

Archaeological Heritage Impact Assessment

High water and littoral dune zone east to south east of Portion 1 of the Farm Walkers Point 215, Magisterial District Knysna, Western Cape Province: Proposed dune protection via extension of existing retaining wall and addition of timber revetment.

prepared for
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Executive Summary

Construction activities associated with the above proposal could negatively and permanently impact archaeological and heritage related resources. In accordance with legislation protecting archaeological and heritage resources, the length of proposed retaining and stabilizing structures requires that an archaeological and heritage impact be conducted.

On 19 October 2007 an Archaeological Heritage Impact Assessment was conducted of the above named property. While the dune abutting the high water mark is densely vegetated with indigenous and alien species, sufficient coverage and inspection of exposed profiles and clearings were made to inform on the archaeological and heritage sensitivity of the study area.

No archaeological, heritage or palaeontological resources were identified during the foot survey and inspection. If these resources once occurred in the study area, then it is reasonable to anticipate that construction activities – earthmoving - as well as wind and water erosion would have exposed archaeological, palaeontological and heritage related materials. Given the total absence of heritage resources, there is no indication that the proposed construction activities will negatively impact these resources. Construction activities will impact a very narrow strip mostly along the seaward base of the dune. On the basis of the above, it is recommended that a specialist Heritage Impact Assessment is not required.

From the perspective of specialist archaeologist and generalist heritage practitioner, it is recommended that the proposed extension of the existing retaining wall and timber revetment be authorized. Both the dune and structures on it are seriously threatened by erosion and collapse of well sorted dune sands.

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1. Introduction

1.1 Background

This study is made in “retrospect” because the bulk of construction activities associated with a second house are complete and the property owner now applies for rectification. To this end, and as part of the EIA process, Dr. Colleen Ebersohn of Eco-Route Environmental Consultancy cc appointed the Centre for Heritage and Archaeological Resource Management (CHARM cc) to conduct an Archaeological Heritage Impact Assessment on Portion 102 of the Farm Uitzicht 216, Magisterial District Knysna, Western Cape Province (Figures 1, 2 & 3 and Plates 1 & 2).

Activities associated with construction of the second house on the property include (for layout see Figures 3 & 4):

- Removal of vegetation (presumed indigenous) and excavation to create a building platform;
- Depositing of excavated material (mostly soil) down hill from the building site, on the property;
- Construction of a new dwelling on the cleared area (partially completed);
- Construction of a retaining wall (Sholin type) to stabilize the excavated site.

1.2. Purpose and Scope of the Study

Objectives of the Archaeological Heritage Impact Assessment are:

- To assess the study area for traces of archaeological and heritage-related materials;
- To identify options for mitigation in order to minimize potential negative impacts; and
- To make recommendations for mitigation.

Terms of Reference (ToR):

- a) Locate boundaries of the study area.
- b) Conduct a foot survey of the study area to identify and record archaeological and heritage-related resources.
- c) Assess the impact of the proposed development on archaeological and heritage-related materials.
- d) Recommend mitigation measures where necessary.
- e) Prepare and submit a report to Dr. Colleen Ebersohn of Eco-Route Environmental Consultancy cc that meets standards required by Heritage Western Cape in terms of the National Heritage Resources Act, No. 25 of 1999.

1.3 Study Area

Portion 102 of the Farm Uitzicht 216 is situated in the Western Heads Conservancy Area on the western bank of the Western Head of the Knysna Lagoon some 18 km by road from Knysna on the Cape south coast (Figures 1, 2 & 3 and Plates 1 & 2). The study area was reached by vehicle via the N2 and then via the tar road to Belvedere, Brenton and Brenton on Sea. Red arrows in Figure 1 show further details of the access route. The study area is approximately 8.8 hectares in extent, and its boundary points - rounded to the nearest meter - are as follows (map datum WGS 84; see bottom image of Plate 2):

- A, S34.06902 E23.04274 (decimal degrees); 23 Y-003945 X3771318 (SA Grid)
- B, S34.06619 E23.04571 (decimal degrees); 23 Y-004220 X3771004 (SA Grid)
- C, S34.06759 E23.04742 (decimal degrees); 23 Y-004377 X3771160 (SA Grid)
- D, S34.07036 E23.04450 (decimal degrees); 23 Y-004108 X3771467 (SA Grid)

While the property is zoned Agricultural, it has not been used as such. Apart from a vehicle track, fire breaks and the locations of earlier and recent structures, the property is covered with pristine indigenous vegetation (Plates 1, 2 & 3). See further details in the NEMA, 2004 (Act No. 8 of 2004): Section 24G Application form prepared by Dr. Colleen Ebersohn.

