

U. SHORES

Field Note U10b. Klipkoppie to Koppie Alleen shore – Morphology and geology



View to the west on the shore between Klipkoppie and Koppie Alleen.

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This section of the De Hoop Nature Reserve shore is about 6 km long and is characterised by sandy and pebbly beaches and rock outcrops in the west, and sea cliffs and abrasion tables in the east (Figures 1 to 3).

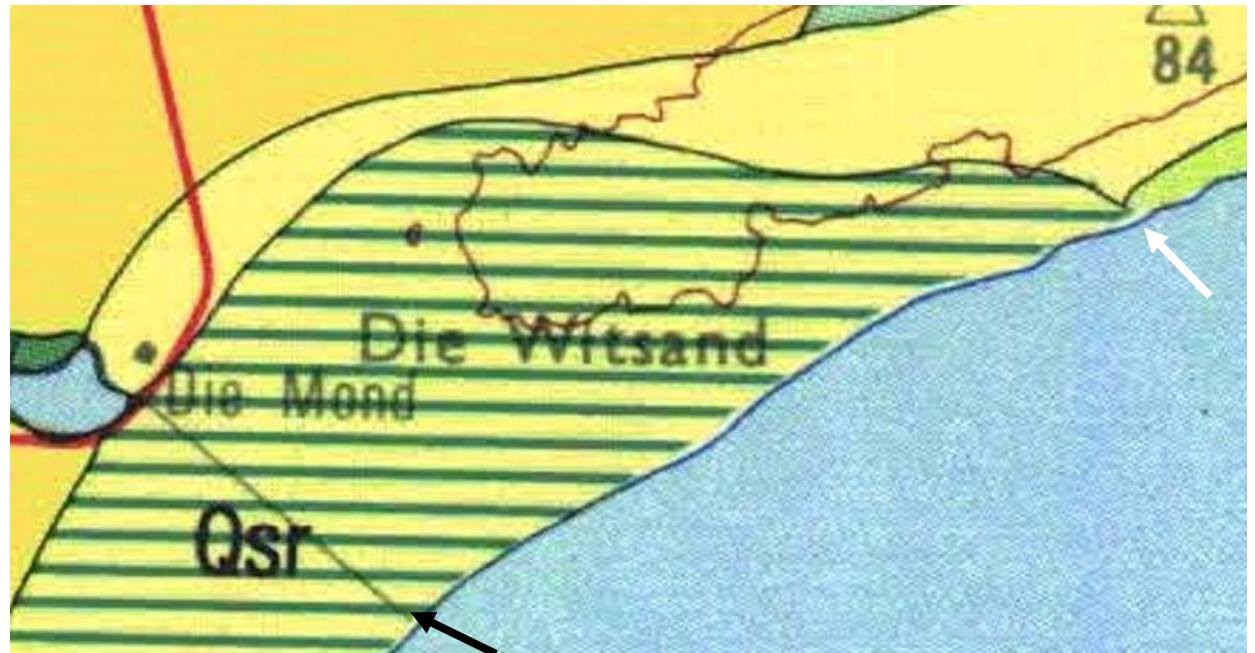


Figure 1. The Klipkoppie to Koppie Alleen shore. Top – satellite image. Bottom – geology map (Riversdale sheet, 1:250,000, 1993). 'Qsr' denotes the Quaternary sands of the Strandveld Formation. The map fails to show the rocks along this strip of shore. Black arrow points to Klipkoppie; white arrow points to Koppie Alleen.

