

**HERITAGE SURVEY OF THE GREAT KEI WIND
ENERGY FACILITY, EASTERN CAPE.**

FOR COASTAL ENVIRONMENTAL SERVICES

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By Gavin Anderson

**Umlando: Archaeological Surveys and Heritage
Management**

PO Box 102532, Meerensee, 3901

Phone: 035-7531785 Fax: 0865445631

Cell: 0836585362



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INTRODUCTION

“Great Kei Wind Power (Pty) Ltd [GKWP] proposes the development of a wind energy facility (WEF) in the Komga area, Amathole District, in the Eastern Cape. The wind farm will host approximately thirty nine (39) turbines, with a potential power output of one hundred and five (105) megawatts (MW).

The ... farms collectively total over 5 000 ha of land, but the development footprint of the wind turbines and associated infrastructure will potentially occupy less than 2 % of this area. Topographically, the area is characterised by undulating plains and river valleys.

The Eskom Chaba substation is located within the proposed WEF area, and will be the site where the energy generated by the WEF is fed into the Eskom grid.

Other infrastructure associated with the proposed WEF will be:

- Concrete foundations to support the wind towers
- Approximately 6 meter wide internal access roads to each turbine
- Underground cables connecting each turbine to the other and to the mini substation
- A building to house the control instrumentation and interconnection elements, as well as a storeroom for maintenance equipment
- An onsite mini substation to facilitate interconnection of the WEF with the Eskom grid

Turbine models have different output capacity (e.g. 1MW or 4MW turbine). The main features that differ are the hub height (can be between 80-120 metres high) and rotor blade length (40-70 metres long).... The ultimate size of the wind turbines will depend on technical assessments of the wind data gathered on site, but will typically consist of rotor turbines (3 x 50m blades) with rotor diameters of

around 100 - 120 meters atop a 110 meter hub height steel or hybrid tower” (CES BID 2013)

The affected area is ~40km northeast of East London. The area of the proposed wind farms has been under cultivation since the turn of the century, and used for pasturage and maize production. The contours from ploughing are still visible in fields that have been left for pasturage. Thus most of the study area is no longer pristine, and any potential open archaeological sites would be disturbed. Archaeological sites would probably occur in the overhangs of the valleys, and I was informed of rock art sites in these areas.

Komga was based on a military camp established in 1854. The town had an increase in people from the 1860s and acquired municipal status in 1904. The town played a role in the 9th Border War of the 1870s in supplying Colonial Forces from the Komga Mounted Infantry. The neighbouring farms were used as administrative posts during these wars. The Komga Mounted Infantry were also used in the Anglo-Boer War. There are several provincial monuments in the town itself, and the two main cemeteries have historical graves.

The literature gives the word ‘Komga’ as having KhoeKhoe origin (place of an abundance of clay), while others give it a Xhosa origin (secluded place) (<https://archive.org/details/DictionaryOfSouthernAfricanPlaceNames>) . The latter name refers to an area about 10km northeast of the town Komga itself.

Umlando was contracted to undertake the HIA of the proposed project. A few heritage sites were recorded in the general area, and these included graves. Several areas were noted as having potential graves. The current positions of the turbines will not impact on heritage sites. The routing of some of the power lines will need to be redirected as they may impact on human graves. The location of some of the turbines have changed since the original survey, however they will not impact on any heritage sites.

