

**TERRESTRIAL BIODIVERSITY COMPLIANCE  
STATEMENT  
FARM ARCH ROCK NO. 296 REMAINDER  
PORTION 5  
KEURBOOMSTRAND  
PROPOSED REDEVELOPMENT  
Bitou Municipal Area**



View of the servitude entrance

Benjamin Walton for Cape Vegetation Surveys

o.b.o. Terry de Waal for Babylonstoren (Pty) Ltd

Reviewed by: Mark Sasman (Pr.Sci.Nat.) SACNASP Environmental Science



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## STATEMENT OF INDEPENDENCE

I, Benjamin Alan Walton, trading as “Cape Vegetation Surveys”, in terms of section 33 of the NEMA, 1998 (Act No. 107 of 1998), as amended, hereby declare that I provide services as an independent botanical specialist and receive remuneration for services rendered for expressing a factual account of the baseline environment. I have no financial or other vested interest in the project. Botanical information contained in the report may not be copied without the authors consent.

### An abridged Curriculum Vitae:

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Experience: Cape Vegetation Surveys: Consulting Botanist 2017-2020

Western Cape Nature Conservation Board (CapeNature), Scientist: Land Use Advisor 2010-2017;

Department of Environmental Affairs and Development Planning, Principal Environmental Officer (George) 2008-2010;

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## (1) Introduction and Terms of Reference

The terms of reference is to conduct a vegetation survey to confirm the vegetation unit and conservation status; and describe the vegetation and sensitivity, with reference to the fynbos forum ecosystems and NEMA specialist guidelines for Terrestrial Biodiversity Compliance Statements (where habitat is transformed). This is to inform the environmental impact of activities within transformed Goukamma Dune Thicket habitat; and identify risks, suggest mitigation and make recommendations for implementation. The sensitivity of the study area (see Fig. 1) at Keurboomstrand is described in context of the remaining natural habitat, current land use and suitability of redevelopment.



Figure 1: Showing the property (yellow polygon) at Keurboomstrand (image courtesy of Google Earth).

## Scope of Assessment - national screening tool

The DFFE screening report generated for Farm Arch Rock No. 296 Remainder of Portion 5 at Keurboomstrand for “*Infrastructure in the Sea\_Estuary\_Littoral Active Zone\_Development Setback\_100M Inland or coastal public property*” identified, *inter alia*, that a terrestrial biodiversity assessment be undertaken based on the Very High Terrestrial Biodiversity Sensitivity of the area; with a Medium Relative Plant Species Sensitivity. This report complies with the minimum requirements for terrestrial biodiversity assessments<sup>1</sup>.

## Site sensitivity verification

The area was analyzed using satellite imagery (Google Earth and Cape Farm Mapper) and biodiversity informants viewed in QGIS.

Verification of the sensitivity of the receiving environment was conducted by a preliminary survey on foot where plant species were observed and recorded and select waypoints were taken with a GPS. The waypoints were used as a reference to establish the extent of the existing vegetation patterns and land use.

The property has an array of existing cottages used for tourism. The applicant proposes to redevelop the cottages and change the positioning and internal accesses. Various protected and indigenous trees occur at the property with gardens beds and lawn surrounding the chalets. The southern extent has a large open area near the seafront cottages. Thus the receiving environment where redevelopment is proposed is mostly transformed with only trees remaining (see Fig. 2). Thus no impact on biodiversity pattern is expected to occur should development proceed; only certain trees will be affected.

As the state of the habitat is mostly transformed this report, as per the protocols for biodiversity sensitivity assessment, is a compliance statement.

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<sup>1</sup> Government Gazette No. 43110, GN No. 320 (2020) National Environmental Management Act, 1998 (Act No. 107 of 1998) Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of section 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for environmental authorization.



Figure 2: Showing a Milkwood between chalets.

## (2) The property and location

Farm Arch Rock No. 296 Remainder of Portion 5 (0.5 ha) at Keurboomstrand is zoned Resort Zone I. The site is located at the end of Main Street and then via a servitude in Keurboomstrand at Picnic Rock and Arch Rock seaside accommodation, and is hereinafter referred to as the “study area” (see Fig. 3).

