>	Grysbok
Mammals	<i>Tragelaphus sylvaticus</i>	Southern Bushbuck

*Present historically

4.5 Tier 2 Assessment: RE/1/337

Biodiversity offset areas proposed on RE/1/337 connect with significant sections of the Core Area to the north into Aalwyndal as well as east and west to RE/220 and potentially RE/337 to the west (respectively; Figure 41). The Gerickes River runs through the property and continues via RE/220 and other properties to the Gerickes Estuary. Formal protection through the proposed biodiversity offset would secure an additional portion of this watercourse which would benefit the aquatic ecosystem in terms of its landscape connectivity, stability and water quality. Given that the site is immediately adjacent to Aalwyndal and provides excellent connectivity opportunities the site is of high value as a potential offset area.

General topography on this site is less steep than the neighbouring RE/220 (previous section). A servitude leading from Aalwyndal to the south and along the property boundary between RE/220 and RE/1/337 is proposed as a new road across the watercourse by the Mossel Bay Municipality in the future.

During the site visit and following discussions with the landowner, it was evident that a fire had recently burnt through part of this property and up the slope into parts of Aalwyndal (Figure 42). This fire was unplanned and believed to be started by vagrant use of the area. Similar to RE/220, the access is relatively uncontrolled at present. Unfortunately, many alien plant seedlings are now germinating post-fire and should be controlled to prevent degradation of the vegetation.

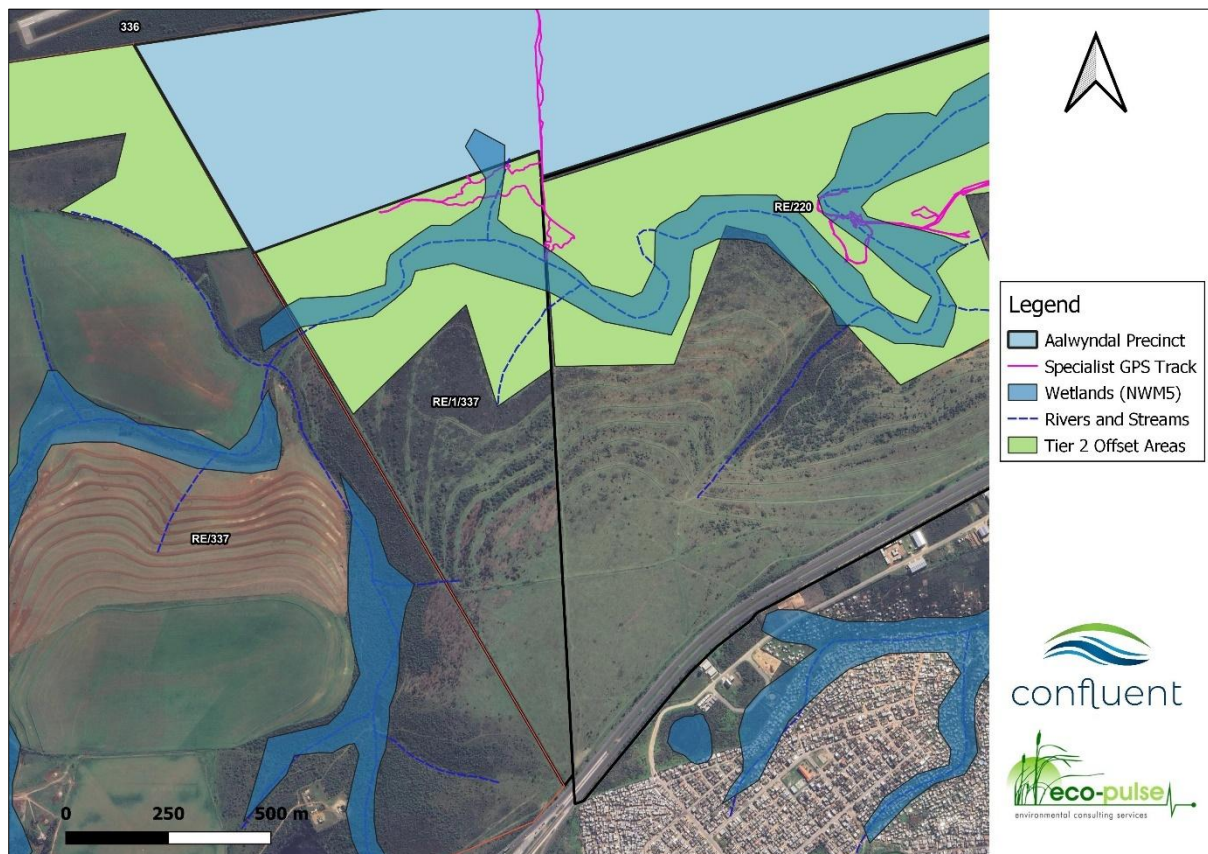


Figure 41. Map showing RE/1/337 in relation to neighbouring properties, proposed offset area, and Aalwyndal to the north.

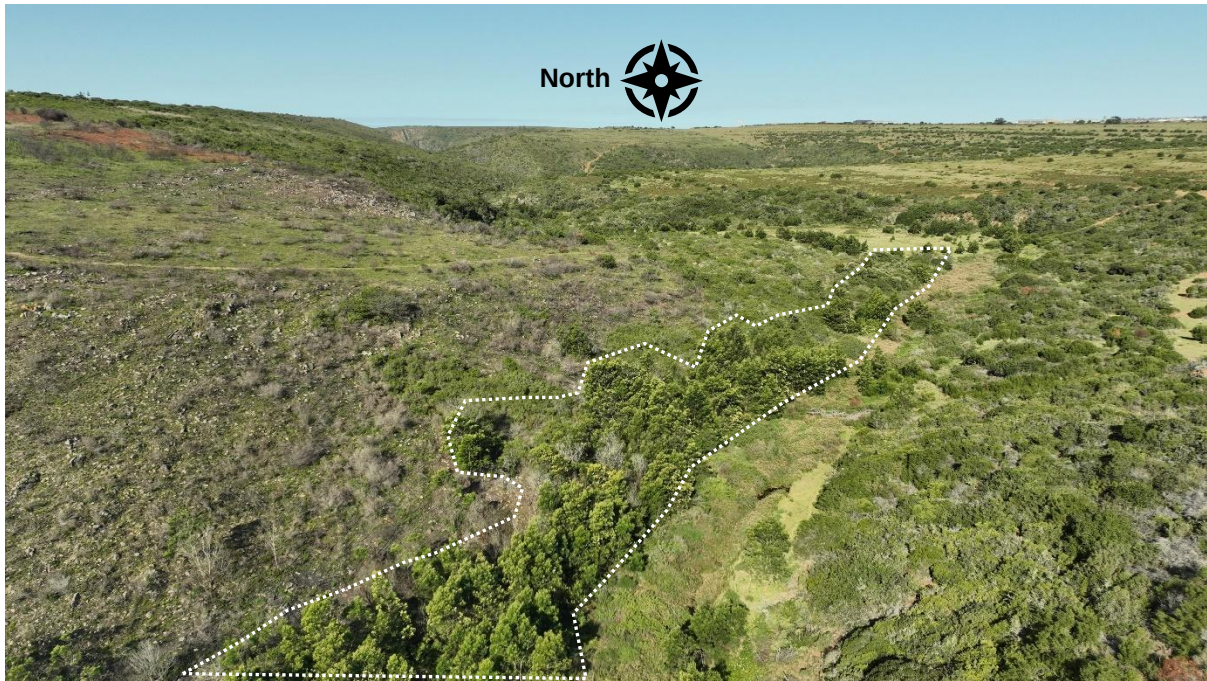


Figure 42. Drone photo along the valley-bottom wetland looking East with a recently burned slope (grey vegetation; unplanned burn) extending towards Aalwandal to the North. White dotted area indicates Black Wattle along the valley-bottom wetland.

4.5.1 Aquatic Ecosystems

The Gerickes River is mostly mapped as an Aquatic ESA by the WCBSP, and this is the case for the section of wetland present on RE/1/337. Extensive and mature growth of Black Wattle has invaded the valley bottom wetland on this site, particularly on the northern slope (Figure 43). However, there is still extensive indigenous wetland and riparian vegetation that would spread and recolonise cleared areas if alien vegetation were controlled. Similar to the watercourse further downstream on RE/220, the instream and marginal vegetation in wetland areas is dominated by *Cyperus textilis* which is similar to sections of the Tweekuilen River and tributaries in Aalwyndal.



Figure 43. Drone image of the Gerickes River showing dense vegetation which is partially invaded by Black Wattle (north slope) and Rooikrans (southern slope).

4.5.2 Terrestrial and Botanical Assessment

This property is located directly west of RE/220, however it was only accessible from the north via Aalwyndal. The site assessment was also only conducted in the northern section of the property due to limited access. A recent fire had occurred in proteoid fynbos vegetation (extending onto the south-western corner of Aalwyndal; Figure 44). A large stand of spider gum trees (*Eucalyptus conferruminata*) were observed on the site, however this invasive tree species has not yet spread too far and can be controlled. The banks of the Gericke River, were invaded by black wattles (*Acacia mearnsii*).

The fynbos and thicket vegetation observed on RE/01/337 is very similar to the vegetation of Aalwyndal, although the standing fynbos was lacking a strong Proteoid component. South of the drainage line, a fynbos-renosterveld mosaic vegetation type was observed, although no detailed walkthrough of that area was conducted. The main threat to the vegetation on this portion is from invasive alien plants, however these invasions can be eradicated / controlled should an appropriate management plan be followed for the site. Some of the burned patches on the site had regenerating Proteas, however, this could only be confirmed once they re-establish.

While no SCC were recorded during the site assessment, this is likely due to the short survey period compared to the adjacent RE/220, where more time surveying was spent. This site likely supports many of the same SCC found within Aalwynda and observed on RE/220. This property is considered a like-for-like offset site, especially regarding the fynbos vegetation observed during the site visit.



Figure 44. Landscape features and observations on and around RE/01/337.

4.5.3 Terrestrial Animal Assessment

This property was not ground-truthed by the faunal specialist but can be considered a continuation of habitat and likely species occurrence to the neighbouring RE/220 and Aalwyndal given that it directly borders both areas.

4.6 Tier 2 Assessment: Portion 255/220 & RE/47/220

Portion 255/220 and neighbouring RE/47/220 (Figure 45) provide an extension of protection along the Gericke River and connectivity immediately adjacent to Aalwyndal through the proposed Core Area. They also connect well to RE/220 (previously discussed) which constitutes an important area south of Aalwyndal. Relative to other proposed offset areas vegetation on these properties has been somewhat degraded by alien invasion (Figure 47) but given their strategic location in terms of connections from the precinct to other areas, their value is still considered high as offsets. Although these sites will require more input for initial control of alien vegetation.

These sites were assessed together because they are relatively small, but combined, constitute an important landscape linkage. RE/47/220 was not directly accessed because it was completely visible from both RE/220 and 255/220. It has also been previously assessed by the Confluent Environmental team for a proposed development closer to the river on the neighbouring property.



Figure 45. Map showing neighbouring Portions 255/220 and RE/47/220 Vyf-Brakke-Fontein in relation to watercourses, Aalwyndal and RE/220.



Figure 46. Drone photo showing the approximate boundaries of RE/255/220 and RE/47/220 in the surrounding landscape.

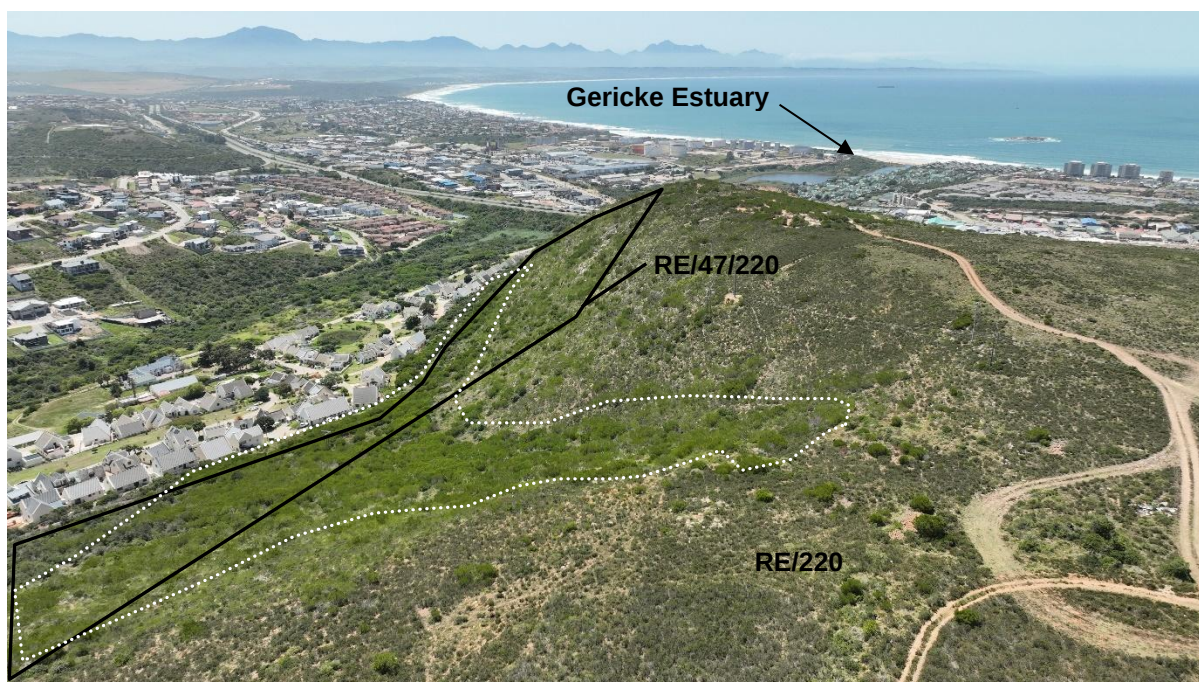


Figure 47. View East towards the sea and the Gericke Estuary showing RE/47/220 and associated Rooikrans invasion (white dotted line) which extends to RE/220.

