

8 October 2021

To whom it may concern

HIGH WATER MARK (HWM) DETERMINATION: PROPOSED CLIFF PATH - HERMANUS

1. Scope

- Determination of the HWM for erven 12257, 1234, 1235, 1236, 5491, 5492, 9493, 6337, 1247, 1248, 1249, 1250 and 6088 Hermanus – See figure 1.



Figure 1: HWM determination for various Hermanus erven.

2. Qualification

- Survey was conducted by Professional Land Surveyor AJH van Brakel (GPr. LS1329D) and in terms of the Land Survey Act 8 of 1997 and the regulations framed thereunder.

3. Survey methodology

3.1 Equipment

- Spectra Precision SP60 GNSS Receivers

3.2 Survey method

- Survey control was established by making use of Trignet, a continuously operating Global Navigation Satellite Systems (GNSS) Network.
- The Spectra GNSS receiver was calibrated onto a published Town Survey Mark (TSM), 30G2 and checked onto another published TSM, 22G2 with residuals of (-0,02m, -0.01m).
- The TSM's are based on the national survey control network using the WGS84 Ellipsoid and Hartebeesthoek94 Datum.
- A coastal risk modelling study performed for the Overberg District by RHDHV for the Western Cape Department of Environmental Affairs (DEA&DP) in 2015 was used as an *initial guide* in determining the HWM.
- The HWM in this work is defined as the 1:10 year run-up line, determined using empirical wave run-up formulae together with a SWAM wave model.
- The vegetation line (visible physical feature) was surveyed for most of this stretch of coastline and adopted as the HWM.
- Along beach areas, storm debris lines were surveyed and adopted as the HWM.
- For short ambiguous sections, a rough contour line was surveyed and adopted whenever it seemed reasonable to assume that the incoming wave characteristics would be similar.
- In areas where manmade structures were erected, these structures were considered like seawall structures which act as barriers to the water run-up. The HWM was therefore surveyed around these structures (see Erf 6337).

3.3 Survey deliverable

- Survey Drawing in AutoCAD DWG format
- Survey Drawing in Google Earth KMZ format

Yours sincerely,



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