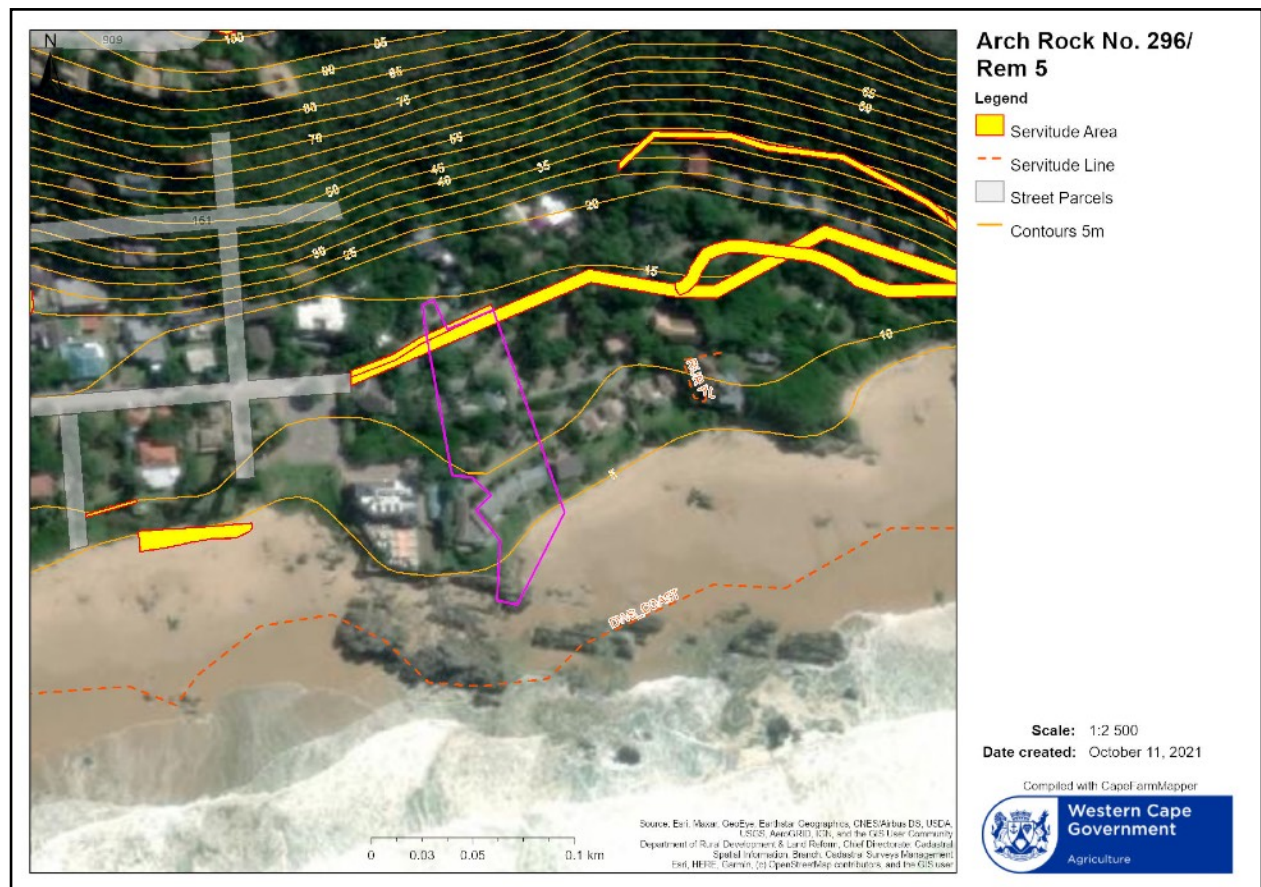


Figure 3: Showing the property and servitude area traversing the northern extent (image courtesy of Cape Farm Mapper).

The proposal concerns the demolition or renovation of existing structures and redevelopment of tourism chalets; as shown on the diagram “AT\_101\_SITE DEVELOPMENT PLAN\_Sketch 009\_20200707” by Malherbe Rust Architects.

