Annexure Q2:

Follow up report on Archaeological excavations on the Orange River floodplain between Jakkalsberg and Sendelingsdrift

A REPORT ON ARCHAEOLOGICAL EXCAVATIONS ON THE ORANGE RIVER FLOODPLAIN BETWEEN JAKKALSBERG AND SENDELINGSDRIFT: RICHTERSVELD

Prepared for

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September 2001

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1. INTRODUCTION

It was recognised during the Phase 1 survey of the Trans Hex mining area that pre-colonial material was in many instances in the process of eroding out of stratified slack water silt deposits, built up during regular Orange River flood events. As silts are no longer being deposited as a result of the construction of the major dams higher upstream, the floodplains are now largely erosional environments with wind being the major agent. The erosion is exacerbated by the removal of vegetation largely by small stock grazing. Our observations suggest that archaeological material is being exposed in this process and will disappear in time as erosion progresses.

Dr. Janette Deacon of the then National Monuments Council (now the South African Heritage Resources Authority) visited the area in 1999, and she suggested that some sites be excavated before they became too degraded. It was agreed that Trans Hex would fund a program of excavation and that finance would be sought elsewhere to undertake the analysis of the recovered material.

The area of particular concern was on the floodplain to the east of Jakkalsberg, opposite the old German Police post on the Namibian side at Sendelingsdrift (Figure 1). The location of the pre-colonial sites are shown on an aerial photograph extract and include those that have been excavated during this project, as well as the sites excavated by Lita Webley (JKB A&B). While we had hoped to be able to work on six sites, we were eventually only able to work on four (JKB K, L, M, N) which we believe were those most likely to be degraded. One site, JKB P, a minor scatter, was further damaged in the flash flood of 2000 and is no longer suitable for study. JKB O remains to be studied and the Contacts Office will mount a field season in 2002 to excavate the site.

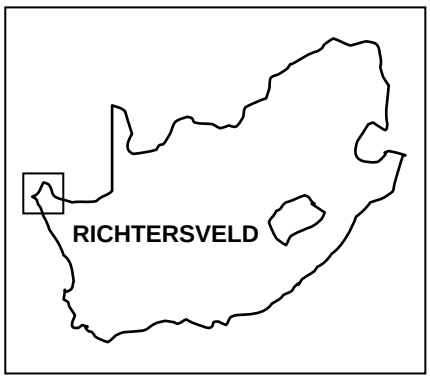
The report presented here is a preliminary statement of the excavated material and the context. The analysis will continue over the next year and the results published hopefully in 2003.

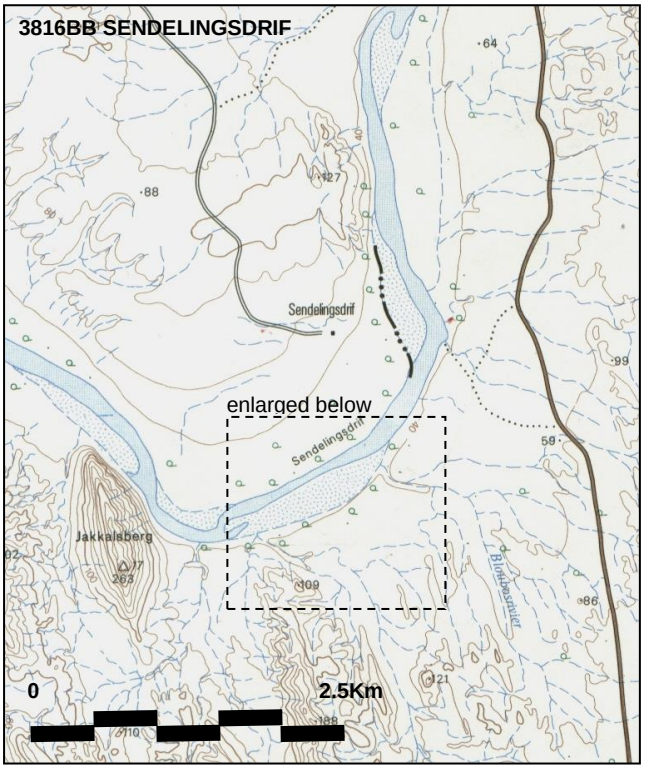
2. BACKGROUND TO THE EXCAVATIONS

The initial survey of the Trans Hex mining areas along the Orange River undertaken in 1998 (Halkett 1998, 1999) indicated that there were both pre-colonial and colonial remains preserved within the area. Of particular interest from a research point of view, are the pre-colonial remains.

