

CULTURAL HERITAGE IMPACT ASSESSMENT OF THE PROPOSED NSUZE IRRIGATION SCHEME NEAR NKANDLA



ACTIVE HERITAGE cc.

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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 Nsuze Irrigation Scheme identified seven heritage sites. These are all Early Iron Age occurrences. Four of the Early Iron Age sites are threatened by the irrigation scheme and it is suggested that a buffer zone of at least 100m be maintained around each of these heritage sites. Given the high rating and significance of these heritage sites it is further suggested that a heritage specialist should be appointed to monitor any development within 120m from these sites. Special care must be taken when developing the irrigation scheme not to damage or alter these sites in any way. Apart from this concern there is no known archaeological reason why the proposed development may not proceed on the remainder of the study area 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

Table 1. Background information

Consultant:	Frans Prins (Active Heritage) for Green Door Environmental
Type of development:	The development and expansion of the Nsuze Irrigation Scheme adjacent to the uThukela River.
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:

Access to the footprint can be gained off the R74 towards Kranskop, proceed to Ntunjambili, then turn towards the Thukela River Valley along the D1640 and travel for approximately 10 km towards a bridge that crosses the river. The proposed areas for the irrigation development are situated all along the Thukela River (northern and eastern bank) and along the Nsuze River (Fig 1). The proposed development site is boarded by tribal communal areas and the entire area is located within the catchment area of the Thukela River.

2 BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

The archaeological history of the Province of KwaZulu-Natal (KZN) dates back to about 2 million years and possibly older, which marks the beginning of the Stone Age. The Stone Age in KZN was extensively researched by Professor Oliver Davies formerly of the Natal Museum. The Stone Age period has been divided in to three periods namely: Early Stone Age (ESA) dating between 2 million years ago to about 200 000 years ago, Middle Stone Age (MSA) dating between 200 000 years ago to about 30 000 years ago, and the Later Stone Age (LSA) which dates from 30 000 to about 2 000 year ago. The Stone Age period ends around approximately 2 000 years ago when Bantu speaking Age farmers from the north arrived in southern Africa. The Iron Age is also divided into three periods, namely: Early Iron Age (EIA) dating between AD 200 and AD 900, Middle Iron Age (MIA) dating between AD 900 and AD 1300, Late Iron Age (LIA) dating between AD 1 300 and 1 820.

2.1 Stone Age

2.1.1 Early Stone Age (ESA)

The ESA is considered as the beginning of the stone tool technology. It dates back to over 2 million years ago until 200 000 years ago. This period is characterised by Oldowan and Acheulean industries. The Oldowan Industry, dating to approximately between over 2 million years and 1.7 million years predates the later Acheulean. The Oldowan Industry consists of very simple, crudely made core tools from which flakes are struck a couple of times. To date, there is no consensus amongst archaeologists as to which hominid species manufactured these artefacts. The Acheulean Industry lasted from about 1.7 million years until 200 thousand years ago. Acheulean tools were more specialized tools than those of the earlier industry. They were shaped

intentionally to carry out specific tasks such as hacking and bashing to remove limbs from animals and marrow from bone. These duties were performed using the large sharp pointed artefacts known as handaxes. Cleavers, with their sharp, flat cutting edges were used to carry out more heavy duty butchering activities (Esterhuysen, 2007). The ESA technology lasted for a very long time, from early to middle Pleistocene and thus seems to have been sufficient to meet the needs of early hominids and their ancestors. Although not identified on the footprint, ESA tools occurrence have been reported in other sites in KZN. Apart from stone artefacts, the ESA sites in this Province have produced very little as regards other archaeological remains. This has made it difficult to make inferences pointing to economical dynamics of the ESA people in this part of the world. The diet of ESA peoples has therefore had to be reconstructed on the basis of evidence from elsewhere that it comprised primarily of animal and plant foods (Mazel 1989).

2.1.2 Middle Stone Age (MSA)

The MSA dates to between 200 000 and 30 000 years ago, coinciding with the emergence of modern humans. The MSA technology is therefore believed to have been manufactured by fully modern humans known as *Homo sapiens* who emerged around 250 000 years ago. While some of the sites belonging to this time period occur in similar contexts as those of ESA, most of the MSA sites are located in rock shelters. Palaeoenvironmental data suggest that the distribution of MSA sites in the high lying Drakensberg and surrounding areas was influenced by the climate conditions, specifically the amount and duration of snow (Carter, 1976). In general, the MSA stone tools are smaller than those of the ESA. Although some MSA tools are made from prepared cores, the majority of MSA flakes are rather irregular and are probably waste material from knapping exercises. A variety of MSA tools include blades, flakes, scrapers and pointed tools that may have been hafted onto shafts or handles and used as spearheads. Between 70 000 and 60 000 years ago new tool types appear known as segments and trapezoids. These tool types are referred to as backed tools from the method of preparation. Residue analyses on the backed tools from South African MSA sites including those in KZN indicate that these tools were certainly used as spear heads and perhaps even arrow points (Wadley, 2007). A few sites with impressive MSA deposits have been excavated in KZN. Perhaps the best known ones are Sibudu Cave and Umhlatuzana Cave to the south of the study area, and Border Cave to the north of the study area. All these sites provided impressive evidence for fine resolution data and detailed stratigraphy (Wadley & Jacobs, 2006).