## THE BIODIVERSITY IMPORTANCE OF THE AREA IN CONTEXT OF THE LANDSCAPE PERSPECTIVE

### (3) The Biodiversity Spatial Plan<sup>2</sup>

The property is mostly outside of designated sensitive areas according to the Provincial Biodiversity Spatial Plan (see Fig. 4), except for the southern extent along the seashore which is outside of the development footprint. The spatial planning units (20 ha) encompassing the study area are mapped as containing the following specific geographic features:

- (3)(1) Coastal Habitat Type;
- (3)(2) Coastal resource protection- Eden;
- (3)(3) Foredune;
- (3)(4) Indigenous Forest Type;
- (3)(5) Eastern Fynbos Renosterveld Shale Fynbos Floodplain Wetland
- (3)(6) Garden Route Shale Fynbos (EN) - outside of study area;
- (3)(7) South Outeniqua Sandstone Fynbos (VU) outside of study area;
- (3)(8) Watercourse protection- South Eastern Coastal Belt.

From a landscape perspective the identified specific geographic features mentioned above, pertain to the importance of a coastal resource being the seafront and foredunes and coastal habitats, with indigenous forest. The study area is transformed from a botanical perspective, but large trees afford shelter for avifauna and is otherwise fragmented from the surrounding natural habitats. However the seafront is prone to coastal erosion and ecological processes are largely dependant on wind and wave action. As indicated in the coastal risk assessment<sup>3</sup> the nearshore rocky reef offers some protection from wave attack.

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<sup>2</sup> <http://bgis.sanbi.org/Projects/Detail/194>

<sup>3</sup> WML Coast Consulting Engineers (2021) Coastal Engineer's Report: Arch Rock Resort, Farm Portion 5 of 296, Keurboomstrand.