4.6.1 Aquatic Ecosystems

The Gericke River flows through the valley bottom below both properties, although unfortunately, extensive residential development has taken place in the lower lying areas adjacent to the river. Apart from the sections of each property which extend to the valley bottom, no other major watercourses are present on either property. A small unchanneled valley-bottom wetland is present on RE/255/220 which is squeezed between two residential developments and crossed by the road (See Figure 46 and Figure 49). This wetland has extensive indigenous vegetation, but at present is invaded by Black Wattle. This invasion is by no means irreversible and could be relatively easily managed. As is the case further upstream, the Gericke River at this point is mapped as an Aquatic ESA according to the WCBSP.

A few flow paths indicated as non-perennial drainage lines extend from Aalwyndal down the slopes of RE/255/220 to the Gericke River. These drainage lines could not be accessed due to the extremely difficult terrain, but from drone footage it is clear that their vegetation structure is more densely vegetated, while no standing or flowing water would be expected most of the time given the site topography.

4.6.2 Terrestrial and Botanical Assessment

Adjacent to Portion 255/220 is RE/47/220. No field assessment was conducted on RE/47/220; however, it was visible beyond the southern boundary of 255/220. The vegetation was dense and in places resembled thicket. Some cliffs were observed which are continuous on RE/220. RE/47/220 could be considered as an important link between other candidate offset properties.

Portion 255/220 contains senescent vegetation and is located adjacent to residential areas on sloping land east of Aalwyndal. This site contained a mosaic vegetation of fynbos, renosterveld and thicket, which is very similar to the complexity and heterogeneity of ecosystems found on

Aalwyndal. The lower slopes of this site were heavily invaded with black wattle (*Acacia mearnsii*), with the vegetation becoming more natural higher up on the hillslope towards the upper plateau near Aalwyndal. Portion 255/220 is considered an important corridor adjacent to Aalwyndal, and the habitats represented are very similar to those observed on Aalwyndal.

The time spent surveying the site was less than some of the other offsite offset areas, and therefore the number of species recoded on this site was only 10. Despite this, the vegetation characteristics and transitions could clearly be seen on the site (Figure 48). The transitions observed as the slope aspect changed on Portion RE/255/220 were very similar to changes observed within Aalwyndal where undulating hills were found:

- These characteristics are that south facing slopes tend to represent fynbos. In this case both ericaceous (dominant) and proteoid fynbos were present.
- Hilltops and north-facing slopes tend to represent a graminoid form of renosterveld (bottom image of Figure 48).
- Valleys and drainage lines are thickets, and are usually invaded



Figure 48. Landscape features and observations from the vantage point of RE/255/220.

4.6.3 Terrestrial Animal Assessment

Portion 225/220 is steep and heavily invaded at the lower slopes. The top of the slope is characterized as a mosaic of fynbos, thicket, and renosterveld which is similar to the landscape found within Aalwyndal. Development exists along the bottom extent of the slope of RE/225/220 but a small wetland is avoided by this development where a variety of birds were found which would typically be associated with this habitat, as well as two frog species (Table 9; Figure 49).

As vegetation on the slopes changes from invaded to natural with an increase in altitude, a greater diversity of insects was observed such as dragonflies, damselflies (both Odonata), and ants (Formicidae). Plants in the genus *Aspalathus* were found at these high elevations which is noteworthy since two endangered butterflies (*Aloeides*) highlighted for Aalwyndal depend on this genus for feeding as caterpillars (Figure 50). The only SCC observed were tunnels of golden moles which, given the habitat, are likely associated with *A. corriae*) fynbos golden mole. The habitat fits the description of suitable habitat for several species highlighted as likely present in Aalwyndal (See Appendix. 1). See full list of species observed in Table 9.

Table 9. Species observed directly or indirectly (through tracks and signs) at 225/220. SCC in red, species commonly observed in Aalwyndal that would benefit from offsets in bold.

Taxon	Species	Common name
Amphibian	<i>Cacosternum nanum</i>	Bronze caco
Amphibian	<i>Xenopus laevis</i>	African clawed frog
Avifauna	<i>Anas undulata</i>	Yellow-billed ducks
Avifauna	<i>Anthropoides paradiseus</i>	Blue crane
Avifauna	<i>Apalis thoracica</i>	Bar-throated apalis
Avifauna	<i>Ardea cinerea</i>	Grey heron
Avifauna	<i>Bradypterus baboecala</i>	Little rush warbler
Avifauna	<i>Buteo rufofuscus</i>	Jackal buzzard
Avifauna	<i>Chrysococcyx klaas</i>	Klaas's cuckoo
Avifauna	<i>Cinnyris afer</i>	Greater Double-collared Sunbird
Avifauna	<i>Coturnix coturnix</i>	Common quail
Avifauna	<i>Falco rupicolus</i>	Rock kestrel
Avifauna	<i>Gallinula chloropus meridionalis</i>	African Common Moorhen
Avifauna	<i>Neotis denhami</i>	Denhams bustard
Avifauna	<i>Ploceus capensis</i>	Cape weaver
Avifauna	<i>Promerops cafer</i>	Cape Sugarbird
Avifauna	<i>Pycnonotus capensis</i>	Cape bulbul
Avifauna	<i>Threskiornis aethiopicus</i>	African sacred Ibis
Avifauna	<i>Vanellus armatus</i>	Blacksmith lapwing
Invertebrate	<i>Phymateus morbillosus</i>	Red milkweed locust
Invertebrate	<i>Pieris brassicae</i>	Large White
Invertebrate	Termitidae	Termitidae
Mammal	<i>Bos taurus</i>	Domestic cattle
Mammal	<i>Canis familiaris</i>	Domestic dog
Mammal	Chrysochloridae	Golden mole
Mammal	<i>Equus caballus</i>	Domestic horse
Mammal	<i>Hystrix africaeaustralis</i>	Cape Porcupine
Reptile	<i>Pelomedusa galeata</i>	Cape Terrapin
Reptile	<i>Stigmochelys pardalis</i>	Leopard tortoise



Figure 49. Wetland observed at the lower slopes of the site with high bird species diversity. Note Black Wattles in bloom along the banks (light yellow flowers).



Figure 50. One of two *Aspalathus* sp. found at the site which are known to occur in association with butterfly SCC.

Based on these field observations, these properties would be suitable offset areas for the Aalwyndal development and can be considered like-for-like from a faunal perspective. The occurrence of invasive species is an existing negative impact in some parts of Aalwyndal as it is at this site. The species found during the site visit have been found widely in Aalwyndal. The landscape is suitable habitat for several SCC which are suspected to occur in Aalwyndal.

Although RE/47/220 was not inspected on foot, a clear view of this property was obtained from 225/220. Vegetation can be characterised as invaded fynbos / renosterveld, suitable habitat for a variety of species occurring in Aalwyndal. A steep valley is present, on the boundary of 225/220. These cliffs are suitable habitat for a variety of species that are widely occurring at Aalwyndal such as Rock hyrax (*Procavia capensis*), Rock kestrel (*Falco rupicolus*; observed in flight in this gorge), and other species. RE/47/220 connects 225/220 to RE/220, adjacent to the Aalwyndal precinct. RE/47/220 is therefore essential for maintaining a corridor for animals with high mobility such as birds.

4.7 Tier 2 Assessment: RE/18/225

Limited opportunities were available to fly the drone because of flight restrictions imposed by the Mossel Bay Airport. Nonetheless, a few images were taken of the northern offset area, while the southern area could not be flown. This was unfortunate given that the vegetation in the southern area is virtually pristine fynbos-dominated and extensively vegetated with *Protea lanceolata* which is the most dominant species (Figure 51).



Figure 51. Typical continuous fynbos in the southern proposed offset area.

Two potential offset areas were highlighted on this property (Figure 52). The first to the north aimed to connect Aalwyndal via the Tier 1 sites to areas westwards towards the koppie on RE/7/225 Rietvalley. The northern corridor aligns well with Black Harrier movements in the broader landscape and was selected as specific support for this species. This area has the potential for expansion (in future discussions with the landowner) into old fields in the immediate surrounds because these fields clearly support a number of bird SCCs. A drone photo depicting the matrix of vegetation condition in this area is shown in Figure 53.

The southern corridor aligns with neighbouring properties connected to the south of Aalwyndal, several of which have already been assessed in this report. The southern corridor aims to protect a band of relatively undisturbed and extensive fynbos-renosterveld vegetation, along with the upper reaches of the Gerickes River.

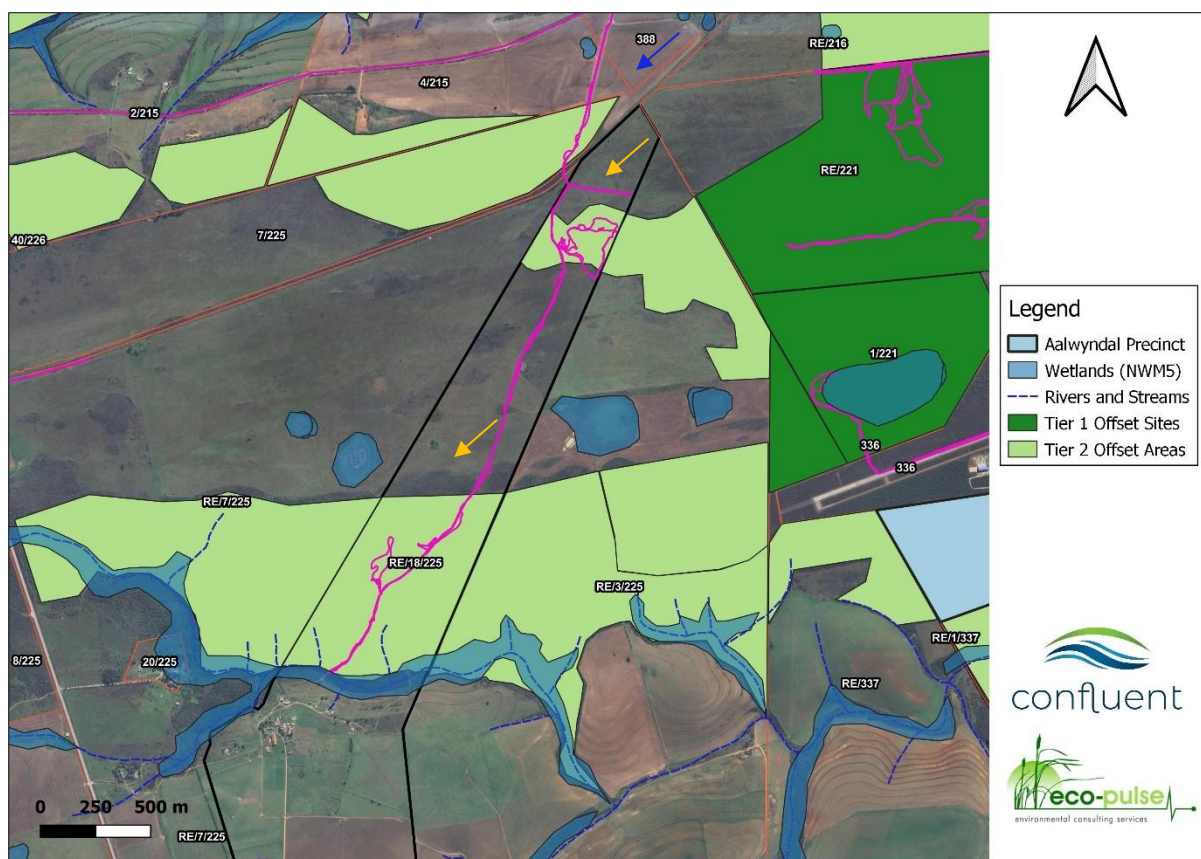


Figure 52. Location of RE/18/225 in relation to other Tier 1 and Tier 2 candidate offset sites. Yellow and blue arrows indicate Denham's Bustard and Blue Crane observations respectively.

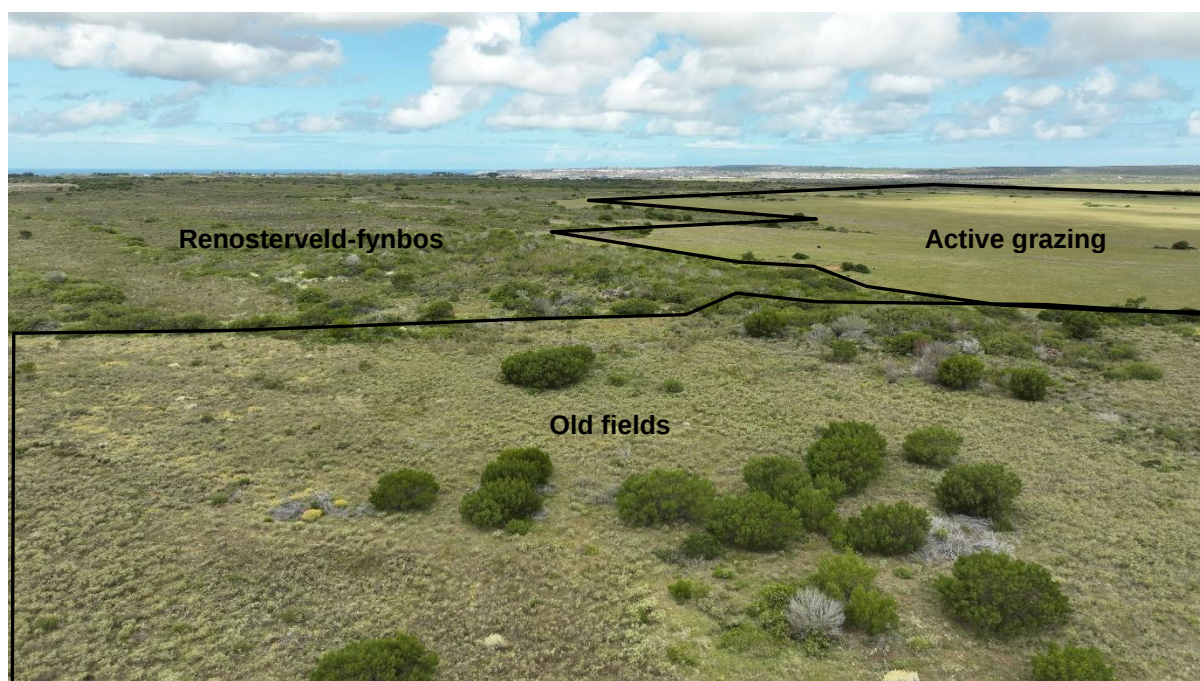


Figure 53. Drone photo of part of the northern section of RE/18/225 showing the matrix of vegetation condition based on historical and present land use.

