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Pri.Sci.Nat # 400045/08

BOTANICAL ASSESSMENT OF PROPOSED DEVELOPMENT OF ERVEN ON PORTION OF PORTION 40 OF ROMANSBAAI 711, GANSBAAI, WESTERN CAPE.

Compiled for: PHS Consulting, Hermanus

Applicant: Danger Point Ecological Development Company (Pty) Ltd

29 May 2026

Draft: 20 November 2024

DECLARATION OF INDEPENDENCE

In terms of Chapter 5 of the National Environmental Management Act of 1998 specialists involved in Impact Assessment processes must declare their independence and include an abbreviated Curriculum Vitae.

I, N.A. Helme, do hereby declare that I am financially and otherwise independent of the client and their consultants, and that all opinions expressed in this document are substantially my own.

NA Helme

ABRIDGED CV:

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University of Cape Town, South Africa. BSc (Honours) – Botany (Ecology & Systematics), 1990.

Since 1997 I have been based in Cape Town, and have been working as a specialist botanical consultant, specialising in the diverse flora of the south-western Cape. Since the end of 2001 I have been the Sole Proprietor of Nick Helme Botanical Surveys, and have undertaken over 1700 site assessments in this period.

A selection of relevant previous botanical work is as follows:

- Botanical assessment of proposed Romansbaai abalone farm expansion (Lornay Environmental 2024)
- Botanical assessment of proposed development on Erven 1469, 1470, 1471, 1473 and 1479, Vandyksbaai (Lornay Environmental 2024)
- Botanical assessment of proposed sand-mining on Portion of Portion 30 of Klipfonteyn 711, Gansbaai (Grasaro 2023)
- Botanical assessment of proposed development on Erf 4570 Betty's Bay (Lornay Environmental 2023)
- Botanical assessment of proposed development on Erf 1486 Vermont (Lornay Environmental 2023)

- Botanical assessment of Ptns 3 & 6 of Farm 563 Kleinmond (Lornay Environmental 2021)
- Botanical assessment of Ptn 9 of Farm 429 Gabrielskloof, Caledon (Infinity Environmental 2021)
- Baseline ecological assessment of Karwyderskraal 584, Caledon (Terramanzi 2021)
- Botanical impact assessment of proposed development of Ptn 29 of Farm 410, Caledon (PHS Consulting 2021)
- Botanical assessment of proposed new cultivation on Welbedacht farm, Tra Tra Mountains (Footprint Environmental 2020)
- Biodiversity Compliance Statement - Philippi erf 1/1460 (Infinity Environmental 2020)
- Botanical assessment of Kleinmond WWTW expansion (Aurecon 2020)
- Botanical assessment of Mooreesburg WWTW expansion (Aurecon 2020)
- Botanical assessment of Struisbaai cemetery sites (Infinity Environmental 2020)
- Botanical assessment of MoPama development site, Swellendam (Landscape Dynamics 2020)
- Botanical assessment of Ptn of Rem of Erf 1 Caledon (Theewaterskloof Municipality 2019)
- Botanical assessment of proposed new cultivation on Portion of Wittewater 148, Piketberg (Cornerstone Environmental 2019)
- Botanical assessment of Droogerivier farm Leipoldtville (Footprint Environmental 2018)
- Botanical assessment of Sebulon farm, Redelinghuys (Natura Libra Environmental Services 2018)
- Botanical assessment of proposed new cultivation on Ptn 2 of farm Groenevalley 155, Piketberg (Cederberg Environmental Assessment Practise 2017)
- Botanical assessment of proposed new cultivation on Groot Patrysvlei, Clanwilliam (Cederberg Environmental Assessment Practise 2017)
- Botanical assessment of proposed new cultivation on farm Rosendal, Koue Bokkeveld (Cederberg Environmental Assessment Practise 2016)
- Botanical assessment of proposed cultivation on farm Kransvlei, Clanwilliam (Cederberg Environmental Assessment Practise 2016)

CONDITIONS RELATING TO THIS REPORT:

The methodology, findings, results, conclusions and recommendations in this report are based on the author's best scientific and professional knowledge, and on referenced material and available knowledge. Nick Helme Botanical Surveys and its staff reserve the right to modify aspects of the report, including the recommendations and conclusions, if and when additional relevant information becomes available.

This report may not be altered or added to without the prior written consent of the author, and this also applies to electronic copies of this report, which are supplied for purposes of inclusion in other reports, including in the report of EAPs. Any recommendations, statements or conclusions drawn from or based on this report must cite this report, and should not be taken out of context, and may not change, alter or distort the intended meaning of the original in any way. If these extracts or summaries form part of a main report relating to this study or investigation this report must be included in its entirety as an appendix or separate section to the main report.

