

Botanical Specialist

Compliance Statement Report for

Patrys Development

on erf 3927 of Still Bay.

This report was prepared during August 2021 by:

Regalis Environmental Services CC
P.O. Box 1512
6620 Oudtshoorn
Tel: 044-2791987
Email: janvlok@mweb.co.za

METHODOLOGY, UNCERTAINTY AND ASSUMPTIONS

The national status of the affected vegetation type was determined by means of consulting Mucina *et al* (2006) and updates thereof [South African National Biodiversity Institute (2006-2019). The Vegetation Map of South Africa, Lesotho and Swaziland, Mucina, L., Rutherford, M.C. and Powrie, L.W. (Editors), Online, <http://bgis.sanbi.org/Projects/Detail/186>, Version 2018]. The regional conservation value of the affected vegetation was determined by means of consulting the fine-scale conservation plan for the region by Pence (2017) [and updates thereof on Elsenburg's Cape Farm Mapper program].

The property was surveyed on foot to determine the ecological condition of the affected area and to establish if any rare or endangered plant species (*sensu* Raimondo *et al*, 2009 and updates thereof in www.sanbi.redlist) are, or may be present. All the plant species encountered could be identified with certainty as many were in flower after good recent rain, which resulted even in a flush of usually spring annuals. A thorough search was done for rare and threatened species known to occur on the general area (e.g. *Disa lugens*, etc.).

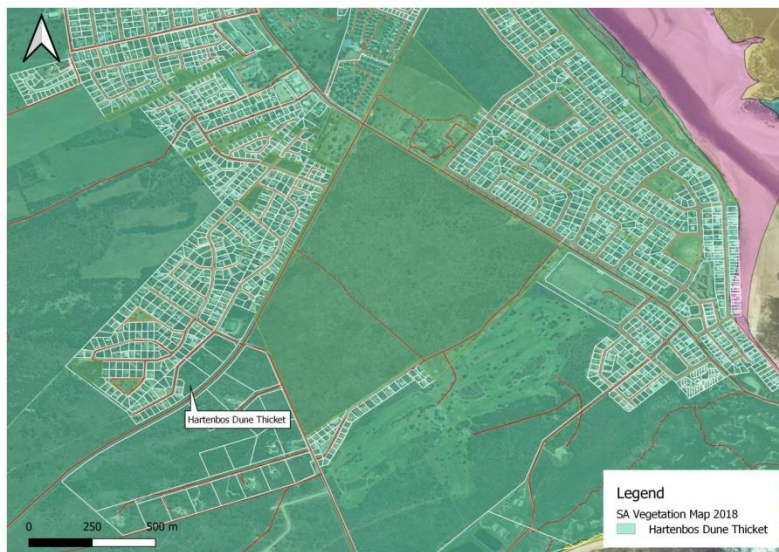
In this revised report I checked to see if there have been any recent changes in the conservation status of the affected environment recently and as there are none, I am thus confident that the methodology followed for a botanical sensitivity analyses and impact assessment complies with:

1. Appendix 6 of the 2014 National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA) Environmental Impact Assessment (EIA) Regulations (and as amended), detailing the requirements for specialist's reports; and,
2. The principals outlined in the *Guideline for Biodiversity Specialists* (WC: DEA&DP, 2005) and those of the *Western Cape Biodiversity Spatial Plan Handbook* (Pool-Stanvliet et al, 2017).
3. The protocols prescribed for a botanical impact assessment prescribed in Government Notice no. 1150 dated 30/10/2020.

