REVISED REPORT: PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED ALBANY WIND ENERGY FACILITY (WEF) AND ASSOCIATED INFRASTRUCTURE, SITUATED NEAR GRAHAMSTOWN, MAKANA LOCAL MUNICIPALITY, SARAH BAARTMAN DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE.

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NOTE: The phase 1 archaeological impact assessment for the proposed Albany WEF was conducted in May 2018. A revised report was compiled during May 2019 that reflected the revised layout which was referred to as the "scoping layout". The scoping layout still proposed the establishment of 66 turbines on the same farm portions although most of the original turbine positions had been changed. Several changes to last revised layout of the Albany WEF have been made. This report reflects the latest revised layout (2020).

The phase 1 archaeological impact assessment was required as a requisite of the National Heritage Resources Act 25 of 1999, Section 38 (1)(c)(i):

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as −
(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
(c) any development or other activity which will change the character of the site −
(i) exceeding 5000 m^2 in extent

The reports follow the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for compiling a Phase 1 Archaeological Impact Assessment.

1. EXECUTIVE SUMMARY

1.1. Purpose of the Study

The phase 1 archaeological impact assessment for the proposed Albany WEF was conducted in May 2018. A revised report was compiled during May 2019 that reflected the revised layout which was referred to as the "scoping layout". The scoping layout still proposed the establishment of 66 turbines on the same farm portions although most of the original turbine positions had been changed. Several changes to last revised layout of the Albany WEF have been made. This report reflects the latest revised layout (2020).

The purpose of the study revises the previous scoping layout (2019) in comparison to the currently revised layout of the proposed Albany Wind Energy Facility (WEF) and associated infrastructure situated near Grahamstown, Makana Local Municipality, Sarah Baartman District Municipality, Eastern Cape Province.

The original survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimize possible damage to the archaeological heritage. The revision of the previous of the previous layout and current layout will confirm that the changes made will have not negative impact on the archaeological and other heritage resources identified during the original survey conducted in 2018.

1.2. Brief Summary of Findings

Middle Stone Age (MSA) stone artefacts occurred in various locations over the proposed development area within the exposed and disturbed surface areas. This would generally be expected as the immediate and wider region is rich in the occurrence of Middle Stone Age as well as Early Stone Age archaeological material. It is possible that stone artefacts will occur between the surface and 50 cm – 80 cm below the ground.

Several stone packed features were also recorded within the proposed development area. These included stone packed / walled kraals, an historical stone packed / walled farm boundary as well as the remains of foundations.

The built environment component included historical ruins that included farmhouses, other buildings and a church. A graveyard is associated with the church.

An old historical wagon route was pointed out by the owner of the Farm Grobbeler's Kloof situated at the entrance to the farm south off the N2 national, running parallel to N2 national road.

1.3. Recommendations

The overall area is considered as having a *low archaeological heritage significance and a medium-high heritage significance*. The following recommendations must be considered before development continues:

1. An archaeological walk-through assessment must be conducted when the final layout of the Albany wind energy facility is determined. The walk-through assessment will be conducted to assess changes in the positions of the turbines, access roads and cabling between the turbines as well as other associated infrastructure relative to the original footprint. Further mitigatory recommendations may be necessary if any of the changes may impact negatively upon heritage resources.

2. The stone packed features and stone walling must be noted and a no-impact / no-development buffer of 20 m be established. Potential negative impact on the stone walling (BHSW2) is of concern. It was recommended that an alternative access road

be constructed south of the stone walling to access the five turbines (WTG 70, WTG 3, WTG 5, WTG 7, WTG 9) on the northern boundary of the Farm Glen Craig 241.
(It is noted that the latest revised layout has followed this recommendation and the road has been realigned to the south running parallel to the stone walling.)

3. If any of the buildings are planned to be demolished during the course of development, a built environment specialist, historical architect should be appointed to assess the buildings proposed for demolition.

4. If concentrations of pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

5. A person must be trained as a site monitor to report any archaeological sites found during the development. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

6. The developer / ECO / or construction manager must apply to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for a destruction permit to disturb the stone artefact scatters prior to the commencement of the development.

1.4. Declaration of Independence and Qualifications

This section confirms a declaration of independence that archaeological heritage specialist, Ms Celeste Booth, has no financial or any other personal interests in the project for the proposed Albany Wind Energy Facility and associated infrastructure. Ms Celeste Booth was appointed on a strictly professional basis to conduct a Phase 1 Archaeological Impact Assessment in line with the South African national heritage legislation, the National Heritage Resources Act 25 of 1999 (NHRA 25 of 1999) and in response to the recommendations provided by the Department of Environmental Affairs and according to the environmental impact assessment regulations.

Ms Celeste Booth (BSc Honours: Archaeology) is an archaeologist who has had ten years of full-time experience in Cultural Resource Management in the Eastern Cape and sections of the Northern Cape and Western Cape. Ms Booth has conducted several Archaeological

Desktop Studies and Phase 1 Archaeological Impact Assessments within the Eastern Cape and in the Karoo region across the Eastern Cape, Northern Cape and Western Cape.