The topography comprises a gently undulating slope (1:5) from the south western boundary of the property to its north eastern edge along the high water mark of the Knysna Lagoon (Plate 1). Visible geological sediments include topsoil and sands that are probably of Table Mountain Group origin (Plate 4; further detail available from Dr. Ebersohn). No traces of hard (rock) geological deposits or those that may contain fossil material were observed in the study area.

1.4 Approach to the Study

To the best of my knowledge, no archaeological or heritage-related work has been conducted in the immediate vicinity of the property on the Western Head of the Knysna Lagoon. Unlike most coastal environments, this area does not contain features attractive for pre-historic human occupation such as a predictable protein source (for example marine shellfish) or easily accessible sources of fresh water. Additionally, dense, probably impenetrable natural vegetation would have rendered the environment “closed”, difficult to traverse on foot and making people vulnerable to dangerous animals. Most roads, structures and buildings in this area are of modern origin and not associated with the otherwise rich heritage of Knysna and its Lagoon.

On behalf of the property owner, Dr. Colleen Ebersohn arranged access to the property for the study reported here and also provided a layout plan of earlier buildings and the new, partially completed structure (Figure 4). The study area was located by means of information provided by Dr. Ebersohn as well as aerial photographs. Impenetrable vegetation and near complete ground cover restricted the foot survey and inspection to the vehicle track, fire breaks and localities of earlier and recent structures (Plates 3, 4 & 5 and Figures 3 & 5). Walk tracks were fixed with a hand held GPS to show the area covered during the foot survey as well as locations where photographs were taken (Plate 2). Notes and a high quality, comprehensive digital photographic record were also made (full data set available from author). Exposed sediments and profiles were examined for traces of archaeological, palaeontological and heritage-related materials.

2. Results

Figure 5 shows the AHIA walk tracks - in black dash-dot line in middle of yellow line - as fixed with a hand held GPS during the foot survey (gpx – GPS tracking - file available from author). In about 3 hours of survey a distance of 2.6 km was walked covering an area of nearly one hectare. Due to grass cover a smaller area was archaeologically visible (Plates 3 & 4).

No trace of archaeological, palaeontological or heritage-related material was identified and existing and recent structures appear to have had minimal impact on the environment. Structural material (mainly timber) and placement of buildings ensure that they blend well with the surrounding natural vegetation and scenic landscape making them near invisible from anywhere outside the property (Plates 1 & 5 and Figure 3). In comparison with the location, size and style of buildings on neighboring properties, the nature of structures in

question here is a good example of environmentally and visually sensitive and desirable development (see bottom image in Plate 1). Having spent significant time on the Knysna Lagoon I know that buildings – apart from the jetty - on this property are camouflaged and near invisible while those on adjacent properties are mostly ostentatious and an eye-sore.

3. Sources of Risk, Impact Identification, Assessment and Recommendation

- Since the activities that may have impacted archaeological and heritage-related resources are complete and since no evidence for negative impact was identified, there is no further risk.
- Consequently, there is no recommendation for mitigation.
- From the perspective of specialist archaeologist and generalist heritage practitioner, it is recommended that the property owner's application for rectification be approved.

Figures and Plates (on following pages)