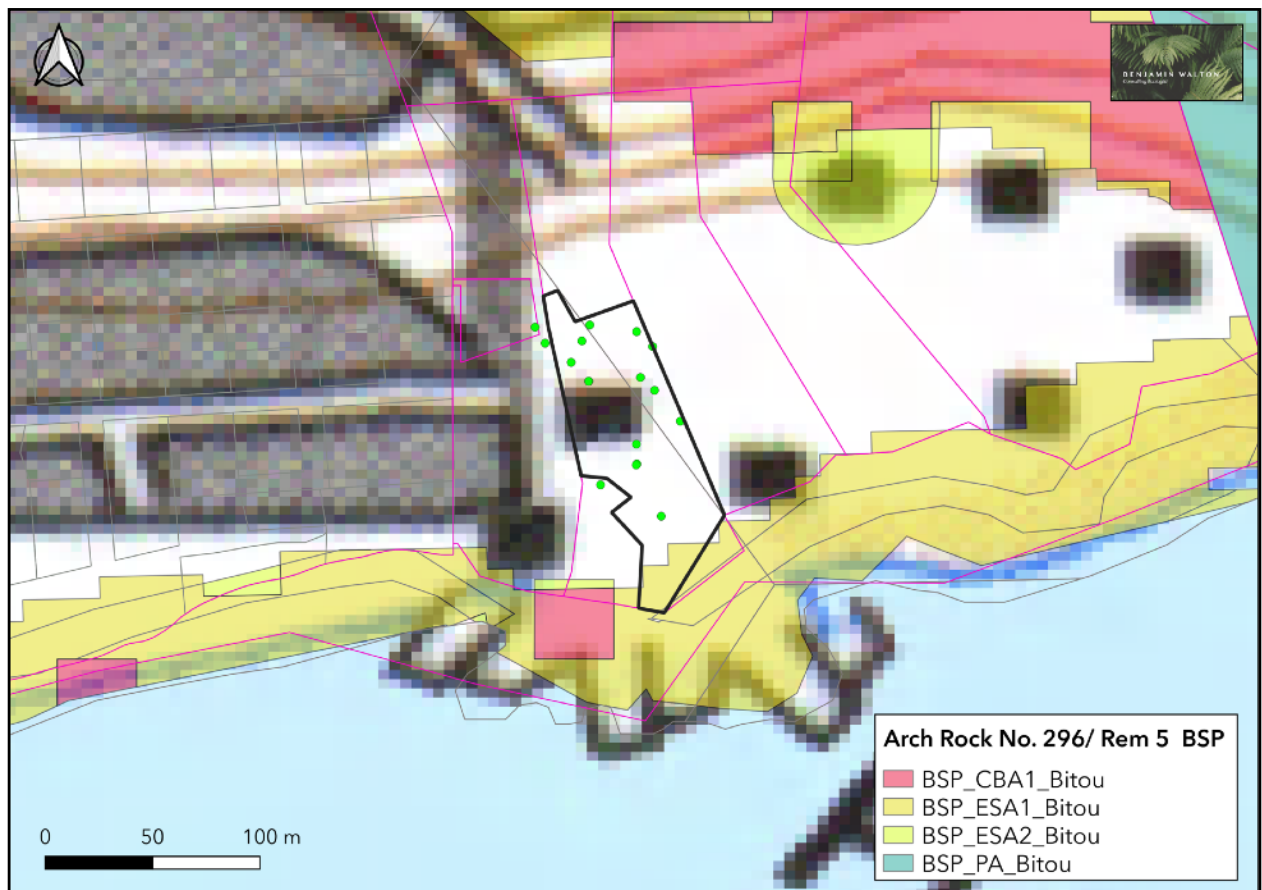


Figure 4: The study area indicated as partially within a sensitive area according to the Biodiversity Spatial Plan, 2017.

## THE BIODIVERSITY IMPORTANCE OF THE SITE AND SURROUNDING RECEIVING ENVIRONMENT

### (4) Vegetation description

According to the updated Vegetation Map of South Africa, Lesotho and Swaziland<sup>4</sup> the mapped vegetation unit occurring at the property is Least Threatened Goukamma Dune Thicket (AT 36), which is not a threatened ecosystem i.t.o. the National Environmental Management Biodiversity Act<sup>5</sup> (see Fig. 5).