FIG. 1 GENERAL LOCATION OF THE GKWP WINDFARM

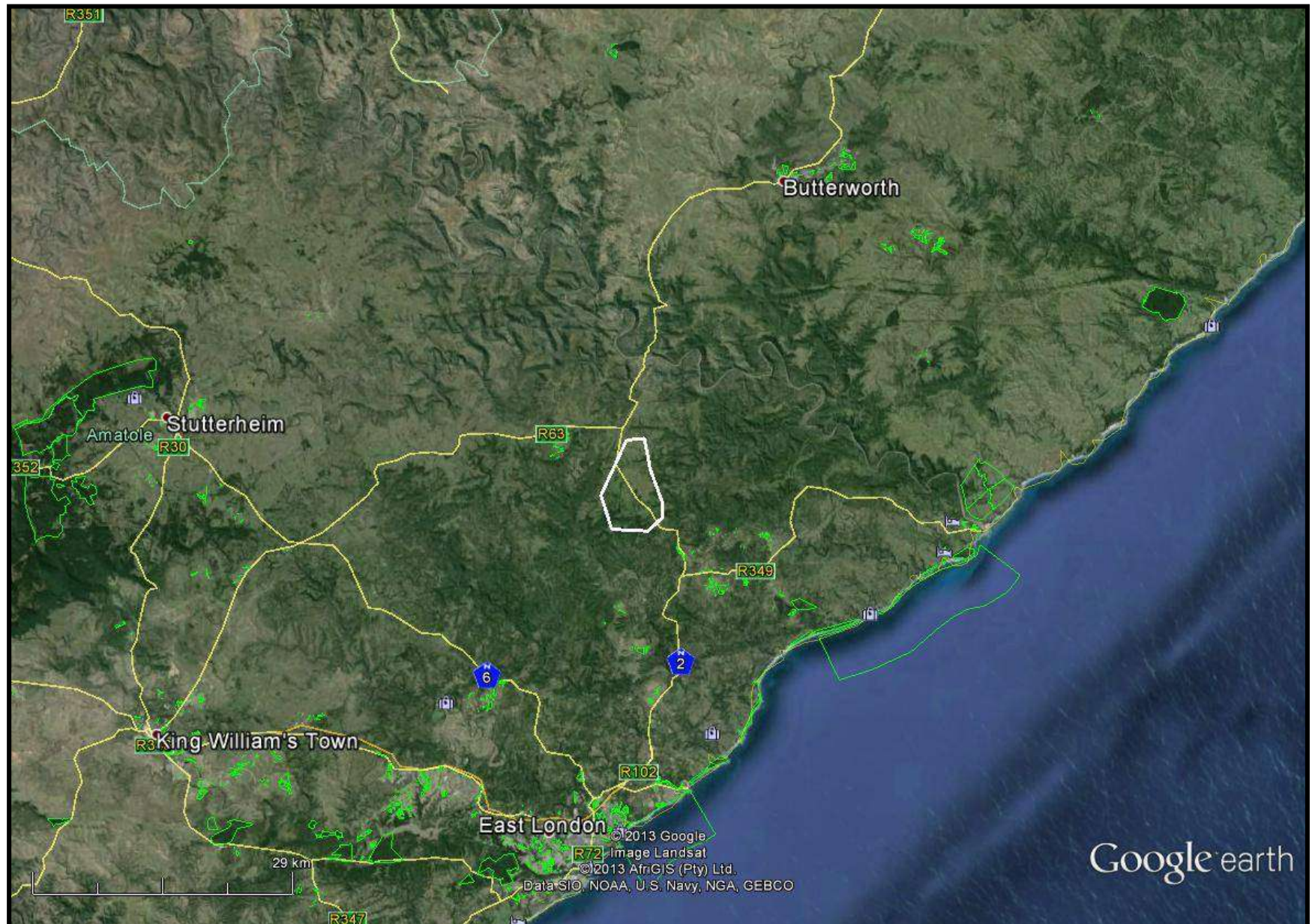


FIG. 2a: AERIAL OVERVIEW OF THE GKWP WINDFARM

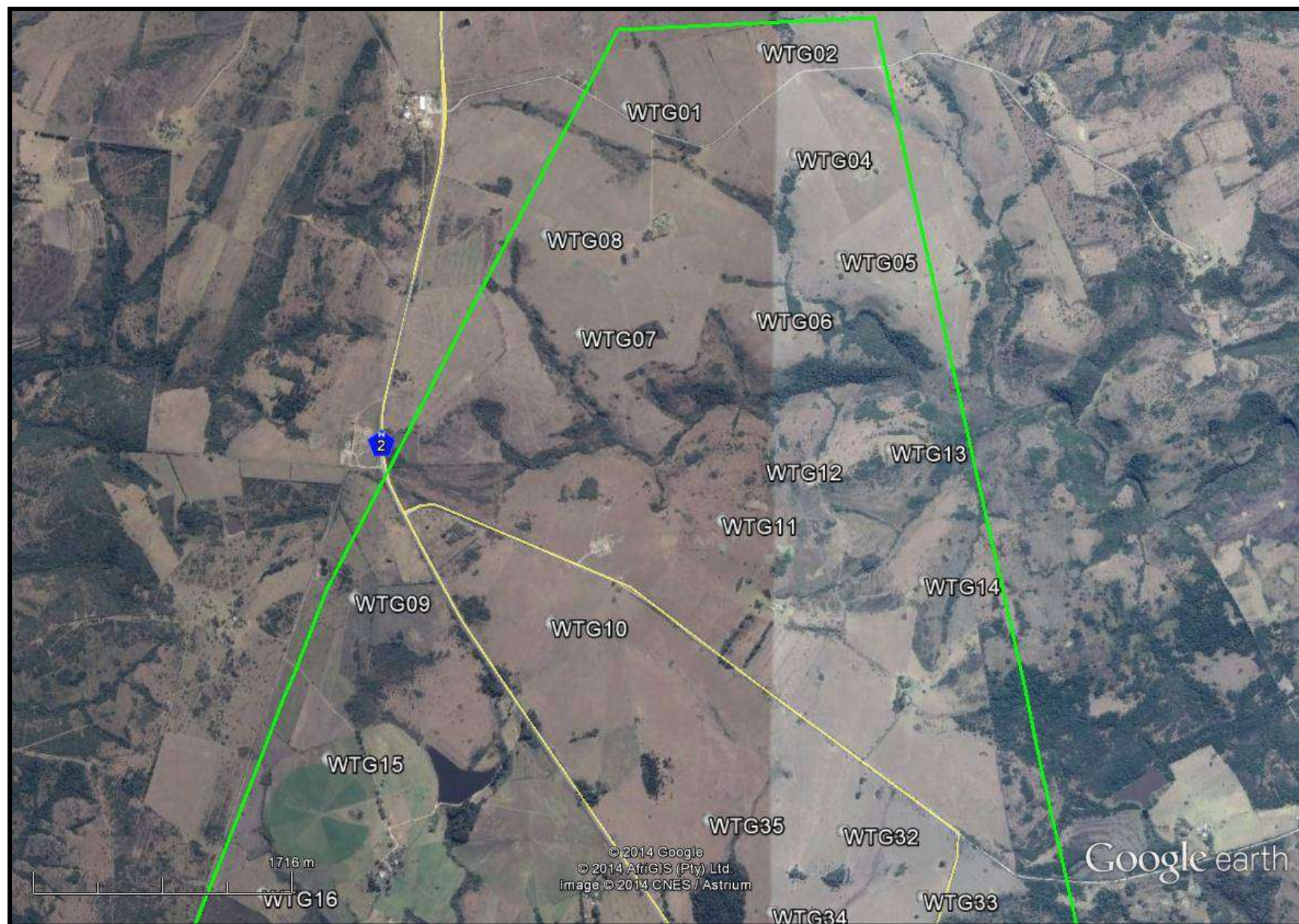


FIG. 2b: AERIAL OVERVIEW OF THE GKWP WINDFARM

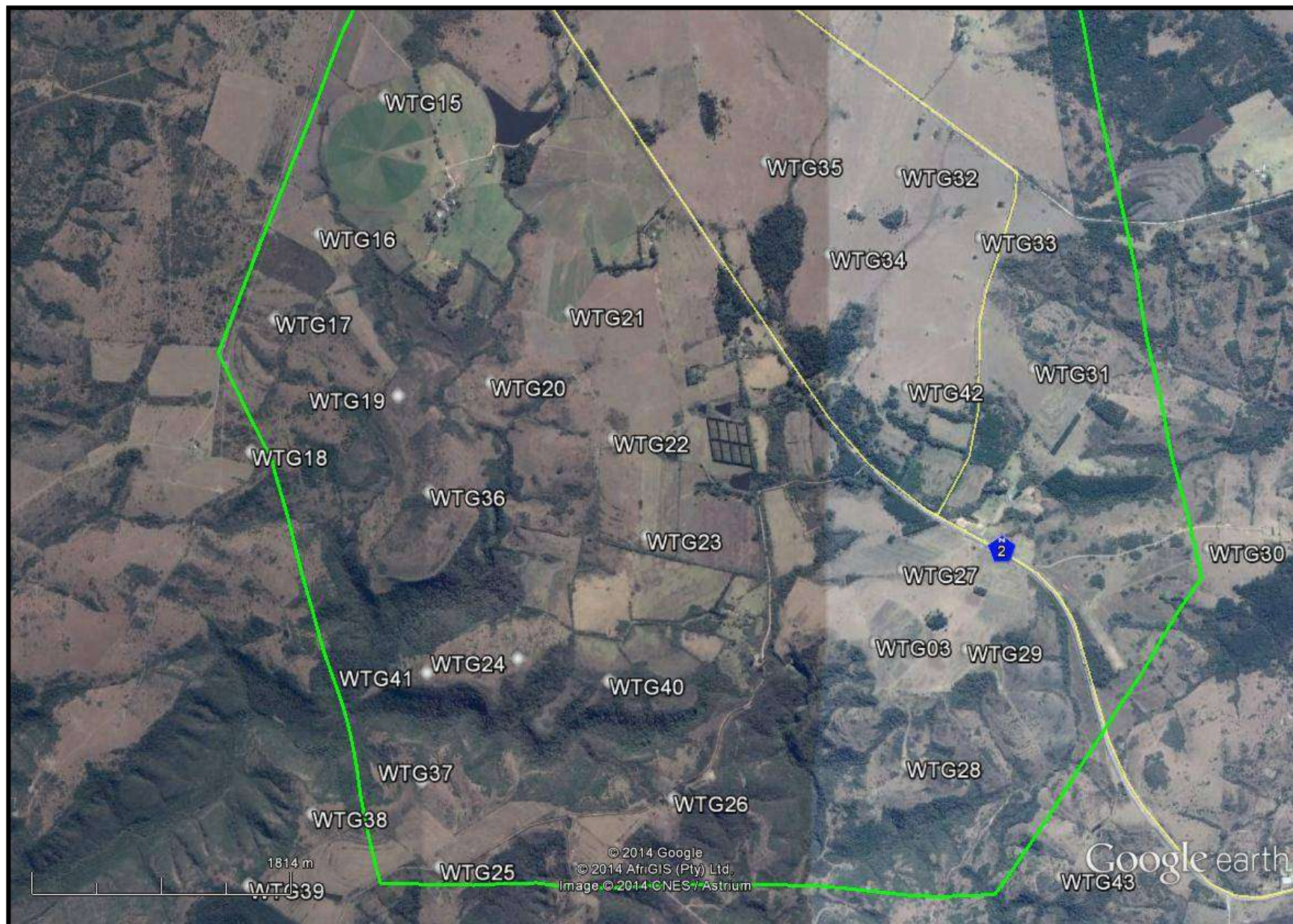


FIG. 3a: TOPOGRAPHICAL MAP OF THE NORTHERN GKWP WINDFARM

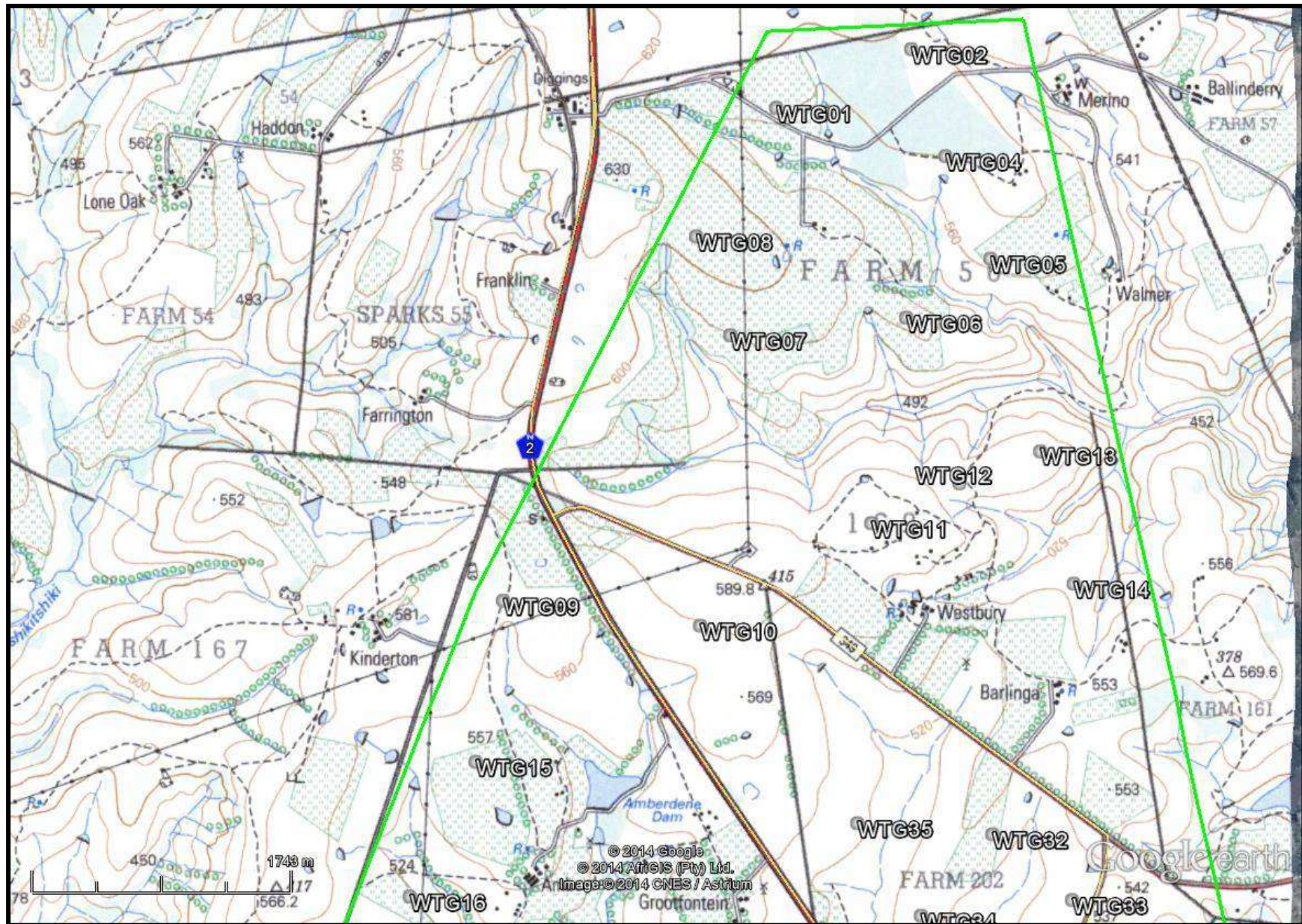


FIG. 3B: TOPOGRAPHICAL MAP OF THE SOUTHERN GKWP WINDFARM

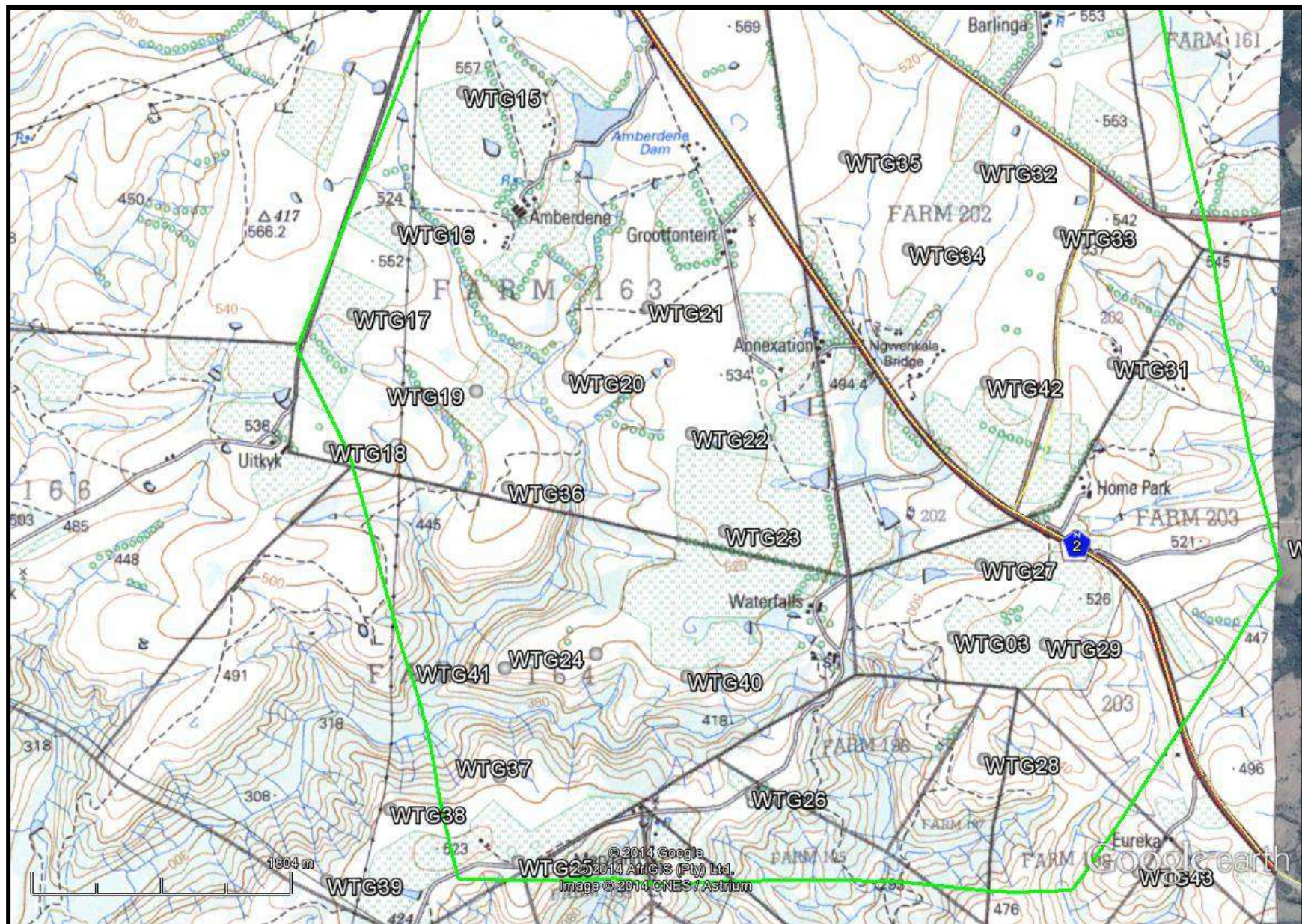


FIG. 4: GENERAL LOCATION GKWP VIEWS



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. This database contains 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). Umlando uses 1st and 2nd 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

SITE SIGNIFICANCE	FIELD RATING	GRADE	RECOMMENDED MITIGATION
High Significance	National Significance	Grade 1	Site conservation / Site development
High Significance	Provincial Significance	Grade 2	Site conservation / Site development
High Significance	Local Significance	Grade 3A / 3B	
High / Medium Significance	Generally Protected A		Site conservation or mitigation prior to development / destruction
Medium Significance	Generally Protected B		Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
Low Significance	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, the location of monuments, as well as for previous archaeological surveys. Fig. 5 shows the known heritage sites of the area. The town of Komga has several provincial monuments, historical cemeteries and farmland areas related to the Frontier