

**CULTURAL HERITAGE IMPACT ASSESSMENT
OF THE PROPOSED CONSTRUCTION OF THE
NEW 88KV SPRING GROVE TEE POWERLINE,
NOTTINGHAMROAD, KWAZULU-NATAL.**



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TABLE OF CONTENTS

1	BACKGROUND INFORMATION ON THE PROJECT	1
2	BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA	6
3	BACKGROUND INFORMATION OF THE SURVEY	9
3.1	Methodology	9
3.2	Restrictions encountered during the survey	9
3.2.1	<i>Visibility</i>	9
3.2.2	<i>Disturbance</i>	9
3.3	Details of equipment used in the survey.....	10
4	DESCRIPTION OF SITES AND MATERIAL OBSERVED	10
4.1	Locational data	10
4.2	Description of the general area surveyed.....	10
5	STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)	13
5.1	Field Rating.....	13
6	CONCLUSION	14
7	MAPS AND FIGURES	15
8	REFERENCES	21

LIST OF TABLES

Table 1.	Background information.....	5
Table 2.	Heritage sites located during the ground survey.....	11
Table 3.	Field rating and recommended grading of sites (SAHRA 2005)	13

LIST OF ABBREVIATIONS AND ACRONYMS

EIA	Early Iron Age
ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1820 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998 and associated regulations (2006).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000)
SAHRA	South African Heritage Resources Agency
STONE AGE	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

EXECUTIVE SUMMARY

A cultural heritage survey of the proposed construction of the new 88kV Spring Grove Tee powerline near Nottingham Road identified four heritage features in the near vicinity of the proposed powerline routes. However, all of them are situated more than 50m from the proposed powerlines routes and they are not threatened by the development. From a heritage perspective route 1 would probably be the best choice for development. It is only 3km long and will have the least impact on the altering the sense of place associated with the cultural landscape of the area. Care must be taken, though, to maintain a buffer of 50m around the two Iron Age sites that occur on either side of the proposed line. There is no archaeological reason why development may not proceed on the property as planned. However, attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) and the KwaZulu-Natal Heritage Act (Act no 4 of 2008) which, requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

1 BACKGROUND INFORMATION ON THE PROJECT

The consultant was approached by Kerry Seppings Environmental Management Specialists (KSEMS) to conduct a heritage impact assessment (HIA) of the proposed powerline.

According to the National Heritage Resources Act, 1999 (NHRA) (Act No. 25 of 1999), the heritage resources of South Africa 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).

The newly promulgated KwaZulu-Natal Heritage Act (Act No. 4 of 2008) also makes specific mention to rock art and archaeological sites.

It is furthermore stated that:

—(1) No person may destroy, damage, excavate, alter, write or draw upon, or otherwise disturb any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the KwaZulu-Natal Heritage Council.

(2) Upon discovery of archaeological or palaeontological material or a meteorite by any person, all activity or operations in the general vicinity of such material or meteorite must cease forthwith and a person who made the discovery must submit a written report to the Council without delay.

(3) The Council may, after consultation with an owner or controlling authority, by way of written notice served on the owner or controlling authority, prohibit any activity considered by the Council to be inappropriate within 50 metres of a rock art site.

(4) No person may exhume, remove from its original position or otherwise disturb, damage, destroy, own or collect any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the Council.

(5) No person may bring any equipment which assists in the detection of metals and archaeological and palaeontological objects and material, or excavation equipment onto any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, or meteorite impact site, or use similar detection or excavation equipment for the recovery of meteorites, without the prior written approval of the Council having been obtained on written application to the Council.

(6) (a) The ownership of any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site, on discovery, vest in the Provincial Government and the Council is regarded as the custodian on behalf of the Provincial Government.

(b) The Council may establish and maintain a provincial repository or repositories for the safekeeping or display of—

(i)

archaeological objects;

(ii)

palaeontological material;

(iii)

ecofacts;

(iv)

objects related to battlefield sites;

(v)

material cultural artefacts; or

(vi)

meteorites.

(7) The Council may, subject to such conditions as the Council may determine, loan any object or material referred to in subsection (6) to a national or provincial museum or institution.

(8) No person may, without the prior written approval of the Council having been obtained on written application to the Council, trade in, export or attempt to export from the Province—

(a)

any category of archaeological object;

(b)

any palaeontological material;

(c)

any ecofact;

(d)

any object which may reasonably be regarded as having been recovered from a battlefield site;

(e)

any material cultural artefact; or

(f)

any meteorite.

(9) (a) A person or institution in possession of an object or material referred to in paragraphs (a) – (f) of subsection (8), must submit full particulars of such object or material, including such information as may be prescribed, to the Council.

(b) An object or material referred to in paragraph (a) must, subject to paragraph (c) and the directives of the Council, remain under the control of the person or institution submitting the particulars thereof.

