

# **DESKTOP HERITAGE SURVEY OF THE MOLTENO SEWERAGE PROJECT, EASTERN CAPE.**

**FOR EOH CES**

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## **INTRODUCTION**

The Chris Hani District Municipality (CHDM) is proposing the construction of sewerage infrastructure on the periphery of Molteno. The infrastructure consists of the construction of a pump station and 350 mm pipeline from the township of Nomonde, eastwards across the Stormbergsspruit River to the Molteno Waste Water Treatment Works (WWTW). The initial throughput of the pipeline will be 55l/s.

The pipeline is in an old river bed and flood plain, of which some was a wetland. The area has been systematically ploughed over the last few decades, and there is little chance of heritage sites occurring in the pipeline footprint.

The desktop study serves as a request of exemption from further HIA reports.

The location of the study area is given in figures 1 – 3.

FIG. 1: GENERAL LOCATION OF THE MOLTENO SEWERAGE INFRASTRUCTURE

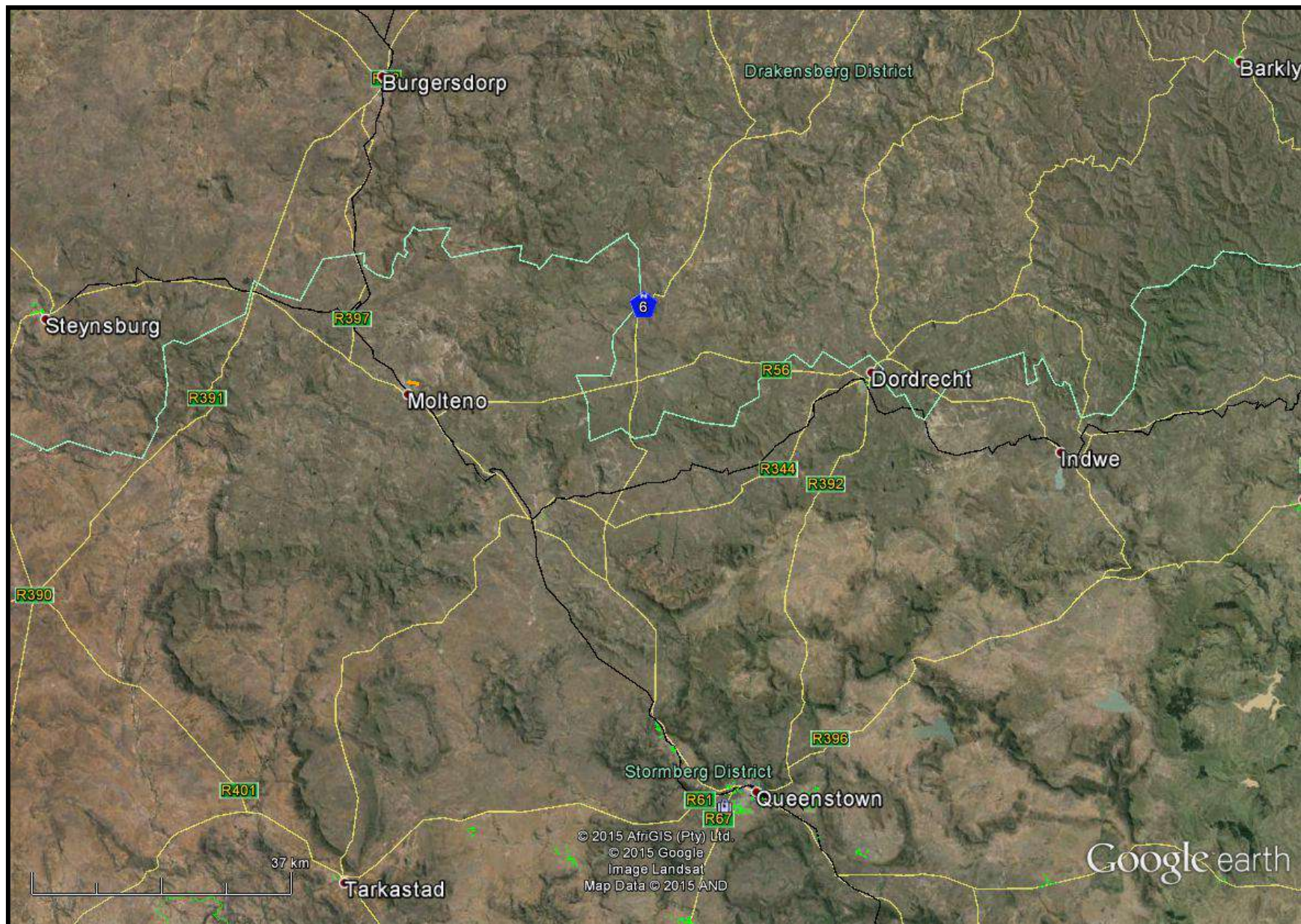


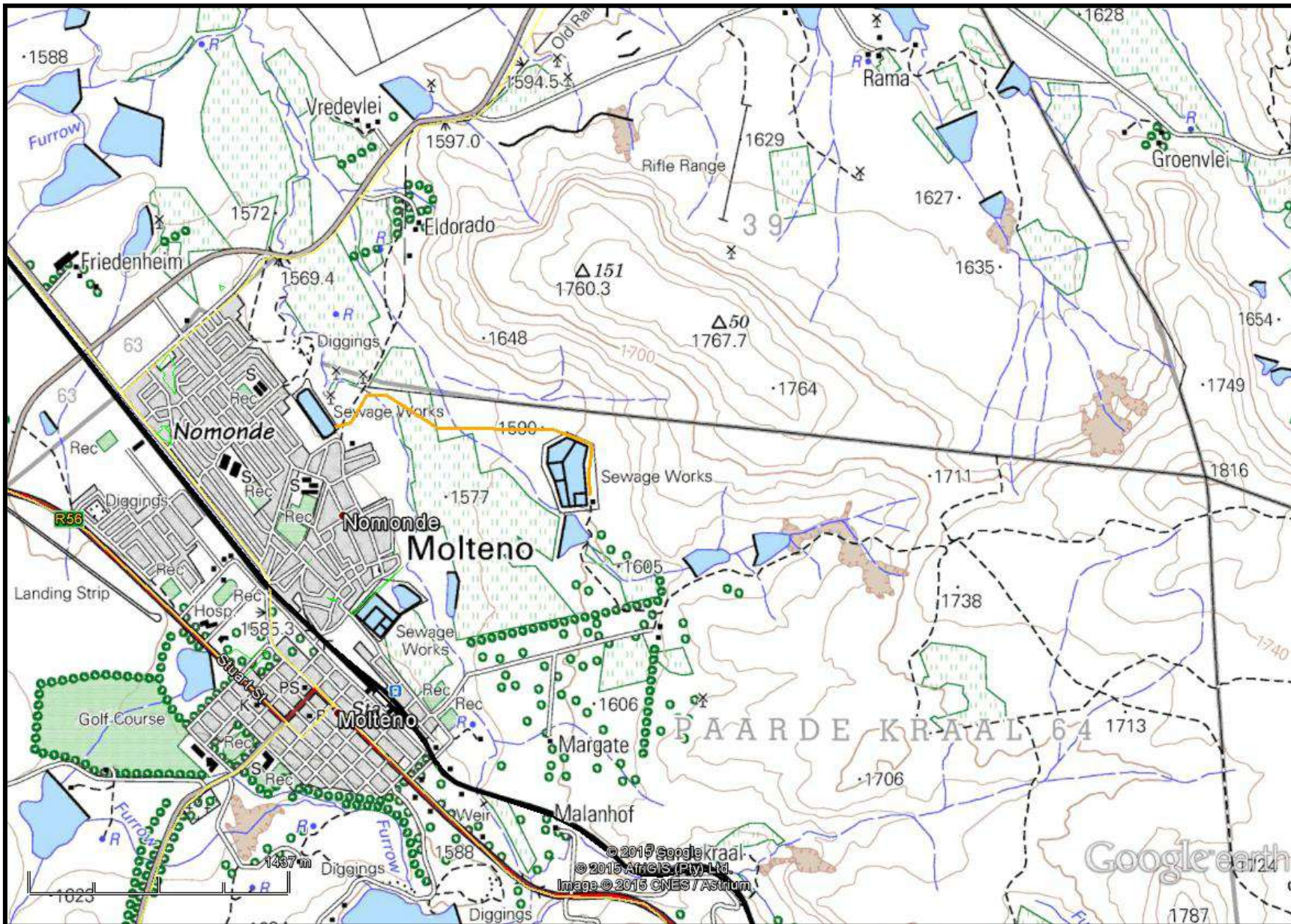


FIG. 2: AERIAL OVERVIEW OF THE MOLTENO SEWERAGE INFRASTRUCTURE





**FIG. 3: TOPOGRAPHICAL MAP OF THE MOLTEÑO SEWERAGE INFRASTRUCTURE**



## NATIONAL HERITAGE RESOURCES ACT OF 1999

The National Heritage Resources Act of 1999 (pp 12-14) protects a variety of heritage resources. These resources are defined as follows:

1. “For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.
2. Without limiting the generality of subsection (1), the national estate may include—
  - 2.1. Places, buildings, structures and equipment of cultural significance;
  - 2.2. Places to which oral traditions are attached or which are associated with living heritage;
  - 2.3. Historical settlements and townscapes;
  - 2.4. Landscapes and natural features of cultural significance;
  - 2.5. Geological sites of scientific or cultural importance;