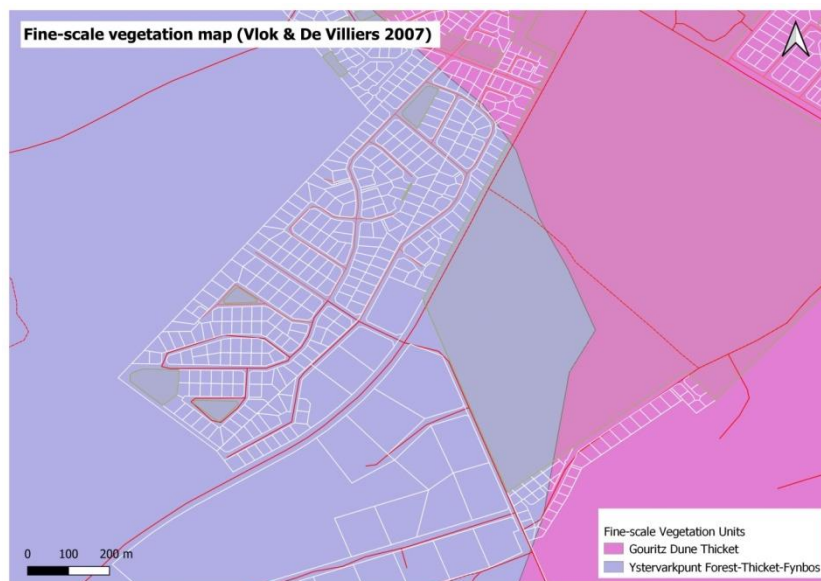
To the best of my knowledge, I have no uncertainties and assumptions to declare regarding the findings and recommendations in this report.

STUDY RESULTS

Following the national vegetation map the proposed development area consists of Hartenbos Dune Thicket (status = Least Concerned; see Map 1). The more detailed regional vegetation map indicate that the affected vegetation consists of Ystervarkpunt Forest- Thicket- Fynbos (see Map 2). The entire erf has been mapped as an Other Natural Area in the 2017 regional conservation plan (see Map 3), its status has not been upgraded since.



Map 1: National vegetation type on the property.



Map 2: Fine-scale vegetation map of vegetation on the property.



Map 3: Regional conservation plan for the affected area (from Pence; 2017).

As is indicated in the fine-scale vegetation type the vegetation on the erf (and surrounding area) consists of a Fynbos matrix [typically with Dekriet (*Thamnochortus insignis*) abundant] in which patches of Thicket vegetation [typically with Milkwood (*Sideroxylon inerme*) prominent] are prominent, but in which some Forest trees [e.g. Hardepeer (*Olinia ventosa*)] is present.

For some reason the shrubby vegetation has been cleared on the property, seemingly repeatedly, perhaps to clear alien vegetation and/or other unwanted elements. This management regime resulted in a ‘parkland-like’ vegetation with clumps of trees dominant in a largely graminoid dominated understorey (see Photo 1). This management regime left the phytodiversity on the erf as rather impoverished. The following 61 species were recorded on the erf:

Trees: *Olinia ventosa*, *Searsia glauca* and *Sideroxylon inerme*.

Shrubs and herbs: *Arctotheca calendulacea*, *Aspalathus cerrhantha*, *A. spinosa*, *A. pinguis*, *Athanasia trifurcata*, *Berkheya heterophylla*, *Carissa bispinosa*, *Carpobrotus edulis*, *Conicosia pugnioformis*, *Chrysocoma tenuifolia*, *Commelina africana*, *Chironia baccifera*, *Cullumia carlinoides*, *Cynanchum obtusifolium*, *Delosperma littorale*, *Diospyros dichrophylla*, *Disperago ericoides*, *Eriocephalus racemosus*, *Euphorbia burmanii*, *Galenia portulacacea*, *Galium tomentosum*, *Helichrysum cymosum*, *H. panduriforme*, *H. teretifolium*, *Limeum aethiopicum*, *Lycium cinereum*, *Mesembryanthumum chrystallinum*, *M. splendens*, *Metalasia muricata*, *Myrsine africana*, *Osteospermum moniliferum*, *Pelargonium capitatum*, *Pollichia campestris*, *Ruschia multiflora*, *Salvia africana-lutea*, *Senecio elegans*, *S. juniperinus*, *Sarcostemma viminale*, *Silene undulata*, *Solanum africanum*, *S. linnaeanum*, *Stachys aethiopica*, *Tephrosia capensis* and *Tetragonia fruticosa*.