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1. INTRODUCTION

This botanical impact assessment was requested to inform the environmental planning and authorisation process being followed for the proposed development of six single residential erven on a portion of Portion 40 of Farm 711 Romansbaai, between Gansbaai and Danger Point, in the Western Cape (see Figure 1). The total study area is about 3.2ha in extent, as shown in Figure 1a, and falls within the partly developed Romansbaai Estate (which is about 150ha).

Figure 1: Image showing the proposed 6 erven (numbered) in the study area (original Alternative 1).

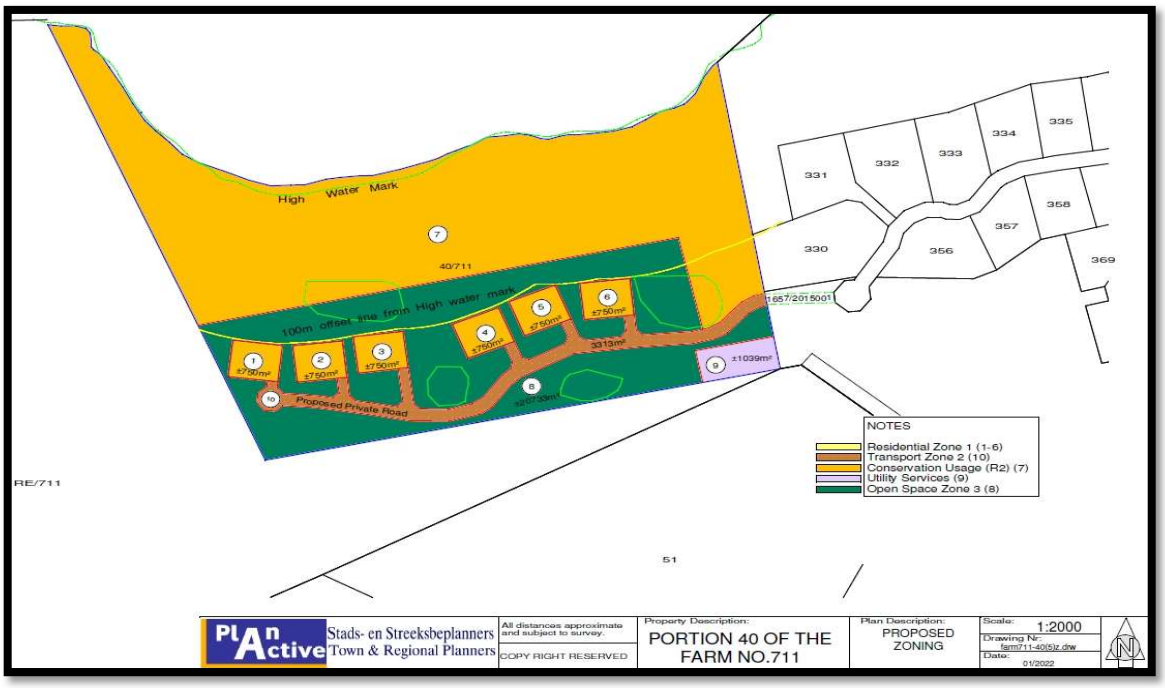

Figure 1b: Revised Layout 2, based on baseline botanical information. Light green outlines are the High sensitivity botanical areas.

2. TERMS OF REFERENCE

The terms of reference for this study were as follows:

- Undertake a site visit to assess the vegetation in the study area
- Identify and describe the vegetation in the study area and place it in a regional context, including its status in terms of the CapeNature Spatial Biodiversity Plan (CBA/ESA/ONA, etc)
- Identify and locate any (likely) plant Species of Conservation Concern in the study area, based on observation, literature and iNaturalist website review
- Provide an overview and map of the likely botanical conservation significance (sensitivity) of the site and in the proposed footprints
- Identify and assess (according to standard IA methodology) the likely botanical impacts of the proposed subdivision and development, including impacts associated with the construction and operational phases
- Indicate the acceptability of the development alternatives from a botanical perspective
- Identify and describe the cumulative impacts of the development alternatives
- Recommend feasible and reasonable mitigation measures to minimise impacts and to help mitigate impacts associated with the proposed development alternatives, including layout change.