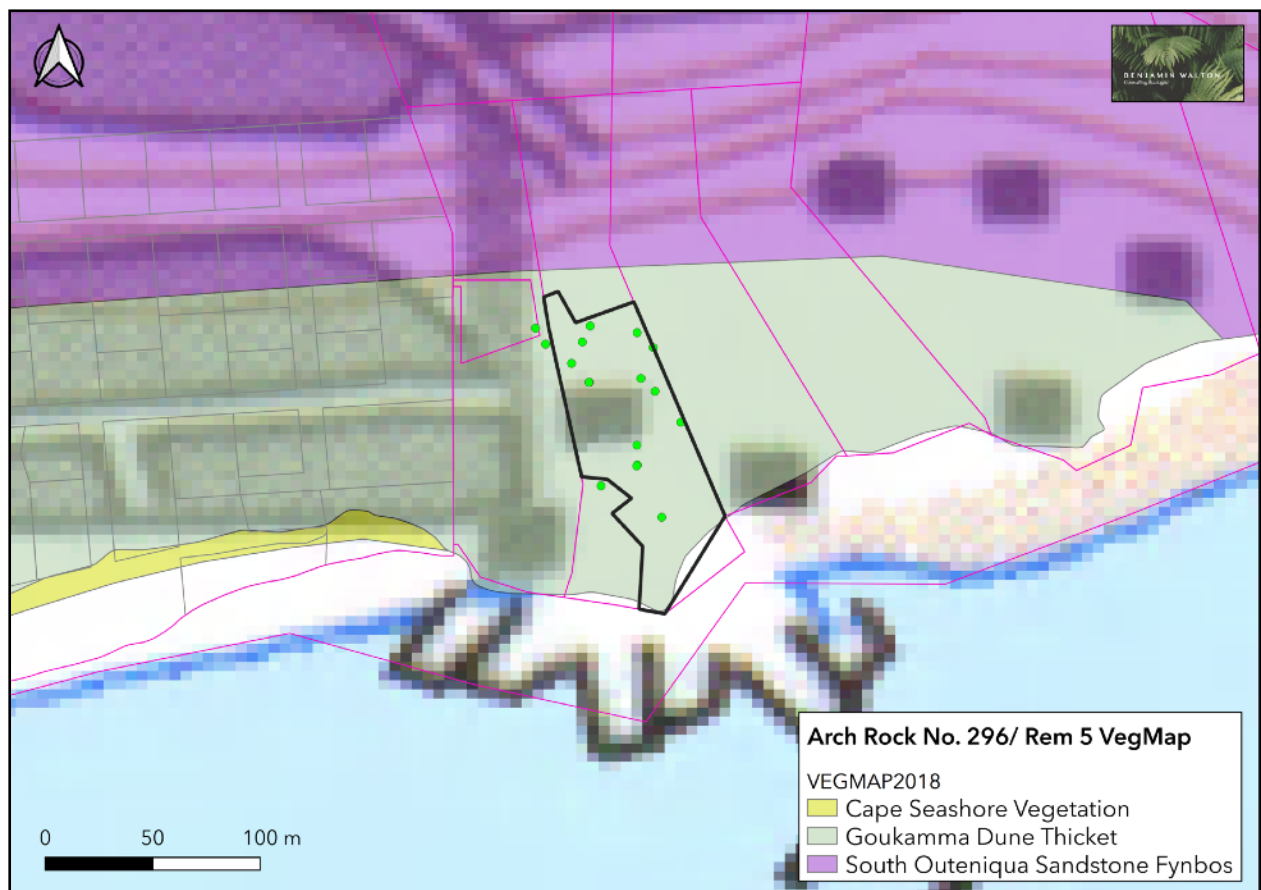


Figure 5: The property in context of National vegetation units as indicated within Goukamma Dune Thicket.

<sup>4</sup> Mucina L & Rutherford MC (eds) (2006) Vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute, Pretoria.

<sup>5</sup> Government Gazette No. 34809, GN No. 1002 (2011) National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004): National List of Ecosystems that are Threatened and in need of Protection

The latter vegetation unit abuts onto Cape Seashore Vegetation at the southern extent of the property. The vegetation unit occurring at the property was previously mapped in 2006 as containing Vulnerable Garden Route Shale Fynbos (FFh 9); as still reflected in the Biodiversity Sector Plan informants.