2. BACKGROUND INFORMATION

Albany Wind Power (Pty) Ltd, plans to develop, construct and operate a Wind Energy Facility (WEF) approximately seven kilometres east of Grahamstown in the Eastern Cape Province. The project site is situated in Makana Local Municipality which forms part of the Sarah Baartman District Municipality.

According to the data recorded by the developer in the area, this project site appears to have favourable wind conditions to operate a wind farm.

The original layout (2018) of the proposed Albany WEF consisted of up to 66 turbines, the last revised layout (2019) also consisted of up to 66 turbines, however, several new locations were identified and some of the turbines shifted slightly from their original position, each capable of generating approximately 4.5 Mega Watts (MW) of power.

The latest revised layout (2020) will consist up 43 turbines with a generating capacity of approximately 6 Mega Watts (MW) of power each and total generating capacity of 297 MW.

The WEF will also include a short powerline and switching station in order to connect the WEF to the existing Eskom Substation (this powerline will be applied for in a separate application in environmental application process which will run parallel to WEF application). The current layout allows for a maximum generating output of up to 297 MW, but the final design may be reduced dependant on the outcome of the specialist studies undertaken during this Environmental Impact Assessment Process. The turbine footprints and associated facility infrastructure (internal access roads, substations, construction compound, batching plant and operations building) will potentially cover an area of approximately 60 ha depending on the final layout design should the project proceed to the construction phase.

The Albany WEF will include the following infrastructure:

- Temporary infrastructure including a site camp and a laydown area of approximately 30 m^2 per turbine (all to be rehabilitated post construction);
- Up to 43 wind turbines with a rotor diameter of up to 170 m, a hub height of up to 130 m and blade length of up to 85 m with a total height of up to 215 m;
- Foundations (up to 550 m^2) for each wind turbines;
- A laydown area next to the locations of the proposed wind turbines (3,900 m^2 for crane hardstand per turbine);
- 25 m^2 area for switchgear and/or transformer at each turbine;

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2.3. Terms of reference

The phase 1 archaeological impact assessment for the proposed Albany WEF was conducted in May 2018. A revised report was compiled during May 2019 that reflected the revised layout which was referred to as the "scoping layout". The scoping layout still proposed the establishment of 66 turbines on the same farm portions although most of the original turbine positions had been changed. Several changes to last revised layout of the Albany WEF have been made. This report reflects the latest revised layout (2020).

The purpose of the study revises the previous scoping layout (2019) in comparison to the currently revised layout of the proposed Albany Wind Energy Facility (WEF) and associated infrastructure situated near Grahamstown, Makana Local Municipality, Sarah Baartman District Municipality, Eastern Cape Province.

The original survey was conducted to:

- Establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features;
- Identify and map all heritage resources in the area affected;
- Assess of the significance of such resources in terms of the heritage assessment criteria;
- Assess the impact of development on such heritage resources; and
- Evaluate the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development; and
- Make recommendations to minimize possible damage to the archaeological heritage.

The revision of the previous layout and current layout will confirm that the changes made will have not negative impact on the archaeological and other heritage resources identified during the original survey conducted in 2018.

3. ARCHAEOLOGICAL BACKGROUND

The pre-colonial archaeological record of the Grahamstown region and surrounds includes traces of the Early Stone Age (ESA) (1.5 million − 250 000 years ago), Middle Stone Age (MSA) (250 000 − 30 000 years ago), Later Stone Age (LSA) (30 000 − recent), Khoekhoen pastoralists, and Later Iron Age farming communities within the last 2000 years. The historical archaeological record is relatively extensive owing to the area being infiltrated before the arrival of the 1820 British Settlers and then later settled by the 1820 British Settlers and the subsequent features established in relation to the British − Xhosa Wars.

The archaeological literature and research within this area is limited and incomplete, although a few sites (pre-colonial and historical) have been excavated in the surrounding Grahamstown area. The Albany Museum Site Recording Database was consulted for archaeological sites nearby and within the surrounding area of the proposed area for the mining right application. Several archaeological and heritage impact assessments have been conducted near to and within the surrounding area of the proposed area for the N2 National Route upgrade, these have been consulted to assist in the awareness of the heritage resources that occur within the region (Van Ryneveld 2012a-b; Nilssen 2011; Binneman & Booth 2008, 2009; Booth 2011; Way-Jones 2011; Anderson 2009, 2011).

3.1. The Early Stone Age (ESA) (1.5 million-250 000 years ago)

The Early Stone Age that ranges between 1.5 million and 250 000 years ago refers to the earliest that *Homo sapiens sapiens* predecessors began making stone tools. The earliest stone tool industry was referred to as the Olduwan Industry originating from stone artefacts recorded at Olduvai Gorge, Tanzania. The Acheulian Industry, the predominant southern African Early Stone Age Industry, replaced the Olduwan Industry approximately 1.5 million years ago, is attested to in diverse environments and over wide geographical

areas. The hallmark of the Acheulian Industry is its large cutting tools (LCTs or bifaces), primarily handaxes and cleavers. Bifaces emerged in East Africa more than 1.5 million years ago (mya) but have been reported from a wide range of areas, from South Africa to northern Europe and from India to the Iberian coast. The end products were similar across the geographical and chronological distribution of the Acheulian techno-complex: large flakes that were suitable in size and morphology for the production of handaxes and cleavers perfectly suited to the available raw materials (Sharon 2009).