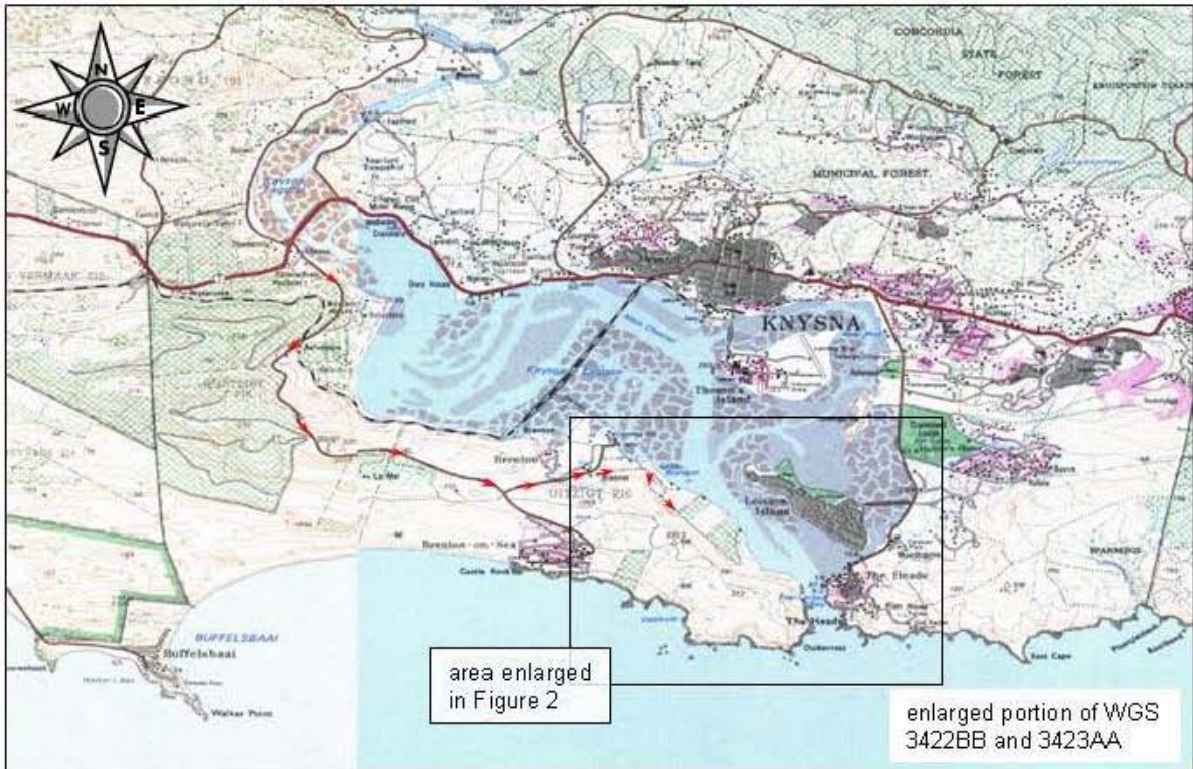


Figure 1. General location of study area – framed in black - relative to Knysna.