(c) The ownership of any object or material referred to in paragraph (a) vest in the Provincial Government and the Council is regarded as the custodian on behalf of the Provincial Government.

This study aims to identify and assess the significance of any heritage and archaeological resources occurring on the site. Based on the significance, the impact of the development on the heritage resources would be determined. Then appropriate actions to reduce the impact on the heritage resources would be put forward. In terms of the NHRA, 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.

Table 1. Background information

Consultant:	Frans Prins (Active Heritage) for Kerry Seppings Environmental Management Specialists (KSEMS).
Type of development:	The proposed Spring Grove Tee 88kV powerline will supply electricity to the Spring Grove Dam Substation (Fig 1) which will be located next to the Spring Grove Dam Pump Station.
Rezoning or subdivision:	rezoning
Terms of reference	To carry out a Heritage Impact Assessment
Legislative requirements:	The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008)

1.1. Details of the area surveyed:

The proposed Spring Grove Tee 88kV powerline will supply electricity to the Spring Grove Dam Substation (Fig 1) which will be located next to the Spring Grove Dam Pump Station. At present two alternative 'Tee' off points have been identified by Eskom on the existing Colenso-Gowrie 88kV powerline, where the proposed Spring Grove Tee 88kV powerline can be connected (ibid).

Substation Co-ordinates: 29°19'14.84"S 29°58'20.09"E

1. Tee of Point Co-ordinates: 29°17'4.62"S 29°59'20.10"E

2. Tee of Point Co-ordinates: 29°18'29.76"S 29°59'40.99"E

The Spring Grove-Gowrie 88kV powerline must traverse the area between the Spring Grove Substation and one of the two alternative Tee off points. At present two potential powerline servitudes have been identified by Eskom surveyors which are shown in Figs 2 & 3. However neither of these powerline servitudes have been confirmed. The first alternative is approximately 3 kilometres in length and is the most direct route between the Colenso-Gowrie 88kV powerline and the Spring Grove Substation. The second alternative is approximately 8 kilometres in length and must cross the Mooi River two times in order to reach the Substation site, there is an additional route section option over the last 3 kilometres of this alternative to by-pass agriculture fields.

The majority of the proposed development area that the two proposed powerline servitudes will traverse is dominated by large farms, and residential areas in the form of small holdings. Maize fields and grazing land for dairy cattle is the dominant agricultural use of the land situated within the area, with individual households situated on a small holding property making up the residential areas. The Nottingham Road and Rosetta area fall within the Grassland biome, with the dominated vegetation found over the development area being Mooi River Highland Grassland and Drakensberg Foothill Moist Grassland. The greater Nottingham Road area (Nottingham Road, Rosetta, and Mooi River) is primarily a farming district and has been since the early twentieth century. This has led to large areas utilised for farming purposes. This has impacted heavily on the natural vegetation of the area, with the most sufficient impact being the loss and decrease in pristine natural vegetation areas.

2 BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

The greater Nottingham Road area has never been systematically surveyed for archaeological sites. However, some sites have been recorded by cultural resource

consultants who have worked in the area during the last two decades whilst archaeologists from the then Natal Museum have made sporadic visits to the area.

Most of the Stone Age sites in the near vicinity of the study area occur in shelters and in open air contexts as exposed by donga and sheet erosion. Some Middle Stone Age flakes, probably dating back to ca. 40 000 – 200 000 years ago, occur in disturbed context in dongas and road cuttings. The majority of Later Stone Age sites as well as rock art sites occur further west in the foothills of the Drakensberg.

The adjacent areas of Muden and Weenen to the east have been well surveyed for archaeological sites. These low altitude and densely wooded areas have been intensely occupied by Iron Age farmers since the Early Iron Age around 500 AD. Some of these sites have also been excavated by Dr Tim Maggs of the Natal Museum in the 1980's (Huffman 2007). The footprint is centrally located between the Drakensberg with its abundance of Later Stone Age rock art sites to the east and the low altitude river valleys that were favoured by Iron Age farmers, to the west.

The available evidence, as captured in the KwaZulu-Natal Museum heritage site inventories, indicates that the area in the near vicinity to the footprint contains a wide spectrum of archaeological sites covering different time-periods and cultural traditions. These include one Early Stone Age site, four Middle Stone Age sites, twenty Later Stone Age sites, eight Later Iron Age sites, and numerous historical sites dating back to the colonial period. Some of the farms in the area contain graves and structures relating to early Voortrekker settlement such as those at the nearby Dargle Valley on the farm Maritzdaal and at La Lampara near Balgowan, however, the majority of older buildings on farmsteads were erected by British colonists after 1850 who occupied farms previously inhabited by Voortrekker pioneers (Bizley & McKenzie 2007). Some historical buildings, such as those at Treverton College approximately 10 km to the north east of the project area, were actively used by British imperial forces during the Anglo-Boer War of 1899-1902. Various graves in the area belonged to British soldiers who died during the War. The old church cemetery at Bruntville, approximately 9 km to the north east of the project area, contains the graves of numerous British soldiers who died during the Anglo-Boer War. These are also protected by heritage legislation.