The most well-known Early Stone Age site in southern Africa is Amanzi Springs, situated about 10km north-east of Uitenhage, near Port Elizabeth (Deacon 1970). In a series of spring deposits a large number of stone tools were found *in situ* to a depth of 3-4m. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old. Other Early Stone Age sites that contained preserved bone and plant material include Wonderwerk Cave in the Northern Province, near Kimberly and Montagu Cave in the Western Cape, near the small town of Montagu (Mitchell 2007). Early Stone Age sites have also been reported in the foothills of the Sneeuberge Mountains (in Prins 2011). Systematic Early Stone Age research is currently being carried out in the Sundays River Valley which will add to the lack of information of this period within the surrounding area.

According to S.L. Hall (1985), classic Early Stone Age handaxes and cleavers had been found near the Grahamstown golf course that probably dates between 1 million and 200 000 years ago in comparison to similar artefacts documented throughout southern Africa.

3.2. Middle Stone Age (MSA) (250 000 – 30 000 years ago)

The Middle Stone Age spans a period from 250 000 - 30 000 years ago and focuses on the emergence of modern humans through the change in technology, behaviour, physical appearance, art and symbolism. Various stone artefact industries occur during this time period, although less is known about the time prior to 120 000 years ago, extensive systemic archaeological research is being conducted on sites across southern Africa dating within the last 120 000 years (Thompson & Marean 2008). The large handaxes and cleavers were replaced by smaller stone artefacts called the Middle Stone Age flake and blade industries. Surface scatters of these flake and blade industries occur widespread across southern Africa although rarely with any associated botanical and faunal remains. It is also common for these stone artefacts to be found between the surface and approximately 50-80cm below ground. Fossil bone may in rare cases be associated with Middle Stone Age occurrences (Gess 1969). These stone artefacts, like the Earlier Stone Age handaxes are usually observed in secondary context with no other associated archaeological material.

From as early as 1915, stone artefacts which were of a "peculiar character", referred to as hand-axes and tortoise-cores by Reginald A. Smith, were plentiful within the Victoria West district. The latter were only found in certain areas and the hand-axes occurred in

conjunction with the cores or without them (Smith 1919). During the 1920's, A.H.J. Goodwin (1926, 1946), identified the Victoria West stone artefact industry, presumably referring to those artefacts with a "peculiar character" found within the district, the wider Karoo region, as well as along the Vaal River. They comprised mainly of stone tools that had been manufactured using a prepared core technique and were regarded as being transitional between the Early Stone Age and Middle Stone Age. Recent research has established that the Victoria West cores were the "evolutionary step" towards the Levallois prepared core industry, indicating an outward spread of this technological change (Lycett 2009).

The Middle Stone Age is distinguished from the Early Stone Age by the smaller-sized and distinctly different stone artefacts and *chaîne opératoire* (method) used in manufacture, the introduction of other types of artefacts and evidence of symbolic behaviour. The prepared core technique was used for the manufacture of the stone artefacts which display a characteristic facetted striking platform and includes mainly unifacial and bifacial flake blades and points. The Howiesons Poort Industry (80 000 - 55 000 years ago) is distinguished from the other Middle Stone Age stone artefacts: the size of tools are generally smaller, the range of raw materials include finer-grained rocks such as silcrete, chalcedony, quartz and hornfels, and include segments, backed blades and trapezoids in the stone toolkit which were sometimes hafted (set or glued) onto handles. In addition to stone artefacts, bone was worked into points, possibly hafted, and used as tools for hunting (Deacon & Deacon 1999).

Other types of artefacts that have been encountered in archaeological excavations include tick shell (*Nassarius kraussianus*) beads, the rim pieces of ostrich eggshell (OES) water flasks, ochre-stained pieces of ostrich eggshell and engraved and scratched ochre pieces, as well as the collection of materials for purely aesthetic reasons. Although Middle Stone Age artefacts occur throughout the Eastern Cape, the most well-known Middle Stone Age sites include the type-site for the Howiesons Poort stone tool industry, Howiesons Poort (HP) rock shelter, situated close to Grahamstown and Klasies River Mouth Cave (KRM), situated along the Tsitsikamma coast. Middle Stone Age sites are located both at the coast and in the interior across southern Africa. Scatters of Middle Stone Age stone artefacts are known to occur within the surrounding area were these have been recorded in archaeological and heritage impact assessments

The site of Howieson's Poort is situated about ten kilometres south-west of Grahamstown and is the archetype site for a distinctive type of Middle Stone Age stone tool with similar specimens having been documented at the Kasouga River Mouth and at Bell in the Peddie District (van Riet Lowe *et al.* 1929*)*. The Middle Stone Age in the region has been dated to between 125 000-75 000 years ago as it coincides with the last interglacial period when climatic and environmental conditions were similar to those of the present interglacial. It is possible, although lacking in evidence, that seasonal movement between the Cape folded mountains behind Grahamstown and the coast took place (Hall 1985).

The Albany Museum Database provides locations of several Middle Stone Age stone artefact scatters and sites at the coast and inland. Scatters of Middle Stone Age stone artefacts have also been documented by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments ranging between Grahamstown and the coastline and the surrounding east-west region (Van Ryneveld 2012a; Nilssen 2011).