2.1.3 Late Stone Age (LSA)

Compared to the earlier MSA and ESA, more is known about the LSA which dates from around 30 000 to 2 000 (possibly later) years ago. This is because LSA sites are more recent than ESA and MSA sites and therefore achieve better preservation of a greater variety of organic archaeological material. The Later Stone Age is usually associated with the San (Bushmen) or their direct ancestors. The tools during this period were even smaller and more diverse than those of the preceding Middle Stone Age period. LSA tool technology is observed to display rapid stylistic change compared to the slower pace in the MSA. The rapidity is more evident during the last 10 000 years. The LSA tool sequence includes informal small blade tradition from about 22 000 – 12 000 years ago, a scraper and adze-rich industry between 12 000 – 8 000 years ago, a backed tool and small scraper industry between 8 000 – 4 000 years and ending with a variable set of other industries thereafter (Wadley, 2007). Adzes are thought to be wood working tools and may have also been used to make digging sticks and handles for tools. Scrapers are tools that are thought to have been used to prepare hides for clothing and manufacture of other leather items. Backed tools may have been used for cutting as well as tips for arrows. It was also during Later Stone Age times that the bow and arrow was introduced into southern Africa – perhaps around 20 000 years ago. Because of the bow and arrow and the use of traps and snares, Later Stone Age people were far more efficient in exploiting their natural environment than Middle Stone Age people. Up until 2 000 years ago Later Stone Age people dominated the southern African landscape. However, shortly after 2 000 years ago the first Khoi herders and Bantu-speaking agro pastoralists immigrated into southern Africa from the north. This led to major demographic changes in the population distribution of the subcontinent. San hunter-gatherers were either assimilated or moved off to more marginal environments such as the Kalahari Desert or some mountain ranges unsuitable for small-scale subsistence farming and herding. The San in the coastal areas of KZN were the first to have been displaced by incoming African agro pastoralists. However, some independent groups continue to practice their hunter gatherer lifestyle in the foothills of the Drakensberg until the period of white colonisation around the 1840's (Wright & Mazel, 2007). According to the Natal Museum archaeological database Later Stone Age sites have been located in the Tugela River in the past but these are mostly restricted to surface scatters. Also dating to the LSA period is the impressive Rock Art found on cave walls and rock faces. Rock Art can be in the form of rock paintings or rock engravings. The province of KZN is renowned for the prolific San rock painting sites concentrated in the Drakensberg.

Rock art sites do occur outside the Drakensberg including Zululand, however, these sites have not been afforded similar research attention as those sites occurring in the Drakensberg. However, there are no rock art sites found within the immediate vicinity of study area, which may be due to the lack of the suitable geology.

2.2 Iron Age

2.2.1 Early Iron Age (EIA)

Unlike the Stone Age people whose life styles were arguably egalitarian, Iron Age people led quite complex life styles. Their way of life of greater dependence on agriculture necessitated more sedentary settlements. They cultivated crops and kept domestic animals such as cattle, sheep, goats and dogs. Pottery production is also an important feature of Iron Age communities. Iron smelting was practised quite significantly by Iron Age society as they had to produce iron implements for agricultural use. However no smelting sites were discovered in the study area as it is the northern KZN that is rich in abandoned iron smelting sites (Maggs, 1989). Although Iron Age people occasionally hunted and gathered wild plants and shellfish, the bulk of their diet consisted of the crops they cultivated as well as the meat of the animals they kept. EIA villages were relatively large settlements strategically located in valleys beside rivers to take advantage of the fertile alluvial soils for growing crops (Maggs, 1989). The EIA sites in KZN date to around AD 500 to AD 900. Extensive research in the province of this period led to it being divided in the following time lines according to ceramic styles (Maggs, 1989; Huffman 2007):

- _ Msuluzi (AD 500);
- _ Ndongondwane (AD 700 – 800);
- _ Ntshekane (AD 800 – 900).

The archaeological data base of the Natal Museum indicates that ten Early Iron Age sites occur in the immediate vicinity of the study area. Some well known excavated sites such as Mamba, Whosi and Ndongondwane (Huffman 2007) occurs in the immediate vicinity of the project area on the banks of the Thukela River.

2.2.2 Late Iron Age (LIA)

The LIA is not only distinguished from the EIA by greater regional diversity of pottery styles but is also marked by extensive stone wall settlements. However, in this part of the world, stone walls were not common as the Nguni people used thatch and wood to build their houses. This explains the failure to obtain sites from the aerial photograph investigation of the study area. Trade played a major role in the economy of LIA

societies. Goods were traded locally and over long distances. The main trade goods included metal, salt, grain, cattle and thatch. This led to the establishment of economically driven centres and the growth of trade wealth. Keeping of domestic animals, metal work and the cultivation of crops continued with a change in the organisation of economic activities. Evidence for this stems from the fact that iron smelting evidence was not found in almost every settlement (Maggs, 1989; Huffman 2007).

2.3 Historic Period

Oral tradition is the basis of the evidence of historical events that took place before history could be recorded. This kind of evidence becomes even more reliable in cases where archaeology could be utilised to back up the oral records. Sources of evidence for socio political organization during the mid-eighteenth to early nineteenth century in the study area and the larger former Natal Province suggest that the people here existed in numerous small-scale political units of different sizes, population numbers and political structures (Wright & Hamilton, 1989). This period was largely characterised by rage and instability as political skirmishes broke due to the thirst for power and resources between chiefdoms. During the 2nd half of the eighteenth century, stronger chiefdoms and paramountcies emerged. However, these were not fully grown states as there was no proper formal central political body established. This changed in the 1780's when a shift towards a more centralized political state occurred. This shift was mainly characterized by population growth and geographical expansion of states. The most important and largest and strongest states at the time were the Mabhudu, Ndwandwe and Mthethwa. However, other smaller states, also established themselves in the greater Tugela Region. These included in the south the Qwabe, Bhaca, Mbo, Hlubi, Bhele, Ngwane and many others (Wright & Hamilton, 1989). The Zulu kingdom, established by King Shaka however remained the most powerful in the region in the early years of the 19th century. Shaka fought ruthlessly and often defeated his rivals and conquered their cattle, wives and even burnt their villages. These wars are often referred to as Difaqane and this period was characterised by rage and blood shedding. Shaka was assassinated in 1828 at which time he had transformed the nature of the society in the Natal and Zululand regions. He was succeeded by Dingaan (Wright & Hamilton, 1989). Dutch farmers unhappy with the British rule in Cape Town decided to explore into the interior of the country, away from British rule. Some groups remained in the Eastern Cape, others kept going and a few