3. LIMITATIONS, ASSUMPTIONS AND METHODOLOGY

The site was visited on 29 May 2024. This was early in the optimal winter – spring flowering season in this mainly winter rainfall area, and thus only about a third of the likely geophytes and annuals were evident or identifiable (apart from the autumn flowering *Oxalis* and *Brunsvigia*), whilst almost all perennial plants were identifiable. There were thus some seasonal constraints on the accuracy of the botanical findings, but given the heavy dominance of perennials in this area – which can be used as indicators of habitat sensitivity - the confidence in the accuracy of the botanical findings is fairly high. The author has undertaken extensive work within the region (including on site in 2005-2006, and on two adjacent sites in 2024), which facilitates the making of local and regional comparisons and inferences of habitat quality and conservation value.

The study area was walked, and all plants on site were noted. Photographs of certain plant species were made (using a Fuji mirrorless slr camera), and uploaded to the inaturalist.org website. Satellite imagery dated May 2023 (and

earlier) was used to inform this assessment, and for mapping. It is assumed that all natural vegetation in the development footprints (erven and roads) will be permanently lost. The vegetation in some of the disturbed areas alongside erf building footprints and the road is likely to be lost during construction, but many species will return in these areas over time (5-10yrs).

The original layout (Layout 1, as per Figure 1a) was revised subsequent to the botanical sensitivity mapping, in order to avoid the four mapped High sensitivity areas, and is presented for assessment as Layout 2 (Figure 1b).

The botanical sensitivity of a site is a product of plant species diversity, plant community composition, rarity of habitat, degree of habitat degradation, rarity of species, ecological viability and connectivity, restorability of habitat, vulnerability to impacts, and reversibility of threats.

The exact meaning of the No Go alternative would be no further infrastructure development in the study area, implying persistence of all the natural vegetation in these areas.

4. REGIONAL CONTEXT OF THE VEGETATION

The study area is part of the South Coast Fynbos bioregion (Mucina & Rutherford 2006), and is part of the Fynbos biome, located within what is now known as the Core Region of the Greater Cape Floristic Region (GCFR; Manning & Goldblatt 2012). The GCFR is one of only six Floristic Regions in the world, and is the only one largely confined to a single country (the Succulent Karoo component extends into southern Namibia). It is also by far the smallest floristic region, occupying only 0.2% of the world's land surface, and supporting about 11500 plant species, over half of all the plant species in South Africa (on 12% of the land area). At least 70% of all the species in the Cape region do not occur elsewhere, and many have very small home ranges (these are known as narrow endemics). Many of the lowland habitats are under pressure from agriculture, urbanisation and alien plants, and thus many of the range restricted species are also under severe threat of extinction, as habitat is reduced to extremely small fragments. Data from the nationwide plant Red Listing project indicate that 67% of the threatened plant species in the country occur only in the southwestern Cape, and these total over 1800 species (Raimondo *et al* 2009). It should thus be clear that the southwestern Cape is a major national and global conservation priority, and is quite unlike anywhere else in the country in terms of the number of threatened plant species.

The South Coast Fynbos bioregion is characterised by relatively high winter rainfall, strong rainfall gradients, poor, sandy soils, moderate topographic diversity, and large urban areas and high levels of alien invasive vegetation. Due to this combination of factors the loss of natural vegetation in this bioregion has been extensive (>50% of original extent lost within the region), and the bioregion has a high number of threatened plant species (Raimondo *et al* 2009).

The CapeNature Spatial Biodiversity Plan (Figure 2) indicates that that all of the site is mapped as Critical Biodiversity Area (CBA1). After ground-truthing the site (and with data on rare plant distribution) I agree with this mapping.