The San were the owners of the land for almost 30 000 years but the local demography started to change soon after 2000 years ago when the first Bantu-speaking farmers crossed the Limpopo River and arrived in South Africa. Around 400 years ago, if not earlier, Bantu-speaking farmers also settled in the greater Mooi River area. Although the majority of sites constructed by these African farmers consisted of stone walling not all of them were made from stone. Sites located in the Dargle and Karkloof Valley areas also show that many settlements just consisted of wattle and daub structures. These Later Iron Age sites were most probably inhabited by Nguni-speaking groups such as the Wushe, Thembu, Mncunu and related groups (Bryant 1965). The Wushe was known to be excellent metal workers and it is not surprising that some archaeological evidence for early metal working has been found in the Karkloof, Nottingham road, and Dargle areas. However, by 1820 the Wushe was dispersed from this area due to the expansionistic policies of the Zulu Kingdom of King Shaka. African refugee groups and individuals were given permission to settle in the area by the British colonial authorities after 1845 where most of them became farm labourers. After the Anglo-Zulu war of 1879 and the Bambatha Rebellion of 1911 many of the African people in the study area adopted a Zulu ethnic identity.

European settlement of the area started soon after 1838 when the first Voortrekker settlers marked out large farms in the area. However, most of these farms were abandoned in the 1840's when Natal became a British colony only to be reoccupied again by British immigrants. The first permanent British settlement in the area occurred in 1852 at the drift in the Mooi River, the Mooi River Drift. This occurred approximately 10km to the north of the study area. Between 1854 and 1856 a small sandstone fort was built at Fort Nottingham, about 11km to the south west of the study area, to act as protection against San (Bushman) livestock raids from the Drakensberg. This is the oldest remaining colonial building in the area. However, many of the farmsteads and associated church and grave yards in the larger Nottingham Road area dates back to the latter half of the 19th century. These, like prehistoric archaeological sites, are also protected by national heritage legislation. In 1884, the railway line from Durban to Johannesburg reached the area and was built across the Grantleigh farm of Alexander Lawrence. He subsequently laid out and establish a village on his farm, called Lawrenceville. In 1921, the village was renamed Mooi River when it was declared a town. Lawrence is known as "The Father of Mooi River" (Bizley & McKenzie 2007).

The English-speaking settlers who occupied the KwaZulu-Natal Midlands from the mid to late 1800's also created a cultural landscape that reminded them of their original homeland in the British Isles. This landscape is indicated by the style of colonial buildings and associated gardens (English country gardens and rose gardens being particularly popular), the creation of certain sporting facilities associated with British interests such as polo and cricket fields, the establishment of British education-style private schools in this area such as Michaelhouse and others, the building of churches and places of worship in the same architectural style as those in the homeland, the replacement of Zulu and Voortrekker placenames with English names, as well as the transformation of the natural landscape to fit the farming practices of the new settlers. The end result was the creation of a landscape more reminiscent of rural parts of southern England and Ireland, than Africa. Cultural landscapes are also protected by heritage legislation.

3 BACKGROUND INFORMATION OF THE SURVEY

3.1 Methodology

A desktop study was conducted of the archaeological databases housed in the KwaZulu-Natal Museum. In addition, the available archaeological and historical literature covering the greater Nottingham Road area was also consulted. The SAHRIS data base of heritage sites and reports was studied. Documents reporting on previous cultural resource management studies in the area were also consulted and the relevant heritage sites were documented.

A ground survey, following standard and accepted archaeological procedures, was conducted.

3.2 Restrictions encountered during the survey

3.2.1 *Visibility*

Visibility was relatively good.

3.2.2 *Disturbance*

No disturbance of any potential heritage features was noted.

3.3 Details of equipment used in the survey

GPS: Garmin Etrek

Digital cameras: Canon Powershot A460

All readings were taken using the GPS. Accuracy was to a level of 5 m.

