Proposal for KFR animal bones permit application -
Applicant: Alex Mackay

Klipfonteinrand is situated in the rain shadow east of the Pakhuis Pass and is adjacent to the dry interior in which shale geology dominates. Excavations at Klipfonteinrand have produced a rich and in some ways surprising new set of data which will contribute significantly to our understanding of the occupation on interior parts of the Western Cape during the late Pleistocene. While the sequence largely mirrors that identified by Parkington in 1969, the presence of early Holocene and Robberg deposits is an important new feature of the site. That these new deposits contain abundant charcoal and reasonably preserved bone adds to their value. Though interpretation of the sequence must necessarily be tentative at this stage, it seems reasonable to conclude that occupation of the interior may have been quite pulsed between >75 ka and the relatively recent past. The site also has a large number of rock paintings on the rear walls, many of which have been defaced by graffiti over the years.

Dr Mackay is proposing to export five bone fragments deriving from the excavation at Klipfonteinrand for radiocarbon dating. These five samples were excavated in 2011 under permit 2011/03/002 by HWC held by Dr Mackay. The five bone samples are a tortoise humerus, a taxonomically unidentifiable sample, a small-medium bovid rib and two unknown tortoise fragments (Table 1). All five samples have been analysed by Teresa Steele (UC Davis) as part of ongoing work at the site. None of the bones show sign of modification other than by heat. Details on size, weight and taxonomic identification are provided in Table 1. The objective of dating the samples is to target the termination of the Robberg at this site, which, based on analysis conducted on the stone artefacts appears to end before the deposition of the stratigraphic aggregation 'Orange Band' (Figure 1). Two of the selected samples come from Orange Band (OB) - these are separate taxa to preclude duplication. Two samples come from the overlying stratum Laminated White and Brown Series (LWBS), immediately above the contact with OB. One more sample comes from the underlying unit White series (WS), immediately below the WS/OB contact. All samples derive from the same excavation square (sq9). All samples are to be sent for dating at the Oxford Radiocarbon Lab, under the supervision of Emma Loftus. They will be shipped via courier directly from UCT to Ms Loftus at the Oxford Radiocarbon Lab as soon as approval is granted. The results will be included in a final report on the excavations (which are now complete) to HWC.

A sampling permit from HWC has already been issued and attached to this application.

Permission from repository

The material is currently stored at the Department of Archaeology of the University of Cape Town although the official repository is Iziko Museum. This is because research is still ongoing and the material has not yet been submitted to Iziko for accessioning. Dr Black, the curator for pre-colonial archaeology at Iziko, has therefore agreed that permission from UCT is sufficient for a sampling application for dating.

Iziko Museum will accession the material once research is completed and the material housed on their premises. .

A letter from the Head of the Department at UCT, Dr Simon Hall, supporting the sampling of the material is attached.

Table 1. List of samples for the proposed dating project.

ID #	context	stratum	square	weight	max	photo #	ID
13652	438	LWBS	9	0.5	24.86	DSC_0403-009	Tortoise humerus
13662	438	LWBS	9	0.7	23.78	DSC_0410-014	No taxonomic id possible
13716	442	OB	9	0.5	36.77	DSC_0415-020	Small-medium bovid rib
13717	442	OB	9	1	24.08	DSC_0421-025	Tortoise unknown element
13802	463	WS	9	4.2	34.03	DSC_0426-030	Tortoise unknown element