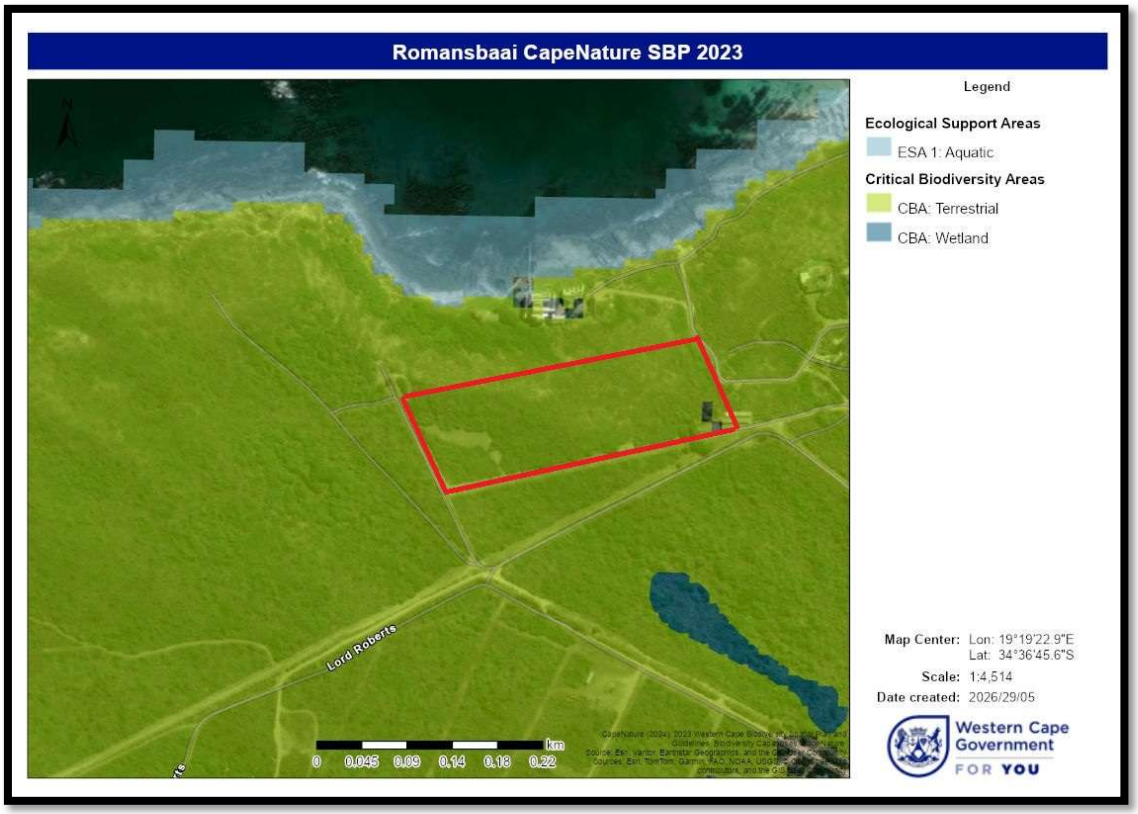

Figure 2: Extract of the CapeNature Spatial Biodiversity Plan (CapeNature 2023) showing that all of the site is mapped as CBA1 After ground-truthing the site I agree with this mapping.

5. THE VEGETATION AND ITS SENSITIVITY

According to the SA Vegetation Map the original natural vegetation in the study area is all **Overberg Dune Strandveld** (Mucina & Rutherford 2018). Based on my groundtruthing I would agree with this. No copy of this mapping is provided

as it adds little value. A draft version of the July 2024 update to the vegetation map has been release online, and is known as the 2024 beta version, and this shows that the unit has changed its name to Southwestern Strandveld, with a similar distribution form Cape Hanglip to Mossel Bay, the only notable difference being a new segregate in the Grootbos - Stanford area.

Overberg Dune Strandveld is now gazetted as **Endangered** on a national basis (Government of South Africa 2022). About 90% of its total original extent remains intact, about 36% is conserved, and the national conservation target is also 36% (Rouget *et al* 2004), and I am thus unclear on how this can be listed as Endangered, even though it is listed under the B1(iii) criterion (restricted distribution and threatening processes). The unit is known to support relatively few plant Species of Conservation Concern (Raimondo *et al* 2009), most of which are threatened by habitat loss to urban development and alien invasive vegetation. This unit occurs on nutrient poor, deep, alkaline sands on the coastal lowlands, and the vegetation type does not need fire for optimal ecological functioning, although it can and does occasionally burn (Helme & Rebelo 2016).

The area has not been burnt for at least thirty years, the vegetation is grazed and fairly lightly trampled (in places) by game (eland, bontebok, springbok and zebra), and the surrounding area have a very low density of invasive alien species (<0.5% cover of rooikrans and manitoka; *Acacia cyclops* and *Myoporum* sp.), with no invasives in the study area. The study area can thus be regarded as being in essentially pristine ecological condition.

Plate 1: View of dense Strandveld thicket vegetation on site, looking southwest. The white flowered shrub in the foreground is the buchu *Diosma demissa* (Redlisted as Vulnerable).

Plate 2: View of dense Strandveld thicket vegetation on site, looking northeast. The white flowered shrub in the foreground is the buchu *Diosma demissa* (Redlisted as Vulnerable). The area shown is one of the proposed development exclusion zones.

Plate 3: Closeup of the buchu *Diosma demissa* (Redlisted as Vulnerable). This species is essentially restricted to a small area between Gansbaai and Pearly Beach, where it is only found on shallow sands overlying limestone.

A small, low-lying area (0.2ha) in the southwest was brushcut a few years ago, for some reason (visible in Figure 3), but still supports a full complement of indigenous species. Most of the study area is north facing, apart from the southwestern corner, and some of it is quite steep (and potentially loose if

vegetation cover is lost), especially on the lower north side. Numerous strandloper shell middens are evident on site, and there is clearly some shallow, underlying calcrete or limestone, although this is not generally exposed at the surface.