3.3. The Later Stone Age (LSA) (30 000 – recent) and Pastoralism within the last 2000 years

3.3.1. The Later Stone Age

The Later Stone Age (LSA) spans the period from about 20 000 years ago until the colonial era, although some communities continue making stone tools today. The period between 30 000 and 20 000 years ago is referred to as the transition from the Middle Stone Age to Later Stone Age; although there is a lack of crucial sites and evidence that represent this change. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens sapiens*, and in Europe, had already replaced *Homo Neanderthalensis*.

The Later Stone Age is marked by a series of technological innovations, new tools and artefacts, the development of economic, political and social systems, and core symbolic beliefs and rituals. The stone toolkits changed over time according to time-specific needs and raw material availability, from smaller microlithic Robberg (20/18 000-14 000ya), Wilton (8 000-the last 500 years) Industries and in between, the larger Albany/Oakhurst (14 000-8 000ya) and the Kabeljous (4 500-the last 500 years) Industries. Bored stones used as part of digging sticks, grooved stones for sharpening and grinding and stone tools fixed to handles with mastic also become more common. Fishing equipment such as hooks, gorges and sinkers also appear within archaeological excavations. Polished bone tools such as eyed needles, awls, linkshafts and arrowheads also become a more common occurrence. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2000 years that earthenware pottery was introduced, before then tortoiseshell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water. Decorative items like ostrich eggshell and marine/fresh water shell beads and pendants were made.

Hunting and gathering made up the economic way of life of these communities; therefore, they are normally referred to as hunter-gatherers. Hunter-gatherers hunted both small and large game and gathered edible plantfoods from the veld. For those that lived at or close the coast, marine shellfish and seals and other edible marine resources were available for the gathering. The political system was mainly egalitarian, and socially, hunter-gatherers lived in bands of up to twenty people during the scarce resource availability dispersal seasons and aggregated according to kinship relations during the abundant resource availability seasons. Symbolic beliefs and rituals are evidenced by the

deliberate burial of the dead and in the rock art paintings and engravings scattered across the southern African landscape.

Later Stone Age sites occur both at the coast (caves, rock shelters, open sites and shell middens) and in the interior (caves, rock shelters and open sites) across southern Africa. There are more than a few significant Later Stone Age sites in the Eastern Cape. The most popular are the type sites for the above-mentioned stone artefact industries, namely Wilton (for the Wilton Industry), Melkhoutboom (for the Albany Industry), both rock shelters situated to the west of Grahamstown, and Kabeljous Rock Shelter (for the Kabeljous Industry) situated just north of Jeffreys Bay.

The majority of archaeological sites found in the area would date from the past 15 000 years where San hunter-gatherers inhabited the landscape living in rock shelters and caves as well as on the open landscape. These latter sites are difficult to find because they are in the open veld and often covered by vegetation and sand. Sometimes these sites are only represented by a few stone tools and fragments of bone. The preservation of these sites is poor and it is not always possible to date them (Deacon and Deacon 1999). Caves and rock shelters, however, in most cases, provide a more substantial preservation record of pre-colonial human occupation.

Between 75 000 and 15 000 years ago there seems to have been no human occupation within the Grahamstown region owing to the worsening climatic conditions. From about 15 000 years ago populations of hunter-gatherers re-established themselves within the region as is evidenced in the preserved Later Stone Age occupational deposits of the few caves and rock shelters that have been excavated, namely Melkhoutboom in the Suurberg (Deacon 1976), Wilton near Alicedale, Uniondale about 20km north-east of Grahamstown (Leslie-Brooker 1987), Springs Rock Shelter and Glen Craig situated immediately north and north-east of Grahamstown, and Edgehill and Welgeluk located on the Koonap River some 40km to the north of Grahamstown (Hall 1985). In addition, most of these sites and many more caves and shelters in the surrounding Grahamstown area contain rock art.

The Albany Museum Database holds records of several Later Stone Age sites that have been recorded between Grahamstown and the coastline as well as within the surrounding region east-west of the proposed development site. Most of these archaeological remains occur in as shell midden along the coastline, as surface scatters, as well as within caves and rock shelters, where available and long the rivers. Scatters of Later Stone Age stone artefacts have also been documented by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments ranging between (Nilssen 2011; Anderson 2009).

3.3.2. Pastoralism

Until 2000 years ago, hunter-gatherer communities traded, exchanged goods, encountered and interacted with other hunter-gatherer communities. From about 2000

years ago the social dynamics of the southern African landscape started changing with the immigration of two 'other' groups of people, different in physique, political, economic and social systems, beliefs and rituals. Relevant to the study area, one of these groups, the Khoekhoen pastoralists or herders entered southern Africa with domestic animals, namely fat-tailed sheep and goats, travelling through the south towards the coast. They also introduced thin-walled pottery common in the interior and along the coastal regions of southern Africa. Their economic systems were directed by the accumulation of wealth in domestic stock numbers and their political make-up was more hierarchical than that of the hunter-gatherers. The most significant Khoekhoen pastoralist sites in the Eastern Cape include Scott's Cave near Patensie (Deacon 1967), Goedgeloof shell midden along the St. Francis coast (Binneman 2007) and Oakleigh rock shelter near Queenstown (Derricourt 1977). Often, these archaeological sites are found close to the banks of large streams and rivers.