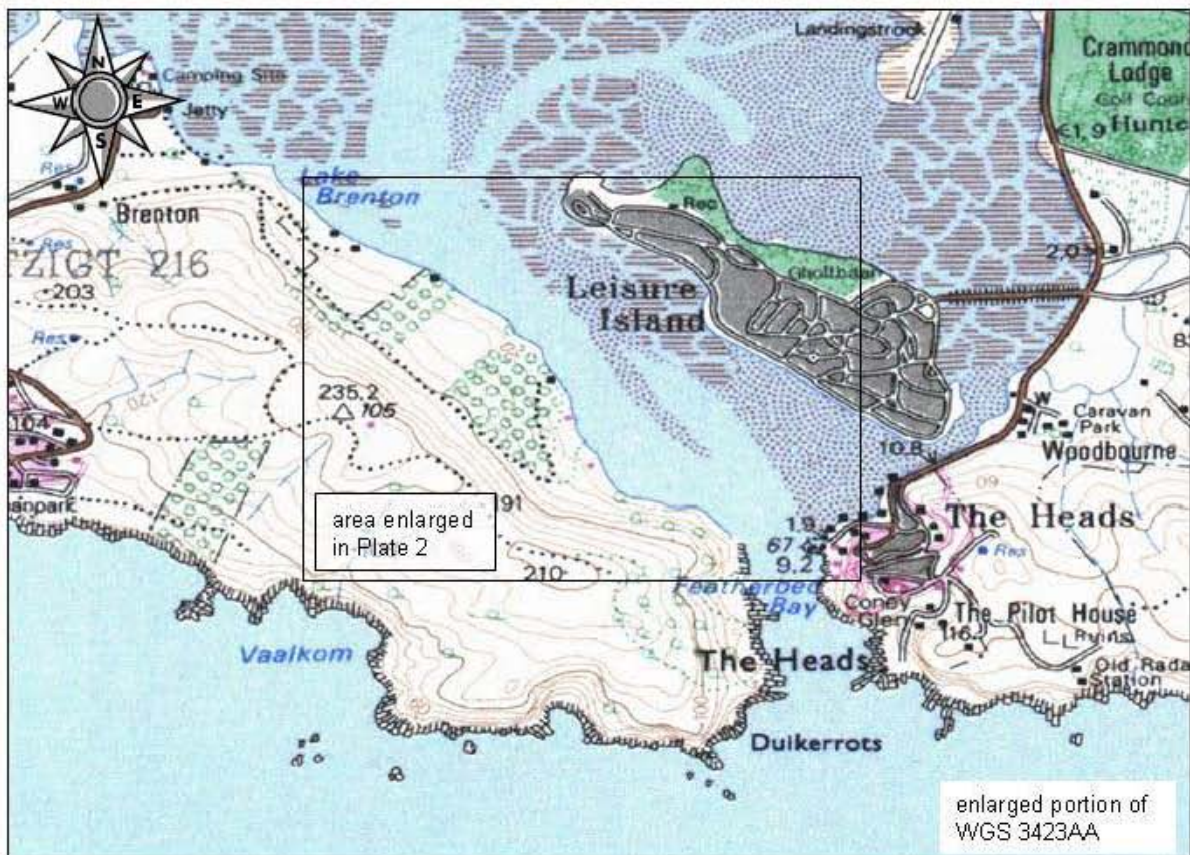


Figure 2. Enlarged area as indicated in Figure 1 showing the general location of the study area – framed with black lines - on the western "Head" of Knysna Lagoon.