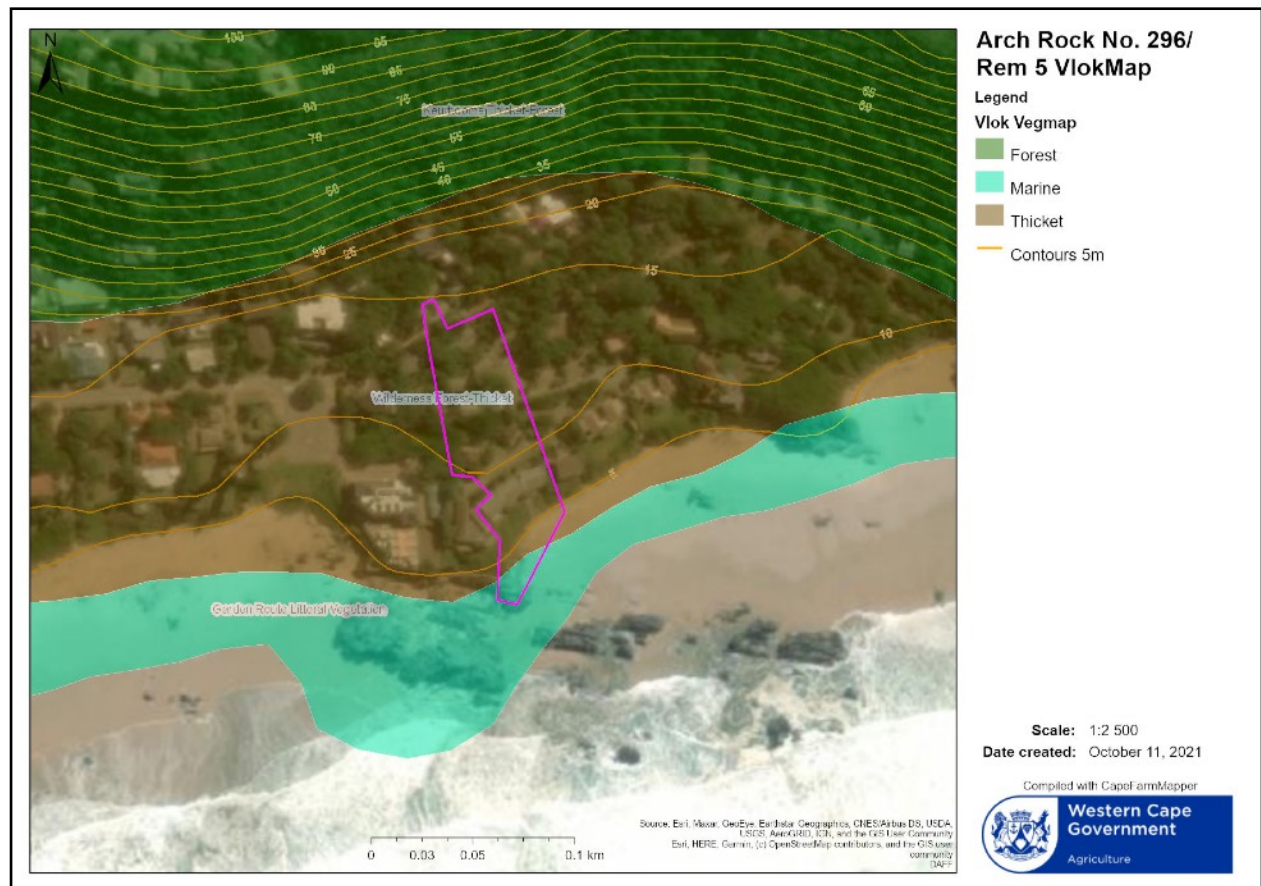


Figure 6: The property in context of the fine-scale vegetation variants as indicated within Wilderness Forest Thicket.

The fine-scale Vegetation Map for the Garden Route<sup>6</sup> delineated broad habitat types with associated vegetation variants, with the study area mapped as containing *Wolwe Forest Thicket*; abutting onto *Garden Route Littoral Vegetation* (see Fig. 6) at the southern extent; which is more akin to the original broad vegetation patterning.

<sup>6</sup> Vlok JHJ, Euston-Brown DIW and Wolf T (2008) Vegetation Map for the Garden Route Initiative. Unpublished 1:50 000 maps and reports supported by CAPE FSP task team.

## SITE SENSITIVITY VERIFICATION



Figure 7: Showing the location points of various trees at the property.

### (5) Baseline description of biodiversity and ecosystem condition

Based on an initial inspection on the 22<sup>nd</sup> of September 2021 the property is on a level shelf sloping gently to the seafront. The existing chalets are surrounded by tall trees which are mostly indigenous and some are protected like Milkwood and Yellowwood (see Fig. 7).

There is no community of plants resembling Fynbos at the transformed suburban property; and it was most likely Coastal Forest, namely *Endangered* Western Cape Milkwood Forest (FOz 6: VI3), protected i.t.o. the National Forest Act, 1998 (Act No. 84 of 1998), as amended. Thus only large trees in clusters or solitary specimens occur at the property of up to 8 and 10 metres in height.



Figure 8: Showing the small cottage just north of the servitude access bisecting the property with Cape Saffron and Candlewoods.

The Protected trees within the development footprint area will require permission from Forestry Western Cape to prune them back mindfully as it is the intention to retain them *in situ* (see Figs. 8 and 9). The main indigenous trees (protected and unprotected) occurring at the property are: *Apodytes dimidiata* (Hardepeer), *Cassine peragua* (Cape Saffron), *Diospyros dichrophylla* (Common Star-Apple), *Mystroxylon aethiopicum* (Cape Cherry), *Podocarpus falcatus* (Outeniqua Yellowwood), *Pterocelastrus tricuspidatus* (Candlewood), *Rapanea melanophloeos* (Cape Beech), *Sideroxylon inerme* (White Milkwood), *Tarchonanthus littoralis* (Wild Camphor) and *Vepris lanceolata*.



Figure 9: Showing the reception cottage surrounded by trees.

The southern extent contains some exotic and extralimital trees which will not require a Forestry Licence to remove them, like: *Brachylaena discolor* (Coast Silver-Oak), *Coprosma reopens* (Mirror Bush) *Ficus natalensis*, *Metrosideros excelsa* (New Zealand Christmas Tree) and a Palm tree.

The vegetation unit at the receiving environment is mapped as Goukamma Dune Thicket, with a conservation status as Least Threatened. Ground-truthing of the study area has refuted the presence of healthy or representative Shale Fynbos or Dune Thicket vegetation occurring there, as the property is transformed, fragmented and situated adjacent to a built environment.

Some indigenous and protected Milkwood and Yellowwood and other forest tree species occur at the study area amongst the chalets, and otherwise the area contains gardened flowerbeds and lawn. The property abuts onto the seashore and coastal littoral zone at the southern extent.

No Species of Special Concern (sensitive species) were observed at the property. The screening reports' list of disclosed and undisclosed sensitive species were not observed at the property, as it is transformed and not fynbos habitat (see Figs. 10 and 11).



Figure 10: Showing the access track on the eastern boundary.

For terrestrial animals, birds and reptiles there would be a negligible impact from the development proposal.

Thus the redevelopment of transformed habitat of **Low Terrestrial Biodiversity Sensitivity** with a **Medium Plant Species Sensitivity** is a low impact for biodiversity and potentially positive impact for development.