4.7.1 Aquatic Ecosystems

The main aquatic ecosystem on RE/18/225 is the valley bottom wetland in the southern section of the property which incorporates the Gericke River. The same river that extends south of Aalwyndal into the Gericke Estuary. While the northern section of the property is well aligned with the band of depression wetlands extending west of Aalwyndal, there are no significant pans on this particular property. There are some excavated water features presumably created for livestock watering (Figure 54), but these are not holding much water apart from after significant rainfall. There are no mapped watercourses on the northern section of the property.



Figure 54. Excavated pond in the northern section of RE/18/225 in an area of significant Rooikrans invasion. One of the Denham's Bustard observations occurred close to the pond (yellow arrow).

The southern section of the proposed offset area is mostly flat, then gently sloping towards the Gerickes River. A large dam is present on the river at this point, which was relatively full of water at the time of the site visit (Figure 55). This section of the watercourse was likely a channelled valley-bottom wetland prior to construction of the dam. The dam is now fringed by extensive vegetation, which is mostly indigenous, although a large stand of Black wattle is present nearby and would need to be controlled. The watercourse at this point is mapped as an Aquatic ESA according to the WCBSP.

The fields south of the dam and Gericke River are highly transformed and not considered of value as a biodiversity offset. The area north of the river is of significant value and would be a valuable inclusion in the offset portfolio.



Figure 55. Dam located on RE/18/225 on the Gericke River in the southern area proposed as a candidate offset site.

4.7.2 Terrestrial and Botanical Assessment

The northernmost section of this property is connected to the boundary of RE/221. A mosaic of fynbos-renosterveld was observed, with the majority of the vegetation representing proteoid fynbos that was very similar to that observed and surveyed in Aalwyndal.

A ferricrete, shallow, pebbly substrate was also observed on the site, with sandstone also present. This is also very similar to Aalwyndal, as has already been discussed for some of the other offset areas assessed. The substrate on the site represents highly favourable habitat for the sensitive plant species that have been found on Aalwyndal. The fallow fields are also very similar to those discussed on RE/221, and could over time be restored to fynbos, especially if some active restoration is implemented. Many of the species present on Aalwyndal were shared with RE/18/225, however several new plant species were also recorded. Although there is evidence of some species turnover between Aalwyndal and Portion 18/225, ca. 71% of the 91 surveyed species (including observations from other iNaturalist users) were shared with Aalwyndal. This is a significant finding given that survey effort on this offset site was relatively high, with a representative survey species list being available.



Figure 56. Some observations made on RE/18/225, including a flowering *Satyrium membranaceum*

4.7.3 Terrestrial Animal Assessment

The property can be defined as mixed dryland pasture where movement of people and domestic animals (dogs, horses, cattle) is mostly unobstructed. Waterbodies at the site hold platanna (*Xenopus laevis*) and terrapins (*Pelomedusa galeata*). Denham's bustard (*Neotis denhami*) SCC was observed at the site in old fields (Figure 54) and GPS-tagged Black Harrier SCC utilise the northern area of the site. Evidence of Golden Mole (likely Fynbos Golden Moles (*Amblysomus corriae*) based on the habitat requirements of the species and those available at the site) was also found in the form of subsurface foraging tunnels (Figure 6). The habitat is suitable for a number of SCC (see Appendix 1) and it is noted that Blue Cranes (*Anthropoides paradisea*) were observed at a neighbouring farm and would definitely utilise the habitat on this property. A bird count conducted at the site yielded few species so opportunistic observations were recorded instead to derive maximum value from field methods. The full animal species list can be found in Table 10.



Figure 57. Golden Mole (*Chrysochloridae*) foraging tunnels found at RE/18/225.

Table 10. Species observed directly or indirectly (through tracks and signs) at RE/18/225. SCC in red, species commonly observed in Aalwyndal that would benefit from offsets in bold

Taxon	Scientific name	Common name
Amphibian	<i>Cacosternum nanum</i>	Bronze caco
Amphibian	<i>Xenopus laevis</i>	African clawed frog
Amphibian	<i>Sclerophrus capensis</i>	Raucous toad
Avifauna	<i>Anas undulata</i>	Yellow-billed ducks
Avifauna	<i>Apalis thoracica</i>	Bar-throated apalis
Avifauna	<i>Vanellus armatus</i>	Blacksmith lapwing
Avifauna	<i>Pycnonotus capensis</i>	Cape bulbul
Avifauna	<i>Coturnix coturnix</i>	Common quail
Avifauna	<i>Neotis denhami</i>	Denhams bustard
Avifauna	<i>Cinnyris afer</i>	Greater Double-collared Sunbird
Avifauna	<i>Ardea cinerea</i>	Grey heron
Avifauna	<i>Buteo rufofuscus</i>	Jackal buzzard
Avifauna	<i>Chrysococcyx klaas</i>	Klaas' cuckoo
Avifauna	<i>Gallinula chloropus meridionalis</i>	African Common Moorhen
Avifauna	<i>Threskiornis aethiopicus</i>	African sacred Ibis
Avifauna	<i>Promerops cafer</i>	Cape Sugarbird
Avifauna	<i>Circus maurus</i>	Black Harrier
Invertebrate	<i>Ceroctis capensis</i>	Spotted blister beetle
Invertebrate	<i>Phymateus morbillosus</i>	Red milkweed locust
Invertebrate	<i>Pieris brassicae</i>	Large White
Invertebrate	<i>Termitidae</i>	Termitidae
Mammal	<i>Chrysochloridae</i>	Golden mole
Mammal	<i>Hystrix africaeaustralis</i>	Cape Porcupine
Mammal	<i>Bos taurus</i>	Domestic cattle

Taxon	Scientific name	Common name
Mammal	<i>Equus caballus</i>	Domestic horse
Mammal	<i>Canis familiaris</i>	Domestic dog
Reptile	<i>Pelomedusa galeata</i>	Cape Terrapin
Reptile	<i>Stigmochelys pardalis</i>	Leopard tortoise

The species and habitats observed during the site visit have been found widely in Aalwyndal. The Golden Mole subsurface tunnels were observed, along with observations of Denham's Bustard and Black Harrier (the latter by GPS tracking). The landscape is suitable habitat for several SCC which are suspected to occur in Aalwyndal.

RE18/225 sites are close to Aalwyndal and support most of the SCCs that are predicted to occur in the precinct. It is connected to RE/220 through the southern area, and Aalwyndal precinct ca. 3km away via corridors across neighbouring properties in riverine habitats which allows for the movement of species, increasing gene flow and reducing competition for resources.

4.8 Summary of Candidate Offset Site Suitability

All of the properties that have been ground-truthed to date are considered suitable offset sites for development in Aalwyndal.

The initial investment to ensure the protection and sustainability of biodiversity features on each property differs somewhat and is primarily driven by the likelihood that fencing could be required (if wandering people and livestock are an issue) and / or if areas of dense alien invasion are present. The latter can be complicated further by accessibility, as some of the properties have very steep terrain and/or minimal access roads. A summary of these factors is provided in Table 11.

Table 11. Overview of initial management priorities that will be necessary to secure properties and protect biodiversity on ground-truthed offset sites.

Property	Area of Alien Invasion (ha)	Severity of Invasion	Ease of Access	Fencing Required
Tier 1: RE/221	14.9	Low	Moderate ^R	
Tier 1: 1/221	49.0	Moderate	Moderate ^R	
Tier 2: 15/215	22.1	Moderate	Easy	
Tier 2: RE/220	94.3	Moderate	Difficult ^S	Yes
Tier 2: RE/1/337	23.0	Moderate	Moderate ^R	Yes
Tier 2: 255/220	15.7	Moderate	Difficult ^S	
Tier 2: RE/47/220	10.48	High	Difficult ^S	Yes
Tier 2: RE/18/225	11.9	Moderate	Easy	

^R = Road access is limited or non-existent

^S = Steep gradients will make alien clearing challenging

5. LANDOWNER ENGAGEMENT

A summary of the preliminary engagement that has occurred with each of the landowners of properties ground-truthed is provided below.

Table 12. Summarised engagement with landowners of ground-truthed properties.

Property	Response to Letter	Notes
Tier 1: RE/221	Negative	- Site informally assessed in May prior to negative response to request to assess biodiversity on the property. - Landowner responded that they are not currently interested in pursuing an offset. - No further engagement has taken place to date.
Tier 1: 1/221	Negative	- Site informally assessed in May from the airport side prior to negative response to request to assess biodiversity on the property. - Landowner responded by email stating that the property is family owned with no future plans of development. Access to survey biodiversity was denied. - No further engagement has taken place to date.
Tier 2: 15/215	Positive	Landowner responded giving permission to survey biodiversity and expressed interest in offsetting process.
Tier 2: RE/220	Positive	- Landowner responded and several emails have been exchanged. - Permission to assess the site was received. - The landowner was notified that their assessment outcome was positive and their site would be considered suitable as an offset.
Tier 2: RE/1/337	Very Positive	- Landowner did not respond to letter as email had changed. - Phoned to discuss and permission to access and survey the property was obtained. - The landowner initiated several follow up emails and phone calls to express their willingness to contribute their property as an offset. - The landowner was notified that their assessment outcome was positive, and their site would be considered suitable as an offset.
Tier 2: 255/220	Positive	- Landowner did not respond to letter as email was incorrect. Tracked down an alternative email and obtained permission to access and survey the property. - Landowner did not respond to letter.
Tier 2: RE/47/220	Very Positive	- Contacted the landowner by phone, who then came to our offices for a meeting. - Permission was obtained and the landowner expressed full support for use of this area as an offset.
Tier 2: RE/18/225	Positive	- Landowner did not respond to the letter. - Emailed directly and after several emails exchanged, obtained permission to access the sites. - Multiple directors of the company landowner must be engaged to take this further, but initial response is positive.

As can be seen, several landowners are either positive or very positive about taking discussions and negotiations further. Generally speaking, landowners were open to engagement and once the concept of the biodiversity offsets was fully explained in a two-way conversation, along with the potential benefits to landowners, most were supportive of the idea. Tier 1 property owners have not yet been directly engaged and may become more open to the idea of offsets given more information on their development prospects and potential benefits as a landowner.

A preliminary landowner agreement has been provided in Appendix 5, and this could be shared with positive landowners to gain their feedback and further insights into potential issues that may arise.

However, given that the priority for securing offsets favours the onsite offset areas in the Core Area as the primary goal, these landowners would only need to be further engaged once the onsite areas have all been secured. This could take several years, and therefore further engagement with offsite landowners could be premature, potentially resulting in frustration or disappointment if offsets don't materialise for them in the short to medium term.

6. CONCLUSIONS

This assessment determined that of the requirement for 360.02 ha of offsite offset areas, Tier 1 Sites offer 218 ha while Tier 2 offer 1263 ha. Given that ground-truthed sites confirm the assessed properties as 'like for like' this means there are ample opportunities to secure sufficient space for Aalwyndal's offset requirements. The priority should remain to secure Tier 1 sites and adjoining Tier 2 offset areas first, as these offer the best conservation outcome.

It must be noted that areas delineated as potential offsets were conceived without inputs from the landowners themselves and are based mostly on natural features. It is highly likely that the extent and layout of these areas would change when formal discussions commence with landowners. The delineations presented in this report should therefore not be interpreted as final, but more as an assessment of where the most suitable areas would be.

At this point, the potential offset areas have been identified, preliminary feedback obtained from a sufficient number of landowners, and a model landowner contract provided (Appendix 5). This information forms the building blocks of the offset bank, however given the phase of the biodiversity offsets required, the bank cannot begin to be formalised through signed agreements until offsite offsets areas become necessary. Further engagement at this point may create expectations from landowners that would likely not be met soon.

Candidate areas identified in this assessment as suitable offsets for the vegetation types in Aalwyndal could very well be considered as potential offset sites for other developments in the Mossel Bay area. Given the requirements of the NBOG and the extent of Endangered and Critically Endangered ecosystems in the Mossel Bay area, this assessment will facilitate the balance between development and preservation of biodiversity in Aalwyndal and beyond.

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8. APPENDICES

8.1 Vegetation types, scored biodiversity, and practical considerations for each of the candidate properties assessed.

Enlarge your screen to view this information.

Tier	Property Name	Registered Size (ha)	Extent Natural (ha)	Site Excluded	Rationale	Sweetland Sclerite Fynbos (Ha)	Mossel Bay Shale (Ha)	Hartembos Dune Thicket (Ha)	Other Vegetation Types (Ha)	Vok Variant (Hartembos River & Floodplain)	Vok Variant (PetroSA Fynbos - Renosterveld)	Vok Variant (Brandwag Fynbos - Renosterveld Thicket)	Vok Variant (Protea Fynbos - Renosterveld Thicket)	Vok Variant (Other)	Use for Use (Vok)	Use for Use (Vok)	Offset site location relative to proposed site	Other site location relative to proposed site	Regional Conservation Importance	Ownership	Zoning / Intended Landuse	Identified in existing municipal open space network	Practical Management Considerations	Compatibility of landuses with conservation objectives	Quality Weightings Score (%)											
1	2/21 Klein Zuurkop	66	62	N		62	0	0	0	0	13,59636	0	48,51201	0	Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site is well connected to other intact natural areas. Limited constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	81%			
1	RE/221 Klein Zuurkop	170,37	139	N		139	0	0	0	0	139	6,40260	4,2024	0	Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site is well connected to other intact natural areas. Limited constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	74%				
2	RE/4/217 Hartembosch	32,24	21	N			21				5,46143	15,35694			Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site provides an opportunity to consolidate / augment existing protected areas. No constraints to fire management are expected.	2	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Existing Municipal Ownership	0,5	1	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>40%)	1	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	100%			
	RE/255/230 (NEW)	16,99	16,99	N		10,6	6,39					11,8	1,23	3,96	Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site provides an opportunity to consolidate / augment existing protected areas. No constraints to fire management are expected.	2	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	1	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>40%)	1	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	98%			
2	RE/47/230 (NEW)	17,82	5,04	N		3,15	1,89				3,86	1,18			Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site provides an opportunity to consolidate / augment existing protected areas. No constraints to fire management are expected.	2	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>40%)	1	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	88%			
2	15/215	268,51	95	N		74	21	0	0		14,93637	0	6,4679	71,4189	0	Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site is well connected to other intact natural areas. Limited constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	69%			
2	2/215	283,29	154,09	N		118		0	0		8,47236	2,34422	0	143,29179	0	Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site is well connected to other intact natural areas. Limited constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	0,5	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0,25	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%)	0,25	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	79%
2	3/215	221,66	113	N		66	47				12,67908	35,8143	64,26311		Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site is well connected to other intact natural areas. Limited constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	69%				
2	388 Klipkop	254,54	121	N		27	76	0	18		47,49735	37,69068	25,72057	10,40969	0	Property contains habitat of the same national vegetation types that will be impacted by development (Sweetland Sclerite Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartembos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vok (Brandwag Fynbos-Renosterveld Thicket or Protea Fynbos - Renosterveld Thicket or Hartembos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site is well connected to other intact natural areas. Limited constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0,5	Moderate proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>30%)	0,5	Property includes a mix of areas including some portions with high edge:area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	81%

