

**HERITAGE DESKTOP SURVEY OF THE PROPOSED
SUNTECH SOLAR FARM, BERLIN, EASTERN CAPE
FOR COASTAL ENVIRONMENTAL SERVICES**

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TABLE OF CONTENT

INTRODUCTION.....3
NATIONAL HERITAGE RESOURCES ACT OF 1999.....3
METHOD.....5
RESULTS.....13
MANAGEMENT PLAN.....13
CONCLUSION.....13

TABLE OF FIGURES

FIG. 1 GENERAL LOCATION OF THE SUNTECH SOLAR FARM.....9
FIG. 2: AERIAL OVERVIEW OF THE SUNTECH SOLAR FARM.....10
FIG. 3: 1996 TOPOGRAPHICAL MAP OF THE SUNTECH SOLAR FARM.....11
FIG. 4: 1954 TOPOGRAPHICAL MAP OF THE SUNTECH SOLAR FARM.....12

INTRODUCTION

Umlando cc was contracted by Coastal Environmental Services to undertake a desktop Heritage Impact Assessment of the proposed Suntech Solar Farm. This would serve as part of the basic assessment, with a follow up field survey. The proposed solar farm is located ~northwest of Berlin, Eastern Cape (fig.'s 1 - 3).

The land has mostly been used as pasturage, and appears to have had little development since 1954, with the exception of rows of trees for presumed windbreaks, and farm buildings.

The impacts on the area will be:

- Solar panel foundations
- Servitudes such as underground cables.

The aim of the desktop is to note any potential red flags, and to highlight certain areas that may be sensitive.

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:

“3. (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—

- (a) Places, buildings, structures and equipment of cultural significance;
- (b) Places to which oral traditions are attached or which are associated with living heritage;
- (c) Historical settlements and townscapes;
- (d) Landscapes and natural features of cultural significance;
- (e) Geological sites of scientific or cultural importance;
- (f) Archaeological and palaeontological sites;
- (g) Graves and burial grounds, including—
 - (i) Ancestral graves;
 - (ii) Royal graves and graves of traditional leaders;
 - (iii) Graves of victims of conflict;
 - (iv) Graves of individuals designated by the Minister by notice in the Gazette;
 - (v) Historical graves and cemeteries; and
 - (vi) Other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) Sites of significance relating to the history of slavery in South Africa;
- (i) Movable objects, including—
 - (i) Objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) Objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) Ethnographic art and objects;
 - (iv) Military objects;
 - (v) objects of decorative or fine art;
 - (vi) Objects of scientific or technological interest; and
 - (vii) 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).

(3) 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—

- (a) Its importance in the community, or pattern of South Africa's history;
- (b) Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- (h) 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
- (i) 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 databases. These databases contain most of the known heritage sites in KwaZulu-Natal, and known memorials and other protected sites, battlefields and cemeteries in southern Africa. 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.