Wars. Despite Komga being one of the main areas of British (Colonial) Forces during the 9th Frontier War, there are very few listed buildings apart from inside the town itself. The farm Annexation was used as an administrative building during the 1870s (or 9th Frontier War). Furthermore, several garrisons were encamped in the general area. There is no record of the locations of these encampments and it is presumed that they have been covered by the gradual expansion of Komga. One unrecorded (and unconfirmed) heritage site is Impetu Kop. Impetu Kop is related to the “Great Cattle killing episode” of 1856-1857. According to the oral history of the area it was named ‘*Impetu*’ (*Xhosa* = maggots) due to the large number of dead people observed at the base of the hill in 1857 (<http://africastay.travel/print/komga-travel-info.html>). This site would thus have a heritage status of being a cultural landscape as well as having Oral History significance.

Two archaeological and/or heritage impact assessments have been undertaken along nearby Komga (Anderson 2010, Van Ryneveldt, 2008). Neither surveys found archaeological material.

The 1959 aerial photographs show several farmhouses and farm labourer’s settlements within the study area (fig. 6). These houses would predate the 60-year limit for protected buildings. The settlements probably have human graves within 50m of the houses. The farmhouses, buildings ('b' on map), settlements ('a' on map), and a school ('sc' on map). The locations of these are summarised in Table 2.