settled in the Orange Free State and the Transvaal. A great number, led by Piet Retief and Gerrit Maritz, crossed the Drakensberg into Natal.

Here they encountered the Zulus who lured them into a trap and brutally massacred many of them. This was only one of the many failures of the white settler expeditions in the frontier areas and when the shocking news reached the Cape, more groups were sent to the interior to revenge. A series of battles were fought but the most notable was the Battle of Blood River in 1838 where the Boers defeated the Zulus. This ended the Zulu threat to the white settlers and a permanent and formal settlement in Natal was established. However the Zulu kingdom remained independent for a couple of decades. The Republic of Natalia was annexed by the British in 1845 and in 1879 the Zulu kingdom was also invaded (Wright & Hamilton, 1989). The Anglo-Zulu War has been well recorded and an important occurrence took place at Jamesons Drift, in the project area, when a few British soldiers attempted to cross the Thukela River after their defeat at the battle of Isandlwana. Although no relicts or artefacts survive from this encounter the surrounding landscape is still imbued with the meaning of this important period in the colonial history of KwaZulu-Natal.

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 Thukela River catchment area was also consulted.

The consultant visited the study area on 17 December 2012. 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. However, very dense Valley Bushveld adjacent to the Thukela River may hide archaeological artefacts and features.

3.2.2 Disturbance

No disturbance of any potential heritage features was noted. Overgrazing and removal of trees for fire wood led to a better archaeological visibility in these areas. However, anthropogenic activities in the close vicinity of all the identified Early Iron Age sites may threaten their conservation in the near future.

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: Nkandla and Kranskop

4.2 Description of the general area surveyed

The middle reaches of the Thukela River catchment is classified as a rural area. The land use surrounding the study area is flanked by Valley Bushveld and thornveld vegetation in the river valleys and grasslands, mostly disturbed, in the higher altitude areas. The footprint is situated in a communal area with a large percentage of rural homesteads occupied by Zulu-speaking small-scale subsistence farmers. Most of these are spatially ordered in the traditional Nguni dispersed settlement pattern or more modern variations thereof. The majority of homesteads appear to have been built in the last 30 years or so. The proposed irrigation scheme developments are situated directly adjacent to the Thukela and Nsuze rivers on alluvial and colluvial soils. Some of these areas are already in use for cultivation and grazing by small-scale subsistence farmers.

The middle reaches of the Thukela River Valley has been thoroughly surveyed by archaeologists during the last 30 years or so. This area was the focus of various research projects by archaeologists associated with the then Natal and Ondini Museums respectively (Huffman 2007). Three Early Iron Age sites have also been

excavated in the recent past notably by archaeologist Len van Schalkwyk who has been working in this area for many years (ibid). The records of the KwaZulu-Natal Museum indicate the presence of 2 Early Stone Age sites, 3 Middle Stone Age sites, 6 Intermediate Stone Age sites, 8 Early Iron Age sites, 3 Later Iron Age sites, and 2 Historical sites in this area. Seven Early Iron Age Sites occur on the footprint or in the close vicinity of the footprint (Fig 2). Three of these Early Iron Age sites are of high importance from a heritage rating point of view.