FIG. 1 GENERAL LOCATION OF THE SUNTECH SOLAR FARM

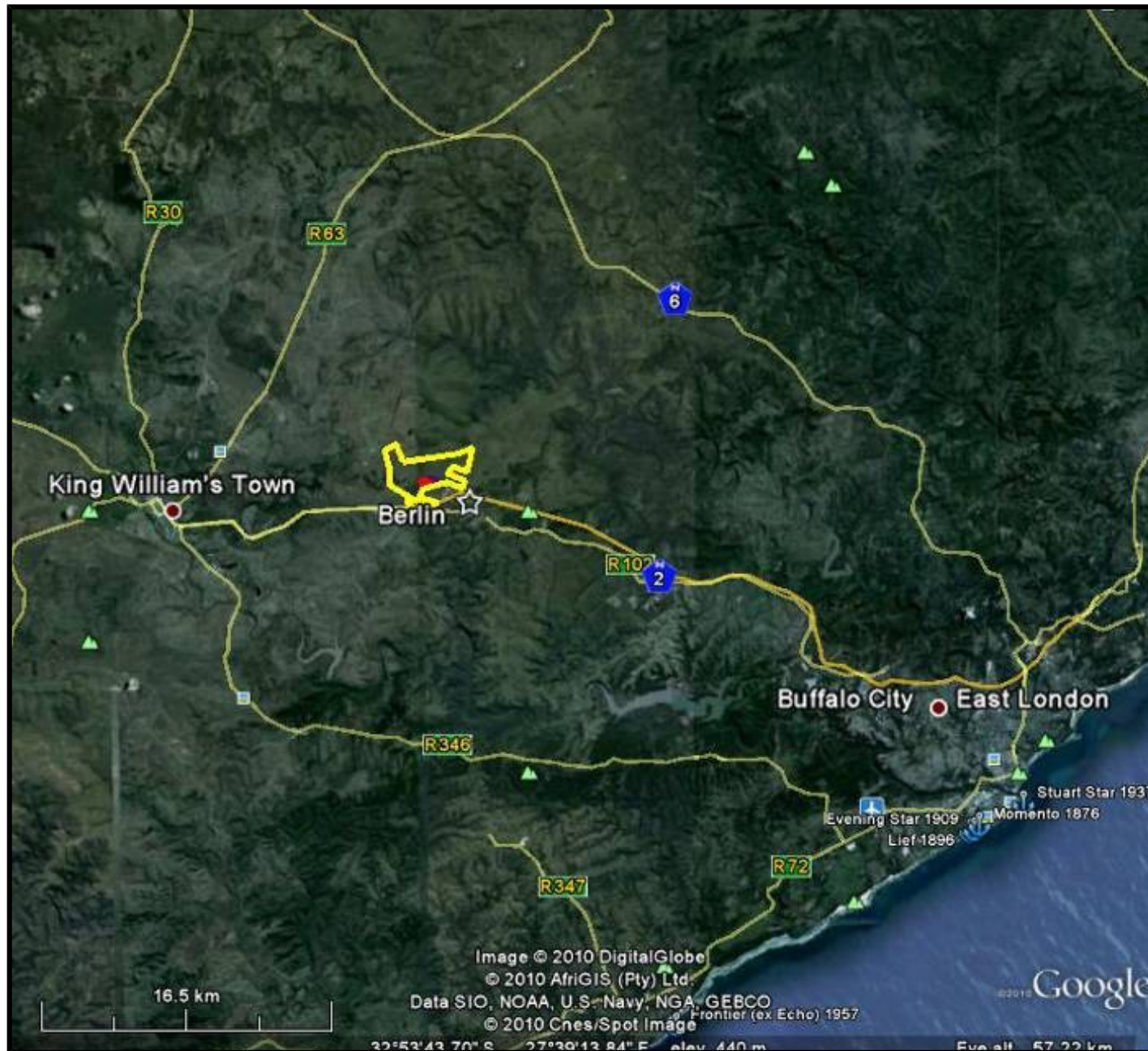