FIG. 5: KNOWN HERITAGE SITES IN THE AREA

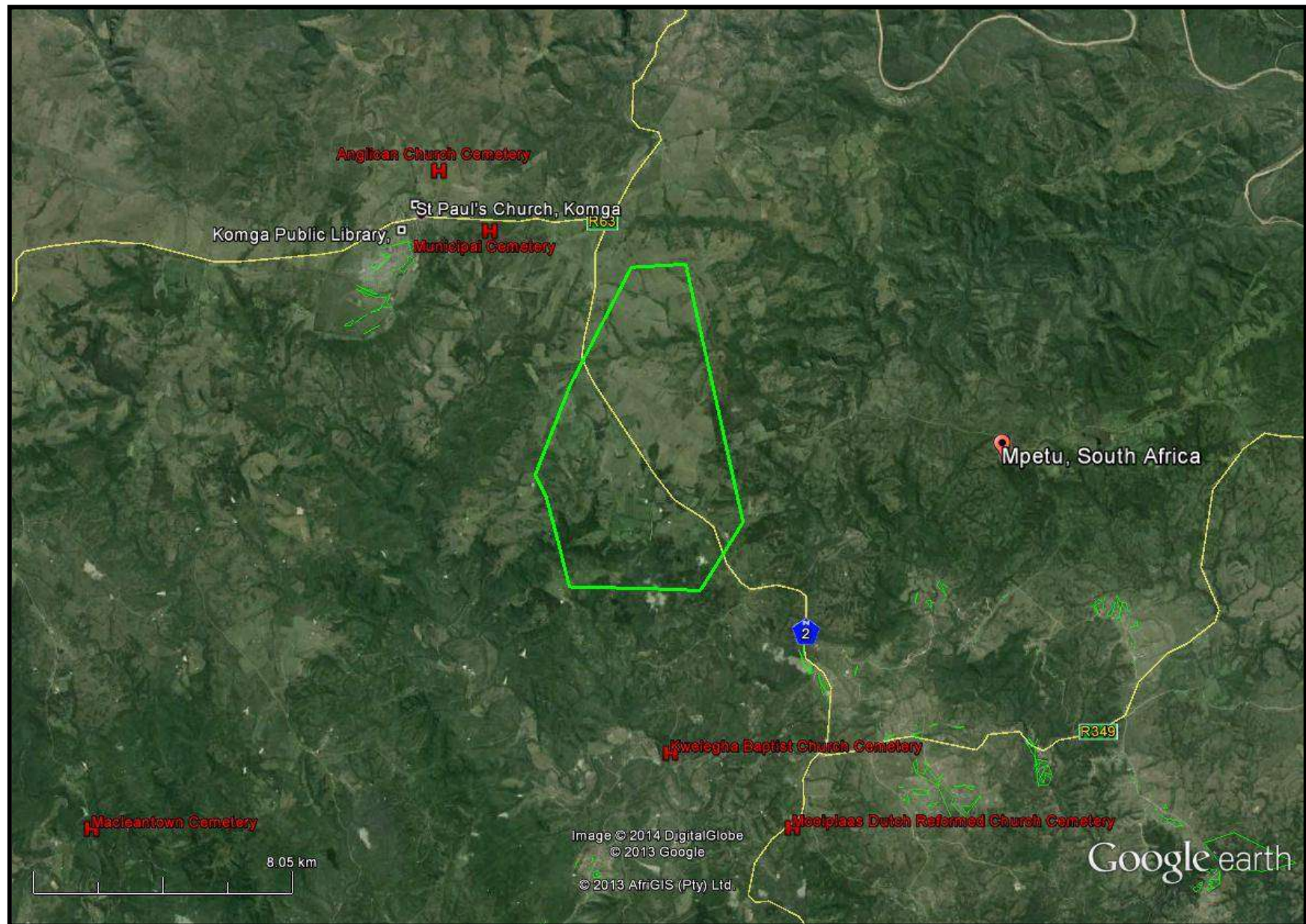


FIG. 6: 1959 AERIAL PHOTOGRAPH OF THE AFFECTED AREA AND FEATURES

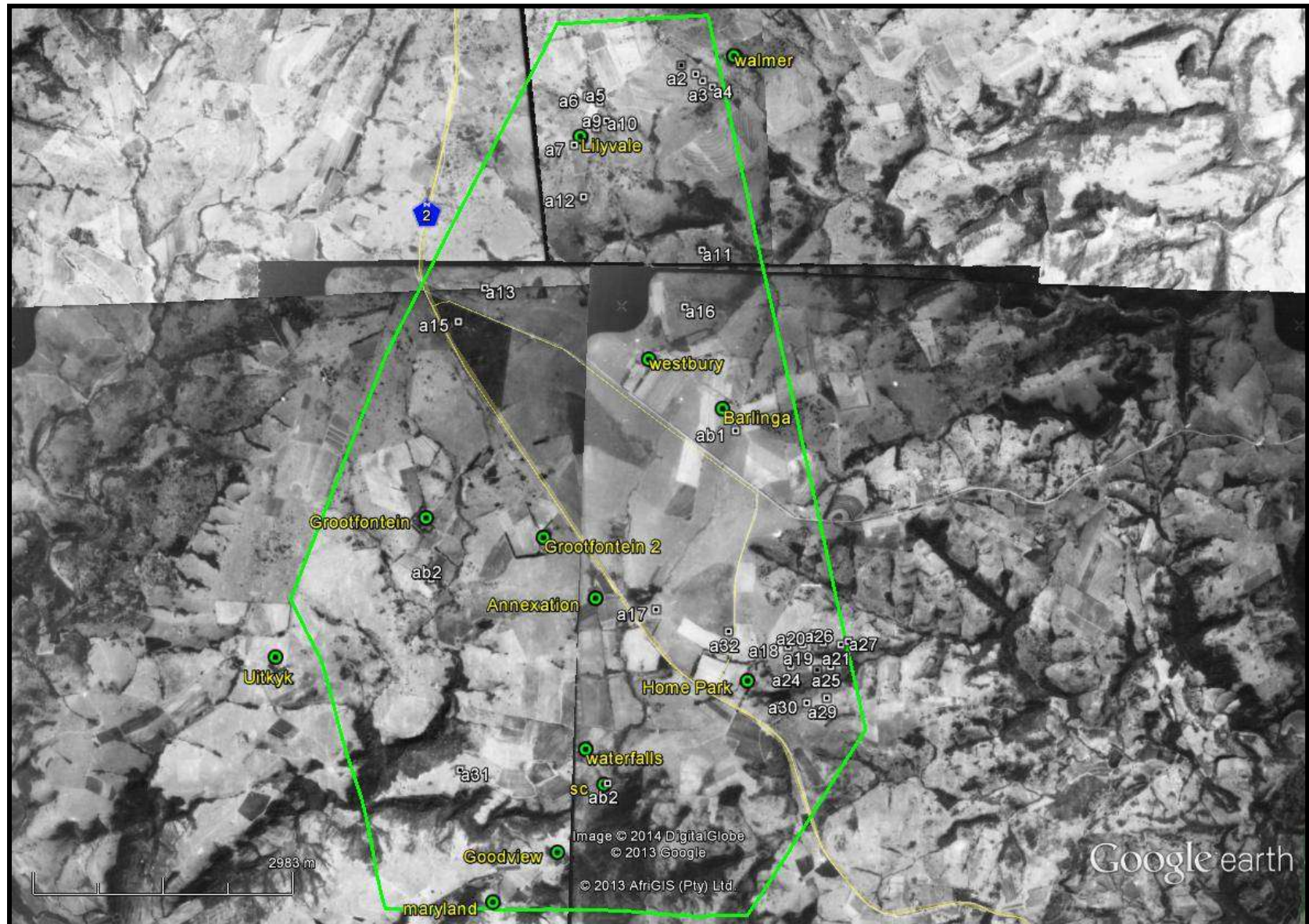


FIG. 7: 1960 TOPOGRAPHICAL MAP OF THE AFFECTED AREA AND FEATURES

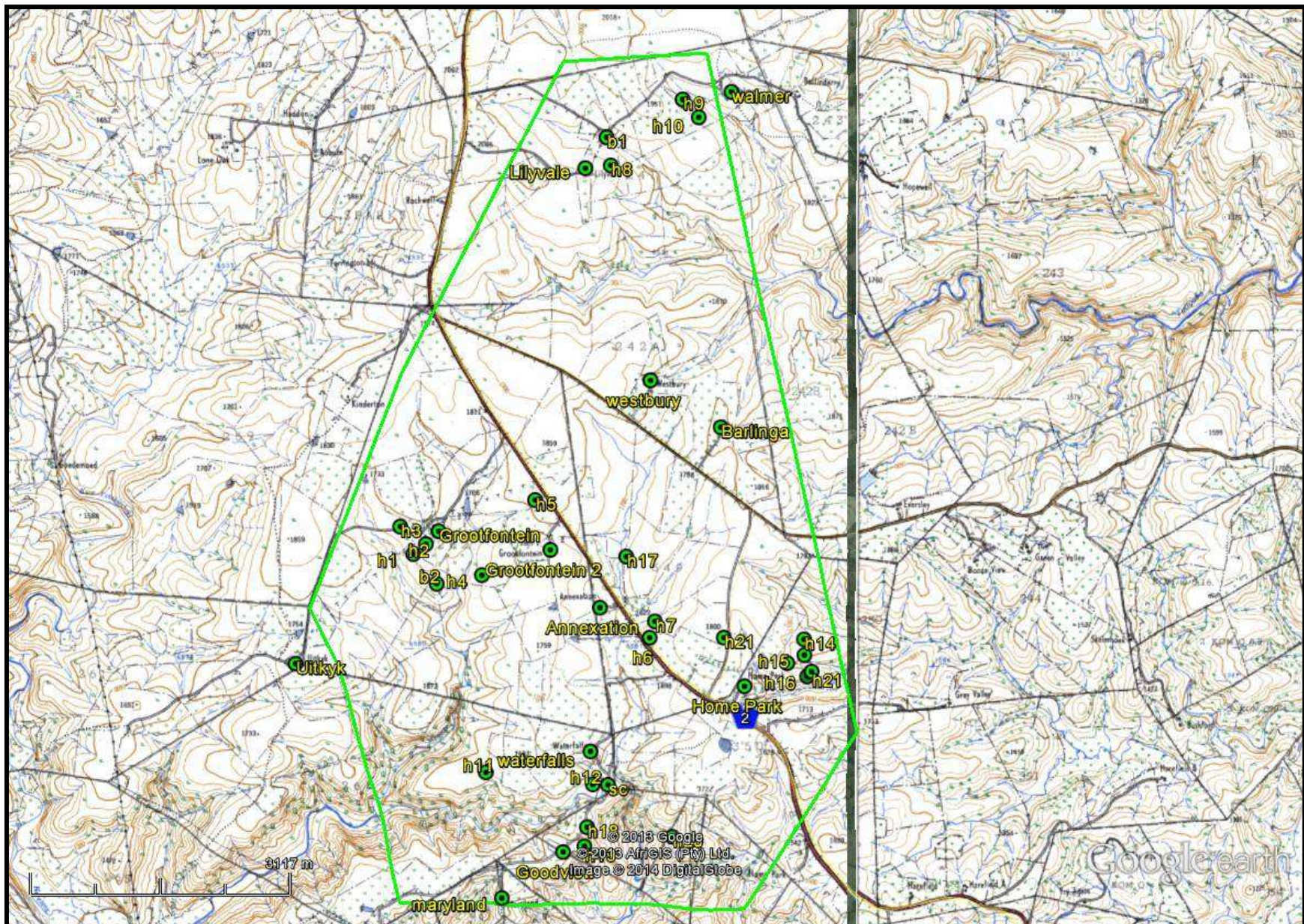
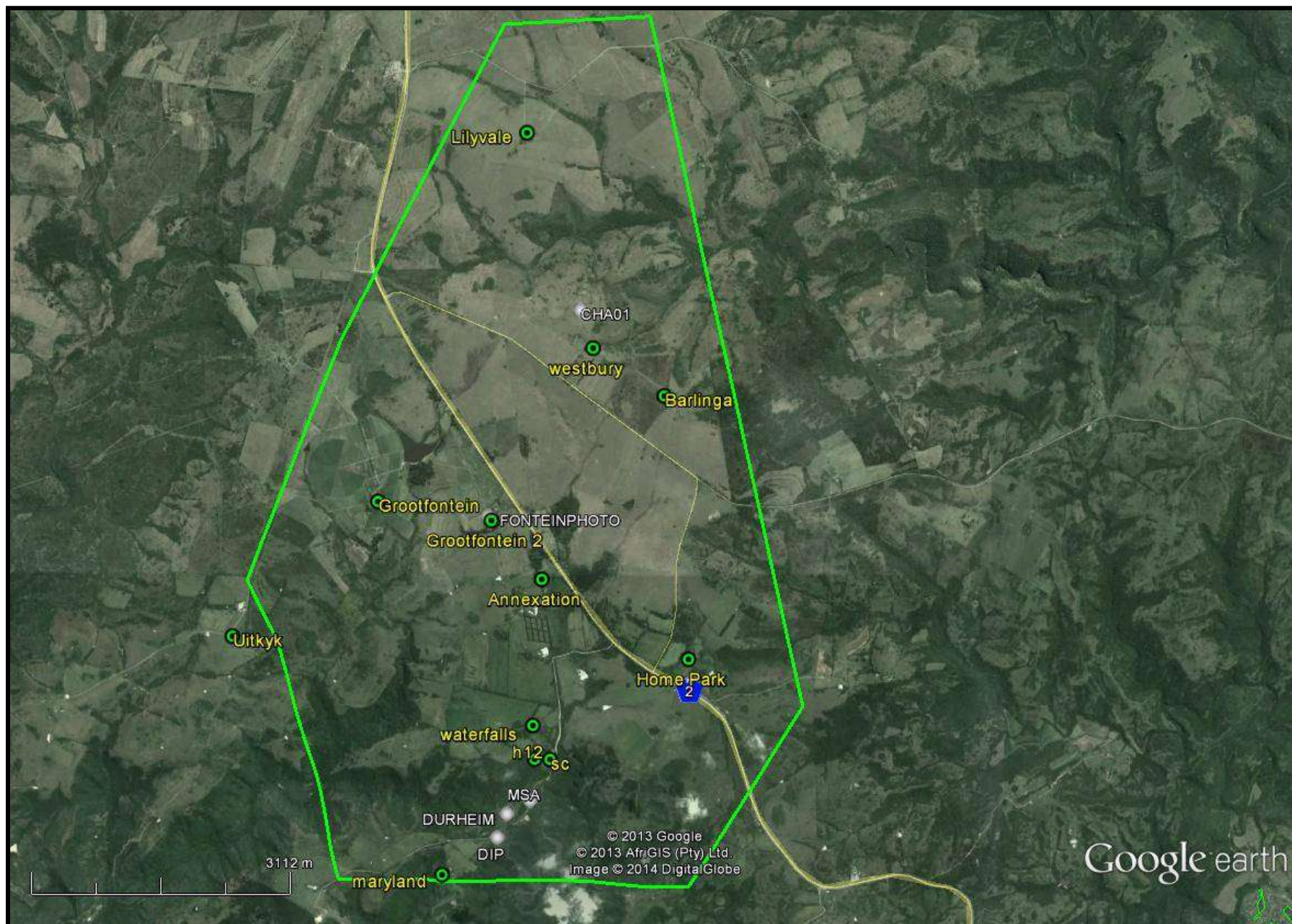


TABLE 2: LOCATION OF BUILDINGS AND LABOURERS' SETTLEMENTS IN 1959

NAME	LATITUDE	LONGITUDE	DESCRIPTION
Annexation	-32.647928682	27.967938350	Farm Buildings
Barlinga	-32.628863499	27.983093080	Farm Buildings
Goodview	-32.673846575	27.963269033	Farm Buildings
Grootfontein	-32.639826188	27.947733542	Farm Buildings
Grootfontein 2 (Amberdene)	-32.641799424	27.961743647	Farm Buildings
Home Park	-32.656251111	27.986102730	Farm Buildings
Lilyvale	-32.601629603	27.966168693	Farm Buildings
Maryland	-32.678769258	27.955543336	Farm Buildings
School	-32.666795238	27.968906176	Farm Buildings
Uitkyk	-32.653824122	27.929728897	Farm Buildings
Walmer	-32.593574888	27.984420409	Farm Buildings
Waterfalls	-32.663193134	27.966806405	Farm Buildings
Westbury	-32.623914455	27.974300745	Farm Buildings
a01	-32.594535937	27.978120536	Settlement
a02	-32.595400129	27.979836142	Settlement
a03	-32.596053317	27.980662873	Settlement
a04	-32.596695561	27.981845203	Settlement
a05	-32.598202059	27.968424180	Settlement
a06	-32.597644887	27.966974371	Settlement
a07	-32.602539254	27.965395073	Settlement
a08	-32.601788466	27.966523032	Settlement