The impact is site specific in **extent** to the study area and surrounding adjacent environment. The activities may have impacts downstream and along the coastline if erosion or pollution is unmanaged.

The **duration** of the impact is permanent should development proceed at the site.

The impact is of **low intensity** as a negligible amount of pattern and process will be lost by occupation.

The impact on Garden Route Shale Fynbos or Goukamma Dune Thicket is **highly improbable**.

The impact on Garden Route Shale Fynbos or Goukamma Dune Thicket habitat and effect on biodiversity, predicted with a **high** level of confidence in the assessment, is of **very low significance**.



Figure 11: Showing the southern extent with a more open area and some exotic and extralimital shade trees.

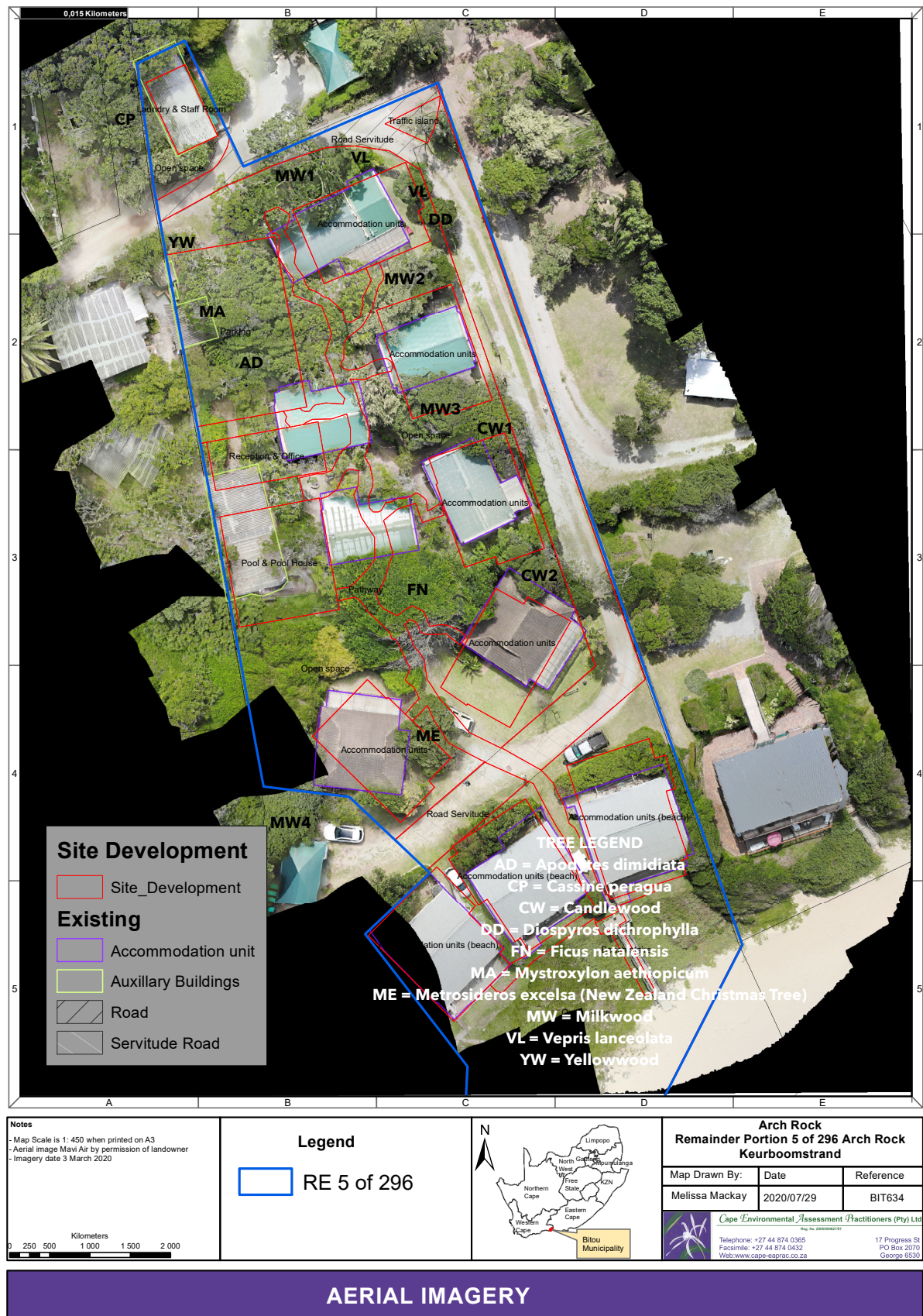


Figure 12: The site development plan annotated with tree names.

