Agency for Cultural Resource Management
**Specialists in Archaeological Studies and Heritage Resource Management**

**ARCHAEOLOGICAL SPECIALIST STUDY: LETTER OF EXEMPTION**

**CONSTRUCTION OF SPORTS FIELD IRRIGATION AND FACILITIES INFRASTRUCTURE IN CALVINIA, HANTAM LOCAL MUNICIPALITY, NORTHERN CAPE**

**March, 2020**

***SAHRA CaseId 14269***

## EXECUTIVE SUMMARY

The overall archaeological impact significance of the proposed Calvinia Sports Field Irrigation Project in Calvinia, in the Northern Cape is considered to be low. The study area, located within the urban edge of the town, is already highly degraded, comprising internal streets, road reserves, sports fields, commercial properties and a small water course. The footprint area and minimal excavations required is also very small. The likelihood of encountering significant archaeological resources is therefore deemed to be very low.

There are no objections on archaeological grounds to authorisation of the proposed project and it is recommended that exemption from further specialist archaeological studies and mitigation be granted for the development.

If any human remains/unmarked graves are uncovered during construction work, these must be immediately reported to the South African Heritage Resources Agency/SAHRA (Att: Ms Natasha Higgit 021 462 4502), and the contracted archaeologist (Jonathan Kaplan 082 321 0172).

### *1. Introduction*

The proposed activity is the construction of sports field irrigation and facilities infrastructure in Calvinia (Hantam Local Municipality), in the Northern Cape Province (Figure 1). The municipal sports facilities infrastructure in Calvinia has not been upgraded in more than 20 years. The intention is to utilize treated effluent for the sports field's irrigation.

EnviroAfrica cc is the independent Environmental Assessment Practitioner responsible for facilitating environmental authorisation for the project.

### 2. *Project description*

Existing irrigation for the municipal sports fields in Calvinia currently takes place via abstracting water from the town's drinking water supply network. This is unsustainable given the extreme water shortages experienced by the town during the hot summer months. The proposal is therefore to utilize treated wastewater from Calvinia's Waste Water Treatment Works (WWTW) as a source of supply for the municipal sports fields. This includes the Calvinia showground sports field, the Calvinia De Kraal sports field, the Calvinia Secondary school sports field and Calvinia Primary school sports field. The project also includes a proposed new grass pitch, a 900 seat pavillion and high mast lighting for the De Kraal soccer field, and high mast lighting for the Calvinia showgrounds sports field.

The irrigation system infrastructure to allow for the required flow rate includes a 4.49km long rising main irrigation pipeline, which will be buried underground, a WWTW Irrigation Pump station at the WWTW, two 120kL reservoirs on the sport fields, each with a booster pump, and security fencing (Figure 2). The pipelines will be constructed within road reserves (*e.g.* R355) and on municipal land, so no natural vegetation will be lost. A new 400m long, 11kV powerline will also be constructed. The proposed powerline route will be located about 4m from the proposed water irrigation line route, to the WWTW pump station on the western edge of Newton.

### *3. Approach to the study*

A field assessment of the route for the proposed irrigation pipeline was undertaken on the 7th June, 2019 (Figure 3). The survey was done by vehicle and on foot. A full photographic record of the route was also taken (Figures 4-22). Much of the route will be located in the road reserve and informal gravel footpaths, before accessing the affected school sports fields. A short section of the pipeline will cross a small, highly degraded unnamed stream south of the R355 (Figure 15), established business premises (Figure 18) and alongside Dorp Street (Figure 21), before connecting again to the R355.

### *4. Archaeological context*

Very little archaeological research or work has been done in Calvinia. A search of the SAHRIS data base revealed only three formal archaeological surveys in the town. No archaeological remains were recorded during an AIA for the proposed upgrading of the Calvinia WWTW/Oxidation Dam, and the Calvinia Cemetery (Webley & Halkett 2009a, b). The Archaeology Contracts Office also conducted an HIA for a borrow pit alongside the R27 outside Calvinia however no heritage resources were identified in this assessment either (Hart & Halkett 2011). CTS Heritage (2018a, b) have also screened two projects in the study area, including a proposed telecommunications mast alongside the Calvinia Sportsground.

### *5. Results of the field assessment*

- No archaeological resources were encountered during the field assessment.

- No protected buildings, structures or features will be impacted by proposed construction activities.

### *6. Conclusion*

The overall archaeological impact significance of the proposed sports field irrigation project at Calvinia is considered to be VERY LOW. The project footprint area is very small and for the most part is already highly disturbed (urban context, road reserves *etc*). No archaeological or historical heritage resources were identified during the field assessment. Therefore there are no objections to the development proceeding.

### *7. Recommendations*

1. The project should be allowed to proceed as planned.

2. If any unmarked human remains/graves are uncovered during construction work, these must be immediately reported to the South African Heritage Resources Agency/SAHRA (Att: Ms Natasha Higgit 021 462 4502), the Environmental Control Officer (ECO), and the contracted archaeologist (Jonathan Kaplan 0823210172)

3. The above recommendations must be included in the Environmental Management Plan (EMP) for the proposed development.

It is recommended that exemption from further specialist archaeological studies and mitigation be granted for this development.

***8. References***

CTS Heritage 2018a. Desktop Heritage Screening Assessment for the proposed expansion of the Calvinia Abattoir Ramskop, Erf 3562, Calvinia, Northern Cape. CTS Heritage, Cape Town

CTS Heritage 2018b. Proposed 25m high telecommunications mast on Erf 1644, Calvinia sportsground, Dorp Street, Calvinia, Northern Cape. Heritage Screener. CTS Heritage, Cape Town.