4 DESCRIPTION OF SITES AND MATERIAL OBSERVED

4.1 Locational data

Province: KwaZulu-Natal

Towns: Nottingham Road, Rosetta, Mooi River

4.2 Description of the general area surveyed

Various heritage sites occur within the greater Nottingham Road area (Fig 2). Some Later Stone Age and Later Iron Age sites have been recorded in the past but it is the colonial area sites and associated landscape features that give the area its particular “European feel” today. Most of the colonial area sites of the area date from the mid 19th century to the early 20th century. These include historical farmsteads, the railway stations of Nottingham Road and Rosetta, historical church buildings and associated grave yards, historical hotel buildings, and various historical residential homes with characteristic Victorian and Edwardian features. The old Fort and associated buildings in the village of Nottingham Road is perhaps the only area in the province of KwaZulu-Natal where colonial buildings that predate the Victorian area can still be seen in original natural surroundings. Large parts of the original landscape of the greater Nottingham Road, however, has been transformed by commercial farming practices and the establishment of English country gardens and old tree lanes consisting predominantly of exotic Oak, Plane, Pine, and Bluegum trees. As such the greater Nottingham road can be described as a cultural landscape with a particular feel and history.

Fortunately only a few of these heritage features occur in close association with the proposed powerlines. In fact, all three powerline routes avoid important heritage sites in the cultural landscape of the greater Nottingham Road. The context and relevant grading of these sites are presented in Table 2.

4.3 Description and distribution of heritage sites found

The various heritage sites identified are described in Table 2 below.

Table 2. Heritage sites located during the ground survey.

	Heritage site category	Brief description	Significance (Table 3)	Mitigation	GPS Latitude and Longitude
1	Later Iron Age site 1 (Fig 3).	This site is located near the top of a hill on a gentle slope. The site consists of a large circular stone walled kraal and two possible house floors (Figs 3 & 6). The kraal consists of a low stone walling ~50cm high, with a 10m diameter. The western (or downhill) side of the kraal is missing, and this would have been the kraal entrance. There are two small circular features ~3m in diameter uphill from the kraal, and these are visible by the longer grass. These features could be the location of hut floors. The site is probably a Late Iron Age (LIA) settlement as described by Maggs (1989) (Anderson 2012). While the soil is shallow, there is probably an archaeological deposit. No graves were observed, which would have occurred below the kraal entrance. There are very few examples of LIA walling in the KZN midlands area,	The site is of medium significance (Table 3) due to its rarity and good preservation of the wall and possible deposit.	The preferred powerline route is situated approximately 120m to the east of the site. The general ruling is that no development may occur within 20m of an archaeological site, and all sites within 50m need to be fenced off. The new line will therefore not have any impact on the heritage site. However a buffer of 50m must be maintained around this site and respected by workers during the construction phase.	S 29° 18' 34.54" E 29° 58' 49.94"

		specifically around Nottingham Road.			
2	Later Iron Age site (2) (Fig 3)	This site is located approximately 465m southeast of Later Iron Age site 2, on the same hill (Fig 3). The site consists of a stone walled terrace ~50m in length (Fig 7)). There are no other features associated with the terrace; however, there is dense bush towards the hill that may contain features. It is not possible to date the terrace.	The site is of low significance (Table 3)	The preferred powerline route is situated approximately 160m to the west of the site. The general ruling is that no development may occur within 20m of an archaeological site, and all sites within 50m need to be fenced off. The new line will therefore not have any impact on the heritage site. However a buffer of 50m must be maintained around this site and respected by workers during the construction phase.	S 29° 18' 47.15" E 29° 58' 59.81"
3	Historical tree lane (Fig 3).	This site consists of a tree lane that leads to the entrance of a historical farmstead. The lane is approximately 200m long and consists of exotic Oak and Platanus trees (Figs 3, 5 & 9). Early English-speaking settlers in the midlands created these lanes to remind them of England and to "domesticate" the local landscape. It appears that this particular lane is older than 60 years.	This site is of medium significance (Table 3). However, there are similar sites in the KZN Midlands.	One of the alternative powerline routes is situated approximately 50m to the immediate west of the site. It would be possible to maintain a buffer of 20m around the tree lane. Alternatively, the powerline can be shifted slightly to the west.	S 29° 17' 43.02" E 29° 57' 20.80"
4	Tree lane (Fig 3)	This site consists of a tree lane that runs parallel to a district road in Rosetta Village. The lane is approximately 100m long and consists of exotic Pine trees (Figs 3 & 8). Some of the trees in this lane may be older than 60 years.	This site is of low significance (Table 3). There are many such sites in the KZN midlands and better examples abound.	One of the alternative powerline routes is situated approximately 100m to the immediate west of the site. It is therefore not threatened by the proposed development and no mitigation is necessary.	S 29° 19' 26.83" E 29° 58' 17.54"

4.4 Summary of findings

Although the greater Nottingham Road is rich in heritage sites and features only four are located close to the proposed powerlines. Two of these are later Iron Age sites and two are tree lanes that form part of the cultural landscape of the area. None of these, however, are threatened by the proposed development as they are all located more than 50m from the proposed powerline routes. From a heritage perspective the preferred route option (Alternative C1) (indicated in blue in Fig 2) is the shortest route and will have the smallest impact on the greater cultural landscape of the Nottingham Road area.