FIG. 2: AERIAL OVERVIEW OF THE SUNTECH SOLAR FARM

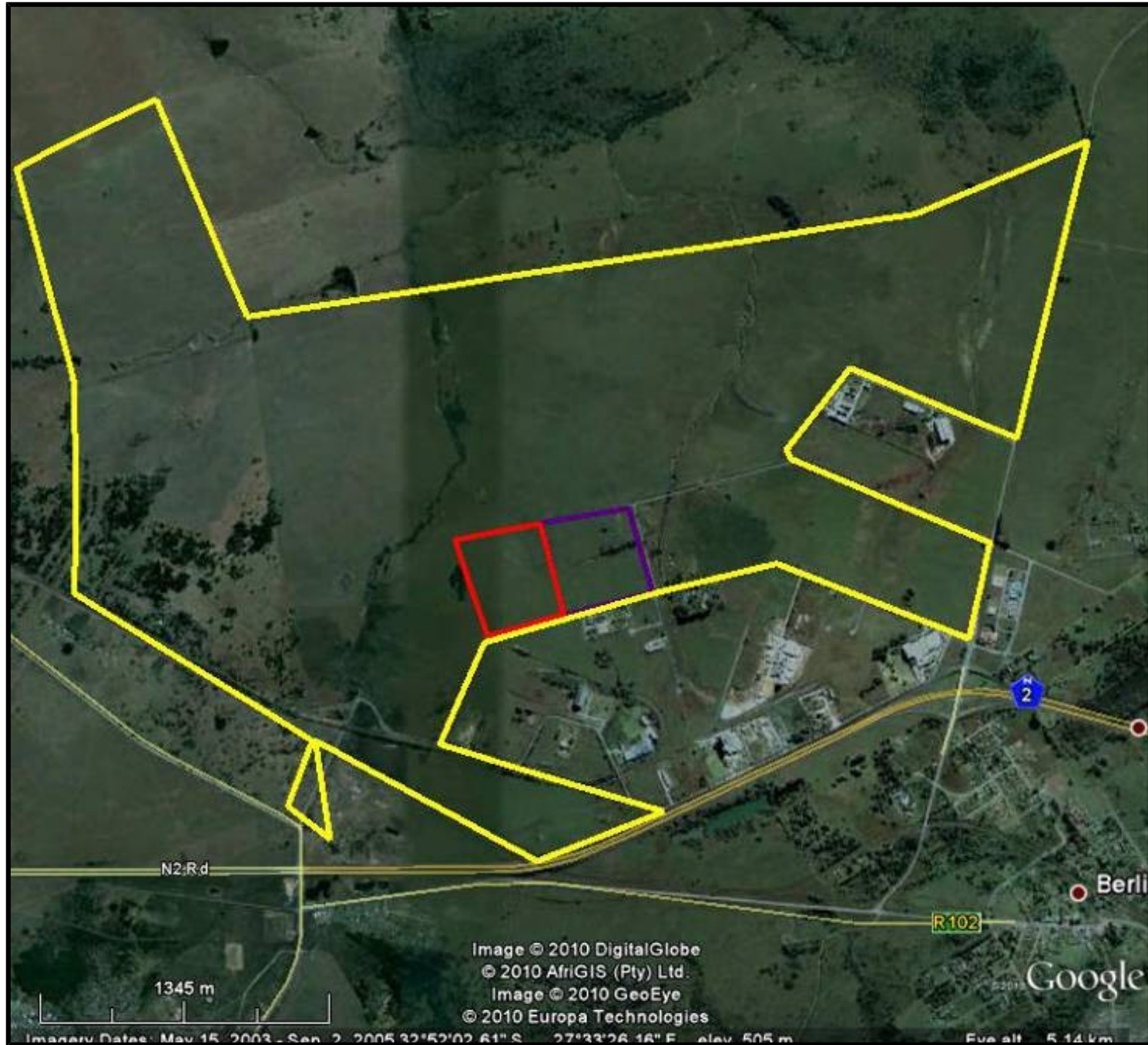


FIG. 3: 1996 TOPOGRAPHICAL MAP