  - 2.6. Archaeological and palaeontological sites;
  - 2.7. Graves and burial grounds, including—
    - 2.7.1. Ancestral graves;
    - 2.7.2. Royal graves and graves of traditional leaders;
    - 2.7.3. Graves of victims of conflict;
    - 2.7.4. Graves of individuals designated by the Minister by notice in the Gazette;
    - 2.7.5. Historical graves and cemeteries; and
    - 2.7.6. Other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
3. Sites of significance relating to the history of slavery in South Africa;
  - 3.1. Movable objects, including—

4. Objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - 4.1. Objects to which oral traditions are attached or which are associated with living heritage;
  - 4.2. Ethnographic art and objects;
  - 4.3. Military objects;
  - 4.4. objects of decorative or fine art;
  - 4.5. Objects of scientific or technological interest; and
  - 4.6. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).
5. Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of—
  - 5.1. Its importance in the community, or pattern of South Africa's history;
  - 5.2. Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
  - 5.3. Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
  - 5.4. Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
  - 5.5. Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
  - 5.6. Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
  - 5.7. Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
  - 5.8. Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and



## 5.9. sites of significance relating to the history of slavery in South Africa”

### METHOD

The method for Heritage assessment consists of several steps.

The first step forms part of the desktop assessment. Here we would consult the database that has been collated by Umlando. These database contain archaeological site locations and basic information from several provinces (information from Umlando surveys and some colleagues), most of the national and provincial monuments and battlefields in Southern Africa (<http://www.vuvuzela.com/googleearth/monuments.html>) and cemeteries in southern Africa (information supplied by the Genealogical Society of Southern Africa). We use 1<sup>st</sup> and 2<sup>nd</sup> edition 1:50 000 topographical and 1937 aerial photographs where available, to assist in general location and dating of buildings and/or graves. The database is in Google Earth format and thus used as a quick reference when undertaking desktop studies. Where required we would consult with a local data recording centre, however these tend to be fragmented between different institutions and areas and thus difficult to access at times. We also consult with an historical architect, palaeontologist, and an historian where necessary.

The survey results will define the significance of each recorded site, as well as a management plan.

All sites are grouped according to low, medium, and high significance for the purpose of this report. Sites of low significance have no diagnostic artefacts or features. Sites of medium significance have diagnostic artefacts or features and these sites tend to be sampled. Sampling includes the collection of artefacts for future analysis. All diagnostic pottery, such as rims, lips, and decorated sherds are sampled, while bone, stone, and shell are mostly noted. Sampling usually

occurs on most sites. Sites of high significance are excavated and/or extensively sampled. Those sites that are extensively sampled have high research potential, yet poor preservation of features.

### **Defining significance**

Heritage sites vary according to significance and several different criteria relate to each type of site. However, there are several criteria that allow for a general significance rating of archaeological sites.