2	4/255 Webdagt	150,11	42	N		29		13	28,45869	14,47052	0	14,88317	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%).	0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	76%	
2	5/218	159,73	52,8	N		20,8	32	0	0	18,48348	0	34,2	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (Individual ownership)	1	Target areas zoned as an incompatible landuse (e.g. industry, residential).	0	Moderate proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>30%).	0,5	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	71%	
2	RE/1/337 Droogfontein	56,37	17	N				17	0	12,64706	1,98843	2,46755	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>60%).	1	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	74%	
2	RE/18/225 Rietvalley	233,33	58	N		37	0	21	0	9,00134	3,85971	0	44,85572	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%).	0,25	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	67%
2	RE/216	100,62	41	N		41	0	0	0	0	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	64%			
2	RE/217 Hartenbosch	476,04	32	N		7	38	0	0	23,69907	0	21,84921	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>60%).	1	Property is characterized by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	71%	
2	RE/220 Vyf Bakke Fontein (South of precinct)	320,95	140	N		9		131	1	76,37667	22,0936	11,36996	30	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>60%).	1	Property contains large blocks of habitat with low edge-area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	79%	
2	RE/1/225 Rietvalley	464,06	150	N		106,5		42	2	23,06317	113,2	76,70995	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%).	0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	64%	
2	RE/337 Droogfontein	253,75	33	N		26		7		0,71201	0,02418	0	32,65671	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%).	0,25	Property is characterized by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	64%
2	RE/7/225 Rietvalley	505,85	113	N		113	0	33	0	41,4	0	0	53,9	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site provides an opportunity to consolidate / expand existing protected areas. No constraints to fire management are expected.	2	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Moderate proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>30%).	0,5	Property contains large blocks of habitat with low edge-area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	83%	
3	323	1223,15	556	N		0	221	0	335	27	0	0	339	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Property contains large blocks of habitat with low edge-area ratio	0	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	60%		
3	356	232,8	146	N		0	10	0	136	14,7	0	0	152,3	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sclerite Fynbos - Rensosterveld; North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vuk (Brandweg Fynbos - Rensosterveld; Thicket or Proteus Fynbos - Rensosterveld; Thicket or Hartenbos River & Rooipunt).	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBA & ESAs).	0,5	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	62%		

3	372	387,6	94	N		0	64	0	31	0	0	0	40	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property includes a mix of areas including some portions with high edge-area ratios.	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	55%
3	1/142 (Rehabilitation NE Cluster)	114,45	78	N		0	0	0	78	0	0	0	78	0	0	Property contains habitat of an alternative vegetation type of a higher threat status (trading up).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property contains large blocks of habitat with low edge-area ratios.	1	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	60%
3	1/151	91,61	80	N		0	78	0	2	24,14	0	37,76	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property contains large blocks of habitat with low edge-area ratios.	1	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	64%
3	10/154	135,96	99	N		0	76	0	23	16,33	0	70,21	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property contains large blocks of habitat with low edge-area ratios.	1	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	64%
3	10/217	257,21	60	N		0	45	0	16	13,9	0	17,5	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is poorly connected with other intact natural areas. / major constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>60%).	Property is characterized by remnants with high edge-area ratios.	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	71%
3	13/115	193,88	144	N		0	7	0	137	0	0	0	120,6	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property contains large blocks of habitat with low edge-area ratios.	1	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	60%
3	14/148 (Oranienburg h)	144,72	46	N		0	46	0	0	0	0	46	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property includes a mix of areas including some portions with high edge-area ratios.	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	60%
3	16/149	233,4	98	N		0	24	0	73	0	0	193,9	0	38,1	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>60%).	Property contains large blocks of habitat with low edge-area ratios.	1	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	71%
3	2/151	108,74	50	N		0	50	0	0	19,65	0	11,15	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is poorly connected with other intact ecosystems / major constraints to managing fire is expected.	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	0,5	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property includes a mix of areas including some portions with high edge-area ratios.	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	50%
3	2/31	98,19	60	N		0	0	0	60	0	0	50,4	0	9,6	0	Property contains habitat of an alternative vegetation type of a higher threat status (trading up).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	1	Private (individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property includes a mix of areas including some portions with high edge-area ratios.	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	57%
3	31/143	180,7	150	N		0	0	0	150	9,2	0	40,6	0	70	0	Property contains habitat of an alternative vegetation type of a higher threat status (trading up).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>60%).	Property contains large blocks of habitat with low edge-area ratios.	1	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	69%
3	129 Marijnsdrift	538,47	172	N		0	64	0	107	0	0	0	126,3	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swartkops-Sicote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Maccus Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandweg Fynbos-Renosterveld; Thicket or Proteus Fynbos - Renosterveld; Thicket or Hartenbos River & Floodplain).	Target property is located within 10km of the development site.	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	Habitat remnants have been identified as critical for meeting conservation objectives (mix of CBAs & ESAs).	1	Other government land or land under communal ownership	0	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture).	0,5	0	Property contains large blocks of habitat with low edge-area ratios.	1	Properties with compatible landuses (linked to maintenance of indigenous flora).	1	57%

3	367 AKA 423	342,43	103	N		0	103	0	0	12	0	47,78	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swelendam Slacote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	1	Target property is located within 10km of the development site.	1	The candidate site is poorly connected with other intact natural areas. Limited constraints to managing fire is expected.	0,5	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property is characterized by remnants with high edge:area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	60%	
3	40/226	187,77	34	N		0	0	0	0	34	0	0	34	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swelendam Slacote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	1	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have not been flagged as a priority for conservation (no CBAs present).	0	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property includes a mix of areas including some portions with high edge:area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	50%	
3	48/149	350,4	174	N		0	62	0	112	33,5	0	50,25	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swelendam Slacote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	1	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%)	0,25	Property includes a mix of areas including some portions with high edge:area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	62%
3	9/142 (NE Cluster) AKA 2/140	156,27	65	N		0	0	0	0	65	0	65	0	0	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	0,5	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	60%	
3	9/149	254,64	154	N		0	0	0	0	154	0	154	0	0	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	0,5	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>40%)	1	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	67%
3	3/146 Mossel Bay	393	372	N		0	0	0	0	372	0	0	0	372	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	0,5	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	60%	
3	RE/143 Kipheuvel	362,22	253	N		0	0	0	0	253	0	104,6	0	148,4	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	0,5	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>40%)	1	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	57%
3	RE/2/142 (NE Cluster)	588,06	480	N		0	0	0	0	480	0	480	0	0	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	0,5	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	60%	
3	RE/219 Vaaldevlei	360,23	155	N		0	74	0	81	21,6	0	96,87	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swelendam Slacote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	1	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>40%)	1	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	74%
3	RE/331 (NE Cluster)	367,62	182	N		0	0	31	150	0	0	30,85	0	0	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Site contains the following vegetation types mapped by Vlok (Brandeweg Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	0,5	Target property is located within 10km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	67%	
3	RE/220 (Renosterveld Estate)	53,7	12	N		0	12	0	0	0	0	0	0	12	Property contains habitat of the same national vegetation types that will be impacted by development (Swelendam Slacote Fynbos (Revised); North Langeberg Sandstone Fynbos; Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld).	Site does not contain like-for-like habitat according to Vlok	0	Target property is located >10km from the development site.	0	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	High proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (>40%)	1	Property contains large blocks of habitat with low edge:area ratio	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	74%
4	378	22,35	14	N		0	0	0	0	14	0	0	0	14	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	Site does not contain like-for-like habitat according to Vlok	0,5	Target property is located >10km from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	1	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property is characterized by remnants with high edge:area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	36%	

4	1/313 Klein Zorghout	387,06	284	N		0	0	0	284	0	0	0	0	284	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	Site does not contain like-for-like habitat according to Vlok	0	Target property is located >10km from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5		0	Property contains large blocks of habitat with low edge-area ratios	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	45%
4	127 Orange Grove	50,83	24	N	Neither veg type, no trade up veg type, and > 10km away	0	0	0	24	0	0	0	0	24	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	Site does not contain like-for-like habitat according to Vlok	0	Target property is located >10km from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5		0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	48%
4	396 Mossel Bay	190,3	163	N		0	0	0	163	0	0	0	0	163	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	Site does not contain like-for-like habitat according to Vlok	0	Target property is located >10km from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5		0	Property contains large blocks of habitat with low edge-area ratios	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	45%
4	RE/3/127	69,84	45	N		0	0	0	45	0	0	0	0	45	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	Site does not contain like-for-like habitat according to Vlok	0	Target property is located >10km from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives	0,5	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5		0	Property contains large blocks of habitat with low edge-area ratios	1	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	48%
0	1862	35,6		Y	Already forms part of the conservation area identified as a condition of the EA for Sockelwald	0	35,6	0	0						Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Siroete Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld)	1	Target property is located within 5km of the development site.	2	The candidate site provides an opportunity to consolidate / expand existing protected areas. No constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Existing Municipal Ownership	0,5	Target areas zoned for conservation or identified for conservation in an existing strategic plan	1							N/A		
0	1863	151,61		Y	Already forms part of the conservation area identified as a condition of the EA for Sockelwald	0	151,61	0	0						Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Siroete Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld)	1	Target property is located within 5km of the development site.	2	The candidate site provides an opportunity to consolidate / expand existing protected areas. No constraints to fire management are expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Existing Municipal Ownership	0,5	Target areas zoned for conservation or identified for conservation in an existing strategic plan	1							N/A		
0	1/128 Ushyk	15,5	10	Y	Small remnant, does not appear to be GIS as mapped and fragmented.	0	0	0	10						Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	Site does not contain like-for-like habitat according to Vlok	0	Target property is located >10km from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5		0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A		
0	12/217	346,84	138	Y	Very large operating quarry on site in the middle of the land parcel causing disturbance and fragmentation	0	69	0	69	0	0	0	0	91,81	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Siroete Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld)	1	Site does not contain like-for-like habitat according to Vlok	0	Target property is located within 5km of the development site.	2	The candidate site is poorly connected with other intact ecosystems / major constraints to managing fire is expected.	0,5	Habitat remnants have not been flagged as a priority for conservation (no CBAs present).	0	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas zoned as an incompatible landuse (e.g. industry, residential)	0	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<10%)	0,25	Property is characterized by remnants with high edge-area ratios	0,3	Properties with incompatible landuses (linked to maintenance of indigenous flora)	0,25	N/A
0	13/38	65,5	55	Y	Neither veg type, no trade up veg type, and > 10km away	0	0	0	55	0	0	0	0	55	Property contains habitat of the same or a lower threat status (trading down)	0	Target property is located >10km from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	as critical for meeting conservation objectives	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5		0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A		
0	20/225	5	1,6	Y	Too small to be included and mostly modified.																		Private (More complex ownership structure, e.g. Trust)											N/A	
0	29/149	30,24	25	Y	Indicated for mining with large edge effects impacted from that land use and adjacent road.	0	22	0	4	0	0	0	5,08	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Siroete Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld)	1	Site contains the following vegetation types mapped by Vlok (Bredasdorp Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	1	Target property is located within 5km of the development site.	1	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas).	1	Private (Individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5		0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A
0	336 Mossel Bay (Airport)	66,34	12,53	Y	Airport is located on this site with plans to develop and zoned for transport which is not compatible with	12,53	0	0	0	0	0	0	0	12,53	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Siroete Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartenbos Dune Thicket or Mossel Bay Shale Renosterveld)	1	Site contains the following vegetation types mapped by Vlok (Bredasdorp Fynbos-Renosterveld Thicket or Proteus Fynbos - Renosterveld Thicket or Hartenbos River & Floodplain)	1	Target property is located within 5km of the development site.	2	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBAs & ESAs).	0,5	Target areas zoned as an incompatible landuse (e.g. industry, residential)	0							N/A		