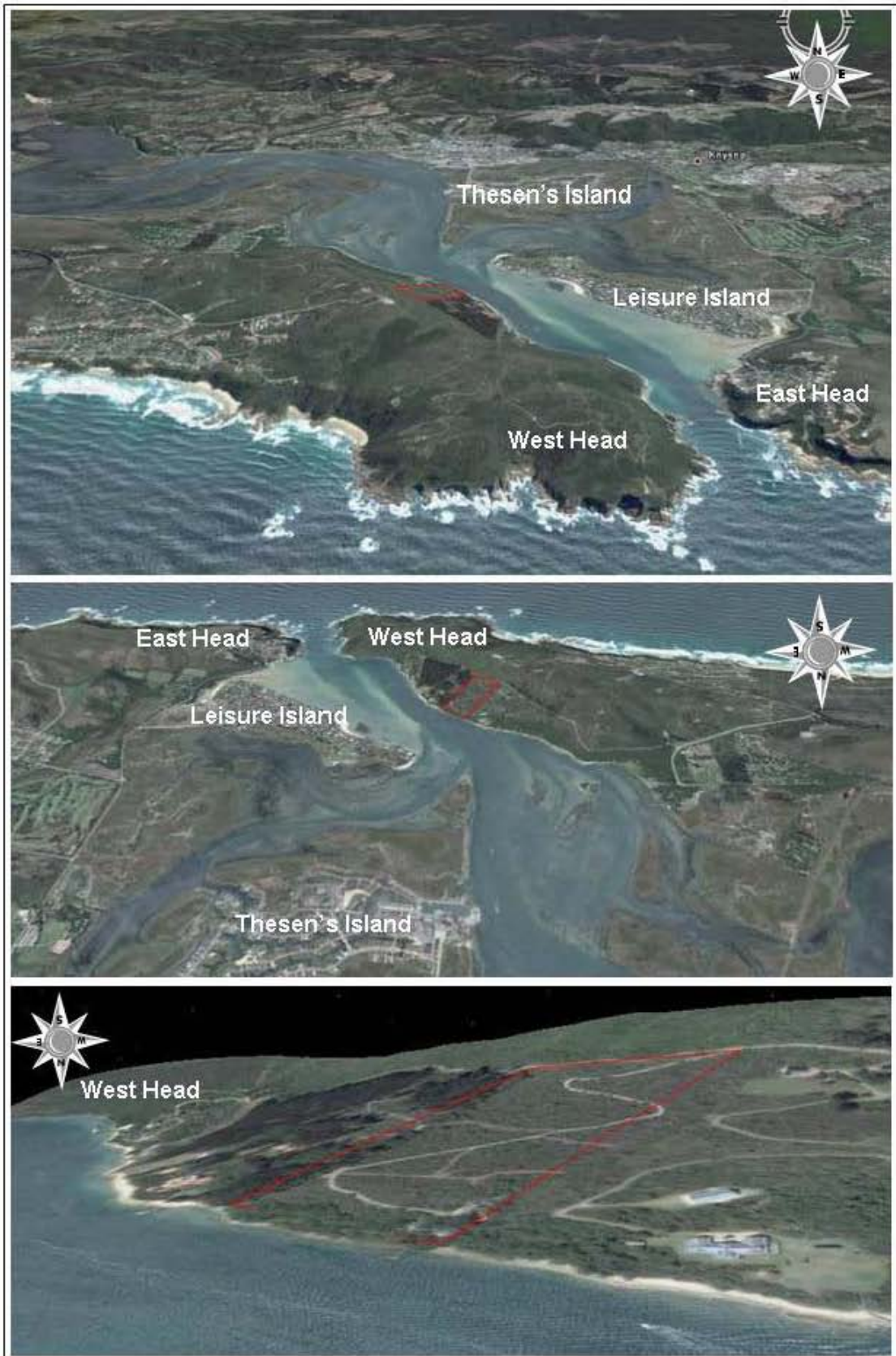


Plate 1. The above – Google Earth images - are oblique 3D views showing the location of the study area / property (approximate boundary in red) relative to the Knysna Lagoon and Heads as viewed from the south (top) and north (middle and bottom).



Plate 2. Top – DWAF - image is the enlarged area as indicated in Figure 2 showing the location of the study area. The lower - Google image - is an enlargement of the property as framed in black above. The approximate boundary of the property is shown in red. See text for coordinates of A through D.



Figure 3. The main image is a copy of the lower image of Plate 1. The location and layout of earlier and recent structures and photo localities are shown in insets. See Plate 5 for images 1 through 8.

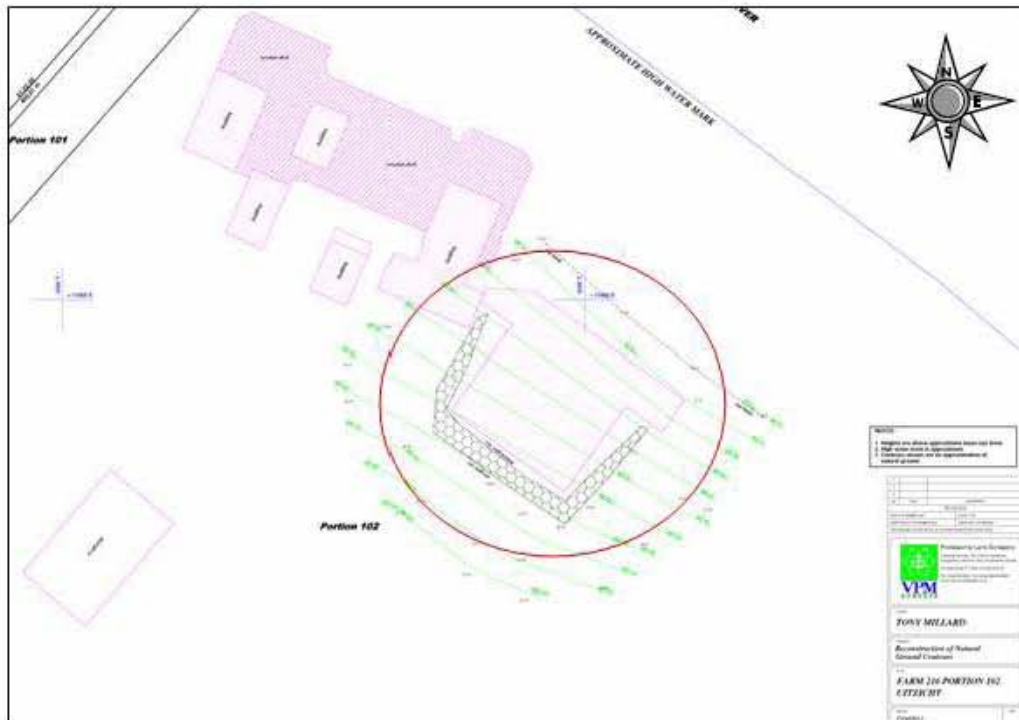


Figure 4. This layout shows earlier and recent structures with latter circled in red (courtesy client).



Plate 3. The above images show examples of vegetation and ground cover in the study area. Red lines in top image mark approximate boundaries of study area. Photo localities are shown in Figure 5.



Figure 5. The study area is outlined in red. Yellow lines represent walk tracks as fixed with a hand held GPS. Camera icons show localities from where photographs were taken (see Plates 3 and 4).