These criteria are:

#### **1. State of preservation of:**

- 1.1. Organic remains:
  - 1.1.1. Faunal
  - 1.1.2. Botanical
- 1.2. Rock art
- 1.3. Walling
- 1.4. Presence of a cultural deposit
- 1.5. Features:
  - 1.5.1. Ash Features
  - 1.5.2. Graves
  - 1.5.3. Middens
  - 1.5.4. Cattle byres
  - 1.5.5. Bedding and ash complexes

#### **2. Spatial arrangements:**

- 2.1. Internal housing arrangements
- 2.2. Intra-site settlement patterns
- 2.3. Inter-site settlement patterns

#### **3. Features of the site:**

- 3.1. Are there any unusual, unique or rare artefacts or images at the site?

3.2. Is it a type site?

3.3. Does the site have a very good example of a specific time period, feature, or artefact?

**4. Research:**

4.1. Providing information on current research projects

4.2. Salvaging information for potential future research projects

**5. Inter- and intra-site variability**

5.1. Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and artefacts?

5.2. Can this particular site yield information about a community's social relationships within itself, or between other communities?

**6. Archaeological Experience:**

6.1. The personal experience and expertise of the CRM practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

**7. Educational:**

7.1. Does the site have the potential to be used as an educational instrument?

7.2. Does the site have the potential to become a tourist attraction?

7.3. The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.

**8. Other Heritage Significance:**

8.1. Palaeontological sites

8.2. Historical buildings

8.3. Battlefields and general Anglo-Zulu and Anglo-Boer sites

8.4. Graves and/or community cemeteries

8.5. Living Heritage Sites

8.6. Cultural Landscapes, that includes old trees, hills, mountains, rivers, etc related to cultural or historical experiences.



The more a site can fulfill the above criteria, the more significant it becomes. Test-pit excavations are used to test the full potential of an archaeological deposit. This occurs in Phase 2. These test-pit excavations may require further excavations if the site is of significance (Phase 3). Sites may also be mapped and/or have artefacts sampled as a form of mitigation. Sampling normally occurs when the artefacts may be good examples of their type, but are not in a primary archaeological context. Mapping records the spatial relationship between features and artefacts.

**TABLE 1: SAHRA GRADINGS FOR HERITAGE SITES**

<b>SITE SIGNIFICANCE</b>	<b>FIELD RATING</b>	<b>GRADE</b>	<b>RECOMMENDED MITIGATION</b>
<b>High Significance</b>	National Significance	Grade 1	Site conservation / Site development
<b>High Significance</b>	Provincial Significance	Grade 2	Site conservation / Site development
<b>High Significance</b>	Local Significance	Grade 3A / 3B	
<b>High / Medium Significance</b>	Generally Protected A		Site conservation or mitigation prior to development / destruction
<b>Medium Significance</b>	Generally Protected B		Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
<b>Low Significance</b>	Generally Protected C		On-site sampling monitoring or no archaeological mitigation required prior to or during development / destruction

## RESULTS

### DESKTOP STUDY

The desktop study consisted of analysing various maps for evidence of prior habitation in the study area, as well as for previous archaeological surveys.

No national monuments, battlefields, or historical cemeteries are known to occur in the study area. Molteno has several historical buildings and cemeteries in the surrounding area. Binneman (2010) recorded several Stone Age scatters, rock art sites, historical walls and buildings, and graves to the south of Molteno. Figure 4 indicates some of these sites. Binneman noted that the Stone Age scatters were of low significance and occurred all over the area.

The 1947 map indicates that the study area was mostly a wetland that had been used for farming. Two large furrows occur to the north of the line. A building existed near the pump station; however, this has been cleared for some other feature.

The Google earth imagery indicates that there was a bridge crossing the river to the north of the pump station. The bridge has been removed and the road is no longer officially used. It appears that there have been excavations around the banks of the river. There is a small hill to the north of the existing wastewater treatment works, and this would have archaeological sensitivity. However, the hill is not in the footprint.

A cemetery occurs ~50m to the southwest of the pump station footprint.

Fig. 6 Show the study area as it occurs today.