0	4/126	5,4	0	Y	Simply too small, and all considered transformed	0	0	0	0	0								Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	0	Site does not contain like-for-like habitat according to Viok	0	Target property is located >100m from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Private (individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property is characterised by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A		
0	4/127	8,8	1	Y	Too small, and mostly transformed	0	0	0	0	1								Property contains habitat of the same or a lower threat status (trading down)	0	0	Site does not contain like-for-like habitat according to Viok	0	Target property is located >100m from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Private (individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	1	Property is characterised by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A		
0	4/26 Grootvlei	7,25	1	Y	Too small, and mostly transformed	0	0	0	0	1	0	0	0	0	0	1	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	0	Site does not contain like-for-like habitat according to Viok	0	Target property is located >100m from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Private (individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property is characterised by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A			
0	6654 (was RE/50/217)	34,27		Y	Already forms part of the conservation area identified as a condition of the EA for Sandvlei	0		34,27	0	0								Property contains habitat of the same or a lower threat status (trading down)	0		Site does not contain like-for-like habitat according to Viok	0	Target property is located within 5km of the development site.	0,5	The candidate site provides an opportunity to consolidate / expand existing protected areas. No constraints to fire management expected.	1	Existing Municipal Ownership	0,5	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%)	0,25				N/A		
0	8/225 Nietvalley	80,64	53	Y	Located adjacent to Mossdriest with likely plans for expansion	0	0	0	53	14	6,6		46,58	0	9,3		Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sligte Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartbees Dune Thicket or Mossel Bay Shale Renosterveld)	1	0	Site contains the following vegetation types mapped by Viok (Brandvlei Fynbos-Renoster Thicket or Protea Fynbos - Renoster-Thicket or Hartbees River & Floodplain)	0	Target property is located within 5km of the development site.	0,5	The candidate site is poorly connected with other intact ecosystems / major constraints to managing fire is expected.	0,5	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas)	1	Existing Municipal Ownership	0,5	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%)	0,25	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with incompatible landuses (linked to maintenance of indigenous flora)	0,25	N/A
0	8/39	107,18	67	Y	Neither veg type, no trade up veg type, and > 100m away	0	0	0	0	67	0	0	0	0	0	67	Property contains habitat of the same or a lower threat status (trading down)	0	0	Site does not contain like-for-like habitat according to Viok	0	Target property is located >100m from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A			
0	RE/11/2127 Hartbeesch	238,27	159	Y	Very large operating quarry on site in the middle of the land parcel causing disturbance and fragmentation.	0	76	0	83	0	0	0	110,09	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sligte Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartbees Dune Thicket or Mossel Bay Shale Renosterveld)	1	0	Site contains the following vegetation types mapped by Viok (Brandvlei Fynbos-Renoster Thicket or Protea Fynbos - Renoster-Thicket or Hartbees River & Floodplain)	0	Target property is located within 5km of the development site.	0,5	The candidate site is poorly connected with other intact natural areas. Limited constraints to managing fire is expected.	0,5	Habitat remnants have been identified as critical for meeting conservation objectives (large CBA areas)	1	Private (individual ownership)	0,5	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%)	0,25	Property is characterized by remnants with high edge-area ratios	0,3	Properties with incompatible landuses (linked to maintenance of indigenous flora)	0,25	N/A
0	RE/126 AKA 430	32,31	11	Y	Neither veg type, no trade up veg type, and > 100m away	0	0	0	0	11	0	0	0	0	0	11	Property contains habitat of the same or a lower threat status (trading down)	0	0	Site does not contain like-for-like habitat according to Viok	0	Target property is located >100m from the development site.	0,5	The candidate site is poorly connected with other intact ecosystems / major constraints to managing fire is expected.	0,5	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBAs & ESAs)	1	Private (individual ownership)	0,5	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property is characterized by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A	
0	1/127 Orange Gro	87,21	72	Y	Neither veg type, no trade up veg type, and > 100m away	0	0	0	0	72	0	0	0	0	0	72	Property contains habitat of the same or a lower threat status (trading down)	0	0	Site does not contain like-for-like habitat according to Viok	0	Target property is located >100m from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Private (individual ownership)	1	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property is characterized by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A			
0	RE/128 Uthuk	22,09	13	Y	Small remnant, does not appear to be GHCP as mapped and is highly fragmented.	0	0	0	0	13	0	0	0	0	0	13	Property contains habitat of an alternative vegetation type of a higher threat status (trading up)	0,5	0	Site does not contain like-for-like habitat according to Viok	0	Target property is located >100m from the development site.	0,5	The candidate site is well connected to other intact natural areas. Limited constraints to fire management expected.	1	Private (More complex ownership structure, e.g. Trust)	0,25	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	0	Property includes a mix of areas including some portions with high edge-area ratios	0,5	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A			
0	RE/151 Outeniquabosch	188,6	48	Y	Extensive transformation for agricultural evident across the site with only watercourses containing more natural vegetation.	0	44	0	4	0	0	0	0	0	0	0	Property contains habitat of the same national vegetation types that will be impacted by development (Swellendam Sligte Fynbos (Revised), North Langeberg Sandstone Fynbos, Hartbees Dune Thicket or Mossel Bay Shale Renosterveld)	1	0	Site contains the following vegetation types mapped by Viok (Brandvlei Fynbos-Renoster Thicket or Protea Fynbos - Renoster-Thicket or Hartbees River & Floodplain)	0	Target property is located within 100m of the development site.	0,5	The candidate site is poorly connected with other intact ecosystems / major constraints to managing fire is expected.	0,5	Habitat remnants have been identified as important for meeting conservation objectives (mix of CBAs & ESAs)	0,5	Target areas not zoned for conservation but where conservation is regarded as a compatible landuse (e.g. rural agriculture)	0,5	Small proportion of earmarked areas are included as part of the proposed Municipal Open Space Plan (<30%)	0,25	Property is characterized by remnants with high edge-area ratios	0,3	Properties with compatible landuses (linked to maintenance of indigenous flora)	1	N/A		

8.2 Letter to Candidate Offset Site Landowners



www.mosselbay.gov.za
admin@mosselbay.gov.za
 Fax/Ifeksi: +27 (44) 606 5062
 Tel/Imfonomfono: +27 (44) 606 5000



Mossel Bay
 MUNICIPALITY
 MOSSEL BAY | HARTENBOS | GREAT BRAK RIVER | HERBERTSDALE

In antwoord verwys na nommer 0000/J Roux
 In reply quote number
 Xa Uphendula chaza Le Nombolo

29 August 2024

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Sir/Madam

DEVELOPMENT OF A STRATEGIC BIODIVERSITY OFFSET PLAN FOR THE AALWYNDAL AREA OF MOSSEL BAY

According to the municipal records, you are the Owner of the following Property/ies:

The Mossel Bay Municipality together with the Western Cape Government are in the process of developing a Strategic Biodiversity Offset Plan for the Aalwyndal area of Mossel Bay. This project aims to resolve the conflict between highly sensitive ecosystems and the need for high density residential development facilitating trade-offs between competing land uses while optimising and expediting development in the future residential area. The Biodiversity Offset Framework will operate in a strategic context beyond the individual project level aiming to unlock development potential of the area whilst ensuring conservation targets for the ecosystem type can be partly met and maintained in perpetuity.

The aim of this letter is to inform you that your property has been identified by biodiversity specialists as potentially including areas of similar vegetation and species to those found in Aalwyndal. The next step is to ground-truth the property in order to classify the vegetation type and establish any similarities to the Aalwyndal vegetation types. Ground-truthing is entirely non-invasive and typically involves the following actions conducted over 4-6 hours:

- Specialists will contact you prior to the site assessment to inform you of the survey date;
- Noting dominant plant species along transects (lines) or at points;
- Active searching for threatened plant species
- Placement of camera traps to monitor wildlife
- Observations of animal signs such as birds, scat, tracks etc.
- Observations of wetlands and other watercourses

MOSSEL BAY | HARTENBOS | GREAT BRAK RIVER | HERBERTSDALE

101 Marshstraat Street Sitalato 101
 Privaatsak Private Bag Ingxowa Yeposi Ngu X29
 Mosselbaai Mossel Bay Bayi 6500

Sometimes it is necessary to leave camera traps at 'high traffic' locations for several days, but specific arrangements would be made with the Landowner to retrieve the camera trap at a later point in that instance. Specialists conduct the survey during daylight hours wearing high visibility clothing and will contact you before the site assessment to inform you of the survey date.

The study does not involve any investigations and reporting on any other activities on your property beyond the above scope and purpose.

At this point in time, the focus is on understanding current land use aspirations, and the suitability of undeveloped portions of your property as a biodiversity offset site.

Further engagements are partially dependent on the specialist findings on your property.

The Municipality kindly request your cooperation with this aspect, and your permission to access your property for surveys as described.

Should you consent to this request, could you please sign and return this consent form provided to the Mossel Bay Municipality, for attention Mr Jaco Roux at jroux@mosselbay.gov.za. You may also contact Mr Roux for more information at 044 606 5071.

Yours faithfully



DIRECTOR: PLANNING & ECONOMIC DEVELOPMENT

/jk

LANDOWNER'S CONSENT FORM**CONTACT INFORMATION:**

Name of landowner / Person in control of the land:	
Company / Trading name: State Department or Organ of State:	
Contact numbers:	
E-mail:	

CONSENT:

1. I/we the undersigned

(insert the name/s of the owner/s of the land or person/s in control of the land)

of identity number/company registration number

(insert the owner/s ID number/s or the registration number of the legal entity)

am/are the registered Owner/s of the property or the lawful person/persons in control of the land

(insert description of the property/ properties and title deed numbers)

2. I / we hereby give consent to,

Confluent Environmental (Appointed specialist)
(insert the name/s of the Applicant / legal entity applying)

to undertake the following activity(ies) on the land:

Specialist Investigation on the mentioned property/ies
(insert a brief description of the project and identified activity(ies) in question that will be applied for)

Signature of Landowner / authorised
representative

13/09/2024

Date:

8.3 Plant species composition comparison between Aalwyndal and candidate offset sites.

Table 13. A comparison between species recorded in Aalwyndal and the offsite offset Portions. Species listed include observations by other iNaturalist users. 11 SCC are presented (yellow rows).

Species	Aalwyndal	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
Total of 607 species	557	43	66	99	19	10	93
Spp. shared with Aalwyndal	557 (100%)	42 (98%)	52 (79%)	90 (91%)	16 (84%)	10 (100%)	66 (71%)
<i>Abutilon sonneratianum</i>	1		1				
<i>Acacia cyclops</i>	1	1	1	1			1
<i>Acacia mearnsii</i>	1		1		1		
<i>Acacia melanoxylon</i>	1						
<i>Acacia saligna</i>	1						
<i>Achyranthemum paniculatum</i>	1			1			1
<i>Acmadenia heterophylla</i>	1						
<i>Acokanthera oppositifolia</i>	1						
<i>Acrodon bellidiflorus</i>	1		1				1
<i>Adromischus caryophyllaceus</i>	1						
<i>Agathosma</i>	1						
<i>Agathosma capensis</i>	1	1		1			1
<i>Agathosma microcarpa</i>	1						
<i>Agathosma ovata</i>	1						
<i>Agathosma serpyllacea</i>	1	1					
<i>Agave americana</i>	1						
<i>Aizoon portulacaceum</i>	1						
<i>Aizoon pubescens</i>	1						
<i>Albuca</i>	1						
<i>Albuca canadensis</i>	1		1				
<i>Albuca cooperi</i>	1			1			
<i>Albuca setosa</i>	1						
<i>Aloe arborescens</i>	1		1				
<i>Aloe ferox</i>	1		1	1			
<i>Aloe maculata</i>	1		1	1			
<i>Alternanthera pungens</i>	1						
<i>Amaryllidoideae</i>	1						
<i>Amphithalea violacea</i>	1						
<i>Anacampseros lanceolata</i>	1						
<i>Anginon difforme</i>					1		
<i>Anginon swellendamense</i>	1						
<i>Anisodonteia scabrosa</i>			1				
<i>Anthospermum aethiopicum</i>	1			1	1		
<i>Anthospermum galioides</i>	1	1		1			
<i>Anthospermum spathulatum</i>	1						
<i>Arctotheca prostrata</i>	1			1			
<i>Arctotis acaulis</i>				1			1
<i>Arctotis pinnatifida</i>							1
<i>Argemone ochroleuca</i>	1						
<i>Argyrobium molle</i>	1						
<i>Aristea africana</i>	1						

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Aristea ecklonii</i>	1						
<i>Aristea nana</i>	1						
<i>Aristea pusilla</i>	1						
<i>Arundinoideae</i>	1						
<i>Aspalathus</i>	1						
<i>Aspalathus acuminata</i>	1						
<i>Aspalathus acuminata acuminata</i>	1						
<i>Aspalathus albomagnifica</i>	1						
<i>Aspalathus alopecurus</i>	1				1	1	1
<i>Aspalathus alpestris</i>	1						
<i>Aspalathus asparagoides</i>	1				1		
<i>Aspalathus ciliaris</i>			1				
<i>Aspalathus nigra</i>	1		1				
<i>Aspalathus obtusifolia</i>				1			
<i>Aspalathus opaca</i>	1						
<i>Aspalathus spinosa</i>	1						
<i>Aspalathus spinosa spinosa</i>	1						
<i>Aspalathus submissa</i>	1						
<i>Asparagales</i>	1						
<i>Asparagus</i>	1			1			
<i>Asparagus aethiopicus</i>	1			1			
<i>Asparagus africanus</i>	1						
<i>Asparagus asparagoides</i>	1						
<i>Asparagus capensis</i>	1		1				
<i>Asparagus capensis capensis</i>	1						
<i>Asparagus lignosus</i>	1						
<i>Asparagus mariae</i>	1		1	1			
<i>Asparagus multiflorus</i>	1						
<i>Asparagus striatus</i>	1						
<i>Asparagus suaveolens</i>	1						
<i>Aspidoglossum gracile</i>	1						
<i>Athanasia</i>	1						
<i>Athanasia dentata</i>	1						
<i>Athanasia quinqueidentata</i>	1			1			1
<i>Athanasia quinqueidentata quinqueidentata</i>	1						
<i>Athanasia trifurcata</i>	1						
<i>Atriplex semibaccata</i>	1						
<i>Azima tetraacantha</i>	1						
<i>Babiana fourcadei</i>	1	1		1			1
<i>Barleria irritans</i>	1						
<i>Barleria pungens</i>	1						
<i>Berkheya</i>	1						
<i>Berkheya armata</i>	1	1	1	1			1
<i>Berkheya carlinoides</i>	1					1	
<i>Berkheya heterophylla</i>	1						
<i>Berkheya rigida</i>	1			1			
<i>Bidens pilosa</i>	1						
<i>Blepharis capensis</i>	1						
<i>Blepharis integrifolia</i>	1		1				1

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Bobartia robusta</i>	1	1	1	1			1
<i>Boophone disticha</i>	1	1		1			
<i>Brassica tournefortii</i>	1						
<i>Brunsvigia orientalis</i>	1						
<i>Bulbine frutescens</i>	1						
<i>Bulbine lagopus</i>	1						
<i>Bulbine sp. nova</i>	1						
<i>Cadaba aphylla</i>	1						
<i>Cannabis sativa</i>					1		
<i>Carex aethiopica</i>			1				
<i>Carissa bispinosa</i>	1						
<i>Carpobrotus</i>	1						
<i>Carpobrotus deliciosus</i>	1						
<i>Carpobrotus edulis</i>	1						
<i>Carpobrotus mellei</i>	1						
<i>Cassytha ciliolata</i>	1						
<i>Cenchrus clandestinus</i>	1						
<i>Cephalophyllum diversiphyllum</i>							1
<i>Chaenostoma</i>	1						
<i>Chaenostoma caeruleum</i>	1						
<i>Chaenostoma campanulatum</i>	1						
<i>Chaenostoma cordatum</i>	1						
<i>Chaenostoma denudatum</i>	1						
<i>Chaenostoma revolutum</i>	1						
<i>Cheilanthes hirta</i>	1						
<i>Cheilanthes viridis</i>	1						
<i>Chenopodiastrum murale</i>	1						
<i>Chenopodium album</i>	1						
<i>Chironia baccifera</i>	1						
<i>Chloris gayana</i>	1						
<i>Chloris virgata</i>	1						
<i>Chlorophytum graminifolium</i>	1						
<i>Chrysocoma ciliata</i>	1						
<i>Cichorium intybus</i>				1			
<i>Cirsium vulgare</i>	1						
<i>Cissampelos capensis</i>	1						
<i>Cliffortia falcata</i>	1						
<i>Cliffortia ramosissima</i>	1						
<i>Clutia alaternoides</i>	1						
<i>Clutia daphnoides</i>	1						
<i>Clutia ericoides</i>	1						
<i>Clutia laxa</i>	1	1					1
<i>Colchicum</i>	1						
<i>Colchicum eucomoides</i>	1						
<i>Colpoen compressum</i>	1			1			
<i>Commelina africana</i>	1						1
<i>Convolvulus capensis</i>	1						
<i>Convolvulus sagittatus</i>	1						
<i>Corycium</i>	1						

