

D. DURICRUSTS

Field Note D2k. Calcrete spatial distribution



Calcrete on a sand dune.

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Of the three pedicretes in the study area discussed in this chapter Calcrete is the most abundant. The geology maps ignore large areas covered with calcrete.

There is negligible clacrete on the TMG sandstone and quartzite formations; There are quite large patches of calcrete on the Bokkeveld shale Formations, but only small patches are found on the soft parts of the Enon Formation.

Of the Bredasdorp Group Formations, the Wankoe and the Waenhuiskrans (also referred to as the 'limestone platform') are nearly totally entombed under a calcrete cuirass.

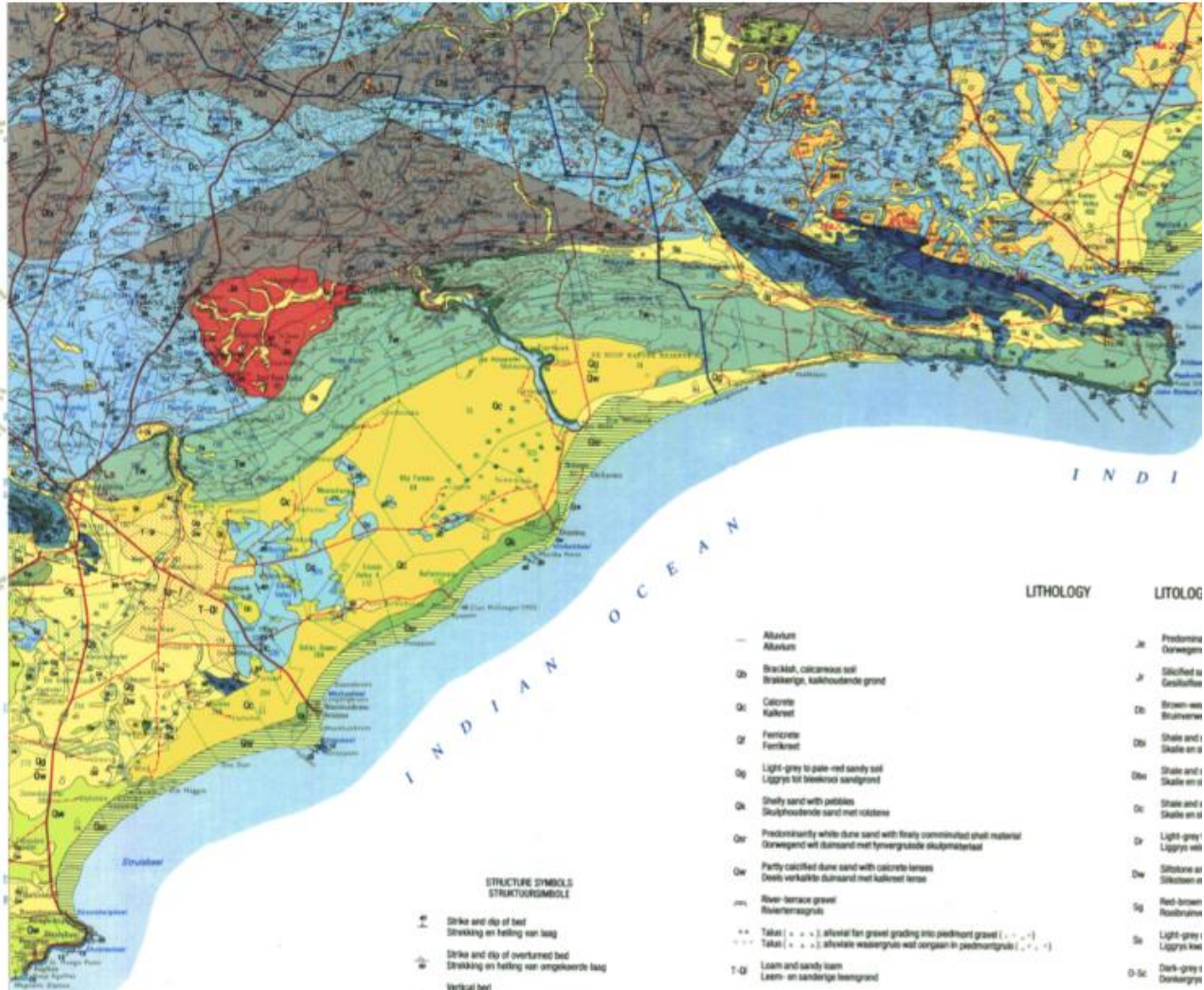


Figure 1. Geology map (Riversdale, 1:250,000, 1993) of the Study Area. Very little calcrete is found on the TMG Formations (dark blue) and the Bokkeveld Formations (light blue and grey), small patches on the Enon Formation (red). Of the Bredasdorp Group Formations the Wankoe and the Waenhuiskrans (green and yellow) are nearly totally covered with a calcrete cuirass.