As can be seen in the site photos the natural vegetation on site has high structural diversity, with a mix of tall shrubs, small trees, grasses, restios and herbs. Autumn flowering geophytes are also present (*Brunsvigia* and *Oxalis).*

Indigenous species noted in the study area include *Searsia glauca, S. laevigata, S. lucida, Olea exasperata, Anthospermum spathulatum, A. galiodes, Euclea racemosa, Pterocelastrus tricuspidatus, Lauridia tetragona, Thamnochortus insignis, Cynodon dactylon, Carpobrotus acinaciformis, Otholobium bracteolatum, Jordaaniella dubia, Ruschia sarmentosa, Restio eleocharis, R. calcicola, Helichrysum niveum, H. patulum, H. dasyanthum, Cassine peragua, Maytenus lucida, Lachenalia rubida, Ficinia ramosissima, F. indica, F. secunda, Chaenostoma subspicatum, Phylica ericoides, Metalasia muricata, Salvia aurea, Brunsvigia orientalis, Passerina paleacea, Satyrium carneum, Osteospermum moniliferum, Eriocephalus racemosus, Tetragonia fruticosa, Sideroxylon inerme, Roepera flexuosa, Geranium incanum, Muraltia satureoides, M. pappeana, Brunsvigia orientalis, Chironia baccifera, Ehrharta villosa, Cineraria geifolia, Asparagus asparagoides, Rumex sagittatus, Oncosiphon suffruticosum, Pentameris pallida, Arctotheca calendula, Cassine peragua, Aspalathus hispida, A. forbesii, Cotula pruinosa, Tephrosia capensis, Agathosma geniculata, A. dielsiana, Pelargonium betulinum, Massonia longipes, Solanum guineense, Ifloga repens, Babiana nana* ssp. *maculata, Myrsine africana, Zaluzianskya villosa, Oxalis depressa* and *Trachyandra ciliata.*

At least four plant **Species of Conservation Concern** (SoCC) were recorded on site, as per Table 1. All have viable populations on site. Two of these are clumped in mappable areas (see Figure 3), but the other two are generally scattered throughout the site and there is thus little point in trying to map them. There is a low likelihood of any other SoCC being present on site.

Species	***Redlist Status***	***Numbers***	***Significance***
Diosma demissa	Vulnerable	About 30 plants, clumped, in 3 areas	High; a rare local endemic

Babiana nana ssp. maculata	Near Threatened	About 10 plants; scattered	Medium; widely scattered on the south Cape coast from the Peninsula to Mossel Bay
Muraltia pappeana	Near Threatened	About 100 plants; scattered & widespread	Medium; widely scattered on the south Cape coast from Gansbaai to Stilbaai
Agathosma geniculata	Near Threatened	About 10 plants in northwest; clumped	High; a rare local endemic

Table 1: The four plant SOCC recorded in the study area.

Rare local endemic species such as *Cliffortia anthospermoides* (Endangered) do not occur on site, and were actively searched for. *Erica irregularis* (Endangered) does not occur south of Gansbaai, although it is common at Grootbos and east of Die Kelders. *Dasispermum grandicarpum* is an inconspicuous, low herb that grows annually from a rootstock, and was until recently known only from Grootbos NR, but has now been recorded from Stanford to Gansbaai (pers. obs.). The species is Redlisted as Data Deficient, but it was not seen in the study area.

Diosma demissa (see Plate 3) is an attractive species of buchu that grows only in the Gansbaai to Pearly Beach area, with a tiny outlying population at Cape Point, and is one of the two priority plant species recorded on site (along with *Agathosma geniculata*). The species is Redlisted as Vulnerable. Three patches were found on site and its population here is considered to be regionally significant (>20% of regional population). The long-lived shrub cannot be successfully translocated.

Agathosma geniculata is a shrub Redlisted as Near Threatened, and occurs in coastal sands from De Kelders to Arniston. The species is rare on Romansbaai Estate, and rare on site, occurring only in one small patch in the northwest part of the study area and its population here is considered to be regionally of fairly low significance (<5% of regional population, but about 10% of the Romansbaai population). The species is found mainly on limestones, from Stanford to De Hoop. The long-lived shrub cannot be successfully translocated.

Muraltia pappeana is a shrub Redlisted as Near Threatened, and occurs in coastal sands from De Kelders to Riversdale. The species is common throughout most of the study area, and elsewhere on Romansbaai Estate. Less than 5% of the extensive Romansbaai population is found in the study area.