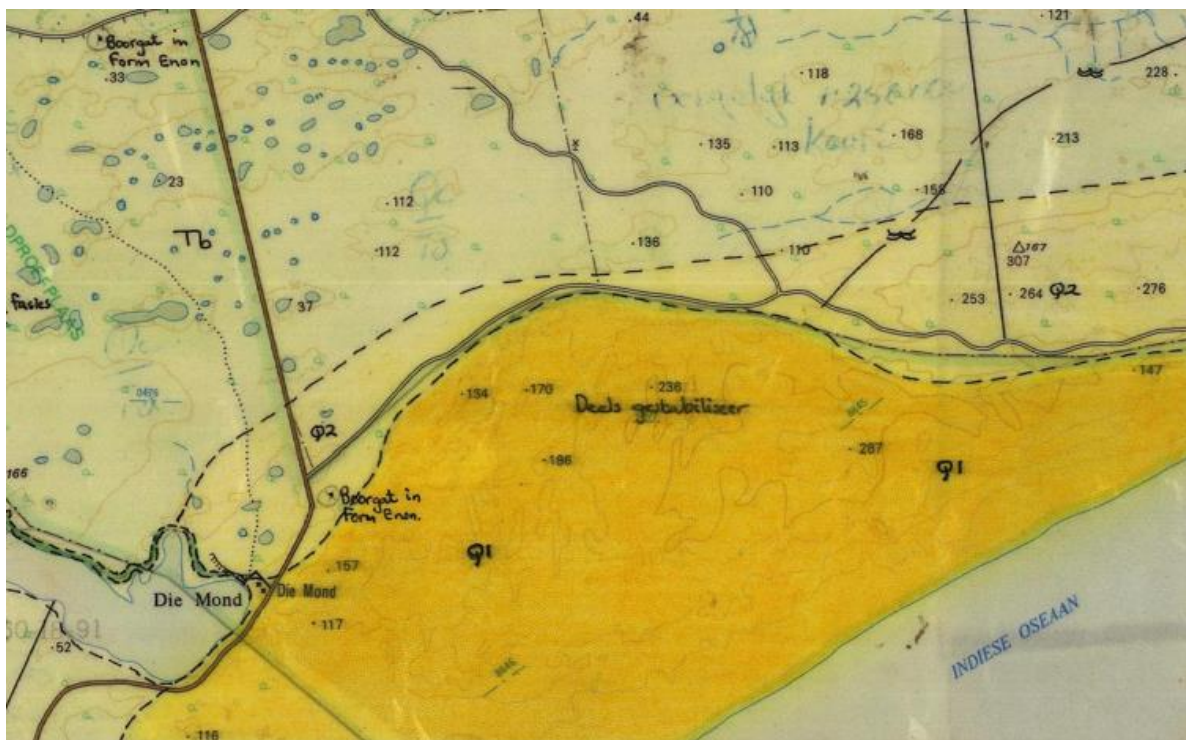
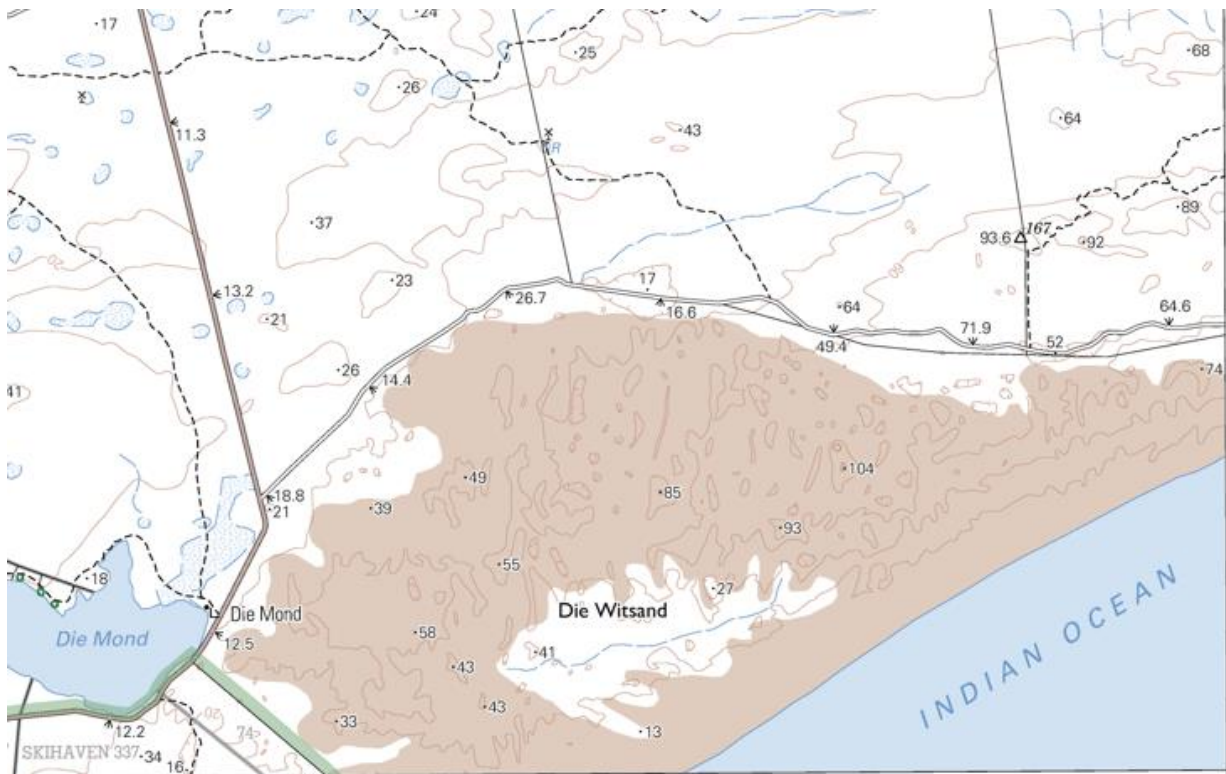