The geological maps are misleading in places, as they do not always show the surface rock cover (Figures 2 to 6).

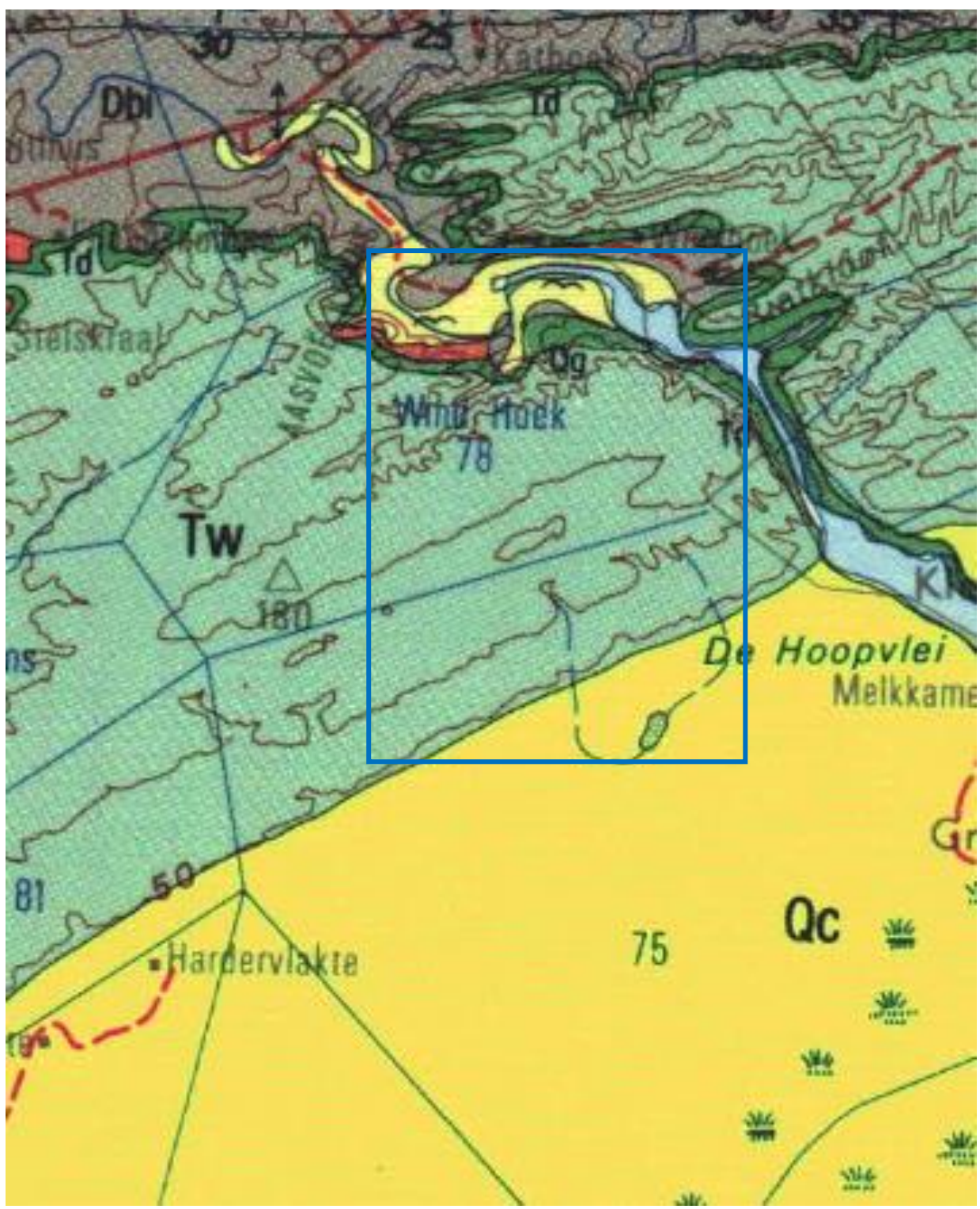


Figure 2. Geology map (Riversdale, 1:250,000, 1993) of part of the Study Area, showing the Wankoe (Tw) and another formation (Qc = Quaternary calcrete; there is no indication of the formation which is covered by the calcrete; this is the Waenhuiskrans Formation. Box is given in Figure 3 as a satellite image.



Figure 4. Satellite image of part of the Study Area, showing the Wankoe Formation (NW from the dashed line) and the Waenhuiskrans Formation (SE of the dashed line). The dark areas are calcrete surfaces covered with thick vegetation. The grey areas are calcrete surfaces, exposed after a bushfire. [The pink areas NW of the dashed line are the nonconsolidated sands of the Wankoe formation].



Figure 4. Geology map (Riversdale, 1:250,000, 1993) of part of the Study Area, showing an area covered with calcrete (Qc = Quaternary calcrete). There is no indication of the formation, which is covered by the calcrete; this is the Waenhuiskrans Formation. The dashed area (Qsr) is the dunes of the Strandveld Formation. Box is given in Figure 5 as a satellite image.