The Albany Museum Database holds records of several Later Stone Age sites that have been recorded along coastline identified by the presence of coastal thin-walled and mostly undecorated earthenware pottery. Pastoral occurrences along the coastline have also been documented by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments (Binneman 2006).

3.4. Human Remains

It difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials.

The Albany Museum Database holds records of human remains that have been exposed and collection for conservation and curation. Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments have also recorded formal historical cemeteries and informal burials (Van Ryneveld 2008) as well as on the farm Tower Hill (Nilssen 2011) and have attended to instances of exposed human remains during construction activities of development (Van Ryneveld 2010).

3.5. Rock Art (Paintings and Engravings)

Rock art is generally associated with the Later Stone Age period mostly dating from the last 5000 years to the historical period. It is difficult to accurately date the rock art without destructive practices. The southern African landscape is exceptionally rich in the distribution of rock art which is determined between paintings and engravings. Rock paintings occur on the walls of caves and rock shelters across southern Africa. Rock engravings, however, are generally distributed on the semi-arid central plateau, with most of the engravings found in the Orange-Vaal basin, the Karoo stretching from the Eastern

Cape (Cradock area) into the Northern Cape as well as the Western Cape, and Namibia. At some sites both paintings and engravings occur in close proximity to one another especially in the Karoo and Northern Cape. The greatest concentrations of engravings occur on the andesite basement rocks and the intrusive Karoo dolerites, but sites are also found on about nine other rock types including dolomite, granite, gneiss, and in a few cases on sandstone (Morris 1988). Substantial research has also been conducted in the Western Cape Karoo area around Beaufort West (Parkington 2008).
The Albany Museum Database holds records of several rock art painting sites that have been recorded between Grahamstown, Fort Beaufort, Peddie, and the coastline. One additional rock art site has been recorded by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments east of Grahamstown (Nilssen 2011).

One rock art site is situated along the banks of the Botha's River that occurs on the Farm Glen Craig 240.

3.6. Historical Background

Grahamstown and the surrounding region, historically referred to as the Albany District or the Zuurveld, has an extensive and richly written history, mostly over the last 250 years from when travellers and trekboere entered into the area and later with the occupation of the 1820 British Settlers and skirmishes with AmaXhosa and local indigenous inhabitants. Below is a brief history of occupation, settlements, warfare and skirmishes that occurred on the Zuurveld / Albany landscape.

During the period 1717 − 1799 stock farmers of predominantly European descent expanded from a relatively compact region of the southwest Cape into a vast unknown area extending almost as far as the Orange River in the north to the Great Fish River in east. These stockman, or trekboere, moved on to the frontier for political, social and economic reasons (Guelke 1976). The trekboer had reached and sparsely settled the eastern frontier by 1799.

The year 1779 is of importance in the history of South Africa, because it witnessed the first clashes between Europeans and Xhosa, a Bantu-speaking people who occupied the territory along and to the east (Guelke 1976). This year marked the first of nine Frontier Wars between Europeans and the AmaXhosa that would take place on the eastern frontier. The First Frontier War (1789 − 1781) sparked by cattle theft by the AmaXhosa along the south-eastern border ensued a series of clashes between the AmaXhosa and Boers. The Boers abandoned their farms at the Bushmans River during 1779. Adriaan van Jaarsveld was appointed field commandant of the eastern frontier in October 1780. He had captured a large number of cattle from the AmaXhosa and claimed to have driven the AmaXhosa out of the Zuurveld by July 1781.

The Second Frontier War (1789-1793) was perpetuated by the increase of the AmaXhosa penetration into the Zuurveld owing to war amongst themselves. Peace between AmaXhosa and the Boers was eventually reached in 1793.

During 1798 the Boer farmers re-occupied the northern part of the Zuurveld whilst many AmaXhosa clans remained in the Southern Zuurveld. With the continual warring between Gaika and Ndlambe in 1799 stock theft and employment of AmaXhosa increased tensions. In January 1799 a second rebellion occurred in Graaff Reinet that precipitated the Third Frontier War (1799 – 1803). In April 1799 discontented Khoikhoi revolted, joined by the AmaXhosa in the Zuurveld, and started attacking European settled farms, sparking a series of clashes between them and mainly the Boers. In 1801, Khoikhoi bands, under Klaas Stuurman, Hans Trompetter and Boesak carried out widespread raids with farms being bedaubed. An inclusive peace was eventually arranged in 1803.

The British first arrived in the area in 1798 (Wells 2009). It was only in 1809 when Lt-Col Richard Collins toured the eastern frontier and recommended that the AmaXhosa be expelled from the Zuurveld which should be secured by European settlement and that the area between the Fish and Keiskamma Rivers be regarded as 'neutral ground' with no occupation by Europeans or AmaXhosa. By January / February 1812, the end of the Fourth Frontier War (1811 – 1812), Colonel John Graham had expelled 20 000 Gqunukwebes and Ndlambes from the Zuurveld and driven them across the Fish River. However, the original residents of the area were not so understanding and made repeated efforts to return to their ancestral lands.