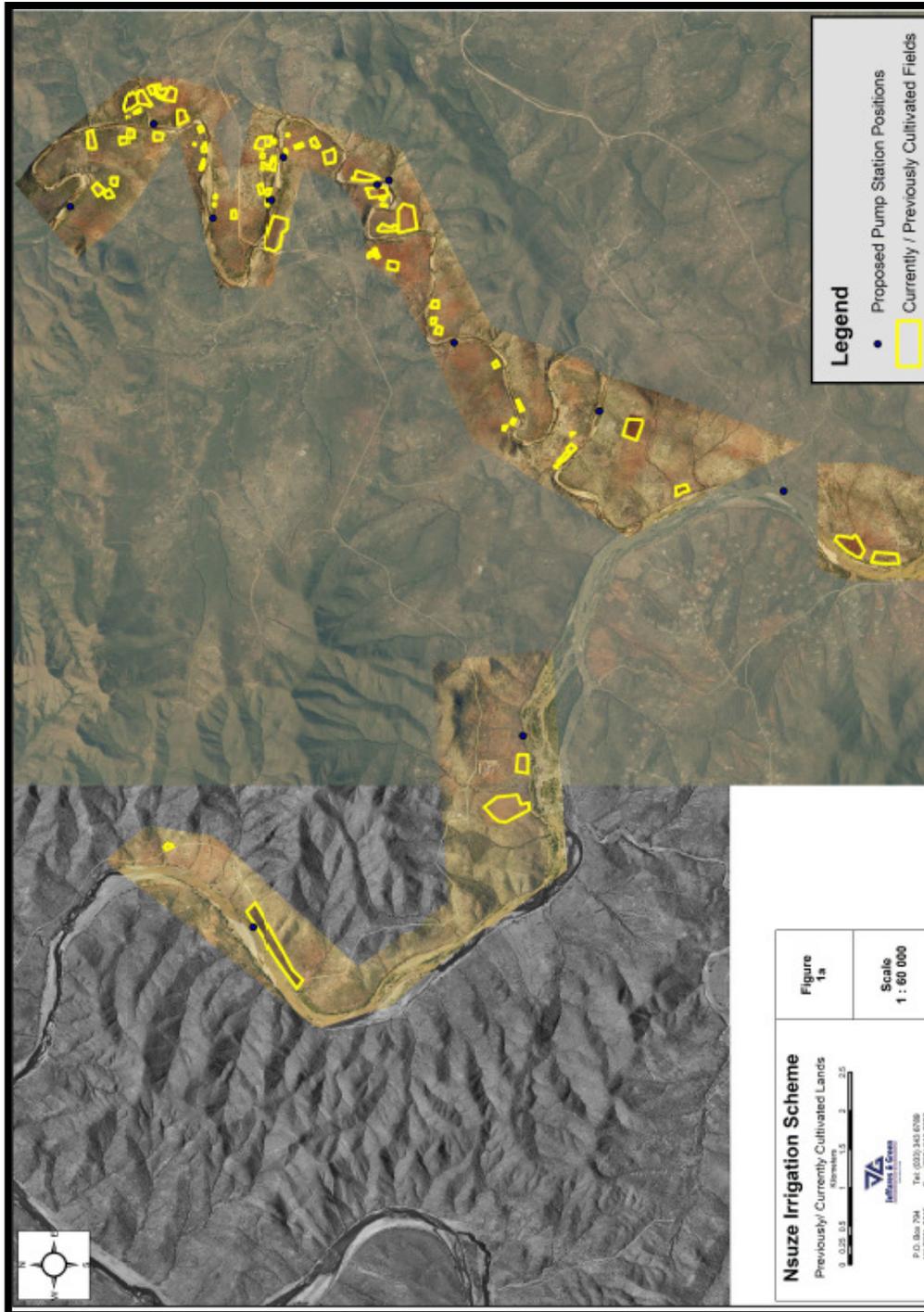


Figure 1. Map showing the location of the proposed Nsuze Irrigation Scheme in the Lower Thukela River Basin.

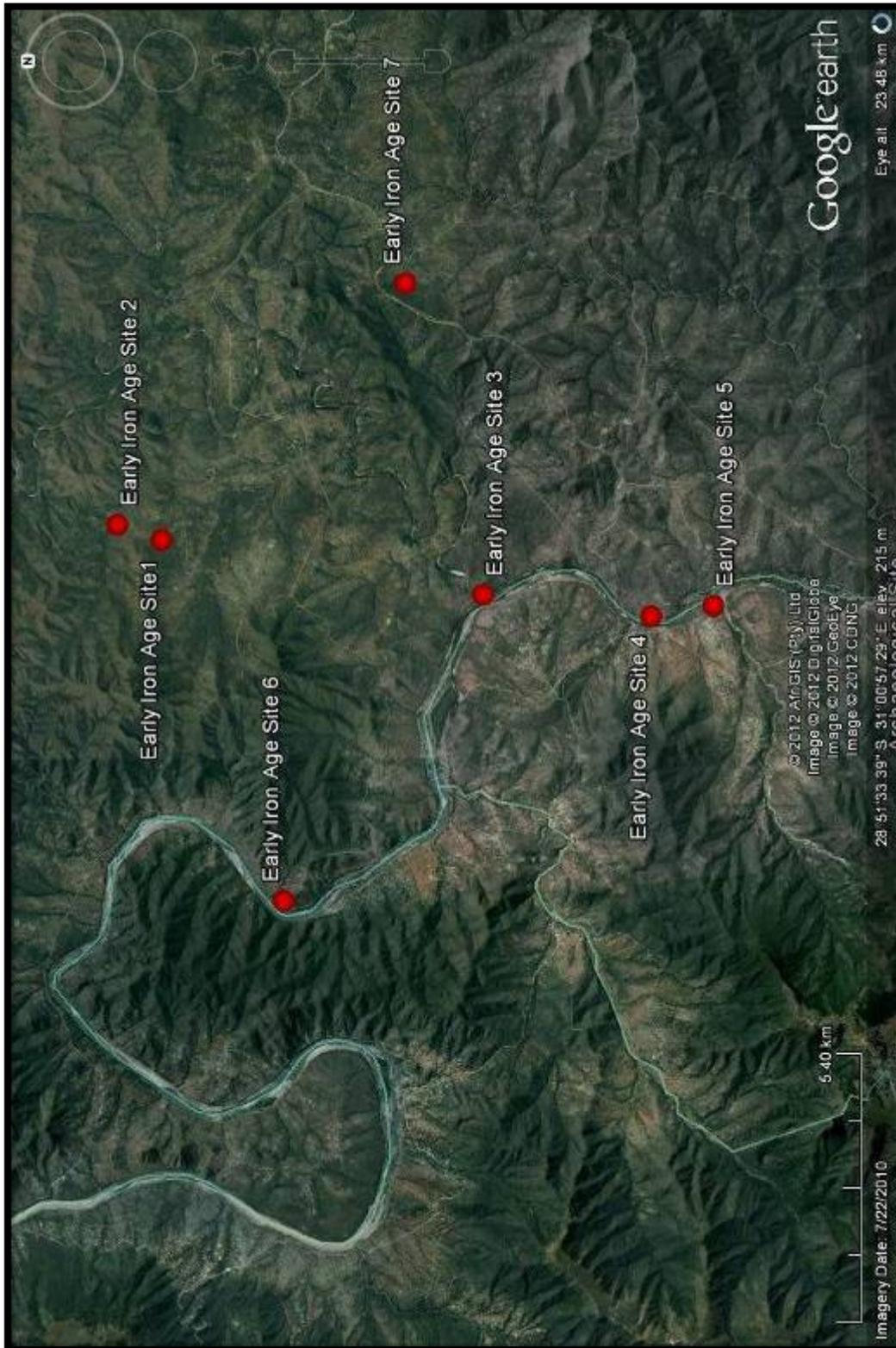


Figure 2. Google aerial photograph showing the distribution of heritage sites in the project area.