Hart, T. & Halkett, D. 2011. Heritage Impact Assessment, proposed strengthening (partial reconstruction) of National Route 27 Section 7 & 8 between Western/Northern Cape Border (km 40.0) and Calvinia (KM 70). Archaeology Contracts Office, Cape Town

Webley, L. & Halkett, D. 2009a. Archaeological Impact Assessment for the proposed upgrading and extension of the Oxidation Dams at the Calvinia WWTW, Namakwa District, Northern Cape Province. Report prepared for Irme van Zyl Environmental Consultant. Archaeology Contracts Office, Cape Town.

Webley, L. & Halkett, D. 2009b. Archaeological Impact Assessment for the proposed construction of a new cemetery at Calvinia, Namakwa District, Northern Cape Province. Report prepared for Irme van Zyl Environmental Consultants. Archaeology Contracts Office, Cape Town

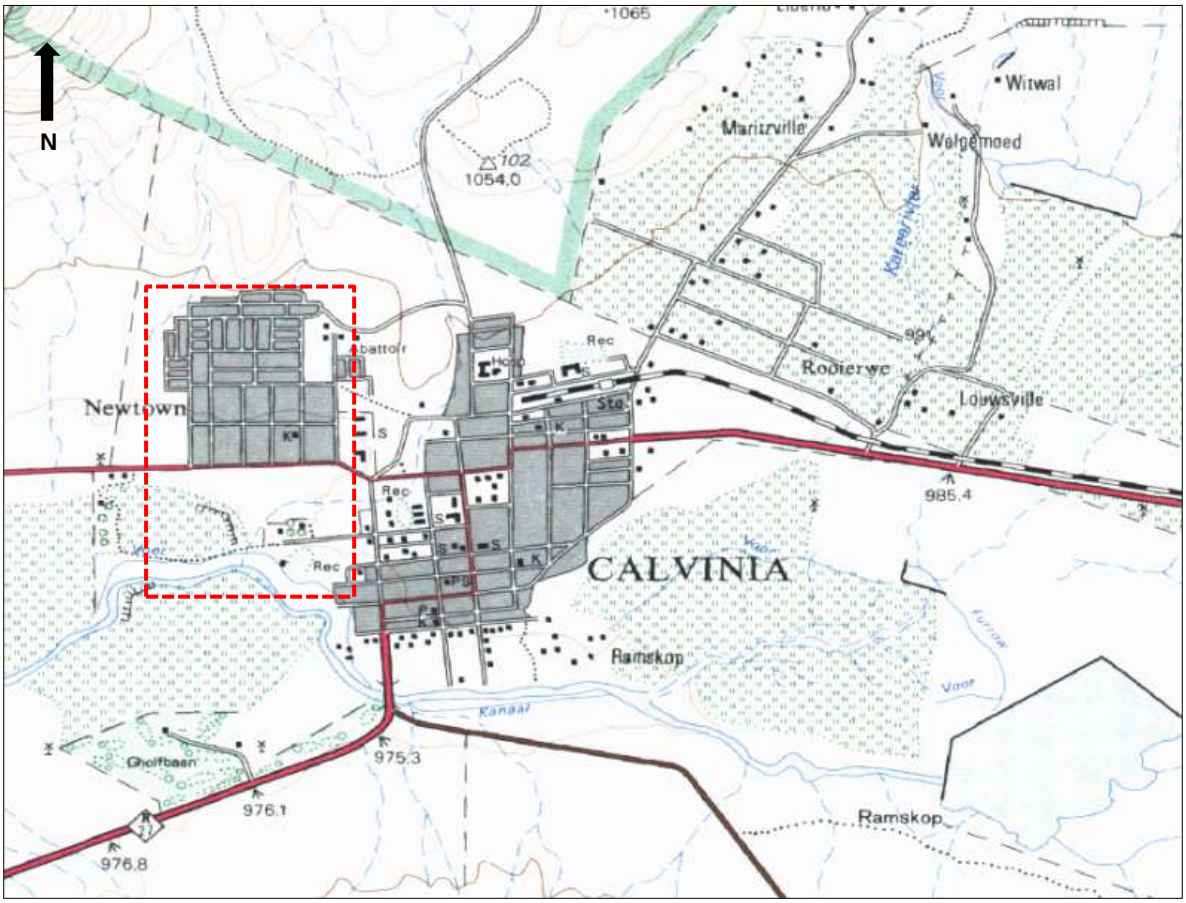


Figure 1. Locality map (3119BD Calvinia). Red polygon indicates the approximate boundary of the project area


Figure 2. Google satellite map indicting the proposed sewer route (green & purple) for the Calvinia Sports Field Irrigation Project. The light blue line is the existing sewer pipeline from the WWTW. The dark blue line is the proposed new 11kv line that will connect to the existing 11Kv overhead line (red)

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Figure 3. Trackpaths in dark blue

Figure 4. Proposed sewer route alongside the R355

Figure 5. Proposed sewer route alongside the R355

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Figure 6. Proposed sewer route alongside the R355


Figure 7. Proposed sewer route alongside the R355


Figure 8. Proposed sewer route alongside the R355


Figure 9. Proposed sewer route alongside the R355


Figure 10. Proposed sewer route


Figure 11. Proposed sewer route

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Figure 12. Proposed sewer route


Figure 13. Proposed sewer route


Figure 14. Proposed sewer route inside school sports field


Figure 15. Proposed sewer route crossing small stream


Figure 16. Proposed sewer route crossing small stream


Figure 17. Proposed sewer route after small stream

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Figure 18. Proposed sewer route through business premises


Figure 19. Proposed sewer route


Figure 20. Proposed sewer route


Figure 21. Proposed sewer route alongside Dorp Street


Figure 22. Proposed sewer route alongside R355 south


Figure 23. Proposed sewer route alongside R355 south

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Figure 24. Proposed sewer route alongside R355 south

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