5 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

5.1 Field Rating

As no heritage sites are located in direct association with any of the proposed powerline routes the footprint is not rated in terms of heritage values (Table 3). However, an individual rating for each site is provided in Table 2.

Table 3. Field rating and recommended grading of sites (SAHRA 2005)

Level	Details	Action
National (Grade I)	The site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority
Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site
Local Grade IIIB	This site is considered to be of HIGH significance locally	The site should be mitigated, and part retained as a heritage site
Generally Protected A	High to medium significance	Mitigation necessary before destruction
Generally Protected B	Medium significance	The site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording is required before destruction

6 CONCLUSION

The proposed establishment of the Spring Grove Tee Powerline may proceed in terms of heritage values as no heritage or archaeological sites are in any danger of being destroyed or altered. In terms of heritage values I support the preferred route as indicated by the client as this route is the shortest of the three proposed trajectories and will have the least impact on the greater cultural landscape of the Nottingham Road area. However, the two Later Iron Age sites identified in this study do occur on either side of the preferred route. Despite this fact, they are both situated more than 100m from the proposed powerline. A buffer of at least 50m must be strictly maintained around these heritage sites by the developer. No removal of potential artefacts or alteration of any structures will be allowed within this buffer zone. It must also be noted that the KwaZulu-Natal Heritage Act requires that any operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities.

7 MAPS AND FIGURES

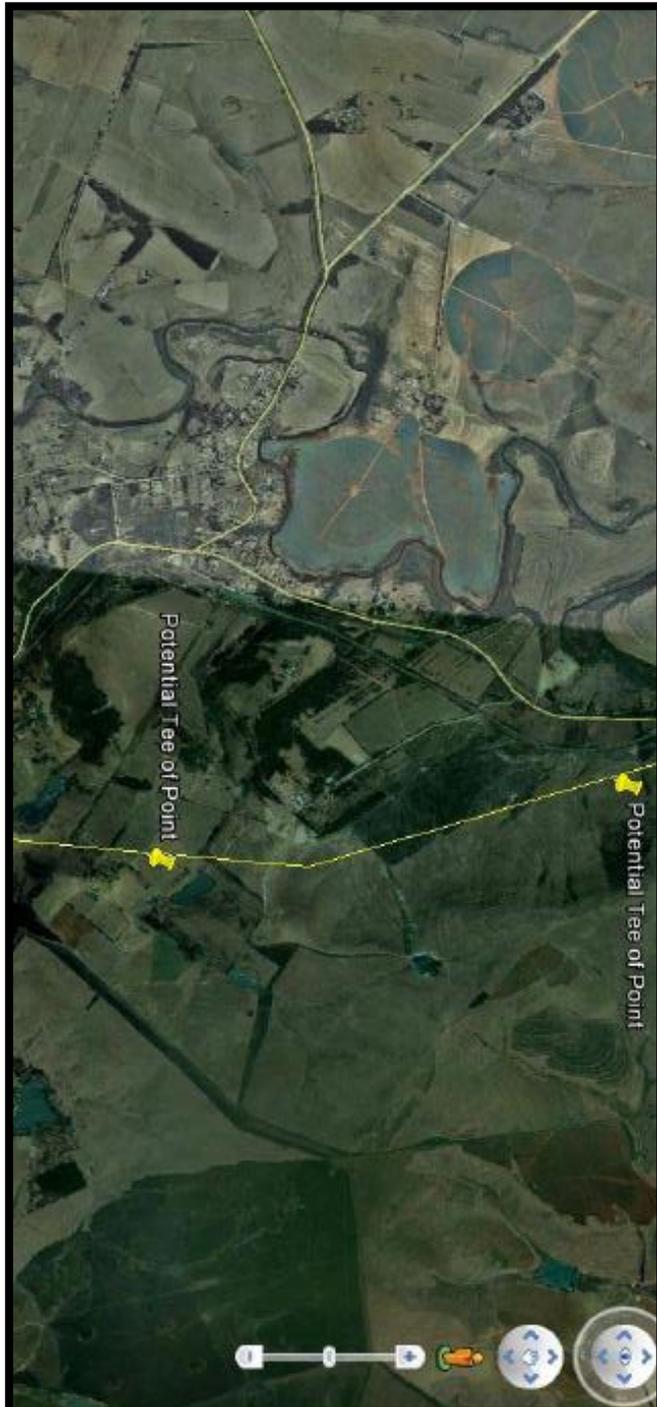


Figure 1. Google aerial photograph showing the location of the future Spring Grove substation site and two potential Tee points.