Two distinct types of pre-colonial assemblage were observed:

- Type 1 are usually found in deflated hollows towards the middle of the floodplain and contain flaked stone of which a high percentage are on crypto crystalline raw materials derived from the Orange River gravels, and quartz which is abundant in the area. Formal tools, largely made on fine grained materials are present and include numerous backed scrapers, side or “boat shaped” scrapers, segments, backed blades and points, and a variety of miscellaneously backed pieces. Pottery is rare on these sites but ostrich eggshell is abundant with some fragments being decorated and others either fully modified into small beads with mean diameters of less than 5mm, or in the various stages of bead manufacture;





1 **LOCATION OF ARCHAEOLOGICAL SITES**

Type 2 are often found on, or adjacent to the tree lined dunes closer to the main Orange River channel or further up on the floodplain often adjacent to non-perennial stream beds. They contain flaked stone assemblages with a much higher percentage of quartz than crypto crystalline material and formal tools are almost never present, or not immediately visible. Pottery is abundant and decorated and lugged forms are recognised. Ostrich eggshell is abundant but decorated pieces are not common. Mean bead diameter is generally in excess of 5mm. Bone is more common on these sites often appearing in distinct parts of the site believed to be the remains of hearths or ash dumps and in some instances ash deposits are preserved.

It is believed that Type 1 sites are the remains of hunter-forager campsites and Type 2 sites the remains of pastoralist campsites (Webley 1997, Smith et al, in press), and that as a result of discrete spatial distribution of the different types, that we can recognise distinct material culture signatures.

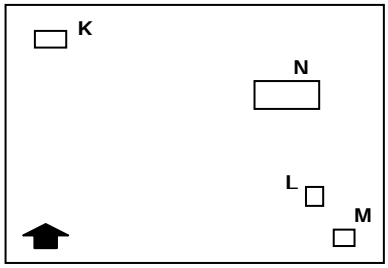
Previous work in close proximity to this study has been undertaken by Dr. Lita Webley on the sites of Jakkalsberg A and B (Webley 1997), and by Smith (Smith et al 2001) on the site of Bloeddrift 23 some 30km downstream. Similar site types have also been observed on the Namibian side of the Orange River and excavations have been undertaken on at least two sites belonging to Type 2 (Robertshaw 1978, Vogel and Visser 1981).

3. EXCAVATION METHOD

A base survey point was established on a silt “island” within the area of JKB N at approximately 28°10.862’S 16°53.121’E. This was marked by an iron stake and served as the common point for all the surveying. The approximate areas of each scatter, and the sampled areas were surveyed using a total station. Local grids were set up on each site to cover as much of the scatter as possible, and conformed to the orientation of the scatter or deflation at that site, rather than all being oriented in a common direction. Grid units were in most cases 50x50cm except in one case (JKB M) where 1x1m units were used. The generally smaller units were selected to assist with better spatial resolution of artefactual material. This method is much quicker than point plotting artefacts (which given the amounts in question would be impossible). Some point plotting of large manuports was used to avoid having to transport large heavy items, with little value beyond the initial identification.

Each grid unit was then labeled with an alpha-numeric number identifying it on a plan and the surface of each square was lightly scraped, sent through a 1.5mm screen and the sieved material bulked in plastic bags for later sorting and analysis. Sites were checked to determine if artefacts were located below the surface in discrete stratified units. In all but one case (JKB L), no sub-surface material was observed.

The surveyed site outlines showing locations of the grids are presented in figures 2 and 3.