5 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

Seven heritage sites occur within in the project area (Fig 2). These have all been identified as Early Iron Age Sites. Early Iron Age sites are typically located on the alluvial and colluvial soils adjacent to the large east flowing rivers of the eastern seaboard – below 1000m altitude (Huffman 2007). Their locality therefore broadly corresponds with the proposed Nsuze Irrigation Scheme that is also situated directly adjacent to the Thukela and Nsuze Rivers. The coordinates and heritage rating of these heritage sites are provided in Table 2. All the Early Iron Age sites are protected by provincial heritage legislation and may not be damaged or altered.

Although contemporary grave sites do occur in the greater project area none of these occur within 120m from the river bank and within the actual footprint.

Table 2. Heritage sites and co-ordinates

No	Heritage Site	GPS Latitude and Longitude	Heritage Rating (after Table 3)
1	Early Iron Age Site 1 (Fig 3)	S28° 48' 27" E31° 02' 38"	Local grade 111A
2	Early Iron Age Site 2 (Fig 4)	S28° 47' 59" E31° 02' 49"	Local Grade 111A
3	Early Iron Age Site 3 (Fig 5)	S28° 51' 52" E31° 01' 58"	Local Grade 111A
4	Early Iron Age Site 4 (Figs 6, 7, 8, 9)	S28° 53' 40" E31° 01' 42"	Provincial (Grade 11)
5	Early Iron Age Site 5 (Fig 10)	S28° 54' 20" E31° 01' 50"	Provincial (Grade 11)
6	Early Iron Age Site 6 (Fig 11)	S28° 49' 43.93" E30° 58' 12.11"	Local Grade 111A
7	Early Iron Age Site 7 (Fig 12)	S28° 51' 02" E31° 05' 46"	Provincial (Grade 11)

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

5.1.1 Early Iron Age Site 1

This site has been documented in the 1980's by members of the then Natal Museum Archaeology Department. The provincial site number is: 2627. It is an open air occurrence with a scattering of typical Early Iron Age style potsherds. The site is situated adjacent to two contemporary Zulu homesteads in an acacia woodland context (Fig 3). It is uncertain how extensive this site is as most site features are covered by soil. However, it is not threatened by the proposed irrigation scheme development. Nevertheless, the developers must ensure that they maintain a buffer zone of at least 100m around this site.



Figure 3. Google aerial photograph showing the location of Early Iron Age Site 1.

5.1.2 Early Iron Age Site 2

This site is situated approximately 500m to the north of Early Iron Age Site 1. It is very similar to this site. Early iron Age site 2 has been documented in the 1980's by members of the then Natal Museum Archaeology Department. The provincial site number is: 2628. It is an open air occurrence with a scattering of typical Early Iron Age style potsherds. The site is situated in an open field adjacent to a stream and surrounded by contemporary Zulu homesteads (Fig 3). It is uncertain how extensive this site is as most site features are covered by soil. However, it is not threatened by the proposed irrigation scheme development. Nevertheless, the developers must ensure that they maintain a buffer zone of at least 100m around this site.