Graminoids: *Cynodon dactylon*, *Ehrharta ramosa*, *E. villosa*, *Eragrostis curvula*, *E. plana*, *Ficinia oligantha*, *Hypperhenia hirta*, *Imperata cylindrica*, *Melinus repens* and *Thamnochortus insignis*.

Geophytes: *Brunsvigia orientalis*, *Drimia capensis*, *Ferraria crispa* and *Trachyandra divaricata*.

No rare or threatened species were found during the survey and none of the plant species of concern listed in the Screening Tool are suspected to occur on or near the proposed development site. As the proposed development area is rather isolated, I have no reason to believe that development on this property will negatively affect any species of special concern.

Alien species are not very common on the erf with *Pennisetum clandestinum* the most common species and covering about 5 % of the site. This alien is largely restricted to a storm water drainage line in the north-eastern corner of the property. The latter seems to be a man-made storm water drainage channel to drain water from the adjacent already developed area to the property immediately east of the Patrys development. The vegetation along this drainage line is highly disturbed and dominated by Kikuyu (*Pennisetum clandestinum*) grass (See Photo 2).



Photo 1: State of the vegetation on the erf.



Photo 2: The storm water drainage area on the erf. The area is dominated by alien plants, indicating that it is a man-made storm water drainage line.

CONCLUSIONS AND RECOMMENDATIONS

The SANBI Screening Tool indicated that the affected property is of Medium Sensitivity regarding Botanical Impact and that the general Terrestrial Biodiversity Sensitivity is Very High, due to its classification as a Vulnerable Ecosystem. The Screening Tool ecosystem classification cannot be based on botanical grounds as my botanical sensitivity assessment is as follows:

1. The affected vegetation type on the erf is not a national threatened vegetation type.
2. The affected area has not been ear-marked on regional conservation plans as of significance to maintain biodiversity pattern or ecological processes.
3. No rare or threatened species were found (or are suspected to occur) on the erf or in its immediate vicinity.
4. Due to its isolated location, development on this property will hold no threat to larger ecological processes vital to retain the local biodiversity.
5. The sporadic occurrence of *Olinia ventosa* is a peculiarity of the affected regional vegetation type (Ystervarkpunt Forest- Thicket- Fynbos). As the local tree component does not form a closed canopy (see Photo 1), the affected vegetation cannot be classified as a forest, at most as a woodland, following the definitions in the Forestry Act (National Forest Act 84 of 1998).

I did not find any sensitive part on the property, apart from the artificial drainage area and my Impact Assessment is appended as Appendage 2. To my opinion the entire area can be developed, barring the storm water drainage area.

Regarding the botanical impact assessment, I support the proposed development on the erf, with the following recommendations;

1. Retain as many as possible of the remaining Milkwood/Hardepeer trees in the proposed development.
2. Obtain permission from the relevant authority (DAFF) to remove any of the specially protected Milkwood trees.
3. No specific management or monitoring actions are proposed for this development.

REFERENCES

Mucina, L., Rutherford, M.C. and Powrie, L.W. (eds.), 2006. Vegetation Map of South Africa, Lesotho and Swaziland. 1:1 000 000 scale sheet maps. SANBI, Pretoria.

Pence, G.Q.K., 2017. Western Cape Biodiversity Framework 2017. Status Update: Critical Biodiversity Areas of the Western Cape. Unpublished CapeNature report.

Pool-Stanvliet, R., Duffel-Canham, A., Pence, G. & Smart, R. 2017. Western Cape Biodiversity Spatial Plan Handbook. Stellenbosch, CapeNature.

Raimondo, D., Von Staden, L., Foden, W., Victor, J.E., Helme, N.A., Turner, R.C.,

Kamundi, D.A. & Manyama, P.A., 2009. Red List of South African plants.

Strelitzia 25, SANBI, Pretoria.

APPENDIX 1: CV OF CONSULTANT.