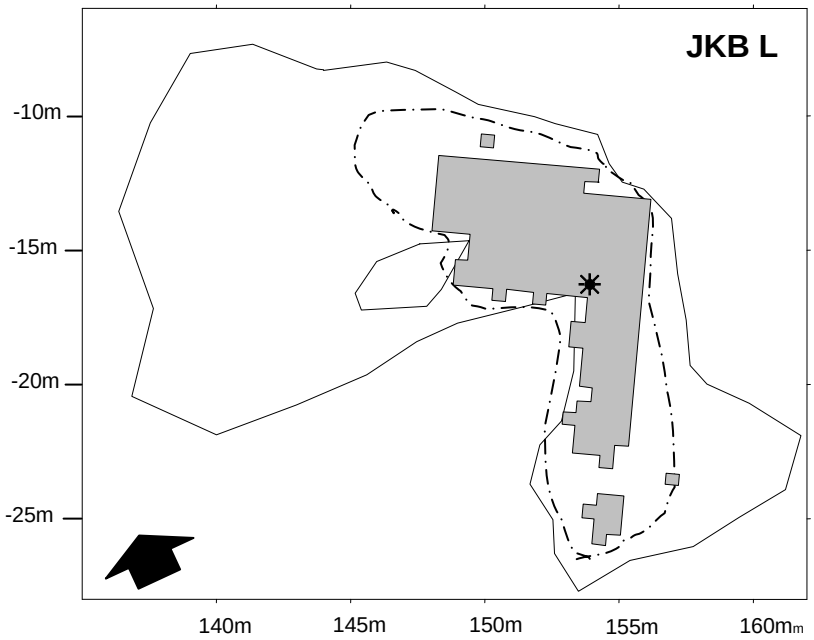


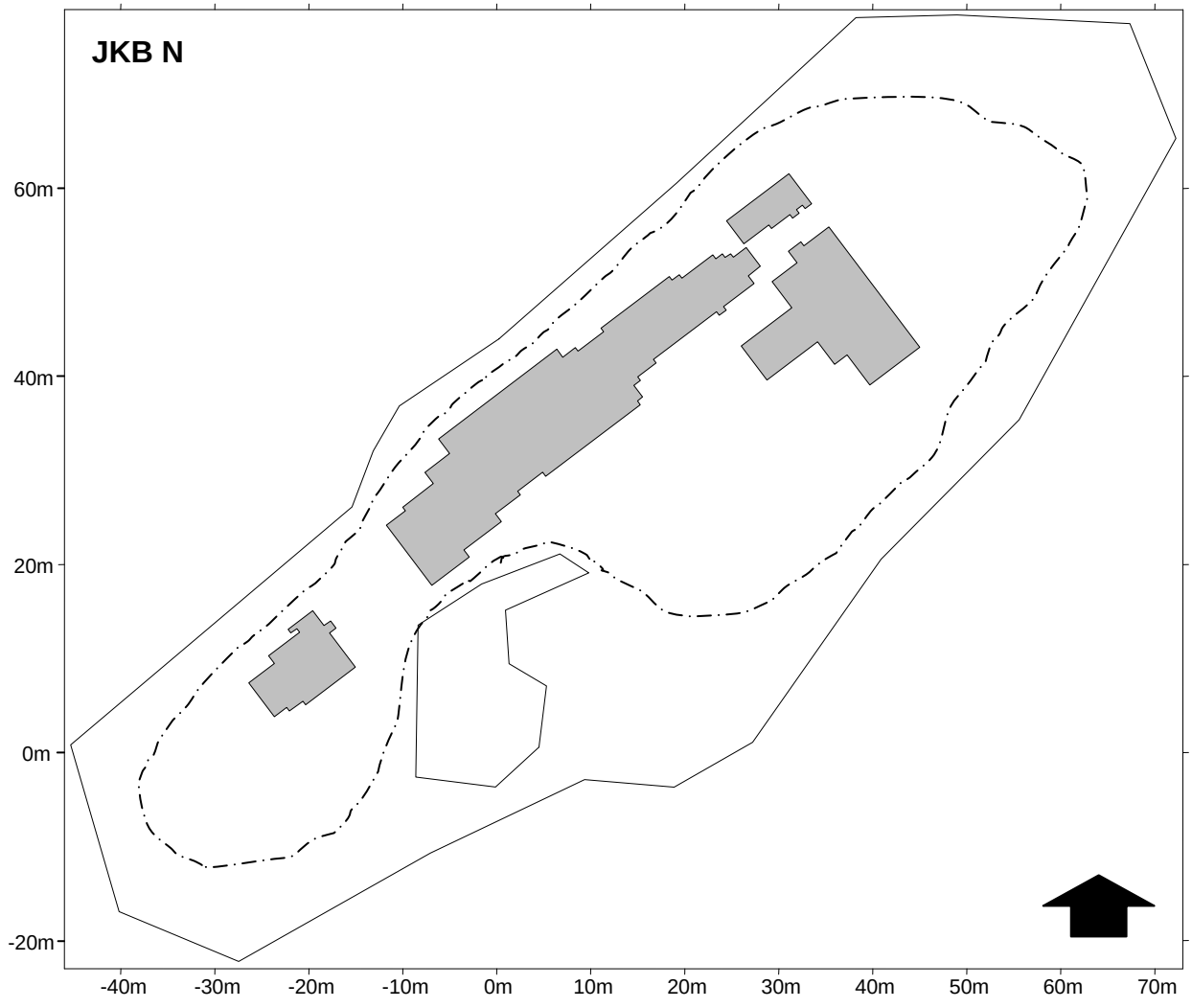
Relative site positions (not to scale)