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Corymbium africanum</i>	1						
<i>Corymbium glabrum</i>	1				1		
<i>Cotula australis</i>	1						
<i>Cotula coronopifolia</i>			1				1
<i>Cotyledon orbiculata</i>	1						
<i>Crassula biplanata</i>			1				
<i>Crassula capitella</i>	1						
<i>Crassula cultrata</i>	1						
<i>Crassula ericoides</i>	1	1					1
<i>Crassula expansa</i>	1						
<i>Crassula mollis</i>	1						
<i>Crassula muscosa</i>	1						
<i>Crassula nudicaulis</i>	1	1	1	1			1
<i>Crassula perforata</i>	1						
<i>Crassula rubricaulis</i>	1						
<i>Crassula saxifraga</i>	1						
<i>Crassula subulata</i>	1						1
<i>Crassula tetragona</i>	1		1				
<i>Crossyne guttata</i>	1	1					1
<i>Cullumia carlinoides</i>							1
<i>Curio archeri</i>	1						1
<i>Curio ficoides</i>	1						
<i>Cussonia thyrsiflora</i>	1						
<i>Cyanella</i>	1						
<i>Cyanella lutea</i>	1			1			
<i>Cyanella lutea lutea</i>	1						
<i>Cyanotis</i>	1						
<i>Cyanotis speciosa</i>	1						
<i>Cymbopogon pospischilii</i>	1						
<i>Cynanchum obtusifolium</i>	1						
<i>Cynanchum viminale</i>	1						
<i>Cynodon dactylon</i>	1	1					
<i>Cyperus eragrostis</i>	1						
<i>Cyperus polystachyos</i>	1						
<i>Cyperus sp.</i>	1						
<i>Cyperus textilis</i>	1		1		1		
<i>Cyphia sylvatica sylvatica</i>	1						
<i>Cyrtanthus fergusoniae</i>	1						
<i>Datura stramonium</i>	1						
<i>Delosperma inconspicuum</i>	1						
<i>Delosperma littorale</i>	1						1
<i>Delosperma neethlingiae</i>	1						1
<i>Delostemon</i>	1						
<i>Dianthus albens</i>	1						
<i>Dicerotheramnus adpressus</i>	1						
<i>Dicerotheramnus rhinocerotis</i>	1	1		1			1
<i>Digitaria eriantha</i>	1						
<i>Diospyros dichrophylla</i>	1		1	1			1
<i>Dipcadi viride</i>	1						

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Dipogon lignosus</i>	1						
<i>Disa cornuta</i>	1						
<i>Drimia calcarata</i>	1						
<i>Drimia capensis</i>	1		1	1			1
<i>Drimia ciliata</i>	1						
<i>Drimia elata</i>	1						
<i>Drimia exuviata</i>	1						
<i>Drimia haworthioides</i>	1						
<i>Drimia sp.</i>	1						
<i>Drosanthemum</i>	1						
<i>Drosanthemum hispidum</i>	1		1				
<i>Drosanthemum parvifolium</i>	1						
<i>Dyschoriste setigera</i>	1			1			
<i>Dysphania carinata</i>	1						
<i>Ehrharta calycina</i>	1						1
<i>Eleocharis limosa</i>				1			
<i>Elytropappus</i>	1						
<i>Eragrostis</i>	1						
<i>Eragrostis capensis</i>	1						
<i>Eragrostis curvula</i>	1	1					
<i>Eragrostis obtusa</i>	1						
<i>Erica discolor</i>	1	1		1		1	
<i>Erica imbricata</i>	1						
<i>Erica peltata</i>	1					1	
<i>Erica quadrangularis</i>		1					1
<i>Erica sessiliflora</i>			1				
<i>Erica sparsa</i>	1						
<i>Erica unicolor mutica</i>	1		1	1		1	
<i>Erica versicolor</i>	1	1	1				1
<i>Erigeron sumatrensis</i>	1						
<i>Eriocephalus africanus</i>	1		1	1			1
<i>Eriospermum</i>	1	1		1			1
<i>Eriospermum capense</i>	1						
<i>Eriospermum dielsianum</i>	1						
<i>Eriospermum pubescens</i>	1						1
<i>Erodium moschatum</i>	1						
<i>Eucalyptus conferruminata</i>					1		
<i>Euclea</i>	1						
<i>Euclea crispa</i>	1						
<i>Euclea racemosa</i>	1		1				
<i>Euclea undulata</i>	1		1	1			
<i>Eulophia cochlearis</i>	1						
<i>Eulophia hians inaequalis</i>	1						
<i>Euphorbia burmannii</i>	1						
<i>Euphorbia foliosa</i>							1
<i>Euphorbia heptagona</i>	1						
<i>Euphorbia mammillaris</i>	1						
<i>Euphorbia mauritanica</i>	1						
<i>Euphorbia procumbens</i>	1						1

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Euphorbia silenifolia</i>	1						
<i>Eustachys paspaloides</i>	1						
<i>Falkia repens</i>	1				1		
<i>Felicia muricata</i>	1						
<i>Ficinia acuminata</i>	1						
<i>Ficinia bulbosa</i>	1						
<i>Ficinia marginata</i>							1
<i>Ficinia nigrescens</i>	1						
<i>Ficinia repens</i>	1						
<i>Fockea edulis</i>	1						
<i>Freesia spp.</i>	1	1	1	1		1	1
<i>Gasteria carinata</i>	1						
<i>Gasteria carinata glabra</i>	1						
<i>Gazania krebsiana</i>	1						
<i>Gazania sp.</i>							1
<i>Geissorhiza inconspicua</i>							1
<i>Gerbera ambigua</i>	1						
<i>Gerbera crocea</i>	1						
<i>Gerbera piloselloides</i>	1						
<i>Gerbera serrata</i>	1						
<i>Gerbera sp.</i>	1						
<i>Gethyllis afra</i>							1
<i>Gigaspermum repens</i>	1						
<i>Gladiolus floribundus</i>	1						
<i>Gladiolus mutabilis</i>	1						
<i>Gladiolus sp.</i>	1						
<i>Gladiolus stellatus</i>	1						
<i>Glottiphyllum longum</i>	1						
<i>Gnaphaliinae</i>	1						
<i>Gnidia</i>	1						
<i>Gnidia nodiflora</i>	1						
<i>Gnidia squarrosa</i>	1						
<i>Gomphocarpus cancellatus</i>	1	1		1			
<i>Gomphocarpus physocarpus</i>	1						
<i>Grewia occidentalis</i>	1						
<i>Gymnosporia buxifolia</i>	1						
<i>Gymnosporia capitata</i>	1						
<i>Gymnosporia nemorosa</i>	1						
<i>Haemanthus sanguineus</i>	1						
<i>Hakea sericea</i>	1						
<i>Harpochloa falx</i>							1
<i>Harveya purpurea</i>	1						
<i>Hebenstretia integrifolia</i>	1						
<i>Helichrysum anomalum</i>	1						
<i>Helichrysum cymosum</i>	1						
<i>Helichrysum dasyanthum</i>	1						
<i>Helichrysum litorale</i>	1						
<i>Helichrysum odoratissimum</i>	1						
<i>Helichrysum patulum</i>	1						

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Helichrysum rosum</i>	1						
<i>Helichrysum rugulosum</i>	1						
<i>Helichrysum rutilans</i>	1						
<i>Helichrysum teretifolium</i>	1						
<i>Heliophila pendula</i>							1
<i>Heliophila subulata</i>	1						
<i>Helminthotheca echioides</i>	1						
<i>Hermannia alnifolia</i>	1						
<i>Hermannia althaeifolia</i>				1			
<i>Hermannia flammea</i>	1						
<i>Hermannia flammula</i>	1	1		1			1
<i>Hermannia holosericea</i>	1						
<i>Hermannia hyssopifolia</i>	1			1			
<i>Hermannia lavandulifolia</i>	1	1	1	1		1	1
<i>Hermannia saccifera</i>	1	1		1			1
<i>Hermannia salviifolia</i>	1	1		1			1
<i>Hermannia sp11</i>	1						
<i>Hesperantha falcata</i>	1						
<i>Heteropogon contortus</i>	1						
<i>Hibiscus aethiopicus</i>	1			1			
<i>Hibiscus pusillus</i>	1						
<i>Holothrix burchellii</i>	1						
<i>Holothrix parviflora</i>	1						
<i>Hyobanche sanguinea</i>				1			
<i>Hyparrhenia hirta</i>	1						
<i>Hypochaeris radicata</i>	1						
<i>Hypoestes aristata</i>	1						
<i>Hypoxis angustifolia</i>	1						
<i>Hypoxis hemerocallidea</i>	1			1			
<i>Hypoxis setosa</i>	1		1				
<i>Indigofera heterophylla</i>	1			1			
<i>Indigofera nigromontana</i>	1	1	1	1			1
<i>Indigofera priorii</i>	1						1
<i>Ixia orientalis</i>	1						
<i>Jamesbrittenia calciphila</i>	1			1			
<i>Jamesbrittenia microphylla</i>	1						
<i>Jamesbrittenia tenuifolia</i>	1						
<i>Jamesbrittenia tortuosa</i>	1						
<i>Juncus kraussii</i>			1				
<i>Kedrostis sp.</i>	1						
<i>Knowltonia</i>	1						
<i>Knowltonia cordata</i>	1						
<i>Knowltonia vesicatoria</i>	1	1		1			
<i>Lachenalia bulbifera</i>	1				1		
<i>Lachenalia perryae</i>	1						
<i>Lampranthus</i>	1			1			
<i>Lampranthus elegans</i>	1			1			1
<i>Lampranthus emarginatoides</i>	1						
<i>Lantana camara</i>	1			1			

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Lantana rugosa</i>	1						
<i>Laurembergia repens</i>	1						
<i>Lauridia tetragona</i>	1	1		1			
<i>Ledebouria revoluta</i>	1	1		1			
<i>Leonotis ocymifolia</i>	1						
<i>Lepidium africanum</i>	1						
<i>Lessertia frutescens</i>	1						
<i>Leucadendron salignum</i>	1	1		1		1	1
<i>Linum africanum</i>	1						
<i>Lobelia coronopifolia</i>	1						
<i>Lobelia erinus</i>	1		1	1			
<i>Lobelia tomentosa</i>	1						1
<i>Lobostemon echioides</i>	1						
<i>Lotononis falcata</i>	1						
<i>Lotononis pungens</i>	1						
<i>Lotononis umbellata</i>	1						1
<i>Lycium cinereum</i>	1						
<i>Lyperia violacea</i>	1						
<i>Lysimachia arvensis</i>	1			1			
<i>Lysimachia foemina</i>	1			1			
<i>Lysimachia loeflingii</i>	1						1
<i>Malva sp.</i>	1						
<i>Massonia depressa</i>	1						1
<i>Massonia longipes</i>	1						
<i>Massonia setulosa</i>	1						
<i>Maytenus procumbens</i>	1						
<i>Megathyrsus maximus</i>	1						
<i>Melinis repens</i>	1						
<i>Mesembryanthemum</i>	1						
<i>Mesembryanthemum aitonis</i>	1						
<i>Metalasia acuta</i>	1			1			1
<i>Metalasia muricata</i>	1						
<i>Metalasia pungens</i>	1	1					
<i>Monopsis unidentata</i>	1						
<i>Monsonia emarginata</i>	1	1	1				1
<i>Montinia caryophyllacea</i>	1						1
<i>Moraea algoensis</i>	1						
<i>Moraea fugax</i>	1						
<i>Moraea polyanthos</i>	1						1
<i>Moraea setifolia</i>	1						
<i>Moraea tricuspidata</i>	1						1
<i>Moraea tripetala</i>	1	1		1			1
<i>Moraea unguiculata</i>							1
<i>Morella quercifolia</i>	1						
<i>Muraltia dispersa</i>	1	1	1	1			
<i>Muraltia ericifolia</i>	1						1
<i>Muraltia ericoides</i>	1						
<i>Muraltia knysnaensis</i>	1						
<i>Muraltia ononidifolia</i>	1						

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Muraltia satureioides</i>	1						
<i>Muraltia squarrosa</i>	1						
<i>Myrrhidium</i> sp.	1			1			
<i>Myrsine africana</i>	1						
<i>Mystroxydon aethiopicum</i>	1						
<i>Nemesia bicornis</i>							1
<i>Nemesia floribunda</i>							1
<i>Nemesia</i> sp.							1
<i>Nicotiana glauca</i>	1						
<i>Nicotiana longiflora</i>	1						
<i>Nidorella ivifolia</i>	1		1				1
<i>Oedera calycina</i>	1						
<i>Oedera genistifolia</i>	1	1		1			1
<i>Oedera imbricata</i>	1			1			1
<i>Oedera pungens</i>	1						
<i>Oedera squarrosa</i>	1						
<i>Olea europaea africana</i>	1		1				
<i>Olea exasperata</i>	1						
<i>Opuntia ficus-indica</i>	1		1				
<i>Orbea variegata</i>	1						
<i>Ornithogalum</i>	1						
<i>Ornithogalum dubium</i>	1			1			
<i>Ornithogalum graminifolium</i>	1						
<i>Ornithogalum juncifolium</i>	1						
<i>Ornithogalum thyrsoides</i>	1						
<i>Ornithopus compressus</i>	1						
<i>Osteospermum moniliferum</i>	1			1			
<i>Osteospermum scariosum scariosum</i>	1						
<i>Osteospermum sinuatum sinuatum</i>	1						
<i>Osteospermum tomentosum</i>	1		1				1
<i>Othonna gymnodiscus</i>							1
<i>Oxalis caprina</i>	1						
<i>Oxalis ciliaris</i>	1			1			1
<i>Oxalis confertifolia</i>	1						
<i>Oxalis corniculata</i>	1						
<i>Oxalis depressa</i>	1						
<i>Oxalis fergusoniae</i>	1	1					
<i>Oxalis imbricata</i>	1						
<i>Oxalis pardales</i>	1						
<i>Oxalis pes-caprae</i>	1						
<i>Oxalis polyphylla</i>	1		1				
<i>Oxalis punctata</i>	1						
<i>Oxalis</i> sp.	1			1	1		
<i>Oxalis stellata</i>	1						
<i>Oxalis stellata stellata</i>	1						
<i>Pachycarpus dealbatus</i>	1						
<i>Passerina corymbosa</i>	1		1				
<i>Pelargonium</i>	1						
<i>Pelargonium alchemilloides</i>	1						1