OF THE SUNTECH SOLAR FARM

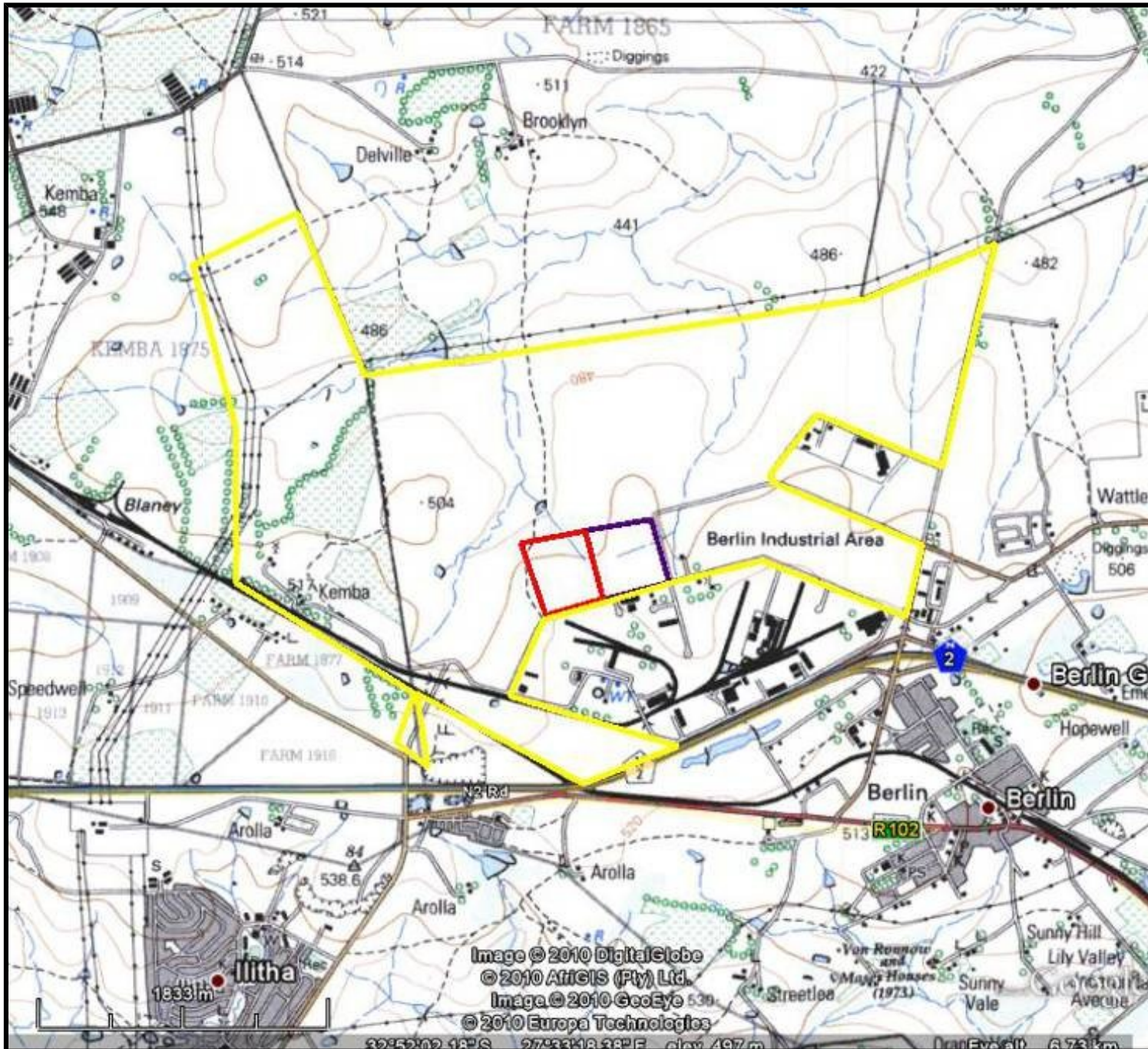
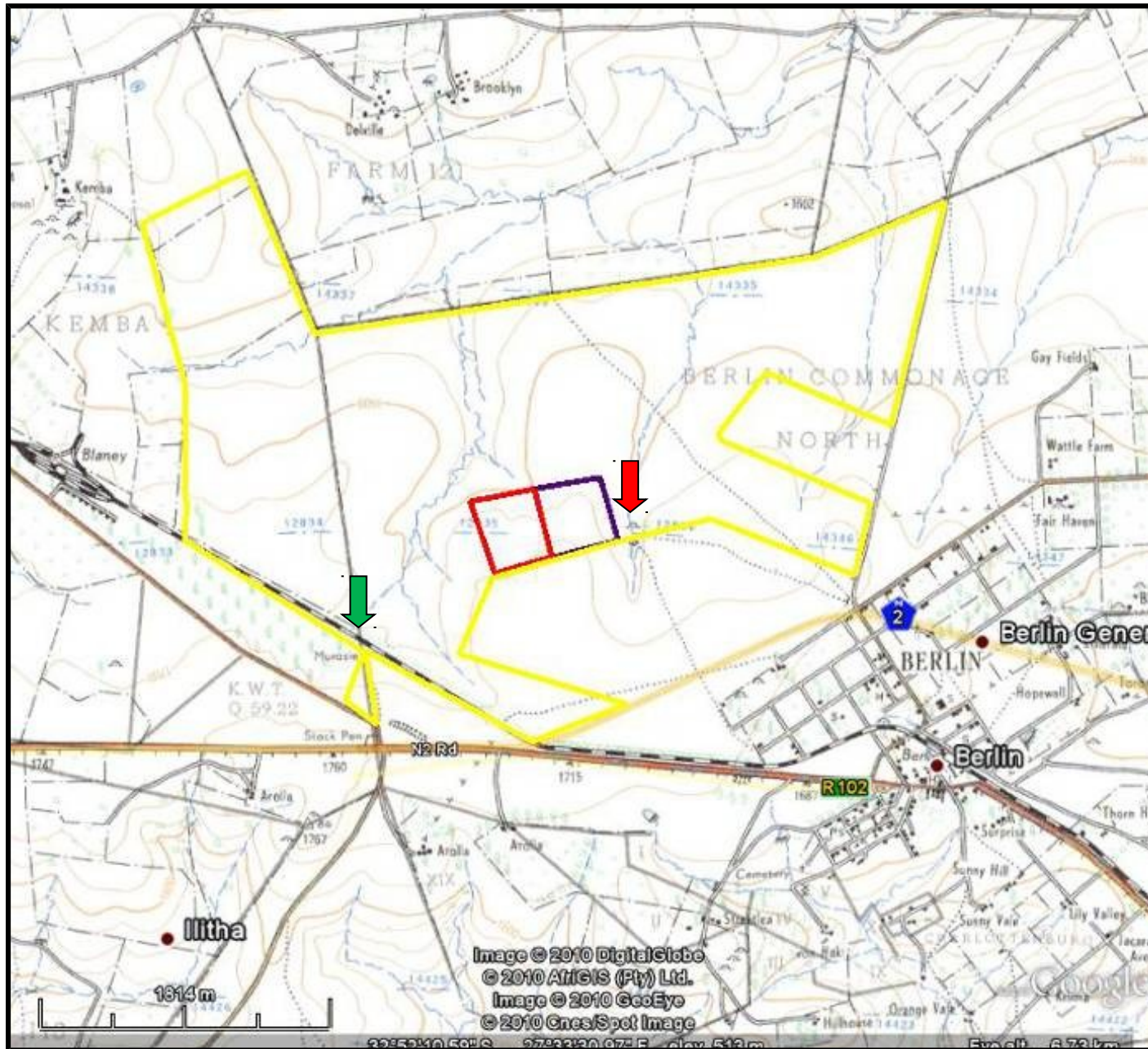