Approximate area of artefact scatter

Hearth

Sampled areas





2 **DETAILS OF SITES JAKKALSBERG L AND N**

4. PRELIMINARY OBSERVATIONS

4.1 JAKKALSBERG N

4.1.1 Description

This is a very extensive artefact scatter lying in a slightly deflated level area between eroded silt deposits and "islands" 28°10.843'S 16°53.122'E (Figure 2, Plate 4 background). The density of artefactual material varies, and as a result, extensive sampling took place to try and establish if there are differences in content across the site. A grid consisting of 50x50cm units was laid out across the various artefact scatters and material was collected from a total of 1489 of these squares (372.25m^2).

4.1.2 Preliminary observations

The site is primarily a stone artefact scatter although some ostrich eggshell fragments and beads are also present. Numerous decorated fragments were also observed. Many formal stone artefacts were collected of which the most common forms appear to be backed scrapers, segments, side scrapers and a variety of other miscellaneously backed forms. Many of these are made on fine grained ccs materials including crystalline quartz. Sorting and analysis is far from complete and therefore not too much more comment can be made at this stage.

A preliminary look at a sample of the beads (n=20), gives a mean diameter of 4.42mm and this is consistent with what we would expect for this type of site. The bead sample is likely to be larger once all sorting is completed. Ostrich eggshell fragments collected on a previous visit have already been submitted for radiocarbon dating although no results are yet forthcoming.

4.2 JAKKALSBERG L

4.2.1 Description

The site lies in a small "L-shaped" deflation hollow within a mound of old flood silt at 28°10.855'S 16°53.216'E. It comprises a surface scatter of artefactual material and bone. A grid consisting of 50x50cm units was laid out across the artefact scatter and material was collected from a total of 194 of these squares (48.5m^2). A single hearth was identified during excavation (Figure 2, Plates 1-4).

4.2.2 Preliminary observations

The most immediate observation is that many finished ostrich eggshell beads were present, as well as many fragments which indicate that beads were being fashioned on the site. There are numerous partially drilled fragments, drilled and partially rounded beads that broke during the rounding process, as well as myriad small triangular pieces which were snapped off larger fragments during the shaping process. The bead sample (n=41) has a mean diameter of 4.56mm. A number of decorated oes fragments have also been found. A number of slabs and fragments of sedimentary rock resembling Bokkeveld shale scattered about the site are believed to have been used to do final rounding of beads and some show evidence of grinding. Indigenous ceramics are either absent or in such small quantities not to have been observed (but we need to complete the sorting and analysis before confirming this observation).

Both quartz and a variety of siliceous raw materials were used in the production of stone artefacts. Formal tools observed so far include segments, backed scrapers and side scrapers (boat shaped).

Numerous fish bones were found particularly in the vicinity of the single hearth. Some of these were charred. Charcoal was collected for dating.