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Pelargonium candicans</i>	1			1			1
<i>Pelargonium capitatum</i>	1						
<i>Pelargonium carneum</i>	1						1
<i>Pelargonium caucalifolium</i>	1						
<i>Pelargonium dipetalum</i>							1
<i>Pelargonium dipetalum dipetalum</i>	1						
<i>Pelargonium fruticosum</i>	1			1	1		
<i>Pelargonium grossularioides</i>	1				1		
<i>Pelargonium lobatum</i>	1						
<i>Pelargonium multicaule multicaule</i>	1						
<i>Pelargonium peltatum</i>	1		1				
<i>Pelargonium pillansii</i>	1						
<i>Pelargonium pulverulentum</i>	1						
<i>Pellaea calomelanos</i>	1						
<i>Pentameris pallida</i>			1				
<i>Petrorhagia prolifera</i>	1						
<i>Pharnaceum</i>							1
<i>Pharnaceum elongatum</i>	1						
<i>Phragmites australis</i>	1						
<i>Phylla axillaris</i>	1			1			
<i>Phyllanthus sp.</i>	1						
<i>Phyllopodium rustii</i>	1						
<i>Physalis peruviana</i>	1						
<i>Pinus halepensis</i>			1				
<i>Pinus radiata</i>	1						
<i>Pittosporum viridiflorum</i>			1				
<i>Plantago lanceolata</i>	1			1			
<i>Plecostachys serpyllifolia</i>							1
<i>Podalyria myrtillifolia</i>	1			1			
<i>Pollichia campestris</i>	1						
<i>Polygala ericifolia</i>	1						
<i>Polygala myrtifolia</i>	1			1			
<i>Polygala myrtifolia myrtifolia</i>	1			1			
<i>Polygala pubiflora</i>	1		1	1			
<i>Polygala umbellata</i>	1						
<i>Polygonum aviculare</i>	1						
<i>Populus sp.</i>				1			
<i>Prismatocarpus campanuloides</i>	1						
<i>Prismatocarpus candolleanus</i>	1						
<i>Protea lanceolata</i>	1	1			1		
<i>Protea neriifolia</i>	1			1		1	
<i>Protea repens</i>	1	1		1			
<i>Pseudognaphalium oligandrum</i>	1						
<i>Pseudoselago</i>							1
<i>Pterocelastrus tricuspidatus</i>	1		1	1			
<i>Pteronia incana</i>	1						
<i>Pteronia oppositifolia</i>	1						
<i>Pulicaria scabra</i>	1						
<i>Putterlickia pyracantha</i>	1		1				

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Restio albotuberculatus</i>	1						
<i>Restio capensis</i>	1						
<i>Restio triflorus</i>	1						
<i>Restio triticeus</i>	1	1					
<i>Rhoicissus digitata</i>	1		1				
<i>Rhoicissus tridentata</i>	1						
<i>Rhynchosium sessiliflorum</i>	1						
<i>Rhynchosia</i>	1						
<i>Rhynchosia caribaea</i>	1						
<i>Rhynchosia chrysoscias</i>	1						
<i>Rhynchosia ciliata</i>	1						
<i>Rhynchosia leucoscias</i>	1						
<i>Riccia</i> sp.	1						
<i>Richardia humistrata</i>	1						
<i>Ricinus communis</i>	1						
<i>Romulea atrandra</i>	1						
<i>Romulea flava</i>	1						1
<i>Romulea rosea</i>	1						1
<i>Ruellia cordata</i>	1						
<i>Ruellia pilosa</i>	1		1	1			
<i>Ruellia simplex</i>	1						
<i>Rumex sagittatus</i>	1						
<i>Ruschia</i>	1		1				
<i>Ruschia leptocalyx</i>	1						
<i>Ruschia lineolata</i>	1						
<i>Ruschia tenella</i>	1						
<i>Samolus porosus</i>			1				
<i>Satyrium longicolle</i>	1						
<i>Satyrium membranaceum</i>	1	1		1	1		1
<i>Satyrium parviflorum</i>							1
<i>Scabiosa columbaria</i>	1			1			
<i>Scabiosa incisa</i>	1						
<i>Schinus terebinthifolia</i>	1						
<i>Schoenus graciliculis</i>	1						
<i>Schotia afra</i>	1		1				
<i>Scilloideae</i>	1						
<i>Scolopia zeyheri</i>	1						
<i>Searsia</i>	1			1			
<i>Searsia glauca</i>	1						
<i>Searsia incisa</i>	1			1			1
<i>Searsia lucida</i>	1			1			1
<i>Searsia pallens</i>	1			1			
<i>Searsia pterota</i>	1						
<i>Searsia rehmanniana glabrata</i>	1						
<i>Searsia rosmarinifolia</i>	1						1
<i>Sebaea</i> sp.				1			
<i>Selago brevifolia</i>	1						
<i>Selago ciliata</i>	1						
<i>Selago corymbosa</i>	1						

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Selago dolosa</i>	1			1			
<i>Selago glandulosa</i>	1						
<i>Selago glomerata</i>	1						
<i>Selago nigrescens</i>	1						
<i>Selago ramosissima</i>	1	1	1	1			
<i>Selago sp.</i>	1		1				1
<i>Senecio burchellii</i>	1		1				
<i>Senecio crassiusculus</i>	1						
<i>Senecio deltoideus</i>	1						
<i>Senecio ilicifolius</i>	1						
<i>Senecio inaequidens</i>	1						
<i>Senecio rosmarinifolius</i>	1						
<i>Seriphium plumosum</i>	1						
<i>Sideroxylon inerme</i>	1		1	1	1		
<i>Silene gallica</i>	1						
<i>Sisyrinchium micranthum</i>	1						
<i>Solanum linnaeanum</i>	1			1			
<i>Solanum lycopersicum</i>	1						
<i>Solanum mauritianum</i>	1						
<i>Solanum nigrum</i>	1						
<i>Solanum tomentosum</i>	1						
<i>Sporobolus africanus</i>	1	1					
<i>Sporobolus virginicus</i>	1						
<i>Stachys sublobata</i>	1	1		1			
<i>Stipagrostis zeyheri</i>	1						
<i>Strumariinae</i>	1						
<i>Struthiola parviflora</i>	1						
<i>Taraxacum officinale</i>	1						
<i>Tarchonanthus littoralis</i>	1						
<i>Tecomaria capensis</i>	1						
<i>Tephrosia capensis</i>	1						
<i>Teucrium africanum</i>	1						
<i>Thamnochortus fruticosus</i>	1						
<i>Thamnochortus insignis</i>	1						
<i>Themeda triandra</i>	1		1				
<i>Thesium aggregatum</i>	1						
<i>Thesium flexuosum</i>	1						
<i>Thesium frisea</i>	1						
<i>Thesium funale</i>	1						
<i>Thesium galioides</i>	1						
<i>Thesium scandens</i>	1						
<i>Thunbergia capensis</i>	1						1
<i>Trachyandra affinis</i>	1						
<i>Trachyandra ciliata</i>							1
<i>Tragus berteronianus</i>	1						
<i>Trichocephalus stipularis</i>	1						
<i>Trichodiadema burgeri</i>	1						
<i>Trichodiadema occidentale</i>							1
<i>Trifolium repens</i>	1						

Species	Aalwynda l	RE/22 1	RE/22 0	15/21 5	RE/1/33 7	RE/255/22 0	RE/18/22 5
<i>Triglochin bulbosa</i>			1				
<i>Triglochin striata</i>			1				
<i>Tritonia crocata</i>	1			1			1
<i>Tulbaghia capensis</i>	1						
<i>Tulista minor</i>							1
<i>Urochloa serrata</i>	1						
<i>Ursinia anethoides</i>	1						
<i>Ursinia anthemoides</i>	1						
<i>Ursinia dentata</i>	1						
<i>Ursinia discolor</i>	1			1			
<i>Ursinia nana</i>							1
<i>Ursinia sp.</i>	1		1				
<i>Urtica urens</i>	1						
<i>Vachellia karroo</i>	1						
<i>Vicia sativa</i>	1						
<i>Viscum capense</i>	1						
<i>Wahlenbergia</i>	1						
<i>Wahlenbergia desmantha</i>	1			1			
<i>Wahlenbergia neostricta</i>	1						
<i>Wahlenbergia tenella</i>	1						
<i>Watsonia aletroides</i>	1			1			
<i>Watsonia fourcadei</i>			1	1			
<i>Watsonia laccata</i>	1				1		1
<i>Watsonia pillansii</i>	1						
<i>Watsonia sp.</i>	1					1	
<i>Withania somnifera</i>	1						
<i>Wurmbea variabilis</i>	1			1	1		
<i>Zantedeschia aethiopica</i>				1			

8.4 Faunal SCC flagged for Aalwyndal and their likelihood of occurrence at candidate biodiversity offset sites.

Species	Common name	Regional Assessment status	Likelihood of occurrence in Aalwyndal	Likelihood of occurrence at RE/225/220 and RE/47/220	Likelihood of occurrence at RE/18/250	Likelihood of occurrence at 15/215	Likelihood of occurrence at RE/220
AMPHIBIANS							
<i>Afraxalus knysnae</i>	Knysna Leaf-folding Frog	Endangered	Low	Very Low	Low	Low	Very Low
AVIFAUNA							
<i>Afrotis afra</i>	Southern Black Korhaan	Vulnerable	Medium	Very Low	Low	Very Low	Low
<i>Aquila verreauxii</i>	Verreaux's Eagle	Vulnerable	Low	Medium	Low	Very Low	Very Low
<i>Bradypterus sylvaticus</i>	Knysna Warbler	Vulnerable	High	Medium	Low	Very Low	Very Low
<i>Buteo trizonatus</i>	Forest Buzzard	Least Concern, Near Threatened (global)	Low	Low	Low	Low	Low
<i>Calidris ferruginea</i>	Curlew Sandpiper	Least Concern, Near Threatened (global)	Low	Very Low	Very Low	Low	Very Low
<i>Campethera notata</i>	Knysna Woodpecker	Near Threatened	Very Low	Very Low	Very Low	Low	Very Low
<i>Certhilauda brevirostris</i>	Agulhas Long-billed Lark	Near Threatened	High	Very Low	Low	Low	Very Low
<i>Ciconia nigra</i>	Black Stork	Vulnerable	Very Low	Very Low	Very Low	Low	Very Low
<i>Circus maurus</i>	Black Harrier	Endangered	Confirmed	Low	High	High	Medium
<i>Circus ranivorus</i>	African Marsh Harrier	Endangered	Low	Very Low	Very Low	Very Low	Very Low
<i>Crithagra leucoptera</i>	Protea Canary	Near Threatened	Medium	Medium	Very Low	Low	High
<i>Falco biarmicus</i>	Lanner Falcon	Vulnerable	Medium	Low	Medium	Low	Very Low
<i>Anthropoides paradisea</i>	Blue Crane	Near Threatened	Medium	Low	Very High	Confirmed	Low
<i>Neotis denhami</i>	Denham's Bustard	Vulnerable	Medium	Very Low	Confirmed	Confirmed	Low

Species	Common name	Regional Assessment status	Likelihood of occurrence in Aalwyndal	Likelihood of occurrence at RE/225/220 and RE/47/220	Likelihood of occurrence at RE/18/250	Likelihood of occurrence at 15/215	Likelihood of occurrence at RE/220
<i>Oxyura maccoa</i>	Maccoa Duck	Near Threatened	Very Low	Very Low	Very Low	Very Low	Very Low
<i>Phoenicopus roseus</i>	Greater Flamingo	Near Threatened	Very Low	Very Low	Very Low	Very Low	Very Low
<i>Polemaetus bellicosus</i>	Martial Eagle	Endangered	Low	Low	Medium	Low	Low
<i>Sagittarius serpentarius</i>	Secretarybird	Vulnerable	Low	Very Low	Low	High	Low
<i>Stephanoaetus coronatus</i>	Crowned Eagle	Vulnerable	Low	Very Low	Very Low	Very Low	Very Low
<i>Turnix hottentottus</i>	Fynbos Buttonquail	Endangered	Very Low	Very Low	Low	Low	Low
TERRESTRIAL INVERTEBRATES							
<i>Aloeides pallida littoralis</i>	Knysna Pale Copper	Near Threatened	Medium	Very Low	Very Low	Low	Very Low
<i>Aloeides thyra orientis</i>	Rooi-Kopervlerkie, Brenton	Endangered	Medium	Very Low	Very Low	Low	Very Low
<i>Aloeides trimeni southeyae</i>	Trimen's Copper	Endangered	Medium	Medium	Very Low	Low	Very Low
<i>Aneuryphymus montanus</i>	Yellow-winged Agile Grasshopper	Vulnerable	Low	Very Low	Very Low	Low	Very Low
<i>Ceratogomphus triceraticus</i>	Cape Thorntail	Near Threatened	Very Low	Very Low	Very Low	Medium	Very Low
<i>Lepidochrysops littoralis</i>	Coastal Nimble Blue	Endangered	Medium	Very Low	Very Low	Low	Very Low
<i>Spesbona angusta</i>	Ceres Featherlegs	Endangered	Very Low	Very Low	Low	Low	Very Low
MAMMALS							
<i>Amblysomus corriae</i>	Fynbos Golden Mole	Near Threatened	Confirmed (one of the two species is present.)	Very Low	Confirmed (one of the two species is present.)	Low	Very Low

Species	Common name	Regional Assessment status	Likelihood of occurrence in Aalwyndal	Likelihood of occurrence at RE/225/220 and RE/47/220	Likelihood of occurrence at RE/18/250	Likelihood of occurrence at 15/215	Likelihood of occurrence at RE/220
<i>Aonyx capensis</i>	African Clawless Otter	Near Threatened		Very Low	Very Low	Very Low	Very Low
<i>Chlorotalpa duthieae</i>	Duthie's Golden Mole	Vulnerable		Very Low	Confirmed (one of the two species is present.)	Low	Very Low
<i>Damaliscus pygargus pygargus</i>	Bontebok	Vulnerable		Very Low	Very Low	Very Low	Very Low
<i>Panthera pardus</i>	Leopard	Vulnerable		Very Low	Very Low	Very Low	Very Low
<i>Poecilogale albinucha</i>	African Striped Weasel	Near Threatened		Very Low	Very Low	Low	Low
	Sensitive species 8	Vulnerable		Very Low	Low	Medium	Medium
	Sensitive species 5	Vulnerable		Very Low	Very Low	Very Low	Very Low

8.5 Offset Agreement Template

OFFSET AGREEMENT

BETWEEN

Biodiversity Offset Trust Name

Registration No

Represented herein by

in his capacity as Director and duly authorized hereto by Company Resolution

and

The Landowner Name

Registration No

Represented herein by

in his capacity as Director and duly authorized hereto by Company Resolution

("the Landowner")

1 INTERPRETATION AND PRELIMINARY

The headings of the clauses in the Agreement are for the purpose of convenience and reference only and shall not be used in the interpretation of or modify nor amplify the terms of this Agreement nor any clause hereof. In this Agreement, unless a contrary intention clearly appears:

1.1 word importing :

1.1.1 any one gender includes the other gender;

1.1.2 the singular includes the plural and vice versa; and

1.1.3 natural persons include created entities (with or without legal personality) and vice versa.