Babiana nana ssp. maculata is a spring flowering bulb, found only in coastal sands, from Cape Point to Mossel Bay. The species is rare on site, but fairly common around Gansbaai and on Romansbaai Estate. Less than 5% of the extensive Romansbaai population is found in the study area.

The botanical sensitivity of the site is as shown in Figure 3. Four areas of High sensitivity have been mapped, which incorporate the known patches of *Diosma demissa* and *Agathosma geniculata*. The rest of the study area is of Medium to High botanical sensitivity.

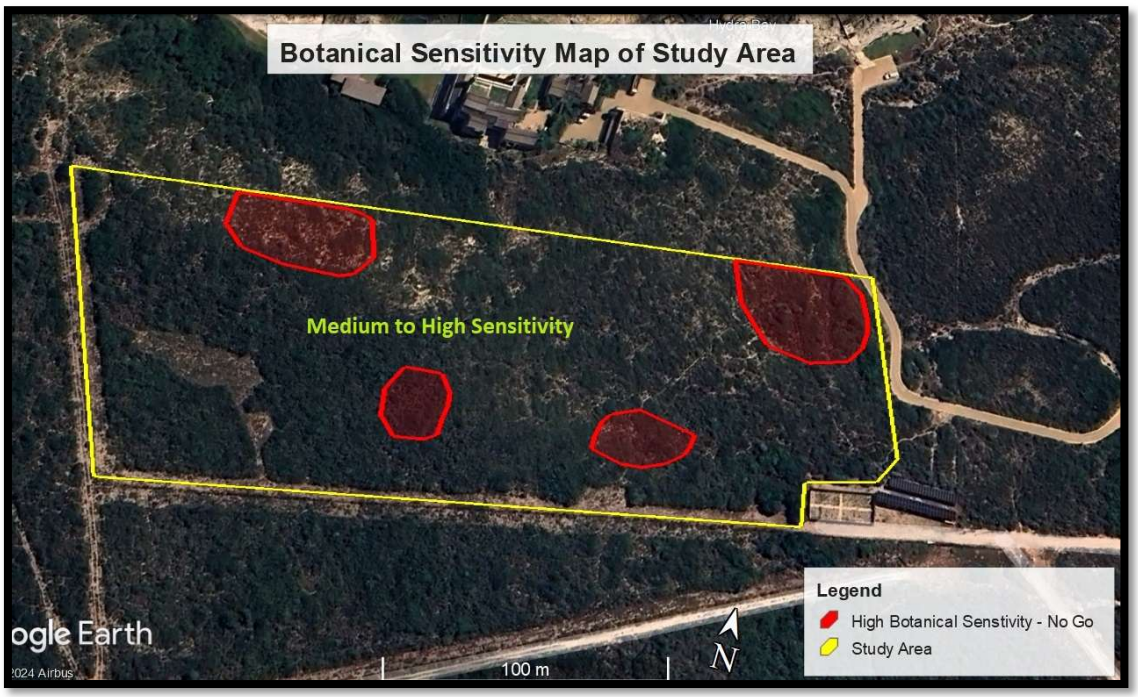

Figure 3: Botanical sensitivity map for the study area. Unshaded areas within the study area are of Medium to High sensitivity. High sensitivity areas are considered No Go areas for development.

6. IMPACT ASSESSMENT

6.1 Construction Phase (Direct) Botanical Impacts

The primary construction phase ecological impact of the proposed development would be permanent loss of all the natural vegetation (gazetted as an Endangered vegetation type) in the development footprints.

For the original alternative (Alternative 1) this would include two of the four High sensitivity vegetation areas, along with associated loss of at least part of the site

populations of 3 of the 4 (all except *Agathosma geniculata*, which is within 100m of the HWM, and thus outside of planned footprints) recorded plant Species of Conservation Concern in these areas. Areas where vegetation loss will be total include about 30% of the current study area (about 0.75ha). About 0.3ha of development will be in High sensitivity areas, and the rest in Medium to High sensitivity areas.

For Alternative 2 all vegetation loss will be in Medium to High sensitivity areas, as all four High sensitivity patches will be avoided, as will all four plant SoCC.

Temporary to short term vegetation loss and disturbance will occur adjacent to all construction areas, and judging by previous and current disturbance patterns around houses and along roads on the Romansbaai Estate, will increase the overall development footprint by about 25% for each alternative (thus an additional 0.25ha or so).

The proposed development would also result in loss and degradation of about 0.97ha of area mapped as CBA (Critical Biodiversity Area).

Botanical significance of this habitat and species loss for Alternative 1 would be **Medium - High negative**. After mitigation (Alternative 2; with included redesign of layout to avoid all High sensitivity patches) this could be reduced to **Low to Medium negative** (see Table A).