The surface consisted of loose silt and when scraped was approximately 4cm in depth. Seven squares were scraped deeper and it was found that the surface layer lay on top of another silt crust. Sandwiched between this initial crust and another one below was more soft material containing artefactual material. This layer was called “crust”. One square was excavated deeper and it was found that additional soft material was found below the layer “crust” and this was termed “lower”. What we thought would be a simple task to separate out the different units on the basis of the silt crusts, turned out not to be the case as the crusts are not consistently preserved. It will be difficult to resolve the matter before doing a specific study of the layering phenomenon.

4.3 JAKKALSBERG M

4.3.1 Description

The site lies in a deep deflation hollow with the base some 2 meters below the surrounding eroded silt deposits 28°10.855’S 16°53.245’E (Figure 3, Plates 5&6). The northern edge of the hollow has been cut away by periodic flooding of the Bloubos River. The site contains a surface scatter of artefactual material and bone. A grid consisting of 1x1m2 units was laid out across the artefact scatter and material was collected from a total of 83 of the squares. The larger squares were chosen in this instance as there was not a lot of small material.

4.3.2 Preliminary observations

Indigenous ceramics are present on the site and appear to represent the remains of at least two bag-shaped pots and possibly with lugs as a single specimen was recovered. Decoration is present on some sherds in the form of shallow, incised, horizontal lines (probably on the neck). There are several large manuports as well as a low density scatter of predominantly quartz debitage. No formal tools were observed. Ostrich eggshell is present but no decorated pieces have been seen. The beads vary in size and the small sample (n=22) gives a mean diameter of 4.89mm which is smaller than we would have expected for this type of site. There are no immediately visible signs of mixing of a ceramic period site with an earlier type of site, but we will need to investigate the possibility that smaller beads are from a different part of the site to the pottery and larger bead specimens.

A relatively large number of ochre fragments form part of the collection. Many fragments of specularite are also present. On a previous visit to the site, two “ingots” of ochre were found in a connected sub-deflation (see figure 3). These appear to be powdered/ground red ochre which has been mixed with some form of binder and appear to have been cast in a basin scooped out of the ground while still malleable and then left to dry. These still need to be analysed to establish the content.

Fragmented bone from a variety of mammalian species is present. The numerous microfaunal remains are believed to have come from owl pellets rather than having been collected by a human agent.

4.4 JAKKALSBERG K

4.4.1 Description

The site lies in a small deflated area on the inland side of the vegetated riverine dune cordon at 28°10.935'S 16°52.931'E (Figure 3, Plates 7&8). Patches of flood sediment form small raised "islands" within the deflation and it is obvious that at some stage before erosion, that artefacts would have been located on more extensive patches of compacted (sun baked) silt. Two areas on the south-eastern side of the site contained large amounts of artefactual material and bone but located on a steep sided erosion slope. The material had clearly slipped down from "in situ" locations higher upslope. What we have called collection area A appears to have originated largely from the local scatter around hearths A1 and A2, while the material in collection area B originates largely from the scatter around hearth B. The scatter overall contains a large amount of fish bone and artefacts including indigenous pottery and lithics. A grid consisting of 50x50cm units was laid out across the artefact scatter and material was collected from a total of 146 of these squares (36.5m^2). It is not immediately clear if the scatter represents a complete camp as the substantial erosion on the southern side suggests that some parts may have disappeared if the site had indeed extended into that area. There is however not a lot of residual artefactual material beyond the area covered in this investigation.

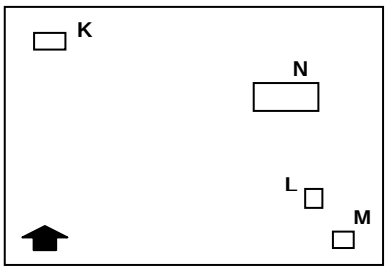
4.4.2 Preliminary observations

It was immediately clear that there were two main areas of activity on the site. The one was clearly surrounding a hearth (B), that could be seen on the surface, and after excavation it became clear that the other area was also surrounding a hearth complex (2 hearths – one largish [A1] with a smaller one adjacent [A2]). All of the hearths contained ash deposits and yielded charcoal for dating purposes although it was not abundant. The potential exists to date charred and burned bone if necessary. The bone consists primarily of fish and it is believed that there is more than one species represented. Other bone is present but tends to be fragmented. Indigenous ceramics are present and include lugs and decorated sherds. At least some of the decoration is the same as at JKB M (horizontal incised lines around the neck), but as the sorting is not complete we cannot exclude the possibility of other types being present.