FIG. 4: KNOWN HERITAGE SITES IN THE MOLTENO AREA

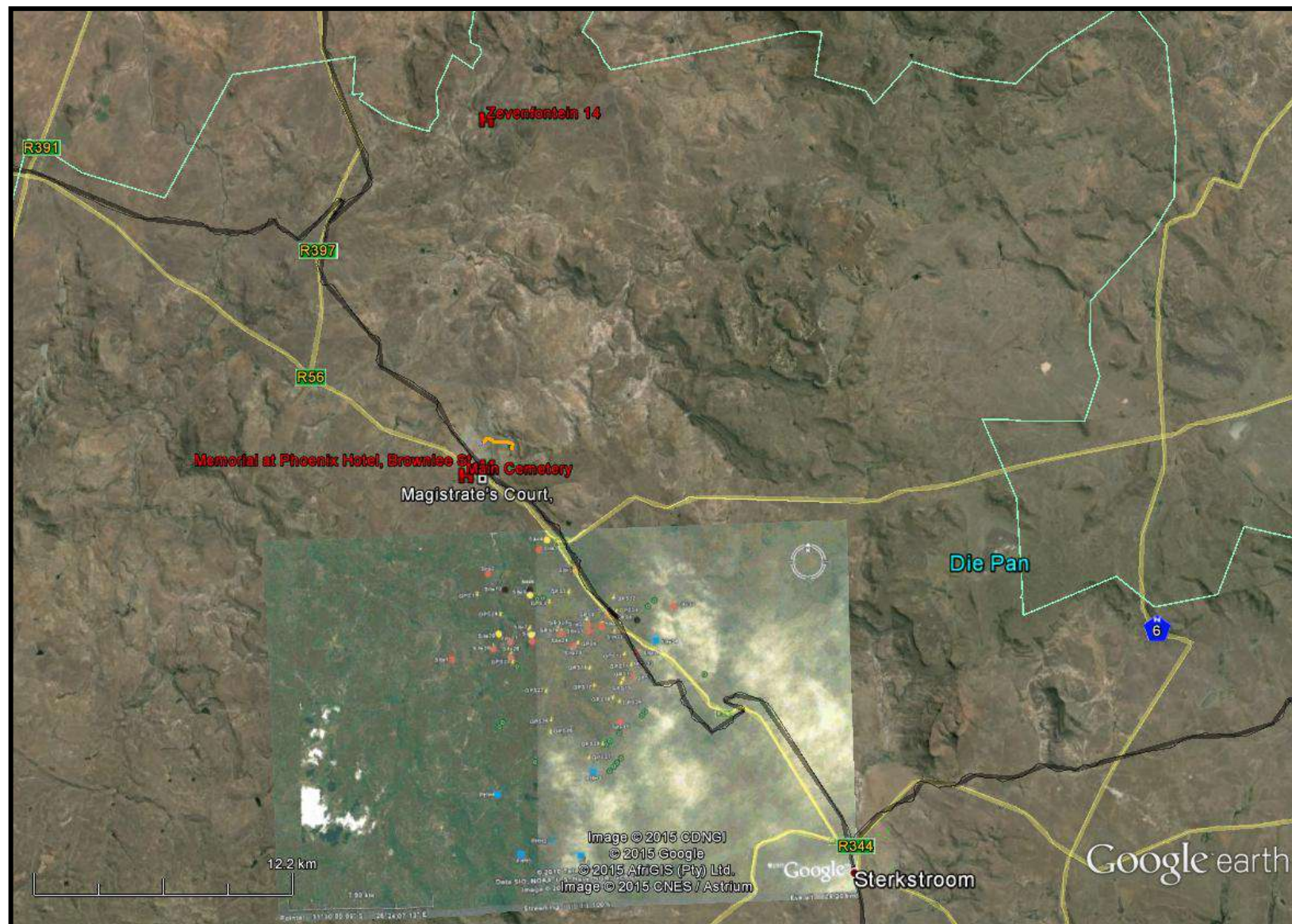
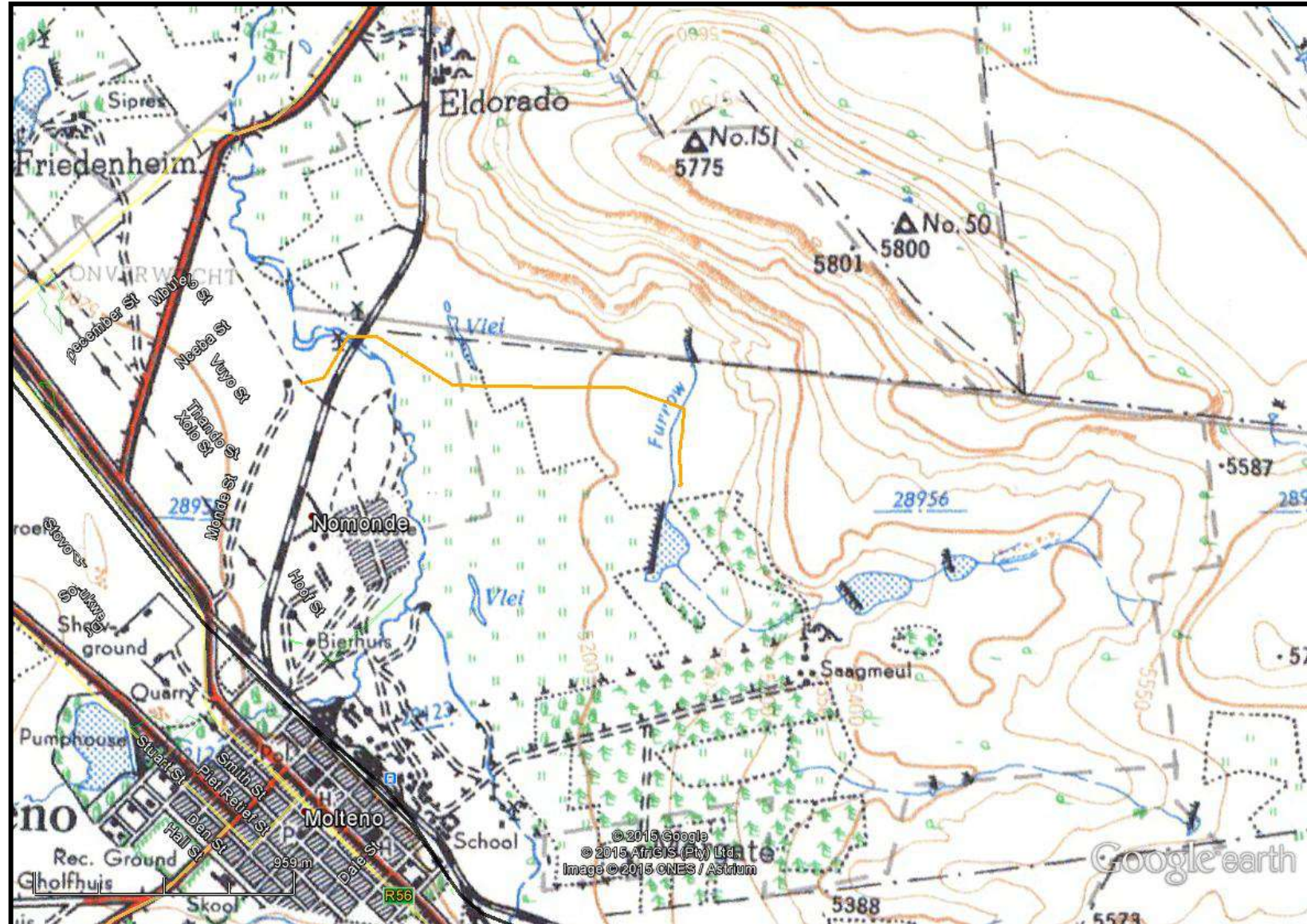




FIG. 5: STUDY AREA IN 1947





**FIG. 6: SCENIC VIEWS OF THE STUDY AREA**



## **CONCLUSION**

A desktop heritage survey was undertaken for the proposed Molteno Sewerage plant, Eastern Cape. The desktop noted that no previous surveys had occurred in the study area. There are no known heritage sites in the study area, although several were recorded to the south of Molteno. Many of these sites were generic open Stone Age scatters that have low significance.

Much of the study area has been ploughed since the 1940s and it is unlikely that any in situ open sites still remain.

The community should be approached for known graves in the study area.

Due to the low sensitivity of the development footprint, I would recommend that no further heritage assessment is required.

## **REFERENCES**

Binneman, J. 2010. A Phase One Archaeological Impact Assessment For The Proposed Dorper Wind Energy Facility On A Site Near Molten, Chris Hani District Municipality, Eastern Cape. For Savannah Environmental Pty (Ltd).