a09	-32.600771944	27.968004543	Settlement
a10	-32.600078049	27.969231654	Settlement
a11	-32.612943562	27.980614939	Settlement
a12	-32.607730932	27.966509393	Settlement
a13	-32.616809266	27.954760252	Settlement
a14	-32.620368617	27.950034590	Settlement
a15	-32.620196765	27.951610577	Settlement
a16	-32.618687787	27.978556556	Settlement
a17	-32.649110200	27.975126598	Settlement
a18	-32.652819891	27.990904393	Settlement
a19	-32.652639461	27.992655576	Settlement
a20	-32.651600360	27.994122476	Settlement
a21	-32.652679146	27.997287930	Settlement
a22	-32.655239944	27.994449375	Settlement
a23	-32.653908618	27.992193553	Settlement
a24	-32.654832874	27.991245271	Settlement
a25	-32.654897773	27.996053277	Settlement
a26	-32.652474398	27.995129046	Settlement
a27	-32.652367423	27.998174330	Settlement
a28	-32.659239968	27.994672512	Settlement
a29	-32.658067116	27.995575985	Settlement
a30	-32.658532476	27.993172204	Settlement
a31	-32.665283212	27.951667103	Settlement
a32	-32.651280980	27.983771348	Settlement
ab1	-32.631116373	27.984604578	Settlement
ab2	-32.646012267	27.948222703	Settlement
ab3	-32.666723356	27.969300570	Settlement

FIG. 8: LOCATION OF RECORDED SITES



The 1960 map shows similar features, except fewer labourers' settlements. One of the reasons is that the 1960 map has grouped several settlements together. One of the landowners had informed me that the school was originally a type of wattle and daub construction, and later became a brick building.