Figure 2. Klipkoppie to Koppie Alleen Shore. Top - topography map; bottom - geology field sheet (Malan, 1984). 'Q1' denotes Quaternary sands of the Strandveld Formation. 'Q2' denotes Quaternary sands. The west end (Klipkoppie) and east end (Koppie Alleen) of this section are shown in Figure 3. This map does not show the rocks along the shore.

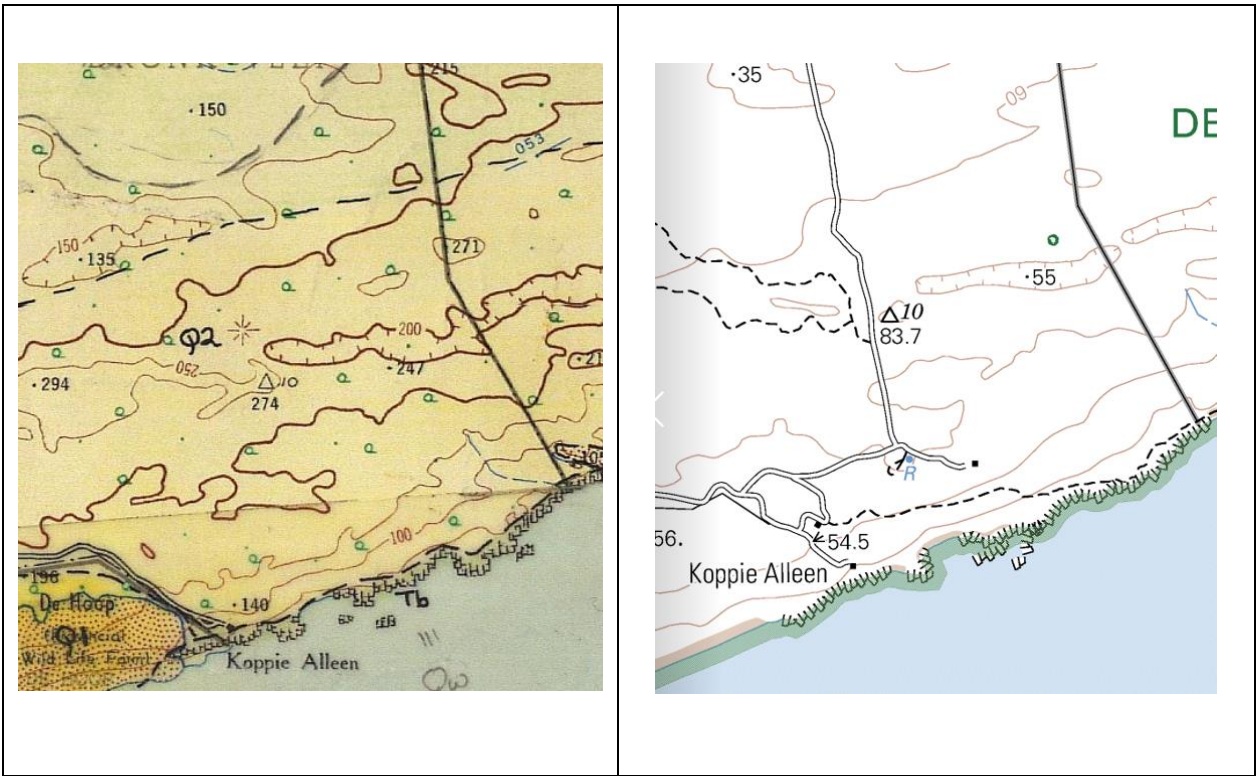
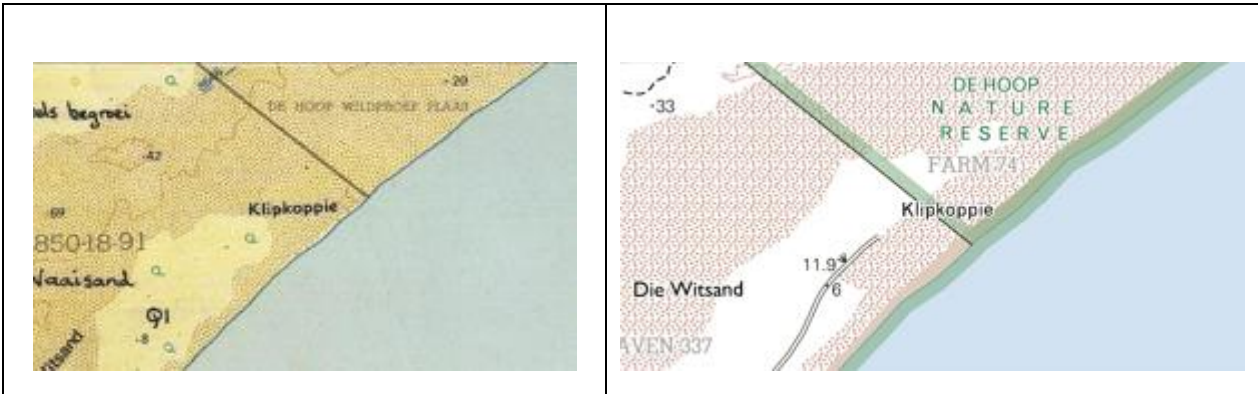