1.2 A failure to sign or initial any annexure, schedule or amendment shall not invalidate this Agreement.

1.3 When any number of days is prescribed in this Agreement, the number shall be reckoned exclusively of the first and inclusively of the last day unless the last day falls on a Saturday, Sunday or proclaimed public holiday (in the Republic of South Africa) in which event the last day shall be the next succeeding day which is not such a Saturday, Sunday or public holiday.

1.4 Where figures are referred to in numerals and in words, if there is any conflict between the two, the words shall prevail.

1.5 Unless the context clearly indicates otherwise, words and expressions defined in this Agreement shall bear the same meaning in any schedule or annexure to this Agreement which do not contain their own definitions.

1.6 Reference to any party includes such person's heir, assigned executor, trustee, successor-in-authority and / or successor-in-title.

1.7 The following terms will have the meanings assigned to them hereunder and cognate expressions shall have a corresponding meaning, namely:

1.7.1 Agreement means this agreement and all signed annexures and schedules attached;

- 1.7.2 "effective date" means the date of last signing of this agreement;
- 1.7.3 "Offset area" means the area defined in the map provided in Annexure 1;
- 1.7.4 "Management Authority" means the person or entity that is responsible for the management of the **Property Name** Offset area, in this case the landowner;
- 1.7.5 "Management Plan" means the plan as drawn up by the Management Authority for maintaining the **Property Name** offset area;
- 1.7.6 "Landowner" means **Landowner Name**

NOW THEREFORE THE PARTIES AGREE AS FOLLOWS

2. INTRODUCTION

- 2.1 The parties wish to record and regulate matters in this agreement concerning inter alia:
- 2.2 the conservation of biodiversity in the offset area, through effective management and maintenance of the offset area, in accordance with the management plan, and
- 2.3 the improvement of the natural condition on the **vegetation types** in the offset area through rehabilitation and restoration measures.

3 DESCRIPTION OF THE PROPERTY AND OFFSET AREA

- 3.1 The area of biodiversity value which contributes to the Offset area comprises the following properties or portions thereof, owned by the Landowner, and is shown in Annexure 1:

List of Properties and map showing areas to be conserved

4 MANAGEMENT OF THE **PROPERTY NAME** OFFSET AREA

4.1 Ownership

The Landowner retains all rights of ownership over the Offset Area.

4.2 Access

The Landowner has full access to the Offset Area provided that the access is consistent with the provisions of this Agreement, and provided further that this may be regulated by agreement in the approved Management Plan.

4.3 Purpose of the Offset Area

The Offset Area, as indicated in Annexure 1, is specifically set aside by the Landowner to contribute to the offset targets as outlined in Strategic Biodiversity Offset Framework Plan for Aalwyndal. This requires:

- 4.3.1 that the offset area be secured, managed and maintained in a natural condition for the duration of the offset period of 30 years;
- 4.3.2 the condition of natural habitat is to be improved, where possible, through the agreed rehabilitation and restoration measures; and
- 4.3.3 the biodiversity is conserved and protected throughout the area.

4.4 Management of the Offset Area

- 4.4.1 The Landowner hereby acknowledges that certain activities on the Property must be restricted in order to achieve the objectives of this Agreement.
- 4.4.2 The Landowner undertakes to protect the Offset Area for the duration of this Agreement and undertakes not to destroy or convert any portion thereof into agricultural land or any other land use, or take any actions or allow any actions to be taken that may have a detrimental effect on the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.4.3 The Landowner hereby grants Biodiversity Offset Trust or their representatives, the right to access the Property, subject to prior notice and/or by appointment, to fulfil its functions in terms of this Agreement.
- 4.4.4 The Landowner undertakes to comply with all national, provincial and/or local legislation in respect of the Property and its activities thereon.

4.5 Management Plan:

- 4.5.1 The Landowner undertakes to comply with all the terms and conditions set out in the Management Plan.
- 4.5.2 The Landowner undertakes to co-operate with The Biodiversity Offset Trust to amend the MP from time to time, if needed, to comply with the objectives of this Agreement, on condition that such amendments are recorded in writing and signed by the Parties.

4.6 Development:

- 4.6.1 The Landowner shall not construct, erect or upgrade, or allow the construction, erection or upgrading, of any buildings, roads or structures on the Conservation Area, except if such actions are allowed for in the Management Plan.

4.7 Biodiversity:

- 4.7.1 The Landowner shall not remove or destroy, or permit the destruction or removal of, any indigenous species or indigenous vegetation, ecosystem or habitats in the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.7.2 The Landowner shall not plant, or permit the planting of, any flora other than local non-invasive indigenous flora on the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.7.3 The Landowner shall not introduce, or permit the introduction of, any non-indigenous fauna onto the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.7.4 The Landowner shall not do, or permit, any act that may adversely affect any indigenous flora and fauna, or their habitats, on the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.8 Water
- 4.8.1 The Landowner shall not do, or permit, any act that may adversely affect the natural state, flow, supply, quantity or quality of any water resource located on the Offset Area, subject to the provisions of the National Water Act, 36 of 1998;
- 4.8.2 The Landowner shall ensure that any other person that may have a right to water located on or under the Offset Area shall do so on such conditions prescribed by the relevant Minister responsible for water in the Republic of South Africa.
- 4.9 Commercial Activity:
- 4.9.1 The Landowner shall not permit or consent to any prospecting, exploration, mining or production of gas, petroleum, mineral or other substances on the Offset Area, unless required to do so by law.
- 4.9.2 The Landowner shall not permit or consent to, unless required by law, the placement of any transmission lines, telecommunication lines, cellular towers or public works on the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.9.3 The Landowner shall not subdivide, or permit the subdivision of the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.9.4 The Landowner shall not operate, or permit the operation of, any trade, industry or business on the Offset Area, except if such actions are allowed for in the Management Plan.
- 4.9.5 The Landowner shall not harvest or permit the harvesting of any indigenous flora or fauna in or on the Offset Area, except if such actions are allowed for in the Management Plan, and the necessary permit/s (required by law) being issued by the applicable statutory body have been obtained.
- 4.10 Other Human Activities:

4.10.1 The Landowner shall not use, or permit the use of, motorcycles or four-wheel drive vehicles in the Offset Area unless their use is necessary for the proper management and protection of the Conservation Area and allowed for in the Management Plan.

4.10.2 The Landowner shall not dump, or permit the dumping of, any waste material in the Offset Area.

4.10.3 The Landowner shall not hunt, or permit hunting to take place in the Offset Area, except if such actions are allowed for in the Management Plan, and the proper permits have been obtained and restrictions adhered to.

4.10.4 The Landowner shall not permit the general public to access the Offset Area, save for the purposes of controlled, guided eco-tourism, except if such actions are allowed for in the Management Plan.

5. RIGHTS AND OBLIGATIONS OF BIODIVERSITY OFFSET TRUST IN RESPECT OF THE OFFSET AREA

5.1 Biodiversity Offset Trust and its employees and consultants shall provide such technical assistance, information and management advice that may be required to ensure the effective management of the Offset Area in line with the Management Plan.

5.2 The Landowner shall allow the Biodiversity Offset Trust, and its employees and consultants pre-arranged, notified and reasonable access to the Offset Area, except in cases of emergency when immediate access shall be allowed, to fulfil their obligations under the Management Plan, which will include access to undertake scientific research and monitoring, and to ensure proper management and compliance with the terms of this Agreement.

5.3 The Biodiversity Offset Trust shall make annual credit payments to the Landowner in accordance with the number of agreed credits and agreed credit price outlined in Annexure 2, as amended from time to time.

6. OBLIGATIONS OF THE LANDOWNER IN RESPECT OF THE OFFSET AREA

6.1 Compliance with the approved Management Plan

The Landowner shall comply with all the terms and conditions set out in the approved Management Plan.

6.2 Conservation Management Costs

The Landowner undertakes to provide the financial resources for all conservation management activities, as outlined in the approved management plan, and as a means of ensuring the long-term management of the Offset area, as specifically outlined in Annexure 3, as updated from time to time. These actions will be determined on an annual basis during an annual management meeting, whereby the necessary conservation actions will be agreed upon and costed.

7. DURATION

This Agreement shall come into effect on the date of signature by the last signing Party hereto and shall remain in force for a period of 30 (Thirty) years.

8. REGISTRATION OF AGREEMENT AND THE ENDORSEMENT THEREOF AGAINST THE TITLE DEED OF THE PROPERTY

- 8.1 The Landowner hereby confirms that he is aware of the fact that this Agreement must be registered and endorsed against the title deed of the property.
- 8.2 The Landowner confirms further that he is also aware of the fact that the terms and conditions of this Agreement will be binding on the successors in title of the Landowner for the 30-year period.
- 8.3 The Landowner undertakes to sign all further documents and to provide all information in order to effect the registration and endorsement of the Agreement against the title deed of the property.
- 8.4 Registration and endorsement of the Agreement against the title deed of the property shall be effected by **NAME** attorneys.
- 8.5 **Biodiversity Offset Trust** will be responsible for all costs related to the registration and endorsement of the Agreement against the title deed of the property.

9. DELEGATION OF RIGHTS AND RESPONSIBILITIES

- 9.1 The parties to this Agreement may not delegate or cede any of their rights or obligations under this Agreement unless:
- 9.2 they have the written consent of the other parties to this Agreement; which consent shall not be unreasonably withheld; and
- 9.3 the party to whom the rights and/or obligations have been delegated or ceded, has acknowledged its acceptance of the delegation or cession in writing, to all parties to this Agreement.

10. BREACH OF CONTRACT

- 10.1 Should any dispute or difference arise between the Parties with regard to the interpretation or implementation of this Agreement, they shall attempt to resolve such dispute or difference by process of negotiation, within a 30-day period of the dispute having been brought to the attention of the offending party by written notice.
- 10.2 Where necessary a mutually agreed independent mediator may be requested by any Party.
- 10.3 Where the Parties are unable to resolve the dispute or difference amicably by means of negotiation or mediation, a Party shall be entitled to submit such dispute or difference to Arbitration in terms of Clause 12.1 or to any court in the Republic of South

Africa that has the authority to hear any legal proceedings connected with this Agreement.

10.4 An agreed upon arbitrator shall conduct the arbitration in a manner that the arbitrator considers appropriate in order to deal with the matter fairly and quickly, but must deal with the substantial merits with a minimum of legal formality. The arbitrator must make a determination on the dispute or difference within 30 (thirty) days of the matter being referred to arbitration, or within a timeframe mutually agreed to by all Parties. The arbitrator's determination shall be final and binding on all Parties. The Parties to the dispute or difference shall share the costs of arbitration.

10.5 If the dispute cannot be resolved through this process, then the offended party may:

10.5.1 immediately cancel the agreement by means of a registered notice addressed to the offending party;

10.5.2 instruct the offending party to remove the title deed endorsement.

11. RECOVERY OF EXPENDITURE ON TERMINATION

In the event that this Agreement is terminated at the instance of either party in terms of Clause 10 above, the defaulting party shall reimburse the other for any expenditure reasonably incurred by it in giving effect to the terms of this Agreement.

12 DOMICILIA AND NOTICES

The parties choose the addresses set out below as their *domicilia citandi et executandi* for all purposes of this agreement and as their respective addresses for the service of any notice required to be served on them in terms of this Agreement.

Landowner

Physical:

Postal:

Biodiversity Offset Trust

Physical:

Postal:

13 VARIATION OF AGREEMENT

No variation, amendment or suspension of any of the terms of this Agreement shall be valid, and no further Agreement which may conflict in any way with the terms of this Agreement shall be binding on the parties unless the variation, amendment, suspension or conflicting Agreement has been recorded in writing and signed by the parties.

In the event the owner wishes to dispose of the property, all current rights and obligations at the time of sale shall be transferrable, and not more onerous than the current (successors).

SIGNED AT ON THIS THE DAY OF 2025

AS WITNESSES:

1. _____
- FOR AND ON BEHALF OF:**
- LANDOWNER**
- SIGNATORY:**
2. _____
- CAPACITY:**

SIGNED AT ON THIS THE DAY OF 2025

AS WITNESSES:

1. _____
- FOR AND ON BEHALF OF:**
- XXX**
- SIGNATORY:**
2. _____
- CAPACITY:**

ANNEXURES TO THIS AGREEMENT

Annexure 1. Map of the biodiversity offset areas

Annexure 2. Schedule of biodiversity offset credits transferred to the Biodiversity Offset Trust

Annexure 3. Management Plan for designated offset areas on Property Name