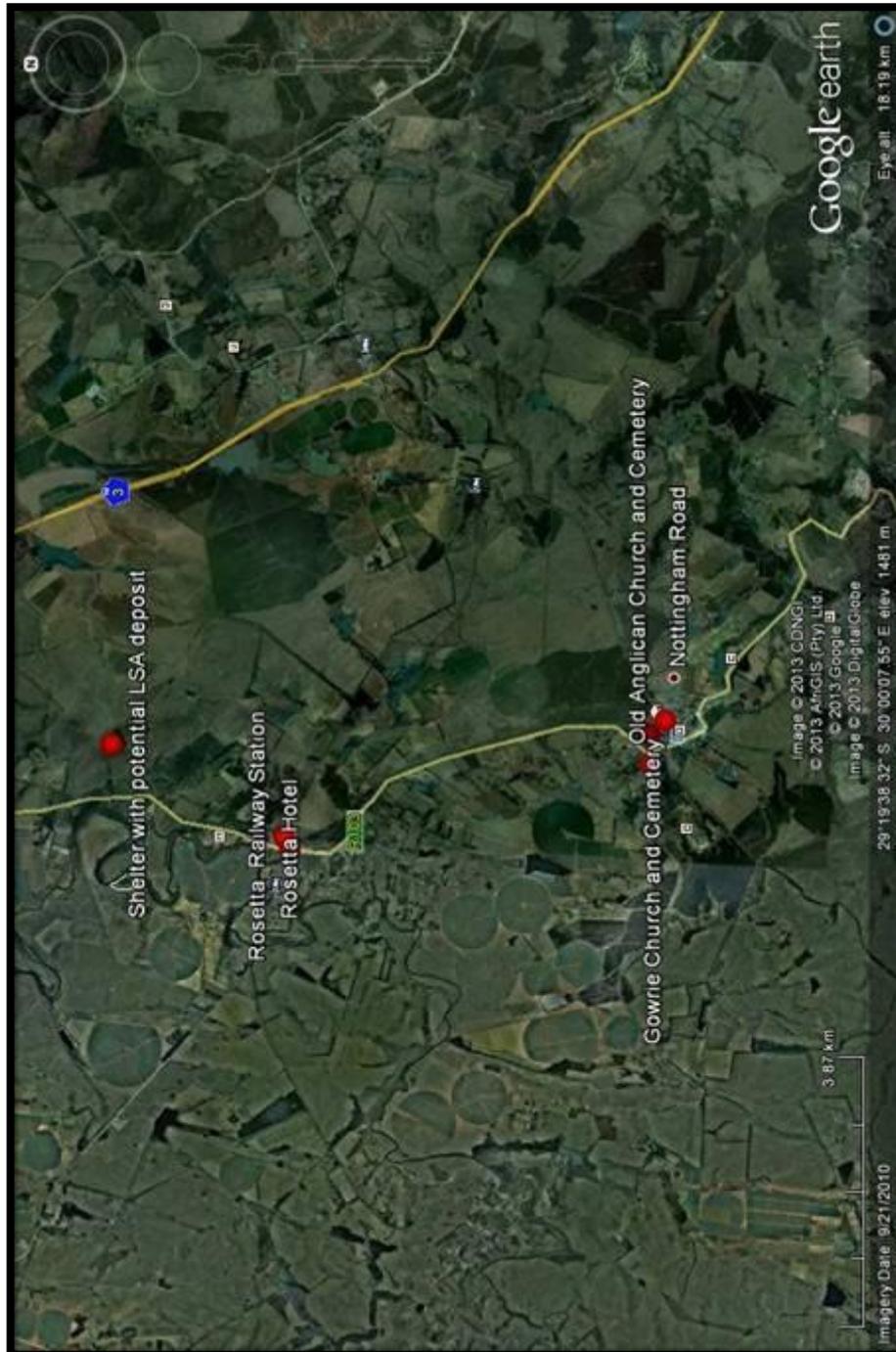


Figure 2. Google aerial photograph showing the known heritage sites in the greater Nottingham Road area.