TABLE 3: LOCATION OF BUILDINGS AND SETTLEMENTS IN 1969

NAME	LATITUDE	LONGITUDE	DESCRIPTION
Annexation	-32.647928682	27.967938350	Farm houses
Barlinga	-32.628863499	27.983093080	Farm houses
Goodview	-32.673846575	27.963269033	Farm houses
Grootfontein	-32.639826188	27.947733542	Farm houses
Grootfontein 2 (Amberdene)	-32.641799424	27.961743647	Farm houses
Home Park	-32.656251111	27.986102730	Farm houses
Lilyvale	-32.601629603	27.966168693	Farm houses
Maryland	-32.678769258	27.955543336	Farm houses
School	-32.666795238	27.968906176	Farm houses
Uitkyk	-32.653824122	27.929728897	Farm houses
Walmer	-32.593574888	27.984420409	Farm houses
Waterfalls	-32.663193134	27.966806405	Farm houses
Westbury	-32.623914455	27.974300745	Farm houses
b01	-32.598327130	27.968804172	Building
b02	-32.645400777	27.947433736	Building
h01	-32.642246024	27.944523666	Settlement
h02	-32.641189459	27.946110715	Settlement
h03	-32.639344644	27.942906531	Settlement
h04	-32.644477965	27.953129787	Settlement
h05	-32.636535139	27.959836829	Settlement
h06	-32.651104740	27.974180577	Settlement
h07	-32.649387660	27.974834263	Settlement
h08	-32.601290339	27.969337062	Settlement
h09	-32.594355379	27.978315981	Settlement
h10	-32.596218719	27.980337504	Settlement
h11	-32.665390056	27.953569729	Settlement
h12	-32.666764230	27.967008685	Settlement
h13	-32.655275699	27.994032895	Settlement
h14	-32.651305003	27.993599075	Settlement
h15	-32.652982302	27.993661148	Settlement
h16	-32.653831381	27.991505887	Settlement
h17	-32.642532440	27.971249960	Settlement
h18	-32.671309041	27.966271374	Settlement
h19	-32.673273507	27.965950267	Settlement
h20	-32.672383356	27.977028151	Settlement
h21a	-32.651075643	27.983491580	Settlement
h21b	-32.654759828	27.994585740	Settlement

A 50m radius should be placed around the edge of all features in Tables 2 and 3 as a buffer zone between these features and turbines and related infrastructures. This will minimise potential impacts in sensitive areas.

Table 4 summarises the sites noted on the Google Earth imagery and date between 1960 and 2002. These sites were not visible during the field survey, with the exception of CHA01.

TABLE 4: LOCATION OF MORE RECENT SETTLEMENTS

NAME	LATITUDE	LONGITUDE	DESCRIPTION
G1	-32.605415185	27.984543777	Settlement
G2	-32.605703993	27.984160021	Settlement
G3	-32.605389436	27.982749953	Settlement
G4	-32.620681194	27.970471798	Settlement
G5	-32.619232712	27.974148864	Settlement
G6	-32.618593786	27.973576648	Settlement
gt7	-32.622327474	27.977182129	Settlement

FIELD SURVEY

The field survey concentrated on the areas where turbines would be located, and the surrounding area, as well as the location of the power lines. The power lines mostly follow existing roads and tracks. The turbines are not located near farm buildings and these were omitted from the survey. However, abandoned buildings were surveyed if they occur near turbines or power lines.

The labourers' settlements noted in Tables 2, 3 and 4 ('a', 'h', and 'g' respectively) do not exist anymore, or were no longer visible and mostly covered in grasslands.

Table 5 summarises the results from the survey.

TABLE 5: RECORDED SITES DURING THE SURVEY

NAME	LATITUDE	LONGITUDE	ALTITUDE	DESC
CHA01	-32.620048961	27.972705010	577.4	Graves
Goodview	-32.678769258	27.955543336		Farm building
Goodview sheep dip	-32.674944978	27.962299967	508.4	Farm building
Durheim memorial	-32.672493020	27.963482989	502.6	Cremation remains
Groenfontein7	-32.641436979	27.961240998	568.1	Farm building
Waterfalls	-32.663193134	27.966806405		Farm building
MSA	-32.671144959	27.966336021	490.5	MSA occurrence

CHA01

CHA01 is a recently abandoned settlement. The site consists of a single wattle and daub house, a cattle kraal, and fruit trees. There are two graves 12m northeast of the house (fig. 9). The graves consist of two rectangular holes that have been filled with sand (and rocks), and topped with branches. There are four metal poles demarcating the border of the grave.

The sites G4, G5 and G6 occur within 160m of this settlement. These settlements were not visible in the grass, but should be treated as having graves.

WTG11 occurs near these settlements, and the connecting power line will pass through G4 and G5.

Significance: Human graves are of high significance.

Mitigation: The area needs to be clearly demarcated if developments occur within 100m of any of the sites. The power line will need to be rerouted as it is too close to settlements that probably have graves.

SAHRA Rating: 3A

FIG. 9: GRAVES AT CHA01



GOODVIEW

Goodview is one of the abandoned farmhouses of the area (fig. 10). The farmhouse is located beside the road. While the outline of garden is still visible, it is overgrown by dense vegetation. The house is older than 60 years. No graves were associated with the house. However, the cremated remains of Mr Durheim occur across the road. This structure predates 1960s and is probably closer to the turn of the 20th century. There is a sheep dip associated with the general farm buildings (fig. 11). This feature forms part of the farm complex and should be treated as such. The turbines will not affect the house, but it may be affected by road widening. The sheep dip is within the footprint of Turbine 26.

FIG. 10: REMAINS OF GOODVIEW FARM



Significance: The house will need to be assessed by an architect historian if it will be affected.

Mitigation: Pending assessment – probably needs to be photographed and measured. The client will either need to pay for an architectural assessment of the sheep dip, and related structures, or fence off the feature during construction so that it is not damaged.

SAHRA Rating: to be assessed.

FIG. 11: SHEEP DIP AT GOODVIEW FARM



Durheim Memorial

The cremated ashes of a Mr Durheim are placed under a boulder near the Farm Goodview. The boulder has a plaque placed there in 1989-1990 (fig. 12). The ashes were apparently dug underneath the boulder.

Significance: The ashes are of high significance.

Mitigation: The area may not be affected and a 50m buffer zone should occur around the boulder.

SAHRA Rating: 3A

FIG. 12: MR DURHEIM'S MEMORIAL AND ASHES



Groenfontein

The 1960 topographical map has two farms called Groenfontein next to each other. The westernmost Groenfontein is now called Amberdene. The farm complex Groenfontein (fig. 13) appears to be the original buildings (with a few modern extensions), and may date to the early 20th century, if not earlier. The existing access road is not currently included in a power line route. The farm

complex needs to be assessed by an architect historian if it and related infrastructures will be affected by the wind farm, including access roads.

Significance: To be assessed

Mitigation: The farm will need to be assessed if affected.

SAHRA Rating: To be assessed

Waterfalls Farm

Waterfalls farm complex occurs on the 1959 aerial photographs and part of the complex predated 60 years in age, if not more. Part of the farm complex appears to have the original structures, while other parts, are more recent (fig. 14). The original buildings appear to be made from the pre-ordered corrugated iron houses that were popular in the late 19th and early 20th century. The farm will not be affected.

Significance: To be assessed

Mitigation: The farm will need to be assessed if affected.

SAHRA Rating: to be assessed.

FIG. 13: GROENFONTEIN BUILDINGS



FIG. 14: WATERFALLS FARM



Waterfalls School

The original school predates the existing built structure. We were informed that the original school was of a type of wattle and daub construction with a corrugated roof. This early structure does not occur anymore. Fig. 15 shows the existing building.

The school will not be affected by the wind farm.

Significance: Not applicable

Mitigation: None required.

SAHRA Rating: 3C

FIG. 15: WATERFALLS SCHOOL



MSA

A single MSA flake was observed in the road cutting between the school and Goodview. The flake was a standard MSA flake made on quartzite. The road cuttings were surveyed for stone tools, however only the one was noted. This suggests that there are stone tools in the area, but of a very low density.

Significance: The stone tool is a single occurrence and is thus of low significance.

Mitigation: No further mitigation is required.

SAHRA Rating: 3C

MITIGATION

The location of the proposed power lines is shown in figure 16a-b. Some areas identified in the survey and on the maps will be affected, and thus will require a rerouting of the power line. These re-routings are as follows:

1. WTG26:

- a. The current line goes to the north, through Goodview farm complex, and has the potential to impact on middens around the farm buildings. The current position will require a heritage officer on site during construction.
- b. The line should be moved further west and connect via the current access gate.