FIG. 4: 1954 TOPOGRAPHICAL MAP OF THE SUNTECH SOLAR FARM¹

¹ Green arrow indicates location of ruins; red arrow indicates 'hut' and/or grave(s)

RESULTS

Archaeological sites

No known archaeological sites exist in the study area. This is probably due to a lack of field survey, than a lack of archaeological material. I would expect to observe at least late Stone Age artefacts in the study area. These artefacts will probably be in a secondary context and have little significance

The study area is too flat to produce overhangs and rock shelters that could contain rock art images.

Historical buildings

The 1954 topographical map (fig, 4) indicates that there are ruins in the study area. Since the buildings are already ruins in 1954, one can assume that they predate 1950s. Since this is a built structure is would be protected by the heritage legislation. The ruins are not shown on the 1996 topographical map (fig, 3), however, there are possible ruins visible on the Google Earth map. There is one 'hut'² on the 1954 map, and thus it may have associated graves. However, this 'hut' has more recent houses nearby.

Between 1996 and 2010 some farm buildings have "disappeared". However since these are not older than 60 years in age, they are not protected by the Heritage Act, unless they have recent historical significance.

The Google Earth image shows that some areas have possible building foundations.

Graves

One area has possible graves older than 60 years (fig. 4). The general area has been disturbed with more recent buildings. This will need to be verified.

² Term on topographical maps probably referring to a wattle and daub house

Land Modifications

Some areas have been modified by humans such as canals. One 'canal' appears to have been originally a perennial stream, that was the canalised. Other streams have modifications as well that are visible on aerial imagery.

MANAGEMENT PLAN

The desktop survey did not note any red flags. However, it did note that there may be several types of heritage resources in the study area. These resources will need to be verified with a field survey.

CONCLUSION

The desktop study of the proposed Suntech Solar Farm found several heritage sites on the 1954 and 1996 topographical maps, as well as on the Google Earth images. These will need to be verified with a field survey.