Formal tools were not immediately evident and not enough progress has been made to make any comment on the raw materials. Similarly, while we know there are ostrich eggshell fragments and beads on the site, we cannot comment at this stage on the bead sizes or if there is any decorated material.

5. SUMMARY

Four sites were excavated as part of this project. Our preliminary assessment is that 2 of them (JKB L, N), which do not contain ceramics and have small beads and formal tools, will date before 2000BP, and when fully analysed, will be consistent with the variant of the Wilton industry called the Springbokoog that has been described from sites in Bushmanland (Beaumont et al 1995). The other 2 sites both contain pottery but lack any distinctive formal stone tool component and will almost certainly date after 2000BP. These sites are consistent with an industry called the Doornfontein, also described from sites in the Northern Cape (Beaumont et al 1995).



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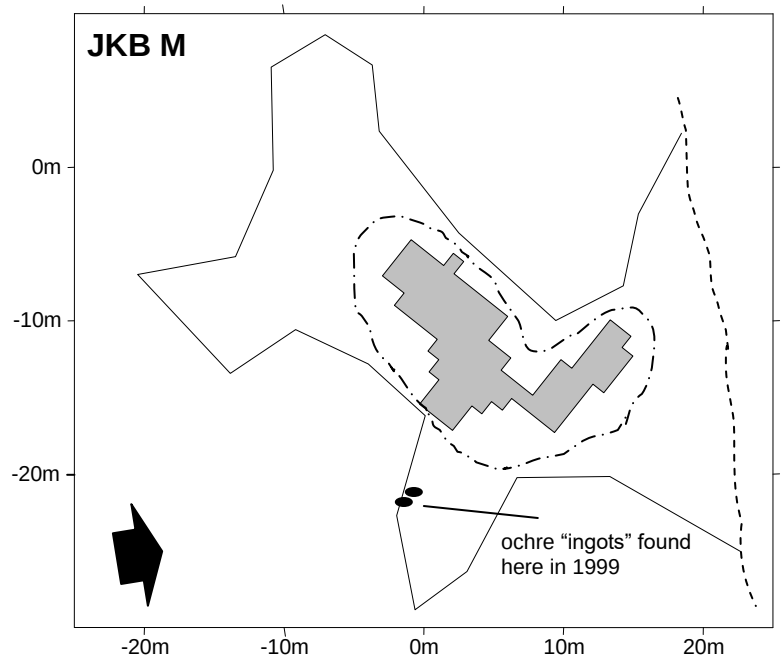
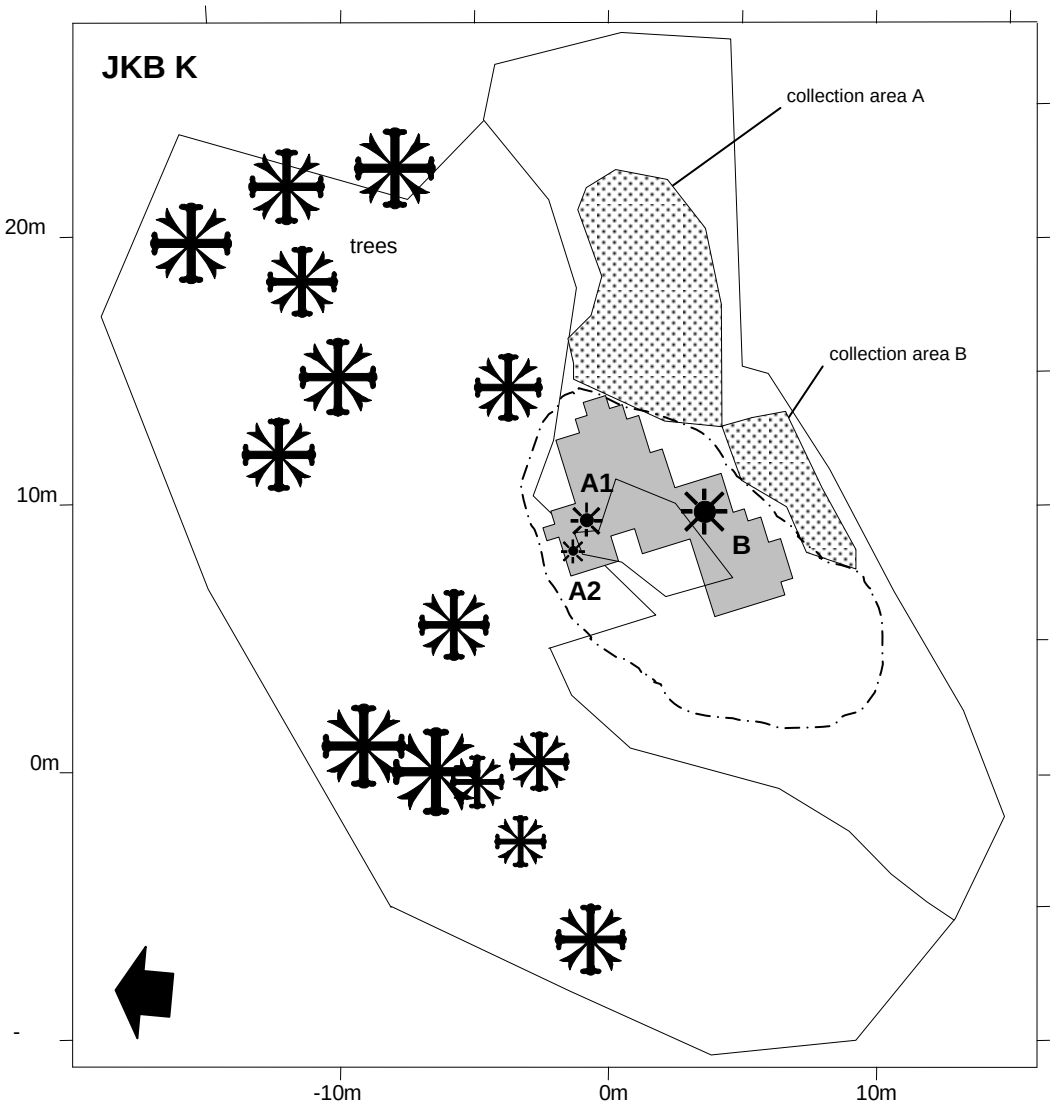
Hearth

