

The Archaeology of conflict on a Colonial Frontier: Investigating the Battle of Boomplaats (1848) and the Skirmish of Zwartkopjes (1845).

Methodology for the use of metal detectors to identify and the subsequent retrieval of battle-related artefacts.

The use of metal detectors has proven their worth on the site of the 1806 Battle of Blaauwberg as a large number of artefacts would not have been identified without this equipment and their skilled operators. The 1806 Battle of Blaauwberg was archaeologically investigated by Willem Hutten as part of his Master's research at the University of South Africa under HWC permits # 130725TS33 and # 130730TS01E.

The vast extent of the battlefield makes the use of other geophysical equipment, such as magnetometers, impractical. However, by using a stringent methodological approach the metal detectors have been remarkably successful in the case of the investigation of the 1806 Battle of Blaauwberg. The applicant, therefore, wants to use the experience he has gained to employ a similar approach during the investigation of the battlefields of Zwartkopjes and Boomplaats.

- The metal detector surveys will be employed within a pre-determined grid system that will be demarcated on the landscape. Poles and bright-coloured string will be used to effectively guide the metal detector operator to transect the grid. This will ensure comprehensive coverage of the battle landscape. It is foreseen that a pre-determined grid of 100m x 100m will be superimposed on the landscape, as this has been determined as an effective size per individual operator assisted by a marker/excavator. It also limits the signal interference of nearby machines.
- Only experienced metal detector operators will be used, as they have developed the skills to discriminate significant signals from the general noise the machines omit.
- Student archaeologists, archaeologists and volunteers will assist the metal detector operator to keep to the pre-determined transects. The assistants will also retrieve the identified material.
- All identified material will be retrieved by the assistants using either trowels or handheld shovels. The assistant will also be equipped with a handheld metal detector or pinpointter,

to identify the metal object. Once the artefact was retrieved the excavation will be backfilled. Only the individual artefacts will be retrieved from the holes no larger than 300mm x 300mm and no deeper than 400mm and no large-scale grid excavation will be conducted.

- It is not foreseen that any artefact will be retrieved deeper than 400mm, as the penetration of the metal detector signal is only effective at a low depth. It is also foreseen that most of the material will be identified on the surface or just under the surface.
- All retrieved artefacts will be bagged and labelled and their locations noted with a handheld GPS.