FIG. 16A: NORTHERN POWER LINE ROUTE AND TURBINES IN RELATION TO HERITAGE SITES

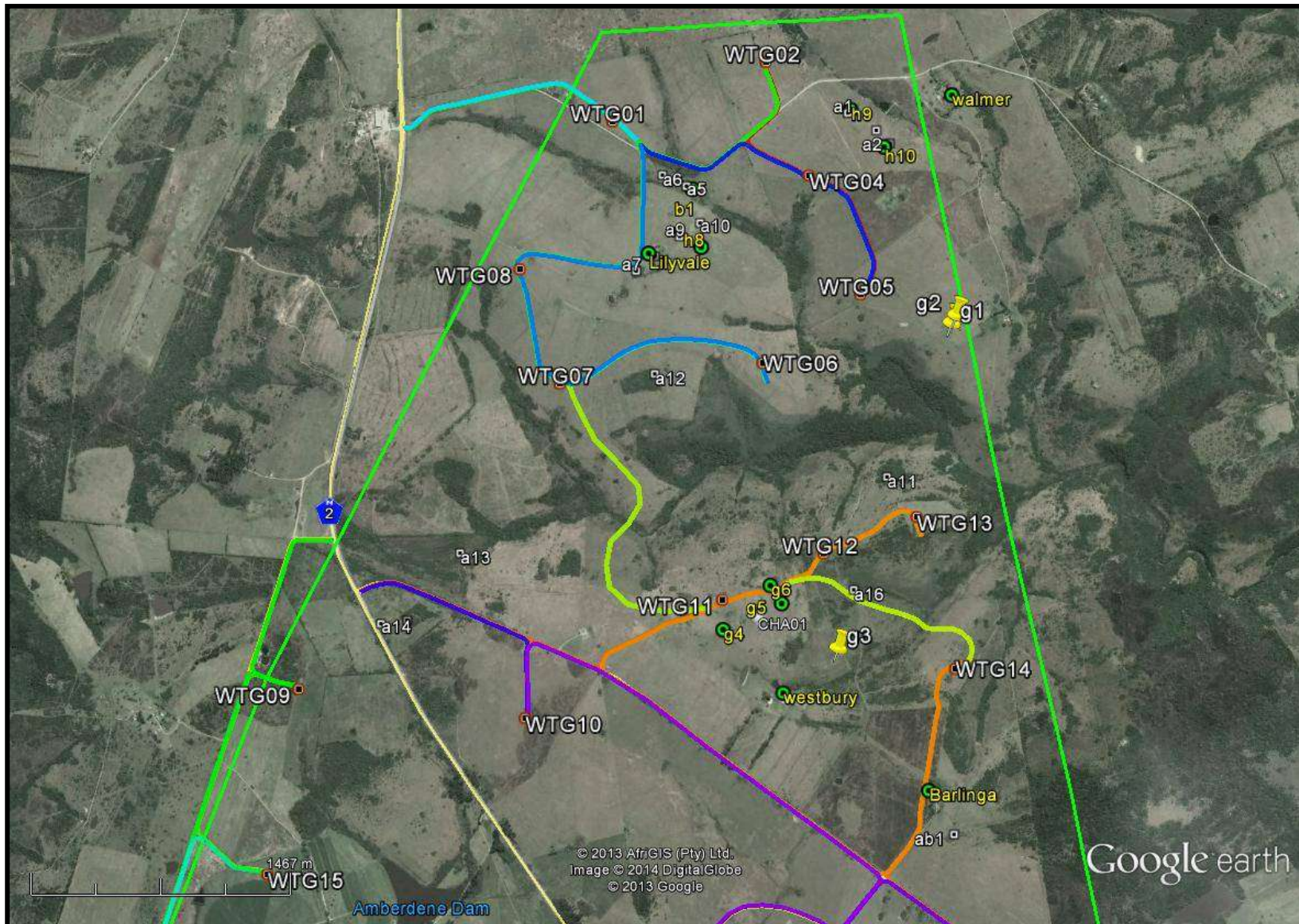
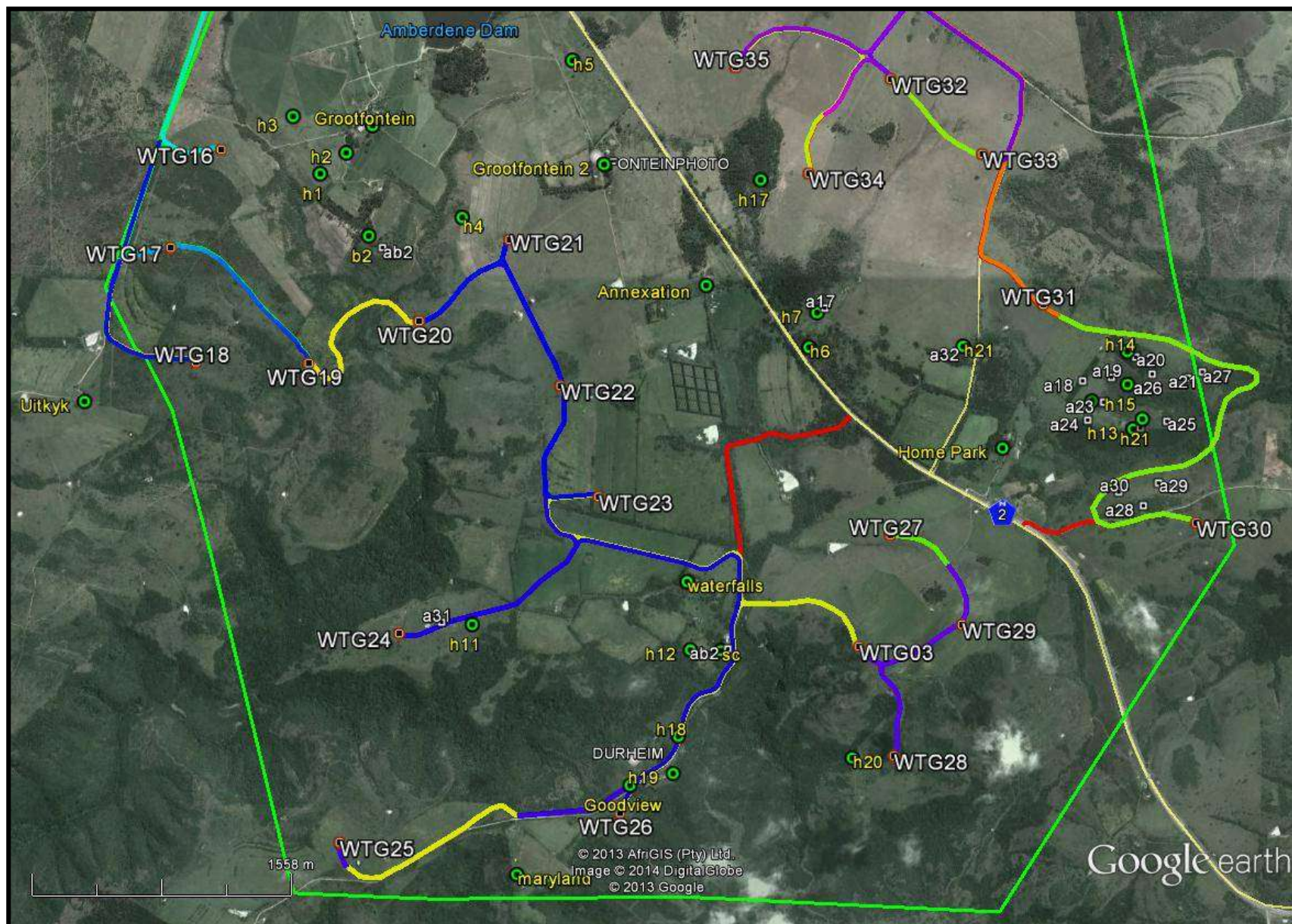


FIG. 16B: SOUTHERN POWER LINE ROUTE AND TURBINES IN RELATION TO HERITAGE SITES



2. H:18
 - a. The power line will pass near this settlement. The settlement was unconfirmed during the survey. The general area should be noted as a sensitive area with potential for human remains.
3. WTG24:
 - a. 450m from the turbine is H11. The area should be marked as sensitive for potential human remains.
 - b. 250m from the turbine is A31. The area should be marked as sensitive for potential human remains.
4. WTG08
 - a. The line passes near Lillyvale, A7, and A8. The area should be marked as sensitive for potential human remains.
5. A5, A6, B1:
 - a. The line passes within 100m of these settlements. The area should be marked as sensitive for potential human remains.
6. WTG11 to WTG12
 - a. These two turbines and the interlinking power lines occur near CHA01, G4, G5 and G6.
 - b. The connecting power line is currently 40m – 50m from the sites and potential graves.
 - c. WTG will probably be moved and these three settlements need to be taken into account.
7. A16
 - a. The power line between WTG11/12 and WTG14 passes near A16. The area should be marked as sensitive for potential human remains.
8. WTG30
 - a. The power line to WTG30 passes A28, A29 and A390. The area should be marked as sensitive for potential human remains.