Sampled areas





3 **DETAIL OF SITES JAKKALSBERG M AND K**

6. FUTURE WORK

One site (JKB O) could not be excavated during this project but remains an important part of understanding the social dynamics of pre-colonial occupation of the area. This site will be excavated next year and can therefore still contribute to the results of this study prior to its publication. It seems unlikely that mining will occur on the floodplain in the foreseeable future and therefore the potential exists that additional sampling may be undertaken during the forthcoming field season.

7. ACKNOWLEDGEMENTS

We would like to thank Trans Hex for making this project possible and Herman Bruwer for facilitation. Our thanks to Andre Muntingh and other Trans Hex staff for their help during our stay at Sendelingsdrift.

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9. REFERENCES

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Plate 1: Site JKB L lying in a small deflation in old silt deposits
Plate 2: Excavating JKB L – location of Jakkalsberg B indicated by arrow
Plate 3: Detail of part of JKB L showing where the hearth was located
Plate 4: Position of the deeper excavation on JKB L showing position of hearth. Location of JKB N is indicated by the arrow.

Plate 5: The site of JKB M lying in a deep deflation between older silt deposits. Location of JKB B indicated by arrow
Plate 6: Detail of the deflation at JKB M looking due east
Plate 7: JKB K lying on the edge of the riverine dune cordon. Collection area B indicated by the arrow
Plate 8: Looking due east across JKB K with the positions of hearths indicated