The extent of the impacts are deemed to be local and regional, but also national, in that the vegetation type and threatened species are also assessed at a national level.

Development Area	Extent of impact	Duration of impact	Intensity	Probability of impact	Irreplaceable loss of biodiversity	Significance before mitigation	Significance after mitigation
Original Layout (Alt 1)	Local & regional	Long term	Medium to High	Definite	High	Medium to High -ve	Medium to High -ve
Mitigated Layout (Alt 2)	Local & regional	Long term	Medium	Definite	Low - Medium	Low to Medium -ve	Low to Medium -ve
No Go	Local	None	Neutral	Low	None	Neutral	Neutral

Table A: Summary table for construction phase botanical impacts associated with the proposed development of the six erven and access roads (two Alternatives). For Alternative 1 the primary construction phase impacts would be permanent loss of High and Medium to High sensitivity vegetation (gazetted as an Endangered vegetation type), along with associated loss of parts of the site populations of 3 of the 4 recorded plant Species of Conservation Concern on site. For Alternative 2 all vegetation loss will be in Medium to High sensitivity areas, as all four High sensitivity patches will be avoided, as will all four plant SoCC.

The No Go alternative would have a significantly lower construction phase botanical impact than the proposed development, and is thus the preferred alternative.

6.2 Operational Phase Botanical Impacts

Operational phase impacts will take effect as soon as the natural vegetation on the site is lost or disturbed, and will persist in perpetuity, or as long as the area is not fully rehabilitated (not likely within 30yrs). Operational phase impacts include loss of the current high level of ecological connectivity across the study area, and associated habitat fragmentation. The construction may also result in alien Argentine ant introduction, with associated negative ecological impacts on seed dispersal for up to 35% of the remaining indigenous plant species within 50m of any construction, and thus covering most of the study area. Disturbance of the soil will also result in a weedy, pioneer plant community establishing in the disturbed areas, at the cost of the mature thicket and other Strandveld species.

The overall habitat fragmentation and loss of ecological connectivity impact is likely to be **Low to Medium negative** at the property scale (before and after mitigation, both alternatives), as the development will result in loss or degradation of about 35% of the currently undisturbed natural vegetation on the site.

Development Area	Extent of impact	Duration of impact	Intensity	Probability of impact	Irreplaceable loss of biodiversity	Significance before mitigation	Significance after mitigation
Original layout (Alt 1)	Local and regional	Long term to permanent	Medium	Likely	Low to Medium	Low to Medium -ve	Low to Medium -ve

Revised layout (Alt 2)	Local and regional	Long term to permanent	Medium	Likely	Low to Medium	Low to Medium -ve	Low to Medium -ve
No Go	Local	None	Neutral	Low	None	Neutral	Neutral

Table B: Summary table for operational phase botanical associated with the proposed development. The main operational phase impacts would be loss and degradation of current ecological connectivity across the footprints, and associated habitat fragmentation, along with invasive alien Argentine ant invasion, and associated disruption of up to 35% of the site seed dispersal.

Introduction of invasive alien Argentine ants is unfortunately also mostly a given for any development, and this is likely to have a **Low to Medium negative** impact (before and after mitigation, both alternatives) on the seed dispersal of up to 35% of the plant species in the study area, for up to 50m away from the disturbed area (*i.e*. it would impact virtually the whole site). There is unfortunately little one can do to mitigate this impact, other than avoiding it in the first place, which means no development.

The No Go alternative would have a significantly lower indirect (operational phase) botanical impact than the proposed development alternatives, and is thus **the preferred alternative.**

No significant positive ecological impacts of the proposed development are likely, either before or after mitigation.

6.3 The No Go Alternative

The No Go alternative (continuation of the *status quo)* on this site would have significantly lower construction and operational phase botanical impacts (Neutral vs Medium or Medium – High negative) than the proposed development alternatives, and is thus the **strongly preferred alternative** both before and after mitigation.

6.4 Cumulative Impacts

The cumulative ecological impacts are in many ways equivalent to the regional ecological impacts, in that the vegetation type and plant species to be impacted by the proposed development has been, and will continue to be, impacted by

numerous developments and other factors (the cumulative impacts) within the region. The primary cumulative impacts in the region are loss of natural vegetation and threatened plant species to ongoing urban development and alien plant invasion (Mucina & Rutherford 2012; Helme & Rebelo 2016).

The overall cumulative ecological impacts of the proposed development at the regional scale are likely to be **Low negative** after mitigation (Medium negative before mitigation), due mainly to the relatively small footprint (1.25ha). However, the cumulative impact of ongoing development in the Danger Point - Gansbaai – Franskraal region is clearly increasing, and as total numbers increase so does the cumulative ecological impact.