All graves within 50m of the footprint should be clearly and visibly demarcated before construction phase, to avoid possible damage to the graves. I also suggest that the line is re-aligned as opposed to removing the graves. The process of grave removals is a complex one that requires community consultation, advertisements, several permits, and finally reburial. Moreover, those graves older than 60 years require a qualified archaeologist to undertake the entire process. This process is summarised as follows¹:

The main concern is the occurrence of human remains (or graves) that may be exposed during construction. These potential sites were noted during the desktop and field surveys. In terms of the National Heritage Resources Act (No. 25 of 1999), and KZN Heritage Act of 1997 and 2008, graves older than 60 years (not in a municipal graveyard) are protected. Only a registered undertaker should handle human remains younger than 60 years or an institution declared under the Human Tissues Act. Anyone who wishes to develop an area where there are graves older than 60 years is required to follow the process described in the legislation (section 36 and associated regulations). The specialist will require a permit from the heritage resources authority:

- Determine/ confirm the presence of the graves on the property. Normally the quickest way to proceed is to obtain the service of a professional archaeologist accredited to undertake burial relocations. The archaeologist will provide an estimate of the age of the graves. There may be a need for archival research and possibly test excavations (permit required).
- The preferred decision is to move the development so that the graves may remain undisturbed. If this is done, the developer must satisfy the relevant Heritage Agency that adequate arrangements have been

¹ Information supplied by SAHRA, and it applies to KZN, although falling under the KZN Heritage Act.

made to protect the graves on site from the impact of the development. This usually involves fencing the grave (yard) and setting up a small site management plan indicating who will be responsible for maintaining the graves and how this is legally tied into the development. It is recommended that a distance of 10-20 m is left undisturbed between the grave and the fence around the graves.

- If the developer wishes to relocate or disturb the graves:
 - A 60-day public participation (social consultation) process as required by section 36 (and regulations - see attachment), must be undertaken to identify any direct descendants of those buried on the property. This allows for a period of consultation with any family members or community to ascertain what their wishes are for the burials. It involves notices to the public on site and through representative media. The archaeologist, who can explain the process, may do this but for large or sensitive sites, a social consultant should be employed. Archaeologists often work with undertakers, who rebury the human remains.
 - If because of the public participation, the family (where descendants are identified) or the community agree to the relocation process then the graves may be relocated.
 - The archaeologist must submit a permit application to SAHRA/KZN Heritage for the disinterment of the burials. This must include written approval of the descendants or, if there has not been success in identifying direct descendants, written documentation of the social consultation process, which must indicate to SAHRA's satisfaction, the efforts that have been made to locate them. It must also include details of the exhumation process and the place to which the burials are to be relocated. (There are regulations regarding creating new cemeteries and so this usually means that relocation must be to an established communal rural or formal municipal cemetery.)

- Permission must be obtained before exhumation takes place from the landowner where the graves are located, and from the owners/managers of the graveyard to which the remains will be relocated.
- Other relevant legislation must be complied with, including the Human Tissues Act (National Department of Health) and any ordinances of the Provincial Department of Health). The archaeologist can usually advise about this.

By sensitising these areas, it is possible to avoid damaging sites and human graves. However, if human graves are exposed, then all work activity needs to cease immediately, and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) and the SAPS need to be informed. The above process will then need to be followed. It is thus easier to re-align the pipeline, than remove the graves.

CONCLUSION

A heritage survey was undertaken for the Great Kei Wind Power Project, south of Komga, Eastern Cape. The current project aims to place 39 wind turbines in the area and linking that to the nearby substation.

The area has a diverse heritage extending over several millennia. Several heritage sites, and potential heritage sites, were noted during a desktop study and a field survey. Few of these sites will be directly affected by the project. However, some minor re-routing of the power lines will be required. Several areas have been noted as being sensitive for human remains. These areas should have a 50m buffer zone around them to minimise potential impact. In one area, the power lines occur within 20m of settlements that will most likely have human graves, and these will need to be re-routed.

Currently no built structures will be affected by the project. If any built structures are to be impacted, they will need to be assessed by a qualified architect historian.

REFERENCES

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<https://archive.org/details/DictionaryOfSouthernAfricanPlaceNames>

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APPENDIX A
SITE RECORD FORMS

UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age

Historical Period: x

Recorder's Site No.: CHA01

Official Name:

Local Name:

Map Sheet:

GPS reading: S32 37 12.2 E27 58 21.7 577 m



DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

From Komga follow the N2 for 4.6km then turn left. Follow this road for 2.5km before turning left again. CHA01 is located 989m from here.

SITE DESCRIPTION:

Type of Site: Settlement and graves

Merits conservation: Yes. Human graves are of high significance. The area needs to be clearly demarcated if developments occur within 100m of any of the sites.

Threats: Yes

What threats: THE GREAT KEI WIND ENERGY FACILITY

RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 23/01/2014

Owner:

References:

Description of site and artefactual content.

CHA01 is a recently abandoned settlement. The site consists of a single wattle and daub house, a cattle kraal, and fruit trees. There are two graves 12m northeast of the house. The graves consist of two rectangular holes that have been filled with sand (and rocks), and topped with branches. There are four metal poles demarcating the border of the grave.

The sites G4, G5 and G6 occur within 160m of this settlement. These settlements were not visible in the grass, but should be treated as having graves.

UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age

Historical Period: x

Recorder's Site No.: Goodview

Official Name:

Local Name:

Map Sheet:

GPS reading: S32 40 29.8 E27 57 44.3 508 m



DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

From Komga follow the N2 for 9.4km then turn right. The Goodview Farmhouse is 3.2km from here, beside the road.

SITE DESCRIPTION:

Type of Site: Historical Farmhouse

Merits conservation: The house will need to be assessed by an architect historian if it will be affected.

Pending assessment – probably photographed and measured. The client will either need to apply for an architectural assessment of the sheep dip, and related structures, or fence off the feature during construction so that it is not damaged.

Threats: Yes

What threats: THE GREAT KEI WIND ENERGY FACILITY

RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 21/01/2014

Owner:

References:

Description of site and artefactual content.

Goodview is one of the abandoned farmhouses of the area. While the outline of garden is still visible, it is overgrown by dense vegetation. The house is older than 60 years. No graves were associated with the house. However, the Cremated remains of Mr Durheim occur across the road. This structure predates 1960s and is probably closer to the turn of the 20th century. There is a sheep dip associated with the general farm buildings. This feature forms a part of the farm complex and should be treated as such. The turbines will not affect the house, but it may be affected by road widening. The sheep dip is within the footprint of Turbine 26.

UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age

Historical Period: x

Recorder's Site No.: Durheim Memorial

Official Name:

Local Name:

Map Sheet:

GPS reading: S32 40 21.0 E27 57 48.5 503 m



DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

From Komga follow the N2 for 9.4km then turn right. The Durheim memorial is 3.0km from here, beside the road.

SITE DESCRIPTION:

Type of Site: Memorial

Merits conservation: The ashes are of high significance. The area may not be affected and a 50m buffer zone should occur around the boulder.

Threats: Yes

What threats: THE GREAT KEI WIND ENERGY FACILITY

RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 22/01/2014

Owner:

References:

Description of site and artefactual content.

The cremated ashes of a Mr Durheim were placed under a boulder near the Farm Goodview. The boulder has a plaque. The ashes were apparently dug underneath the boulder.

UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age

Historical Period: x

Recorder's Site No.: Waterfalls

Official Name:

Local Name:

Map Sheet:

GPS reading: S32 39 47.5 E27 58 00.5



DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

From Komga follow the N2 for 9.4km then turn right. Follow this road for 1.3km before turning right again. Waterfall is located 395m from here.

SITE DESCRIPTION:

Type of Site: Farm complex

Merits conservation: The farm will not be affected. The farm will need to be assessed if affected.

Threats: Yes

What threats: THE GREAT KEI WIND ENERGY FACILITY

RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 23/01/2014

Owner:

References:

Description of site and artefactual content.

Waterfalls farm complex occurs on the 1959 aerial photographs and part of the complex predated 60 years in age, if not more. Part of the farm complex appears to have the original structures, while other parts, are more recent. The original buildings appear to be made from the pre-ordered corrugated iron houses that were popular in the late 19th and early 20th century.