Johannes Hendrik Jacobus Vlok

Biographical Information

Birth: 6th December 1957, Calvinia, South Africa.
Identity Number: 571206 5133 089
Criminal Record: None.
Married to Anne Lise Schutte-Vlok and we have one daughter, Marianne Helena Vlok.

Education

1975 Matriculated at Bellville High School.
1982 Diploma in Forestry, Saasveld Forestry College.
1997 MSc (*Cum Laude*), University of Natal.

Employment

1982-1990. Department of Forestry (later Water Affairs, Forestry and Environmental Affairs), as research technician.
1990-1997. Cape Nature Conservation, as regional botanist.
1997-present. Self employed as environmental advisor (Regalis Environmental Services).

Research Output

One book and more than 50 scientific and popular articles published in international & national journals as primary or as co-author. Delivered several keynote and >20 other verbal papers at scientific forums on ecological and floristic studies. Delivered >300 presentations to civil society (public meetings, radio, newspaper and television) on plant ecology and conservation. Current ResearchGate rating > 26 and has > 1 700 citations.

Awards

2003. Leslie Hill medal. **Succulent Society of South Africa.**
2006. Gold award. **C.A.P.E.**
2006. Certificate of Appreciation. **Western Cape Conservation Stewardship Association.**
2008. Special Award. **CapeNature**
2010. Marloth medal. **Botanical Society of South Africa.**

Consultation & Advisory Capacity

Consultant to WWF-SA, Cape Nature and SANPARKS to determine conservation status of land. Several of the studies resulted in the purchase of the properties, now amounting to a value of >R30 million.

Consultant to National, Provincial and private institutions for vegetation restoration projects, environmental impact assessment and environmental management plans.
Some of these assignments won national awards.

Referee for international and national scientific articles and donor funded grants.

Classified, described and mapped Forest, Subtropical Thicket, Fynbos and Succulent Karoo vegetation units in four major donor funded projects.

Expert witness in Magistrate and Supreme Court cases.

Research associate of Nelson Mandela University (Saasveld campus).

Professional Membership

Registered at South African Council for Natural Scientific Professions (SACNASP) as botanical scientist with membership number 130942.

APPENDIX 2: BOTANICAL IMPACT ASSESMENT FOR THE PROPOSED PATRYS DEVELOPMENT.

Please note that the assessment below is similar for the **construction** and **operational** phases of the proposed development with the main mitigation action being to retain as many as possible of the remaining Milkwood/Hardepeer trees in the proposed development during the construction and operational phase of the proposed development. The storm water drainage area and retention of tree concerns have been addressed in the final layout plan (see Map 1).


| Impact description Without mitigation actions. | Extent | Magnitude | Duration | Probability | Confidence | Reversibility | Significance |
|---|--------|-----------|-----------|-------------|------------|---------------|--------------|
| Disturbance of sensitive storm water drainage area. | Local | Medium | Long term | Probable | Certain | Irreversible | Medium |
| Loss of sensitive vegetation, especially protected trees. | Local | Medium | Long term | Probable | Certain | Irreversible | Medium |

| Impact description With mitigation actions. | Extent | Magnitude | Duration | Probability | Confidence | Reversibility | Significance |
|---|--------|-----------|------------|-------------|------------|---------------|--------------|
| Disturbance of sensitive storm water drainage area. | Local | Low | Short term | Probable | Certain | Reversible | Low |
| Loss of sensitive vegetation, especially protected trees. | Local | Medium | Long term | Probable | Certain | Reversible | Low |

APPENDIX 3: DECLARATION OF INDEPENDANCE

I J.H.J. Vlok as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that I:

- in terms of the general requirement to be independent:
 - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
 - ~~○ am not independent, but another specialist (the “Review Specialist”) that meets the general requirements set out in Regulation 13 has been appointed to review my work (Note: a declaration by the review specialist must be submitted);~~
- in terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any report, plan or document prepared or to be prepared as part of the application; and
- am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014 (as amended).



Signature of the Specialist:

Name of Company:

Date:

Regalis Environmental Services CC

19th August 2021
