


<p><i>Secrets of De Hoop and Environs</i></p>	<p>Field notes on the GEOMORPHOLOGY, HYDROLOGY and ARCHAEOLOGY Between CAPE AGULHAS and CAPE INFANTA</p>	 <p><b>Geomorphological Research</b></p>
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## Z. BIBLIOGRAPHY

### Z4. Hydrology

#### DE HOOP VLEI

#### SOUTH AFRICA

Information sheet for the site designated to the  
List of Wetlands of International Importance  
in terms of the  
Convention on Wetlands of International Importance  
especially as Waterfowl Habitat

South African Wetlands Conservation Programme  
Document No 24/21/3/3/3/1 (1975)

Department of Environmental Affairs and Tourism  
Private Bag X447  
PRETORIA 0001  
South Africa

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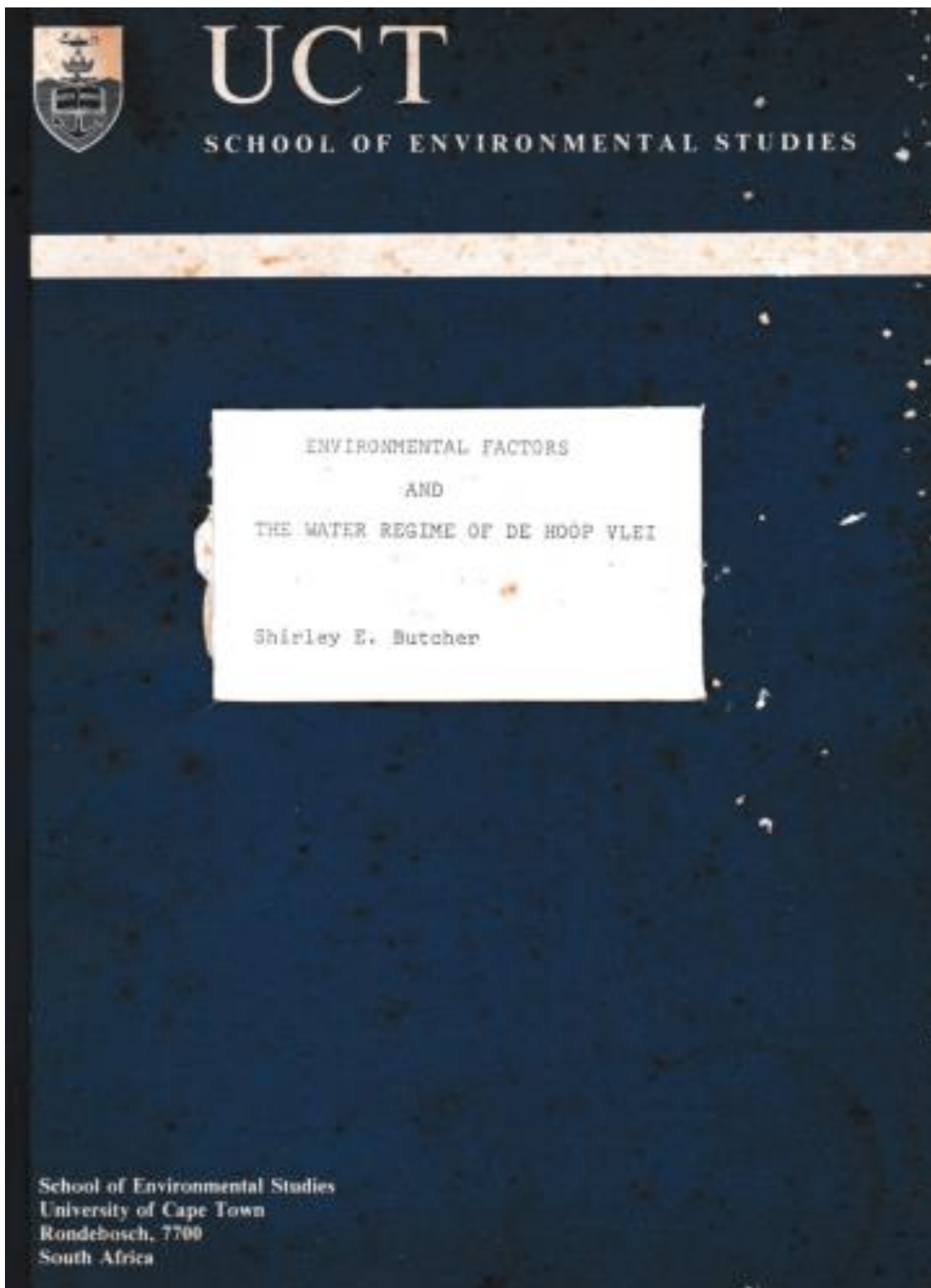
#### DE HOOP VLEI: RAMSAR DATA SHEET