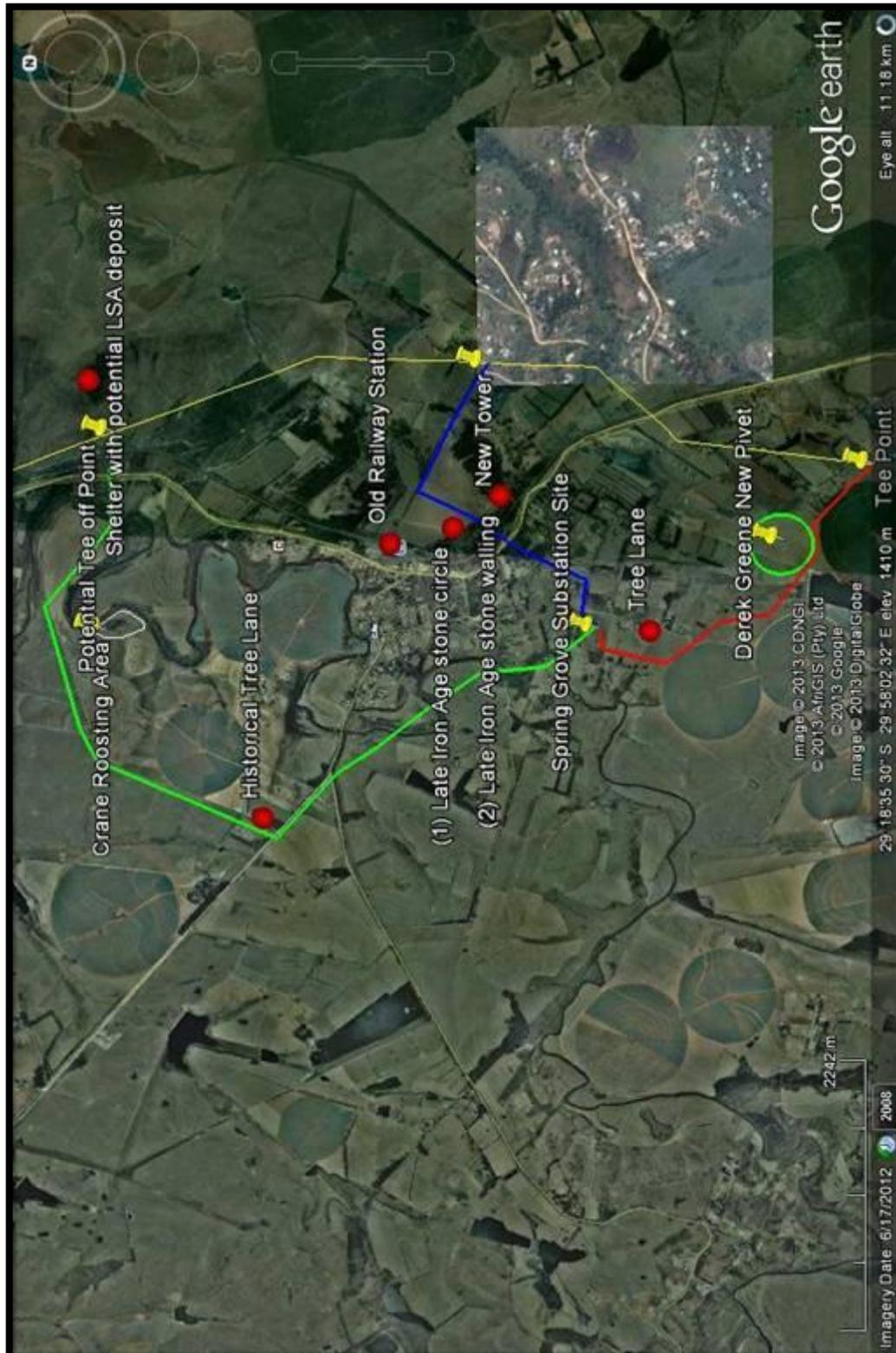


Figure 3. Distribution of heritage sites relative to the identified powerline routes. The blue line indicates the preferred route. The green and red lines indicate two alternative routes.