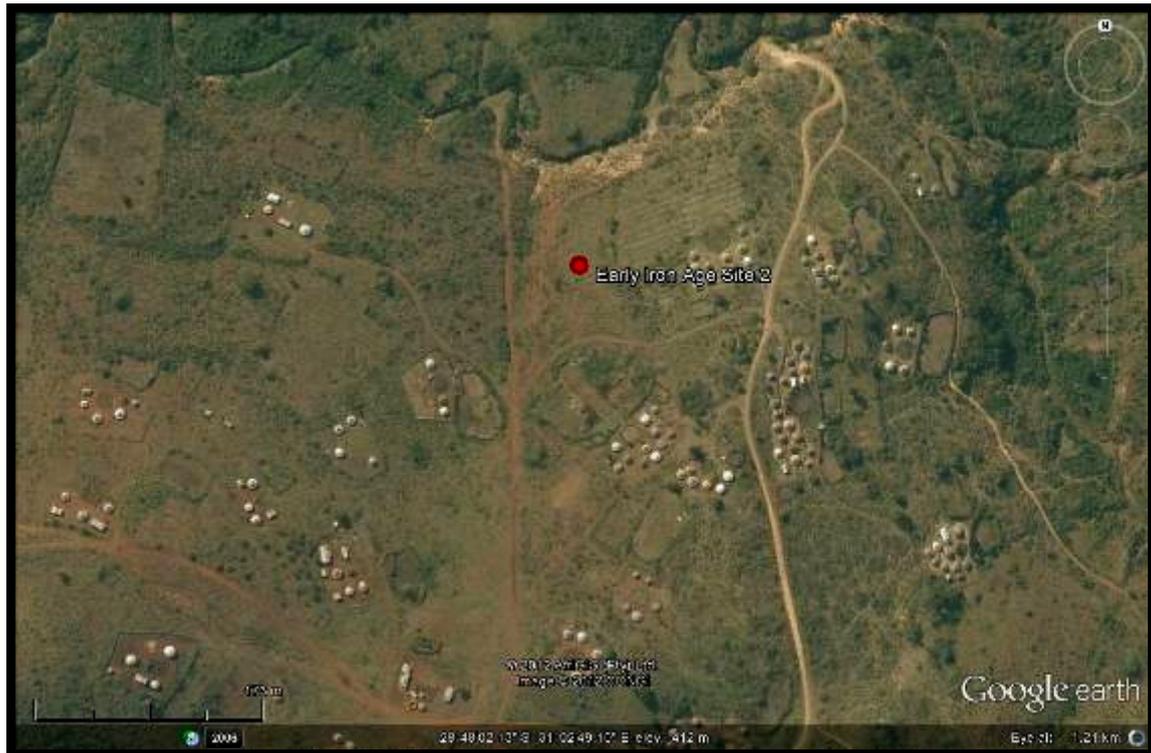


Figure 4. Google aerial photograph showing the location of Early Iron Age Site 2

5.1.3 Early Iron Age Site 3

This site is situated at the confluence of the Nsuzze and Thukela Rivers. It is recorded in the provincial site data base of the KwaZulu-Museum. Its provincial site number is: 2629. It was first located in the 1980's by an archaeologist then attached to the Ondini Museum – Mr Len Van Schalkwyk. The site consists of an open air scattering of potsherds and broken grinders over an area of approximately 60m x 40m. It is situated in a disturbed woodland context. It appears that many of the site features may be buried or covered by soil. This site is threatened by the proposed Nsuzze River Irrigation Scheme as it is positioned within one of the proposed cultivation areas (Figs 1 & 5). A buffer zone of at least 100m must be strictly maintained around this site.



Figure 5. Google aerial photograph showing location of Early Iron Age Site 3.

5.1.4 Early Iron Age Site 4

This site is very well known in the academic literature where it is called Ndongondwane (Huffman 2007). The provincial heritage site number is 2608. It is situated to the south of Early Iron Age Site 3 adjacent to the road D1640 and a bridge over the Thukela River (Figs 5 – 8). The site is situated in a disturbed field, of approximately 100m x 100m, that is presently used for firewood collecting and cattle grazing by the local community. Ndongondwane has been systematically excavated by archaeologists over three decades. Many of the typical Iron Age features, such as refuse pits and hut floors, have been covered by soil. However, systematic excavation of this site has led to new academic insights relating to the spatial use of Early Iron Age settlement. The site is also the type site for Ndongondwane style pottery that occurs on various Early iron Age sites in KwaZulu-Natal and the Eastern Cape. It is arguable the most important Early Iron Age site in KwaZulu-Natal. It has been researched by archaeologists Jannie Loubser in the early 1980's, by Len Van Schalkwyk in the late 1980's (as part of his MA thesis) and more recently by a Canadian team under the directorship of J Greenfield (ibid). This site is threatened by the proposed Nsuze River Irrigation Scheme as it is positioned within one of the proposed cultivation areas (Figs 1, 2 , 5 & 6). A buffer zone of at least 100m must be strictly maintained around this site.



Figure 6. Google aerial photograph showing the location of Early Iron Age Site 4 (Ndongondwane)



Figure 7. View over the Ndongondwane Site. Most of the archaeological features are buried and not visible for the ordinary person.



Figure 8. Some Early Iron Age potsherds are visible on the surface at Ndondondwane



Figure 9. The remains of an Early Iron Age refuge pit.



Figure 10. Broken Early Iron Age lower grinder.

5.1.5 Early Iron Age Site 5

This site occurs about 1km south of Early Iron Age Site 4 (Ndondondwane) adjacent to the Thukela River. It was located in the 1980's by archaeologist Len Van Schalkwyk who also subsequently excavated the site (Van Schalkwyk 1994a). The provincial number for this site, also called Wosi in the literature is: 2624. It was a village in Iron Age times and excavations yielded pottery, grindstones, as well as faunal and botanical remains. Some potsherds are still visible on the surface of the site. The site is situated in a woody context adjacent to the Thukela River. Some cultivated fields utilised by Zulu-speaking subsistence farmers occurs close by (Fig 12). It is uncertain how extensive this site is as most site features are covered by soil. However, it is not threatened by the proposed irrigation scheme development as it occurs too far south. Nevertheless, the developers must ensure that they maintain a buffer zone of at least 100m around this site.