The site for Grahamstown was chosen in 1812 by Lt-Colonel Graham. Initially the Commander of the Regiment, Colonel John Graham, decided to establish his headquarters on the loan farm Noutoe, now known as Table Farm, but at the recommendation of Ensign Andries Stockenstrom it was moved to the homestead of the loan farm De Rietfontein, belonging to Lucas Meyer (www.sahistory.org.za) Construction on the new headquarters, located on the site of the present Church Square, began in June 1812, and was named by Governor Cradock after Colonel Graham. Initially it was planned to develop Grahamstown as the new headquarters for the Hottentot Corps (www.sahistory.org.za). It was established primarily as the military headquarters of the Eastern frontier which was defined by the Great Fish River. He chose the site because of its good location on the spur of a hill between two streams. This would ensure an adequate water supply. It was formally proclaimed as Grahamstown on the 14 August 1812, not only as a military garrison but also as a civil station that was to be administered by a deputy-Landdrost, under the chief landdrost at Uitenhage (Gledhill *et al* 1975).

Between 1814 and 1815, Lord Charles Somerset was appointed Governor of the Cape in 1814. The British Government was not prepared to increase the army presence in the area, despite the army being unable to cope with the hostilities which were occurring almost daily on the frontier. Somerset put forward his idea of an immigration scheme and began to lobby for more people to be sent out to the Cape and to be settled in the Eastern

Cape in particular (King 2005). Plans for the village were drawn up in 1814, and by 1815 33 erven had been pegged and sold on auction.

In 1818, at the onset of the Fifth Frontier War (1818-1819) Gaika had been defeated by Ndlambe at Debe Nek and requested assistance from the Cape which resulted in the colonial forces invading the AmaXhosa territory in December 1818. By 1819, Ndlambe had gain defeated Gaika and went on, with a 10 000 strong army, to attack a small British garrison of about three hundred and fifty soldiers in Grahamstown. The amaXhosa were defeated and eventually driven out of the Zuurveld as far as the Kei River. In October 1819, Gaika became paramount chief and reached a verbal treaty with Somerset that the area between the Fish and Keiskamma Rivers (except Tyume Valley which remained AmaXhosa territory) be 'neutral ground'.

With the onset of the Fifth Frontier War in 1818, the British Government finally decided to take some action and appointed a Committee to investigate the feasibility of Somerset's settlement proposal. The Scheme as set out by the British Government had a three-fold purpose: To settle the disputed eastern frontier of the Cape of Good Hope with an agrarian farming community whose presence would discourage Xhosa pastoralists and cattle raiders from crossing the colonial boundary. To increase the English-speaking community in their newly acquired Colony; and to ease political tensions in Britain that had been stretched to breaking point with post-war unemployment, industrialisation and poor trade. Suddenly a way had opened up for the poor to be able to own some land and have a freedom which they were not experiencing in Britain with its various social classes from Royalty down to the common labourer. They would never own land in England and so the letters just poured in to the Home Office. (King, T. 2005). This would lead to the influx of British settlers throughout the 1820's. However, the scheme was never successful but there were still upwards of 300 subsistence or small−scale farmers in the 1830s (Marshall 2008) (*Graham's Town Journal*, 13 April 1832)

As early as 1829 land was set aside for a Khoekhoe "location" near the burial ground165. In theory, the segregation of Khoekhoe from the rest of the town was supposed to be to the former's advantage. The township soon developed slum conditions and attracted the hostility of some of the town's white inhabitants. (Marshall 2008). The conditions in the township were exacerbated after 1835 by the arrival of large numbers of Mfengu, or "Fingoes", in the town. Little attempt at managing the township was made until the 1840s. (Marshall 2008). The "Fingo Village", as the new township came to be called, was finally given official legal status in 1847, and marked the beginning of efforts to maintain closer control over the town's black residents. Theoretically Complaints about Africans walking through the town naked were frequent, and they were eventually required to wear European clothes in 1845 (Hunt in Marshall 2008). After the frontier wars between 1946 and 1953 the Fingo people were rewarded by agreement that they could have freehold title to land. In 1856, title deeds were given to Mfengu people in Fingo village (Gledhill *et el* 1975).

By 1834, the population of Grahamstown was estimated at 3500 (Gledhill *et el* 1975). By the mid-1840s, Grahamstown had grown from a ragged military encampment to a thriving small town. Its rapid development was a source of considerable pride to its inhabitants. (Marshall 2008). In the 1860s, for example, not only was the Khoekhoe and African township impoverished, but so too were some of the white working-class areas established in the 1820s (Gibbens 1982) (Marshall 2008).

In 1860, the military importance of Grahamstown declines due to Kei River becoming the agreed boundary of the Cape Colony (Gledhill *et el* 1975). However, in 1864, the Supreme Court for the Eastern Districts was seated in Grahamstown. The 1865 census indicated that Grahamstown had a population of 8,072 (www.sahistory.org.za).

