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ARCHAEOLOGICAL ASSESSMENT FOR THE GAUTRAIN

A phase I report prepared for Bohlweki Environmental

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INTRODUCTION

The Gauteng Department of Public Transport, Roads and Works intends to establish a new rapid rail link between Johannesburg, Pretoria and the Johannesburg International Airport. The rail link, known as the Gautrain, will have underground as well as surface sections, totaling about 80 km. In accordance with various environmental and heritage legislation, Bohlweki Environmental, the coordinators for the Environmental Impact Assessment, appointed Archaeological Resources Management (ARM) to examine the surface sections for sites of archaeological interest.

METHOD

ARM staff examined the alternative routes in August 2002. We located the proposed routes using 1: 10 000 orthophotos and 1: 20 000 street maps supplied by Bohlweki. Sites were recorded with a hand-held GPS instrument and transferred to the 1: 50 000 maps 2628 AA Johannesburg and 2528 CC Centurion.

The significance of archaeological sites was based on five main criteria: site integrity (i.e. primary vs. secondary context), amount of deposit, range of features (e.g. middens, hearths and houses), uniqueness and potential to answer present research questions. Sites with no significance do not require mitigation, low to medium may require further work before development, sites with high significance must be mitigated, while sites with maximum significance should not be disturbed at all.

RESULTS

Generally, the Gautrain routes cross over basement granite, and eroded quartz covers most of the Johannesburg sections. Blackreef quartzites protrude above ground in Centurion. Most surface sections everywhere have been disturbed by grading, ploughing or landfill activities.

Marlboro Station Area

No sites were noted.

Modderfontein

The two proposed routes pass through the original residential area. Both will cut through the Brickfields dump, dating from the 1880s. This site later became the first main dump of Modderfontein, and it served this purpose until the 1920s (Hall 1997). The two lines also cross Amsterdam Street, lined with original old buildings.

Significance

- Modderfontein is important to the history of mining and Johannesburg, and the original residential area forms an historic precinct. Consequently, the dump and Amsterdam Street have high significance.

Frankenwald

No sites were noted.

Modderfontein Spruit Options

The remains of African housing stand on the hillside above the spruit. The remains include at least four rectangular mud brick foundations (**1**: 26 02 28.8S 28 06 59.7E; **2**: 26 02 30S 28 07 03.2E; **3**: 26 02 30.7S 28 07 04.6E; **4**: 26 02 35.8S 28 07 05.6E), bottle glass, metal scraps and fencing. The material probably dates to the 1950s.

Middle Stone Age artefacts lay on the eroded and ploughed surface around the confluence of the spruit and a small drainage (26 01 53-59.7S 28 07 25.2-18.8E). The artefacts include blades and triangular flakes made of quartz and fine-grained igneous stone. This material dates between about 250 000 and 25 000 years ago.

Significance

- There are many other examples, and so, the African housing remains have low significance.
- Because of the disturbed context, the Middle Stone Age artefact scatter has low significance.

Midrand Station

No sites were noted.

Oliefonteinbosch

No sites were noted.

Centurion Military Area

One Middle Stone Age flake was found in a sand quarry near the reference design maintenance area.

Significance

- The isolated flake has no significance.

RECOMMENDATIONS

As part of the historic Modderfontein precinct, the Brickfields dump and Amsterdam Street have high significance, and therefore require mitigation (Table 1). The Naude report considers this problem in greater detail. Once the specific alignment has been chosen, archaeologists need to excavate the dump. At least one building on Amsterdam Street will be affected, regardless of the route, and serious consideration should be given to its removal. Some excavations may also be necessary. Depending on the precise alignment, one to four weeks will be needed at both the dump and Amsterdam Street. The dry winter season is the most appropriate time for the excavations.

Elsewhere the Middle Stone Age site requires minimum mitigation. A one-day surface collection will be sufficient.

If the abandoned African housing above the Modderfontein Spruit will be destroyed, then it too requires some further work. In this case it will be necessary to compile a map showing the individual households and their spatial relationships to each other. Two days will be sufficient for this work.

As the survey shows, there are no archaeological grounds for choosing between any alternative. Other than the historic area at Modderfontein, no alternative alignment will negatively impact a significant archaeological site. When the precise alignment has been chosen, however, it will be necessary to examine the Salvokop area because of its designation for the Freedom Park Project. Thus, although the Modderfontein sites require serious attention, there are no archaeological reasons why the Gautrain project should not proceed.

REFERENCE LIST

HALL, S.L. (1997). *A Phase I Archaeological Assessment of Modderfontein*. Johannesburg: University of the Witwatersrand.

Table 1. Significance.

IMPACT	Nature	Extent	Duration	Probability	Significance	Status	Mitigation
Modderfontein Dump	construction	local	permanent	definite	2 (high)	negative	excavations
Amsterdam Street	construction	local	permanent	definite	2 (high)	negative	excavation & removal
Middle Stone Age	construction	local	permanent	probable	4 (low)	negative	surface collection
African Housing	construction	local	permanent	unknown	4 (low)	negative	mapping