PREEKSTOEL BEACH LIFESTYLE ESTATE DEVELOPMENT ON ERF NO. 1028 AND PORTION 2 OF ERF NO. 599, STILL BAY EAST

REHABILITATION OF DUNES ON ERF 1028

METHOD STATEMENT

Date: November 2021

DEADP Appeal Ref. No.: 14/3/1/D5/18/0326/18

DEADP Development Management Ref. No.: 16/3/3/1/D5/18/0001/17

PROJECT DETAILS

TITLE	**PREEKSTOEL BEACH LIFESTYLE ESTATE DEVELOPMENT ON ERF NO. 1028 AND PORTION 2 OF ERF NO. 599, STILL BAY EAST : REHABILITATION OF DUNES ON ERF 1028**
COMPETENT AUTHORITY (DEADP) REF. NOS.	DEADP Appeal Ref. No.: 14/3/1/D5/18/0326/18 DEADP Development Management Ref. No.: 16/3/3/1/D5/18/0001/17
REPORT TYPE	Method Statement of Dune Rehabilitation
AWEC REF. NO.	AW 1012
AUTHOR	Aubrey Withers
CLIENT REF. NO.	Vivren Properties Preekstoel Beach Lifestyle Estate

PROPONENT

Vivren Properties (Pty) Ltd.: Preekstoel Beach Lifestyle Estate, Still Bay East

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METHOD STATEMENT

for the

REHABILITATION OF COASTAL DUNES ON ERF 1028, STILL BAY EAST

PREPARED FOR: Vivren Properties (Pty) Ltd.

Date of Site Visit:	2-5 November 2021	Date of Issue	7 November 2021
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INTRODUCTION

The rehabilitation of the coastal frontal dunes on Erf 1028 is essential as much damage to the dunes (blowouts and mass erosion) has taken place over the past 80 years and more. At that time the dune field to the east of the Goukou River estuary was mobile. The then Department of Forestry had a national programme along the Cape's coastline (now the Eastern Cape and Western Cape) to stabilise these mobile dune systems with rooikrans (*Acacia cyclops*). Dune stabilisation started in Still Bay in the early 1900's by using marram grass from Europe and rooikrans from 1928 onwards. By 1961, the once mobile dunes to the east of the river had been colonised by rooikrans, effectively stabilising them.

The public had uncontrolled access to the beach of Preekstoel from the 1960's onwards to today, where off-road vehicles were seen driving over the frontal dune system. Together with anthropogenic access to the frontal dune system of Preekstoel, these dunes suffered excessive erosion with the removal of dune vegetation, leading to large blowouts (**Photo 1**) and sand mobilisation into the interior (**Photo 2**).

Photo 1: Shows the large blow-outs on the fontal dune system on the Preekstoel Beach

As part of the Preekstoel Beach Lifestyle Estate, an attempt is being made to rehabilitate the frontal dune system on Erf 1028, by firstly trapping sand with brushwood fences and once sufficient sand has been trapped, to stabilise the dune system with locally indigenous hardy Strandveld plants (**Photo 3**). The Home Owners' Association (HOA) will be responsible to manage the frontal dune system into perpetuity by repairing any blowouts caused by storm winds from the prevailing southeast and southwest winds.

Photo 2: Brushwood has been packed on the open dune sand that has been blow into the backdune area.

Photo 3: Indigenous Strandveld dune plants that will be used to stabilise the newly formed dunes.

METHOD STATEMENT

A three-strand wire fence using 1.8m long, CCA treated gum poles between 32mm and 50mm in diameter was erected where sand trapping was necessary and where existing dunes needed protection from wind erosion (**Photo 4**).

Photo 4: The layout of poles where sever wind erosion has taken place. Three strands of wire is attached to the poles about 1m off the sand.

Approximately 1m long brushwood fronds (rooikrans) were cut by chainsaw in the back-dune area where the development of the houses is to take place (**Photo 5**). The brushwood fronds were then dragged to the erected fences (**Photo 6**), where they were woven into the fence and fixed to the fence with binding wire (**Photo 7**).

Photo 5: Brushwood was cut from the backdune area.

Photo 6: Brushwood was dragged to the areas where brushwood fences were erected. Note the brushwood fences to the left of photo.

Photo 7: The brushwood was weaved between the wire strands and fixed to the wire with binding wire. Not the large blow-out towards the back of the dune. A brushwood fence has been placed in the blow-out to trap windblown sand.

In all, about 220m of brushwood fences have been erected within the Preekstoel frontal dune system (**Photo 8**). Once sufficient sand has been trapped, a second phase of brushwood fencing will be constructed on the dunes (**Figure 1**). Further phases will be undertaken until a robust frontal dune system has developed.

Once the frontal dune system is in place it will be stabilized with various Strandveld species locally occurring on the dunes of the Still Bay region. The removal of *Acacia cyclops* will be removed from the existing dunes in a phased manner over about 10 years.

Photo 8: About 220m of brushwood fencing (arrows) has been erected on the highly eroded Preekstoel frontal dune system.