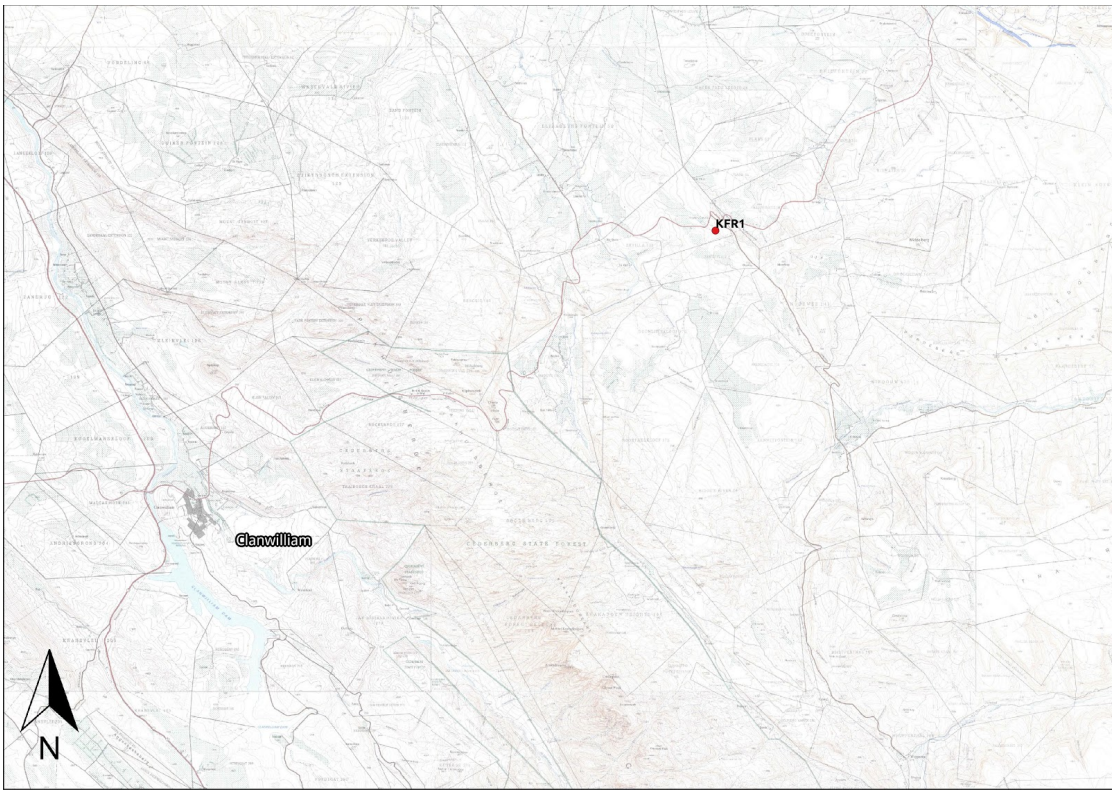


Fig. 1. 1:50 000 map showing the location of the site (KFR1) in relation to the town of Clanwilliam.

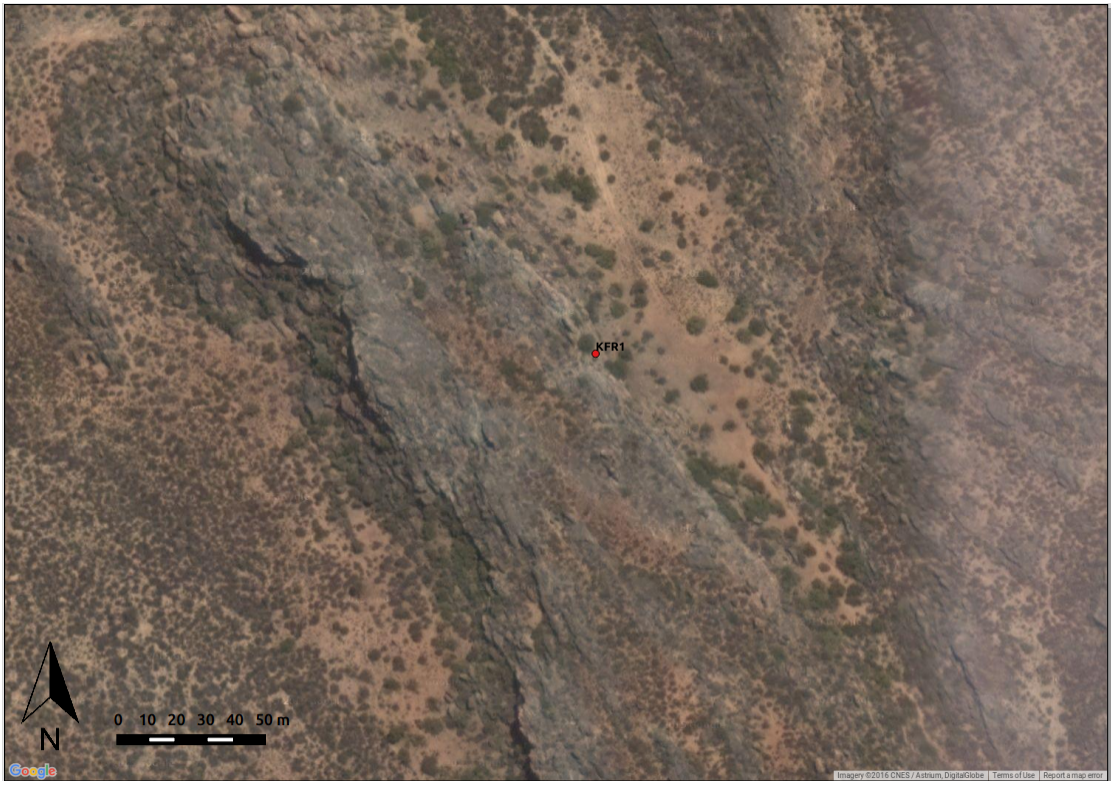


Fig. 2. Satellite map showing the location of the site (KFR1) in relation to the town of Clanwilliam.