Figure 3. The Klipkoppie to Koppie Alleen Shore. Top – topography and geology maps of the west end of the shore (Klipkoppie). Bottom – topography and geology maps of the east end of this section (Koppie Alleen).

The western part of this section of the De Hoop Nature Reserve shore is characterised by sandy beaches, with pebble assemblages and low dunes, which partly or wholly cover the disintegrated and weathered aeolianite ridges of the Waenhuiskrans Formation.

The west end of this section is Klipkoppie - an isolated remnant of Waenhuiskrans aeolianite ridge (Figure 4).



Figure 4. Klipkoppie, an isolated Waenhuiskrans outcrop, which also demarcates the shore-end of the boundary between the Overberg Test Range (OTR) and the De Hoop Nature Reserve (DHNR). Top – satellite image. Middle – view from the west. Bottom – view from the shoreline.

The tops of the aeolianites are partly exposed (Figures 5 to 9).



Figure 5. Partly exposed, disintegrated aeolianites, a short distance from the shoreline.



Figure 6. Partly exposed, disintegrated aeolianites.



Figure 7. Partly exposed ridges (arrows) between low dunes can be discerned from the satellite image.



Figure 8. Ridges partly covered with sand.

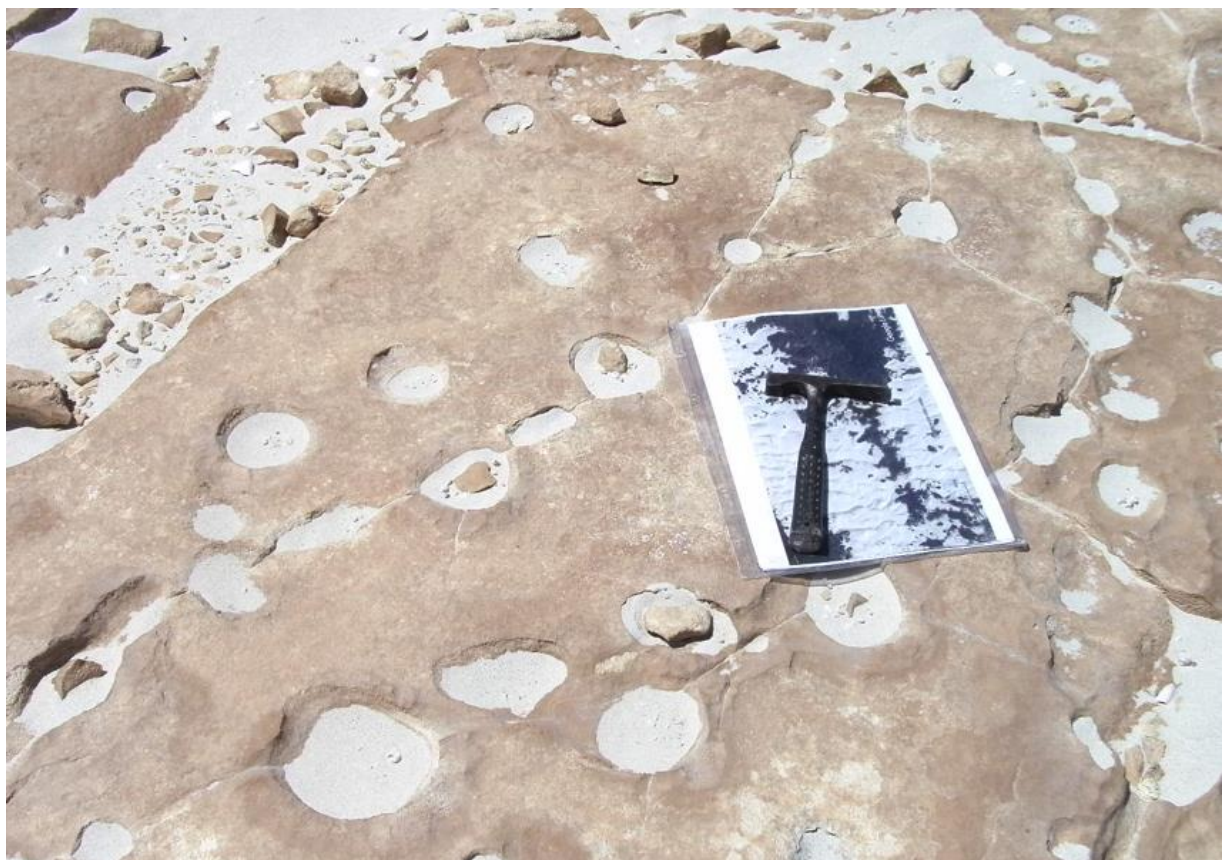


Figure 9. Calcrete caps most of the aeolianites of the Bredasdorp Group. Note the tiny dissolution features.