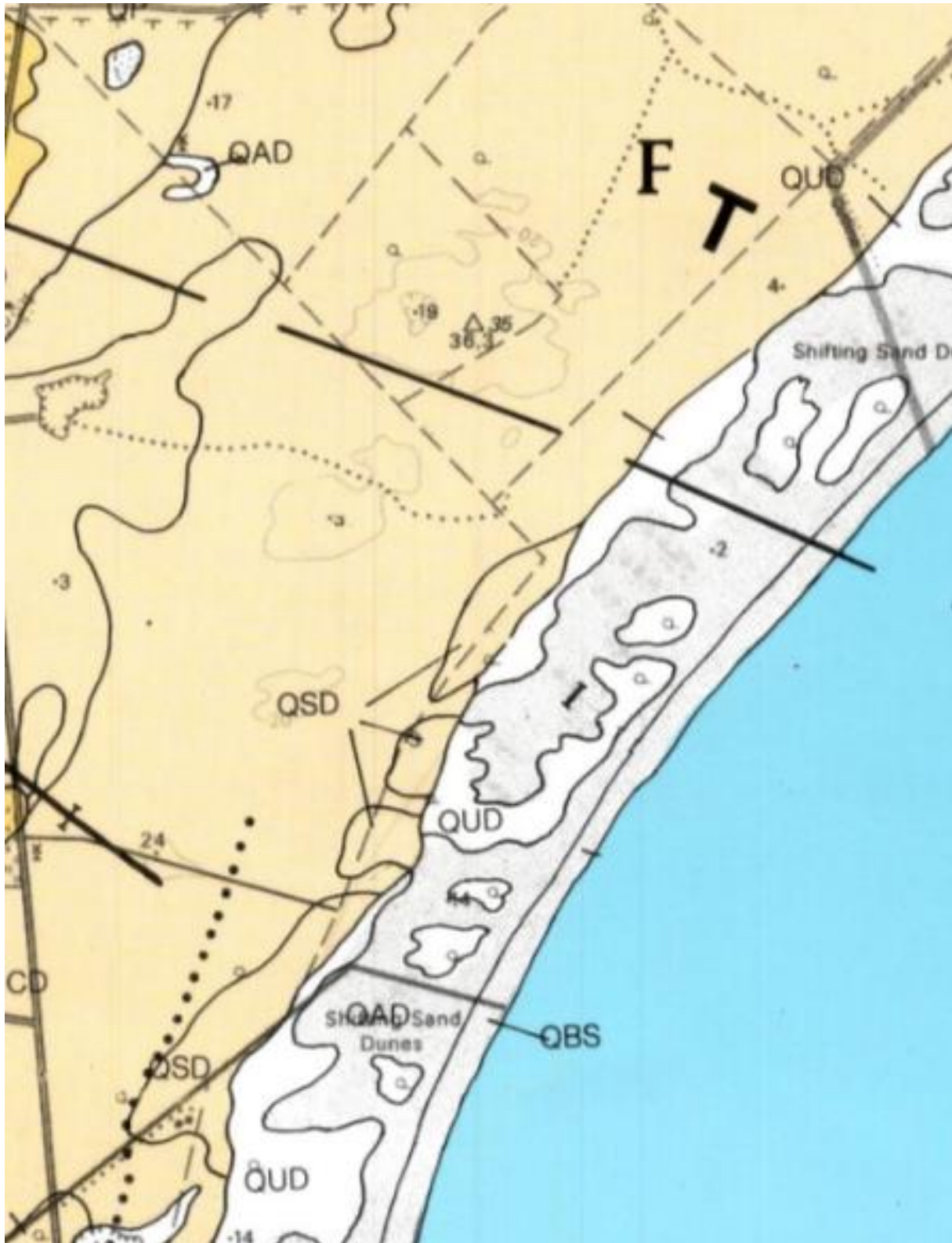


Figure 5. Geology map of Bredsdorp area (MAG Andreoli, 1:50,000, 1989) of the boxed in Figure 4, showing the Waenhuiskrans Formation as QSD = semi-consolidated dune sand, and the Strandveld Formation as QUD = unconsolidated dune sand and QAD active dune sand (shifting dunes). Box is given in Figure 5 as a satellite image.



Figure 5. Satellite image of part of the Study Area, showing the Waenhuiskrans Formation (NW from the dashed line) and the Strandveld Formation (SE of the dashed line). The dunes of Waenhuiskrans Formation are only partially capped with calcrete (grey), while the valleys and depressions between them are sandy with more vegetation. The dunes of the Strandveld Formation are partly vegetated.

The above maps and satellite images have shown that it is difficult to exactly demarcate the calcrete geographical distribution in the Study Area (or anywhere along the south coast).