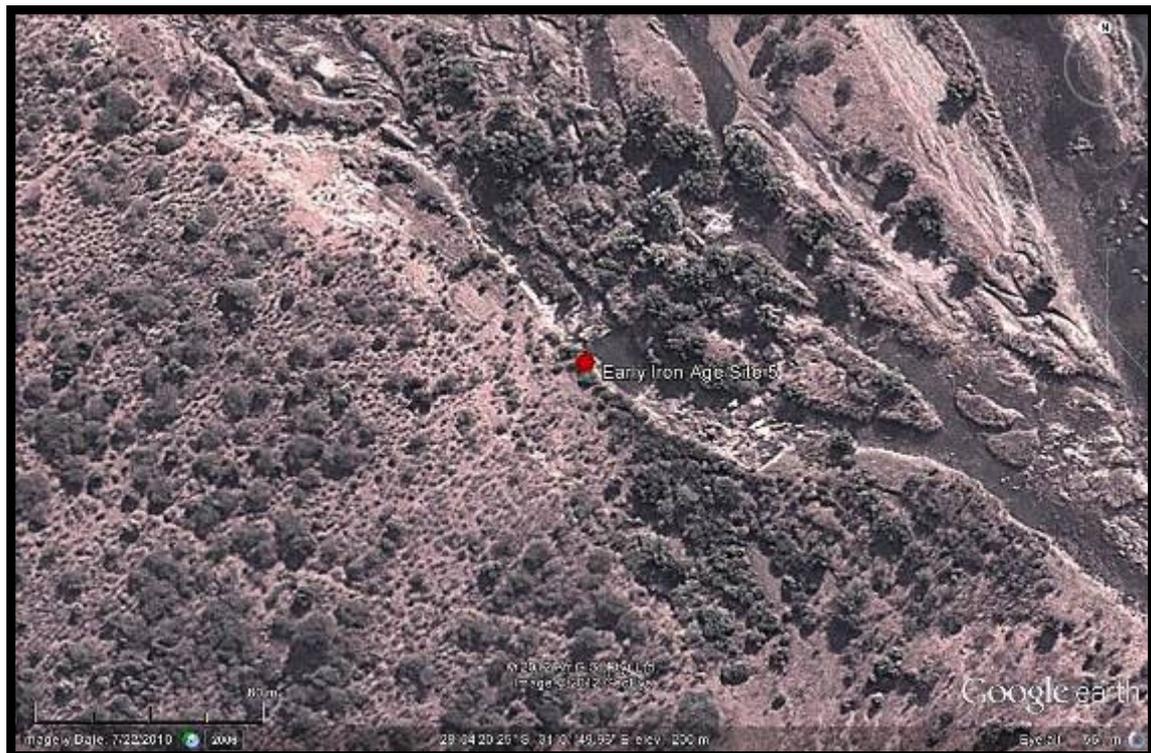


Figure 11. Google aerial photograph showing the location of Early Later Iron Age Site 5 or Wosi adjacent to the Thukela River.

5.1.6 Early Iron Age Site 6

This site is not listed in the provincial data base of archaeological sites in KwaZulu-Natal. The consultant found a few pieces of very fragmented Early Iron Age potsherds on the surface. It is possible that more archaeological artefacts and remains are buried under the soil. However, the location of the site is very typical of Early Iron Age site settings and a substantial Early Iron Age village is most probably hidden under the surface. It is rated as significant and will therefore be protected by heritage legislation. Some Zulu homesteads occur to the east of the site but there is no evidence for any archaeological disturbance of the area (Fig 12). The site is situated in the development zone of the proposed Nsuze Irrigation Scheme. It is therefore important to maintain a buffer zone of 100m around the site.

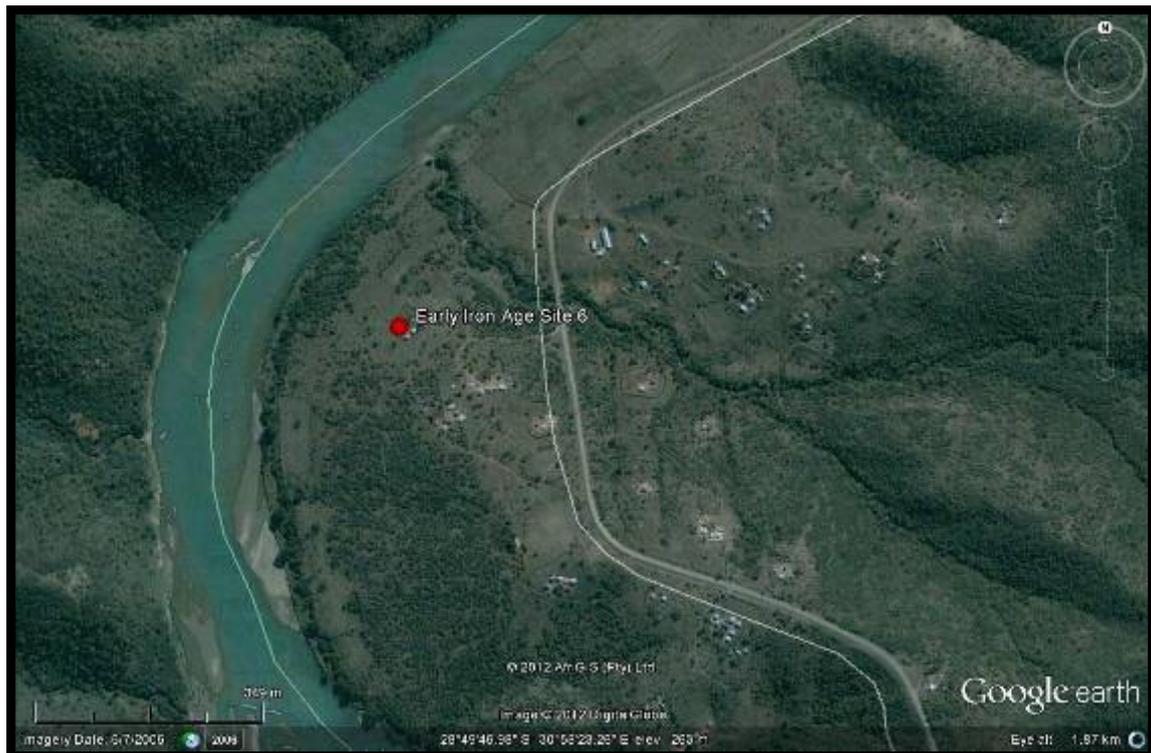


Figure 12. Google aerial photograph showing the locality of Early Iron Age Site 6.