Rocks protrude the beach and large expanses of pebbles are located a short distance inland from the shoreline (Figures 10 to 13).



Figure 10. Partly exposed rocks near the shoreline (black arrows) and pebble assemblages (blue arrows) can be discerned from the satellite image.



Figure 11. Top and bottom - exposed rocks on the shoreline.



Figure 12. Top and bottom - pebble assemblages.



Figure 13. Top and bottom - pebble assemblages. Bottom – pebbles, mostly discoidal, form beach cusps (see Field Note about beach cusps earlier in this chapter).

In the east part of this section of the shore, rock exposures are found between higher dunes (Figures 14 and 15).



Figure 14. Partly exposed rocks (arrows) can be discerned from the satellite image between the dunes (arrows).



Figure 15. Top and Bottom - ridges partly covered with sand in the east part of this section.

In the east part of this section of the shore, rocks protrude the shoreline and pebbles are found in the sandy pocket beaches between the rocks (Figure 16).



Figure 16. Top and bottom – pebbles, mostly discoidal, on sandy pocket beaches in the east part of the shore.

Close to Koppie Alleen disintegrated ridges form the shoreline (Figure 17).



Figure 1. Top – satellite image of the shore immediately west of Koppie Alleen (arrow). Bottom – ridges and abrasion platforms west of Koppie Alleen.

The origin of the pebbles along this section of the shore is yet to be studied.