**1. COUNTRY**  
SOUTH AFRICA

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December 1984

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## SITUATION ASSESSMENT

for

### HEUNINGNES ESTUARY



Compiled by: HillLand Associates

Prepared for



## Maintenance Management Plan for the Heuningnes Estuary mouth under specific conditions

Compiler: Pierre de Villiers  
 Senior Manager: Marine and Coastal Sub-directorate  
 CapeNature

Heuningnes Estuary, De Mond Nature Reserve

### STATEMENT OF THE PROBLEM

The mean annual runoff (MAR) into the Heuningnes Estuary is estimated as 32.39 million m<sup>3</sup>, but this has been reduced to 27.35 million m<sup>3</sup> mostly through alien infestation in the catchment area (Anchor Environmental Consultants 2018). The reduced flows to the system means that natural breaching levels (and related breaching opportunities) are reduced. While little information is available on the mouth dynamics of the Heuningnes under the Reference condition, simulated river inflow data, the estuary bathymetry and present mouth behaviour, all paint a picture of intermittent closures occurring decades apart. Due to the flat topography of the area, inundation would have resulted in a very large open water area that would have taken anything from 2 to 10 years to fill up, given variable inflow, seepage and evaporative losses. When full, this significant body of water would have resulted in extremely high outflow velocities, which in turn would have resulted in a deep basin in the lower reaches and enhanced tidal flows that would have assisted in keeping the mouth open for decades after a breaching. In addition, the mouth position would have shifted depending on the lowest lying point in the frontal dune system, adding additional variability to this complex interaction between river flow, tidal exchange and sediment processes.

Under its current state, the mouth of the Heuningnes Estuary has been artificially manipulated since the early 1940s. This was initially undertaken by the then Department of Forestry and more recently by CapeNature. The rationale behind the practise of keeping the mouth permanently open was to prevent back flooding of riparian properties. The concern was that flooding would result in damage to structures and loss of land under crops due to a combination of prolonged inundation and elevated salinity levels due to accumulation of salt in the soil. A maximum flood level of 2 m AMSL has been put forward as the limit by landowners (SMEC 2017), however, judging by photographic evidence (Anchor Environmental Consultants 2018), hard infrastructure is still about a metre above this level.

Historic practises of artificially stabilizing dunes on either side of the mouth and erecting barriers to trap longshore wind-blown sand was stopped in 2012 pending further studies. The mouth has remained open since then without manipulation, although sediment build-up in the lower reaches is extensive and closure during low flow periods an eminent prospect.

The Heuningnes estuary is ranked 24<sup>th</sup> most important in South Africa in terms of its botanical, fish and bird biodiversity (Turpie *et al.* 2010). It has been identified as an important bird area (Barnes 1996) and a desired protected area in two national conservation planning assessments

# ESTUARIES OF THE CAPE

## PART II: SYNOPSES OF AVAILABLE INFORMATION ON INDIVIDUAL SYSTEMS

### EDITORS

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FRONTISPIECE: THE HEUNINGNES ESTUARY -- ALT. 600 m. ECRU 75-59-95

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**A GEOCHEMICAL INVESTIGATION  
OF THE WATERS AND SEDIMENTS  
OF DE HOOP VLEI,  
BREDASDORP DISTRICT,  
SOUTH AFRICA**

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***FINDING “NEW” WATER TO ADDRESS CONFLICTING AND  
COMPETING WATER DEMANDS IN THE NUWEJAARS  
CATCHMENT, CAPE AGULHAS***

Report to the  
**Water Research Commission**

by

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**De Mond Nature Reserve Complex  
Western Cape**

**South Africa**



# Protected Area Management Plan 2014-2019

Edited by Tierck Hoekstra and Lauren Waller.

Citation

Hoekstra T. and Waller L.(eds) 2014. *De Mond Nature Reserve Complex: Protected Area Management Plan. Unpublished report. CapeNature, Cape Town.*

31 MARCH 2014





# Breede River Estuarine Management Plan

Final Draft

June 2016



# Heuningnes River Estuarine Management Plan

Draft

2019