6.5 Positive Impacts

No significant positive ecological impacts of the proposed development (before mitigation) are likely during either the construction or the operational phase.

7. REQUIRED MITIGATION

The following mitigation is considered essential, feasible and reasonable, and assumes that Alternative 2 (revised layout) would be approved rather than Alternative 1:

- No gardening should be allowed on any of the development plots/erven, in order to reduce development footprints and impacts, and purchasers should instead keep undisturbed as much of the high diversity natural vegetation on each plot as possible.
- Any approved development and road footprints should be clearly demarcated (by temporary fencing) on site prior to any development. No disturbance of natural vegetation outside of these demarcated areas should be allowed, either during construction or thereafter.
- A minimum 5m buffer of natural vegetation must be maintained between the outer boundary of all mapped areas of High sensitivity and any development or disturbance.
- Any listed invasive alien plant species should be removed from the site (none evident currently) on an annual ongoing basis, using approved methodology (see Martens *et al* 2021). The main invasive species on the Romansbaai Estate are rooikrans (*Acacia cyclops)* and manitoka (*Myoporum serratum* and *M. tenuifolium*).

- Search and Rescue of all translocatable bulbs (geophytes, notably the Near Threatened *Babiana nana*) and any other translocatable species should be undertaken from the approved development footprints prior to construction. This should be done at the end of the flowering season for the relevant species (ranges from April to October), and must be undertaken by horticulturists familiar with the rescue and growing on of the species in the area. Material should be translocated to other parts of the property where it will not be disturbed in future, and which is ecologically similar. Alternatively rescued material could be kept in a nursery and then used on site for rehabilitation of any disturbed areas once all development is complete.
- Only locally indigenous Strandveld plant species noted in this report should be used for any rehabilitation of disturbed areas or landscaping/gardening on the greater study area.

8. CONCLUSIONS AND RECOMMENDATIONS

- All of the area surveyed is of Medium to High or High botanical sensitivity, and the underlying vegetation type (Overberg Dune Strandveld) is gazetted as Endangered on a national basis.
- At least four plant Species of Conservation Concern (SoCC) were recorded in the study area, and three of these are likely to be impacted by the proposed Alternative 1 development layout. Two of these three are widespread in the Danger Point area, while one is rare and localised (*Diosma demissa;* Vulnerable).
- Alternative 2 layout will impact directly on two more widespread of the four plant SoCC in the study area, but will avoid most of the *Diosma demissa* populations, and is hence strongly preferred over Alternative 1.
- Areas where vegetation loss will be total include about 30% of the current study area (about 0.7ha). About 0.3ha will be in High sensitivity areas (prior to mitigation, Alt 1), and the rest in Medium to High sensitivity areas (all of Alt 2).
- The whole area is mapped as CBA (Critical Biodiversity Area) in the CapeNature Spatial Biodiversity Plan.
- Construction phase botanical impacts are Medium to High negative before mitigation (Alternative 1), and Low to Medium negative after mitigation

(Alternative 2). The primary proposed mitigation is avoidance of all areas mapped as High sensitivity (see Figure 3), which is how Alternative 2 was drawn up.

- Operational phase botanical impacts are likely to be Low to Medium negative (for both alternatives), driven mainly by likely invasive alien Argentine ant impacts (associated with human residences) on seed dispersal that is normally undertaken by the outcompeted indigenous ants.
- If any development on site is approved (only Alternative 2 is acceptable) then all mitigation as outlined in Section 7 must be timeously and properly implemented.
- The No Go alternative would be the strongly preferred alternative from a botanical perspective, with a Neutral impact.
- Alien invasive vegetation is the primary threat to the vegetation type concerned, even in declared conservation areas, such as the Walker Bay Nature Reserve. A conservation contribution by the applicant is thus strongly recommended to help finance, coordinate and manage alien vegetation clearing in the vegetation type (Overberg Dune Strandveld) that will be impacted by this development. The funding could be made available to an NGO active in the area, such as the Walker Bay Conservancy. The quantum of the donation should be linked to the costs for clearing 25ha of densely invaded Strandveld, in accordance with ratios (1:20 for Endangered habitat) in the offset guidelines (Department of Forestry, Fisheries & the Environment. 2023), even though this is not required as an official, mandatory biodiversity offset process (as mitigated impact level is Low – Medium negative rather than Medium negative). The typical costs of clearing dense aliens on fairly flat terrain are about R20 000/ha – R25000/ha and thus the quantum of the funding should be about R0.5 – R0.62m.

9. REFERENCES

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