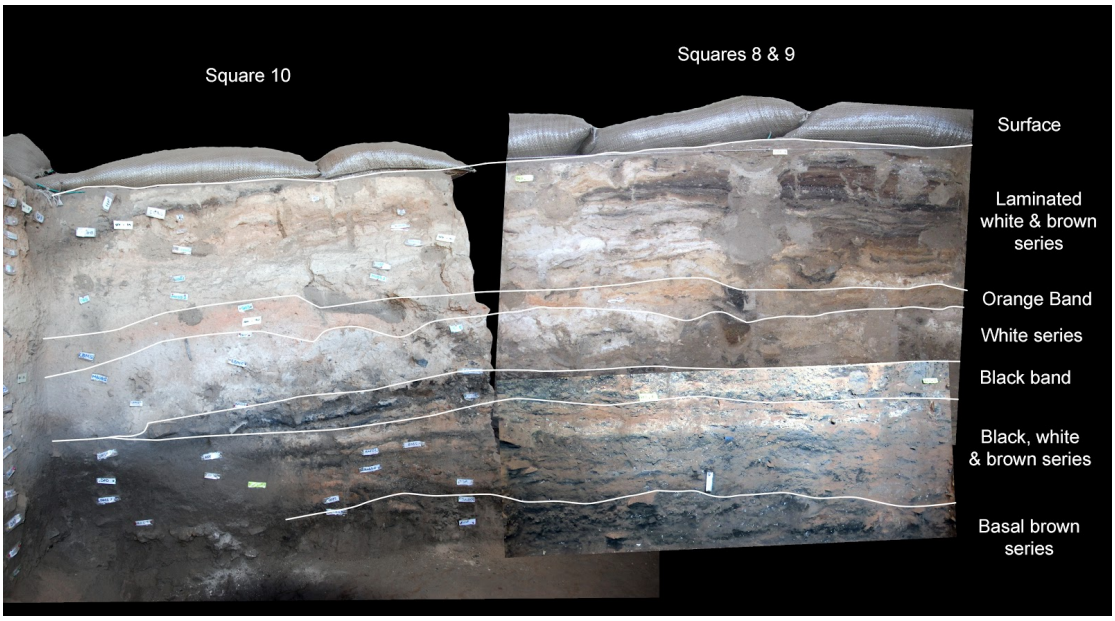
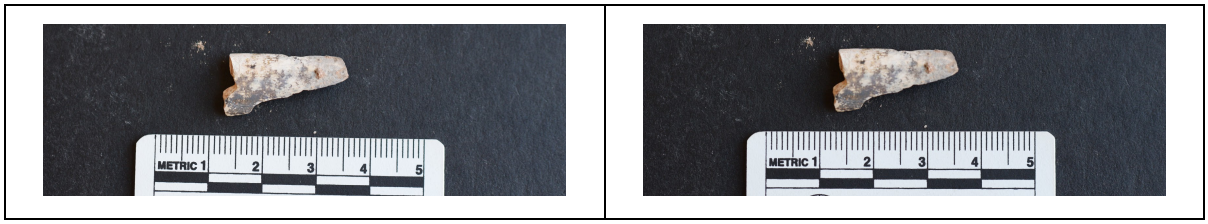


Fig. 3. Section of squares 9 and 10.

Fig. 4. Images of specimen 13652



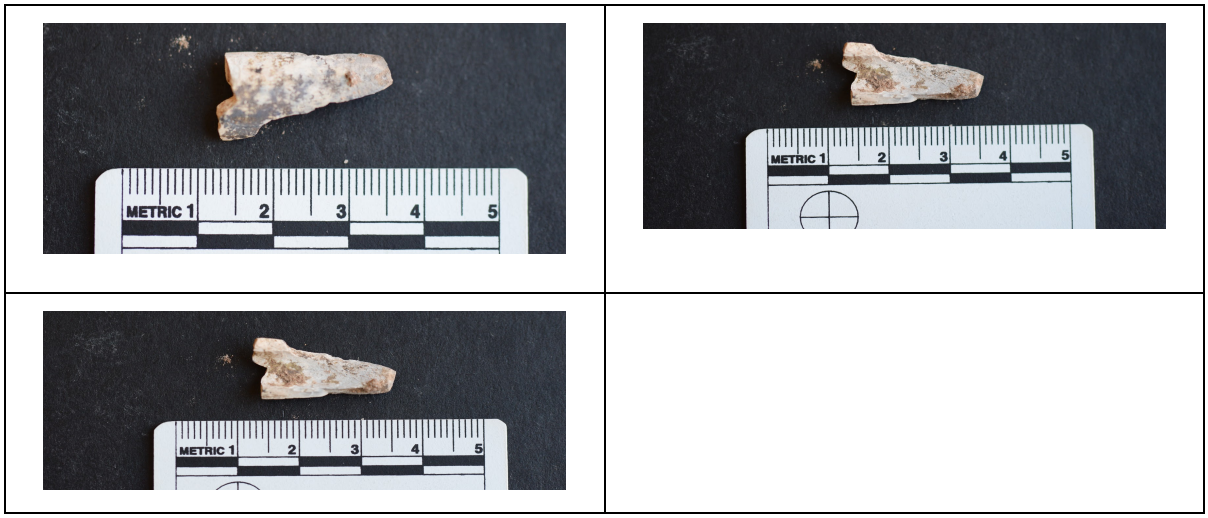


Fig. 5. Images of specimen 13662

Fig. 6. Images of specimen 13716

Fig. 7. Images of specimen 13717

Fig. 8. Images of specimen 13802