Whatever its subsequent marginality, Grahamstown's aspirations had been high. For some fifty years, to the 1870s, it was the second largest town in South Africa, and towards the end of that period Grahamstown interests were the driving force behind a vigorous secession movement. But a moving frontier, the removal of the imperial garrison, and the town's relegation to a branch railway line signalled its declining importance, a condition exacerbated by the effect of the mineral discoveries. The development of Kimberley was largely responsible for the town's total population dropping from the 8 072 recorded in the census of 1865 to 6 903 in that of 1875' (Davidson 2000). In 1875, this population had dropped to 6,903 (www.sahistory.org.za).

By 1876, five major schools had been established in Grahamstown (Gledhill *et el* 1975) and Rhodes University was opened on 31 May 1904.

Ox wagons were the dominant mode of long-distance transport in South Africa for decades before railways began operating in the later nineteenth century. During the first thirty years of the railway era wagons continued to link the ports to the growing population concentrations inland. The wagon-building industry thrived in the 1880s at Paarl, Grahamstown, and King William's Town. (Pirie, G.H.).

By 1904 the population number stood at 13,887, of whom 7,605 were literate (www.sahistory.org.za).

In 1910 South Africa became a Union and was partly free from Colonial rule. South Africa only gained full independence from Britain in 1948 when it became a Republic under D.F. Malan, who won a surprise election in 1946. The Nationalist government retained power until 1994.

4. DESCRIPTION OF THE PROPERTY

4.1. Location data

A portion of the proposed area for the wind energy facility is situated on the Farms Glen Craig 240 (Botha's Hill) and The Orchards 233 (Botha's Ridge) situated north of Grahamstown on either side (east-west) of the R67 Grahamstown-Fort Beaufort road. The WEF layout, including the proposed substations, power line routes, the batching, construction compound and site office, then continues east of Grahamstown on either side (north-south) of the N2 Grahamstown-East London National Road situated on the Farms The Orchards 233, Colingham 226 situated north of the N2 National Road and Grobbelaar's Kloof 334, Green Hills 358, and Trentham Park 346 situated south of the N2 National Road. The proposed area stretches approximately 21.5 km east – west. 66 turbines are proposed to be established.

4.2. Maps

1:250 000 topographic map: 3326 Grahamstown (2003 Edition) (Figure 1)
1:50 000 topographic maps (not included in report): 3326BA FORT BROWN (2002 edition), 3326BB BREAKFAST VLEI (2002 edition), 3326BC GRAHAMSTOWN (2002 edition), 3326BD TRAPPE'S VALLEY (2002 edition)