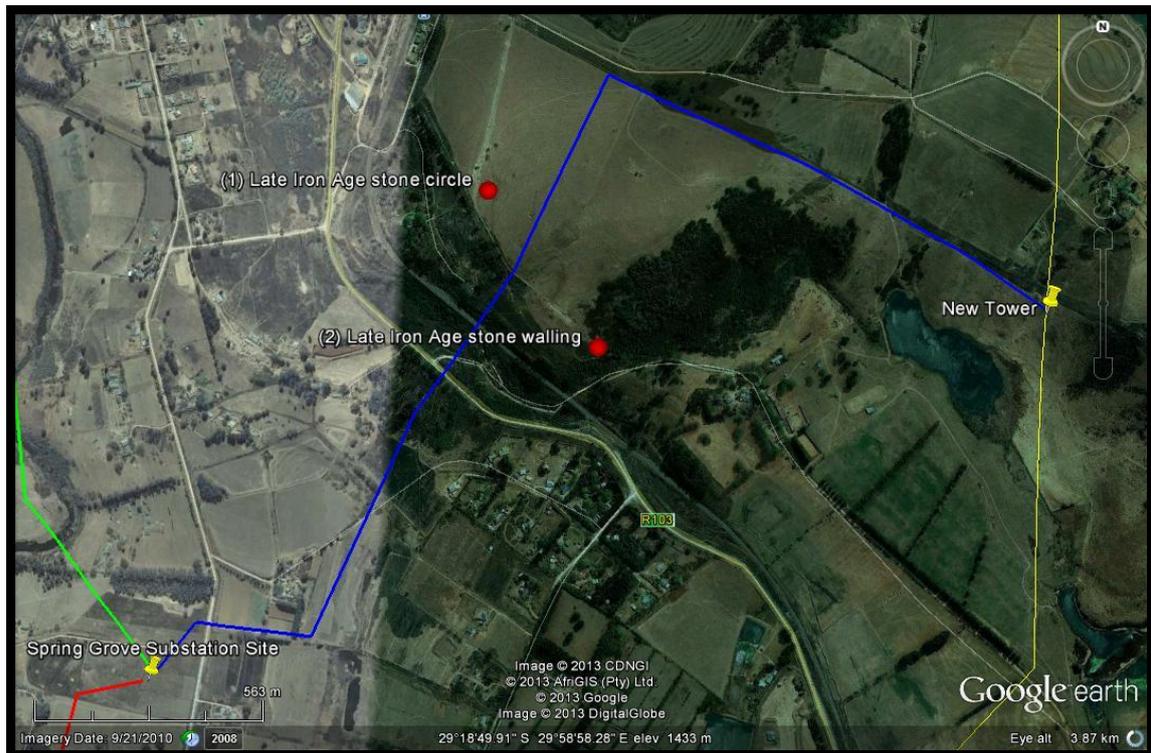


Figure 4. Google aerial photograph showing the location of two Later Iron Age sites on either side of the preferred powerline route.

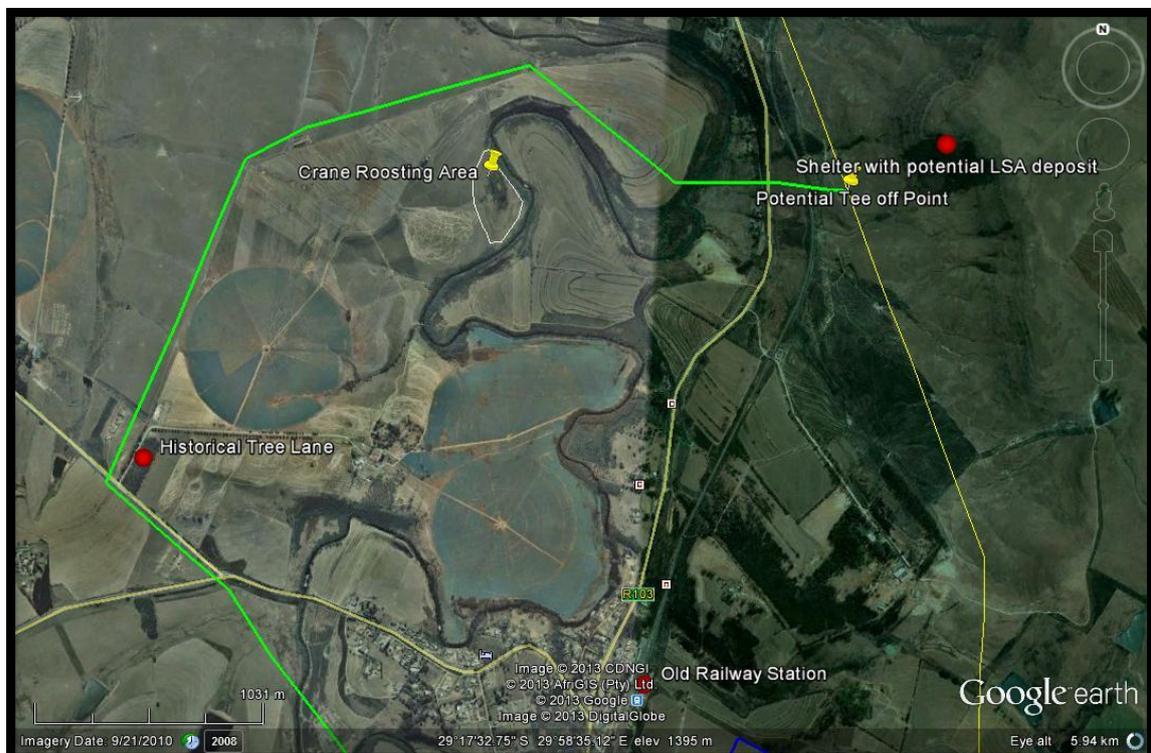


Figure 5. Google aerial photograph showing the location of a historical tree lane adjacent to the alternative powerline route in the northern section of the study area.



Figure 6. Photograph of Later Iron Age site (1). The photograph was taken by Gavin Anderson in winter when the features (indicated by the white arrows) were more clearly visible (Anderson 2012).



Figure 7. Photograph of Later Iron Age site (2) (after Anderson 2012)



Figure 8. Tree lane situated in the southern section of the study area. This feature of the cultural landscape is situated more than 100m from the closest alternative powerline route.



Figure 9. Tree lane situated adjacent to the alternative powerline route in the northern section of the study area. This tree lane is situated approximately 50m from the proposed route.

8 REFERENCES

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