Plate 4. Top - exposed profile on edge of " fire break" (red dot above "d" in Figure 5) and - bottom - exposed ground under new structure show sandy surface sediments typical of the study area.

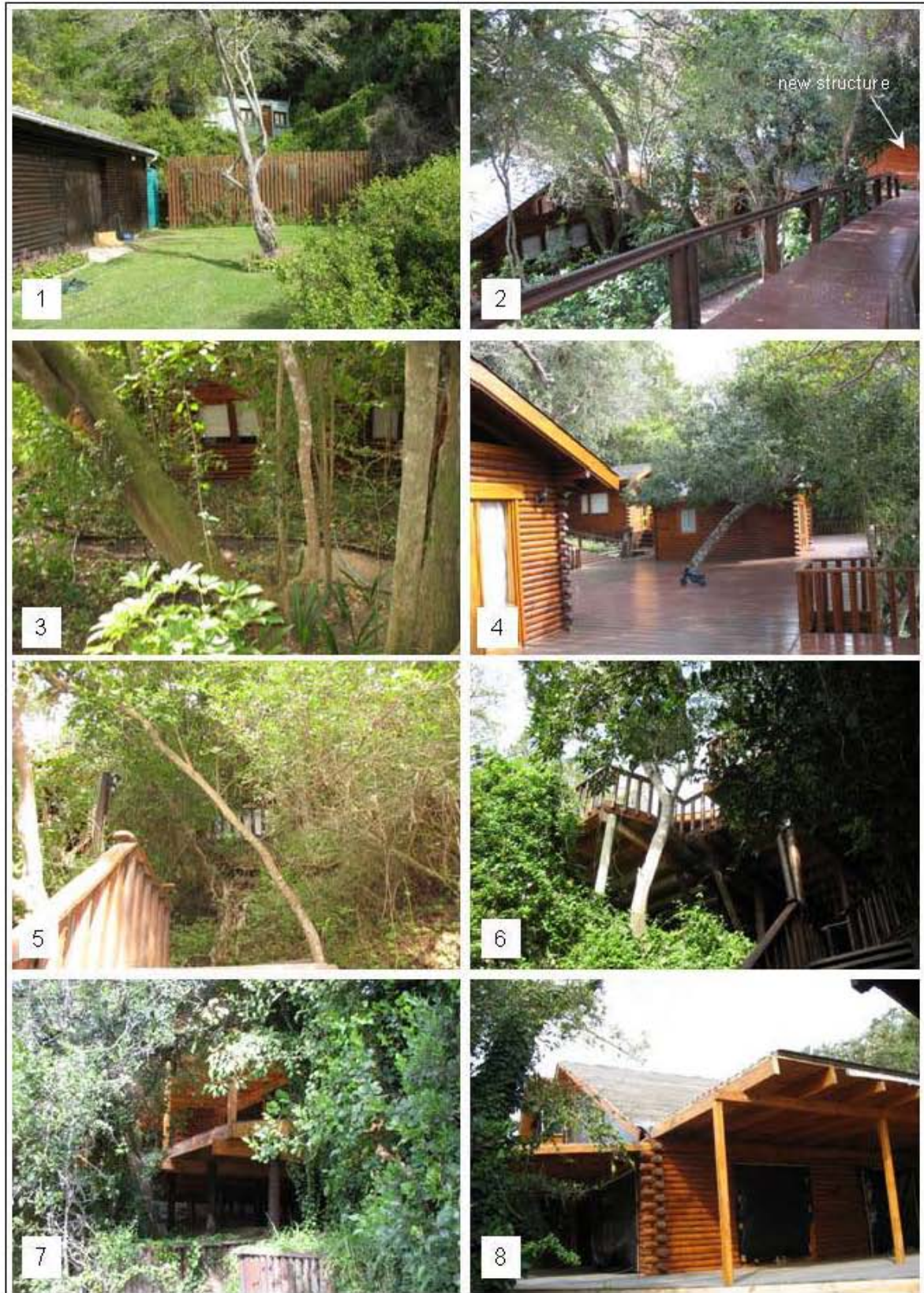


Plate 5. Existing (1 through 6) and new (2, 7 & 8) structures are tucked into, and blend well with natural, indigenous vegetation making them invisible from the south west of the property and well camouflaged when viewed from the north east (lagoon).