Figure 12 above shows the positions of various trees annotated with their names; as similarly shown on the diagram “BIT634 Sensitivity” by CapeEAPrac.

## **(6) Mitigation and Recommendations for management**

- (6)(1) A Forestry Licence will be required to relocate Protected trees within the development footprint (see Fig. 12).
- (6)(2) Only indigenous plant species should be used in the landscaped areas of the redevelopment.
- (6)(3) Construction and operational management of the development must ensure that the Milkwoods are not impacted on should they be retained.
- (6)(4) Following construction any exposed surfaces and slopes may be covered with stack pile mulch and debris, hessian cloth and / or “sausage rolls” to prevent loss of soil by natural wind and water erosion.
- (6)(5) Ensure drainage and runoff is managed to prevent erosion and soil loss. Install contour berms where erosion has occurred to ensure that no new erosion pathways are formed.
- (6)(6) Resource conservation measures should be implemented as far as practical, with downlighting to reduce light pollution.

## **Conclusion**

Redevelopment of the resort accommodation units, in the opinion of the author, will not impact on the conservation status of Goukamma Dune Thicket; with vegetation of Low Terrestrial Biodiversity Sensitivity and of Medium Plant Species Sensitivity. The redevelopment at the property should retain most of the locally indigenous tree species as they afford shade and shelter for avifauna and sense of place of the area.

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## Appendix 1: List of observed plant species at the property

*Albuca bracteata* (Pregnant Onion)

*Allophylus decipiens*

*Apodytes dimidiata* subsp. *dimidiata* (Hardepeer)

*Asparagus asparagoides* (climber)

*Asparagus setaceus* (Common Asparagus Fern)

*Asystasia gangetica* ssp. *micrantha* (African Coromandel)

*Brachylaena discolor* (Coast Silver-Oak)

*Bulbine* sp. (planted)

*Canna indica* (Indian-Shot)

*Cassine peragua* subsp. *peragua* (Cape Saffron)

*Chlorophytum* sp.

*Clivia* sp. (planted)

*Coprosma repens* (Mirror-Bush)

*Cynanchum obtusifolium* (Roundleaf Buckhorn)

*Cyrtomium falcatum* (House Holly-Fern)

*Diospyros dichrophylla* subsp. *dichrophylla* (Common Star-Apple)

*Dipogon lignosus* (Okie Bean)

*Dovyalis caffra* Kei Apple (planted)

*Ficus natalensis*

*Hedera helix* (Poison Ivy)

*Metrosideros excelsa* (New Zealand Christmas Tree)

*Monstera deliciosa* (Delicious Monster)

*Mystroxydon aethiopicum* subsp. *aethiopicum* (Cape Cherry)

*Oxalis incarnata* (Pale Pink-Sorrel)

Palm tree

*Podocarpus falcatus* (Outeniqua Yellowwood)

*Pterocelastrus tricuspidatus* (Candlewood)

*Rapanea melanophloeos* (Cape Beech)

*Rumohra adiantiformis* (Seven-weeks Fern)

*Searsia crenata* (Bluefruit Currant-rhus)

*Senecio angulatus* (climber)

*Sideroxylon inerme* L. subsp. *inerme* (White Milkwood - Protected)

*Tarchonanthus littoralis* (Wild Camphor)

*Tecomaria capensis* (Cape Honeysuckle)


*Vepris lanceolata*

*Zantedeschia aethiopica*

**The terms of reference of the review specialist:**

I Mark Sasman am a SACNASP registered Environmental Scientist (400185/04). The review is confined to confirming that the content is accurate based on checks against the quoted mapping tools and available references and meets the requirements for a specialist biodiversity report in terms of issued guidelines. The author Benjamin Walton, although not formally registered, is a highly experienced and qualified practitioner in this field. The report addresses all the aspects as per the TOR and SDP and the conclusions and recommendations are reasonable and warranted given the data and discussion presented.

10/03/2022

  
M. Sasman (Pr.Sci.Nat.)

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