5.1.7 Early Iron Age Site 7

This site, also called Mamba in the academic literature, is listed in the provincial heritage data base as site number 2614. It was located and excavated by Len Van Schalkwyk in the 1980's (Van Schalkwyk 1994b). He found a prehistoric iron smelting industrial complex on the site. Large quantities of iron were smelted on this terrain. Slag and furnace pieces still abound on the surface of the site. This site is located some distance from other Early Iron Age sites - most probably as iron smelting was a secretive affair and taboo for most people of the village (Fig 13). It is situated adjacent to a woody valley. The abundance of hard woods would have been a prerequisite for the location of a smelting area in the past. A Zulu homestead occurs about 60m from the site but no disturbance of archaeological remains has been noted. This site is rated as highly significant due to its uniqueness and the fact that it forms part of the Early Iron Age cultural landscape of the Central Thukela Basin. Although not situated in the immediate footprint of the proposed irrigation scheme it is situated nearby. A buffer zone of at least 100m must be maintained around the site.

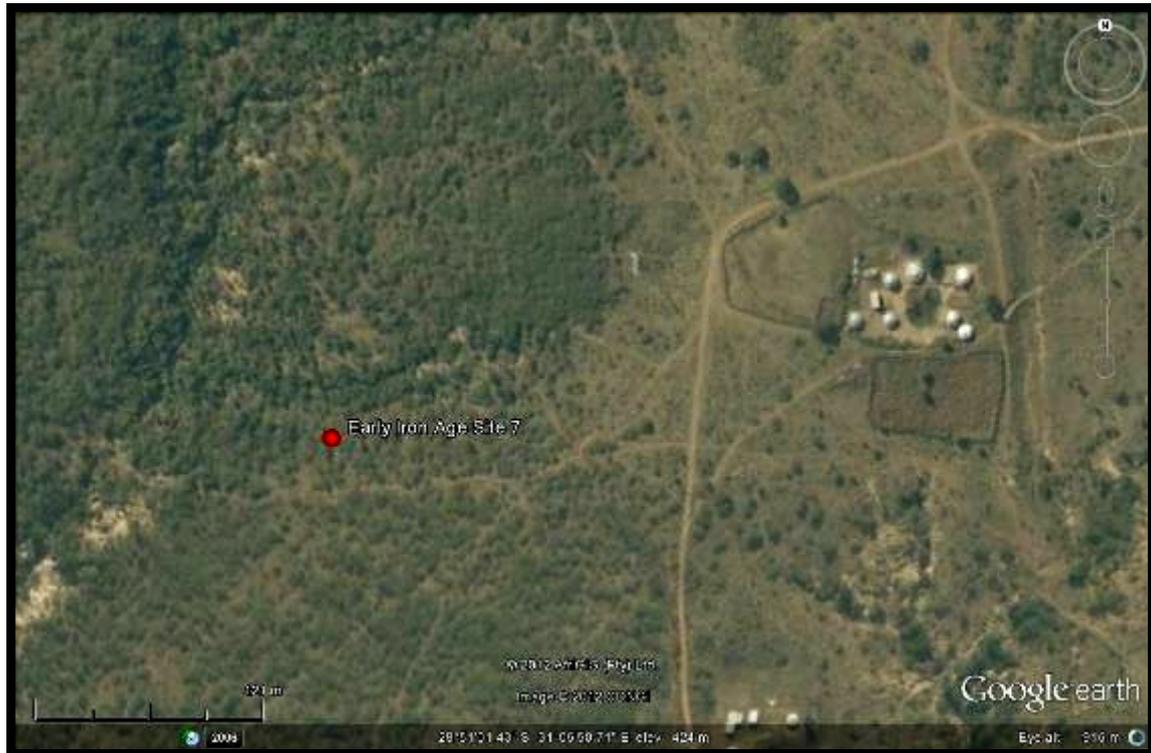


Figure 13. Google aerial photograph showing the location of Early Iron Age Site 7 (Mamba).

5.2 Field Rating

The field rating criteria for Early Iron Age sites 4, 5, and 7 as formulated by SAHRA (Table 3) is given as Provincial (Grade 11) (Table 2). In other words these sites are regarded as provincially significant. They have all been excavated and researched in the past and have contributed significantly to our understanding of Early Iron Age life ways in southern Africa and KwaZulu-Natal in particular. They also form part of a unique Early Iron Age Cultural Landscape. These sites may not be altered or destroyed under any circumstances. . The remainder of Early Iron Age sites in the project area have all been rated as Generally Protected A (Table 2). They need to be thoroughly recorded, by a qualified archaeologist, before they can be destroyed or altered. A second phase heritage impact assessment under the auspices of the local heritage body, Amafa, will be required.

6 RECOMMENDATIONS

- A buffer zone of 100m must be maintained around all the Early Iron Age sites identified. Any disturbance of these sites would be illegal and punishable by law.
- It is also suggested that a qualified archaeologist monitor the proposed Nsuze Irrigation Scheme and be on site when the area is developed.
- Early Iron Age Sites 4, 5, and 7 have been highly rated and may not be destroyed or altered under any circumstances.
- Mitigation may be applied for in the case of Early Iron Age sites 1,2,3 and 6 and a second phase archaeological impact study be initiated. However, this would be the less preferred option.
- It should also be pointed out that the KwaZulu-Natal Heritage Act requires that operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities.

7 RISK PREVENTATIVE MEASURES ASSOCIATED WITH CONSTRUCTION

Strictly maintain a 100m buffer zone around all the identified heritage sites. Only use established roads. No access roads may be constructed unless a second phase heritage impact assessment is initiated.

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