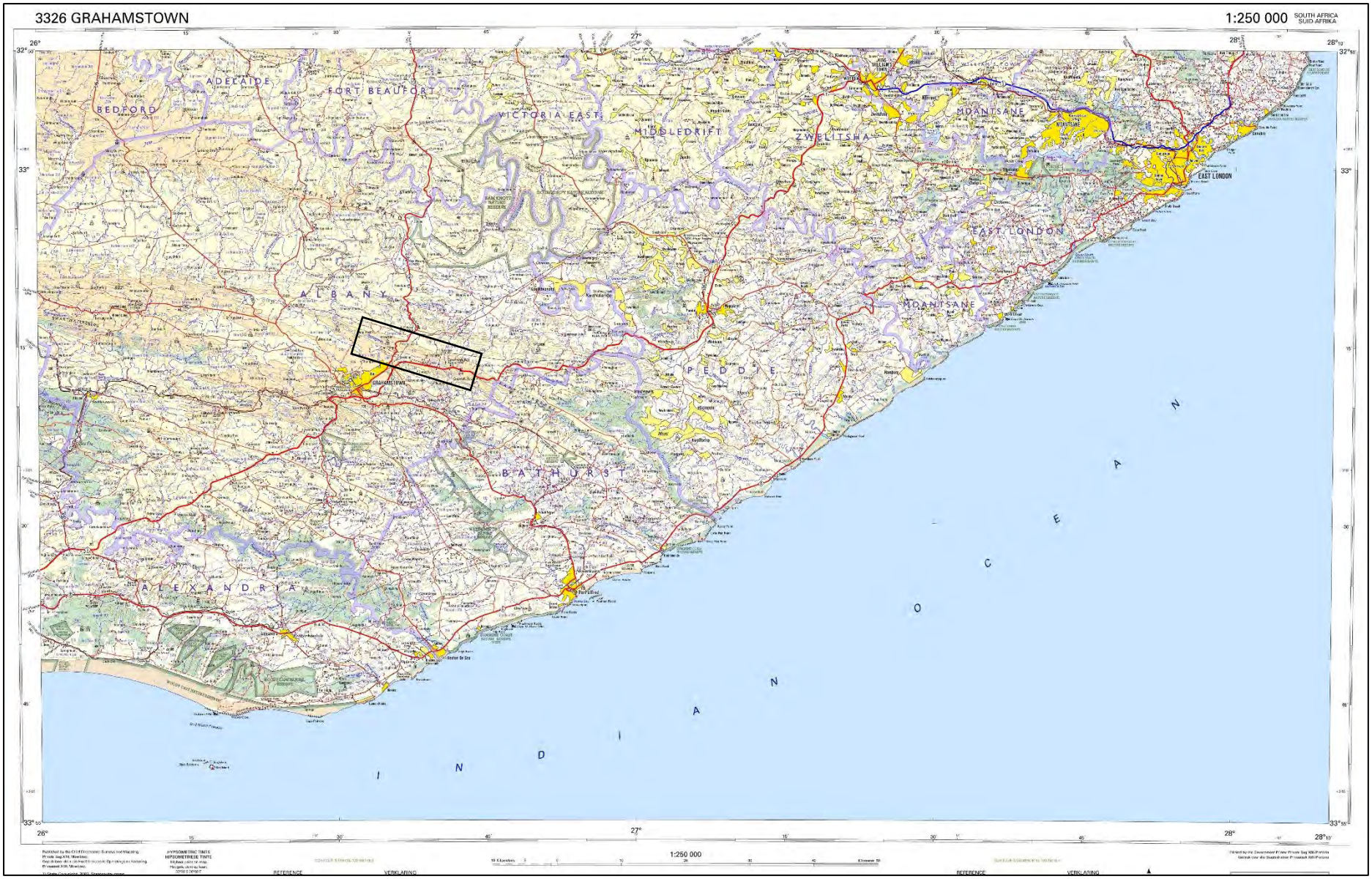

Figure 1. 1:250 000 topographic map 3326 GRAHAMSTOWN (2003 edition) showing the location of the proposed Albany WEF and associated infrastructure, near Grahamstown, Makana Local Municipality.

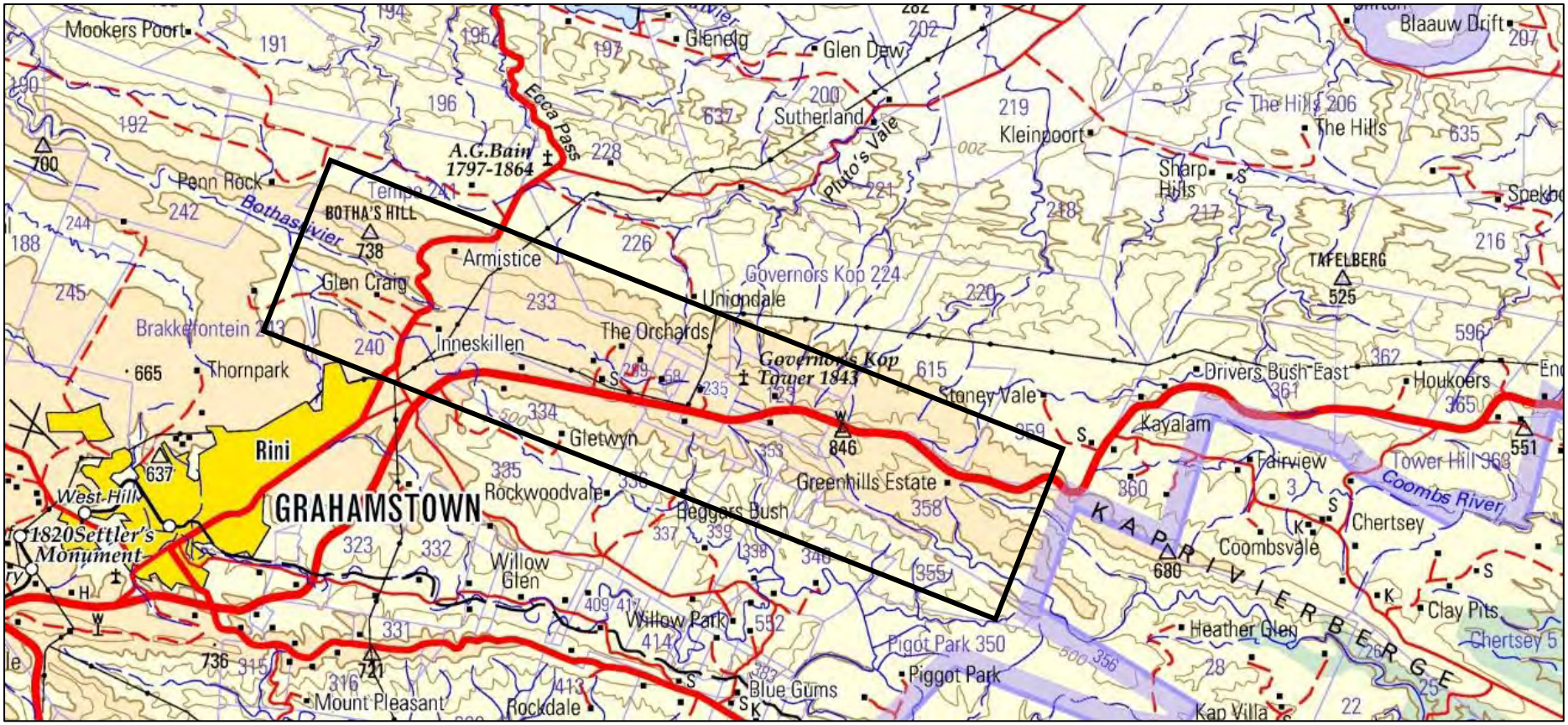

Figure 2. Close-up of 1:250 000 topographic map 3326 GRAHAMSTOWN (2003 edition) showing the location for the Albany WEF and associated infrastructure situated near Grahamstown, Makana Local Municipality.

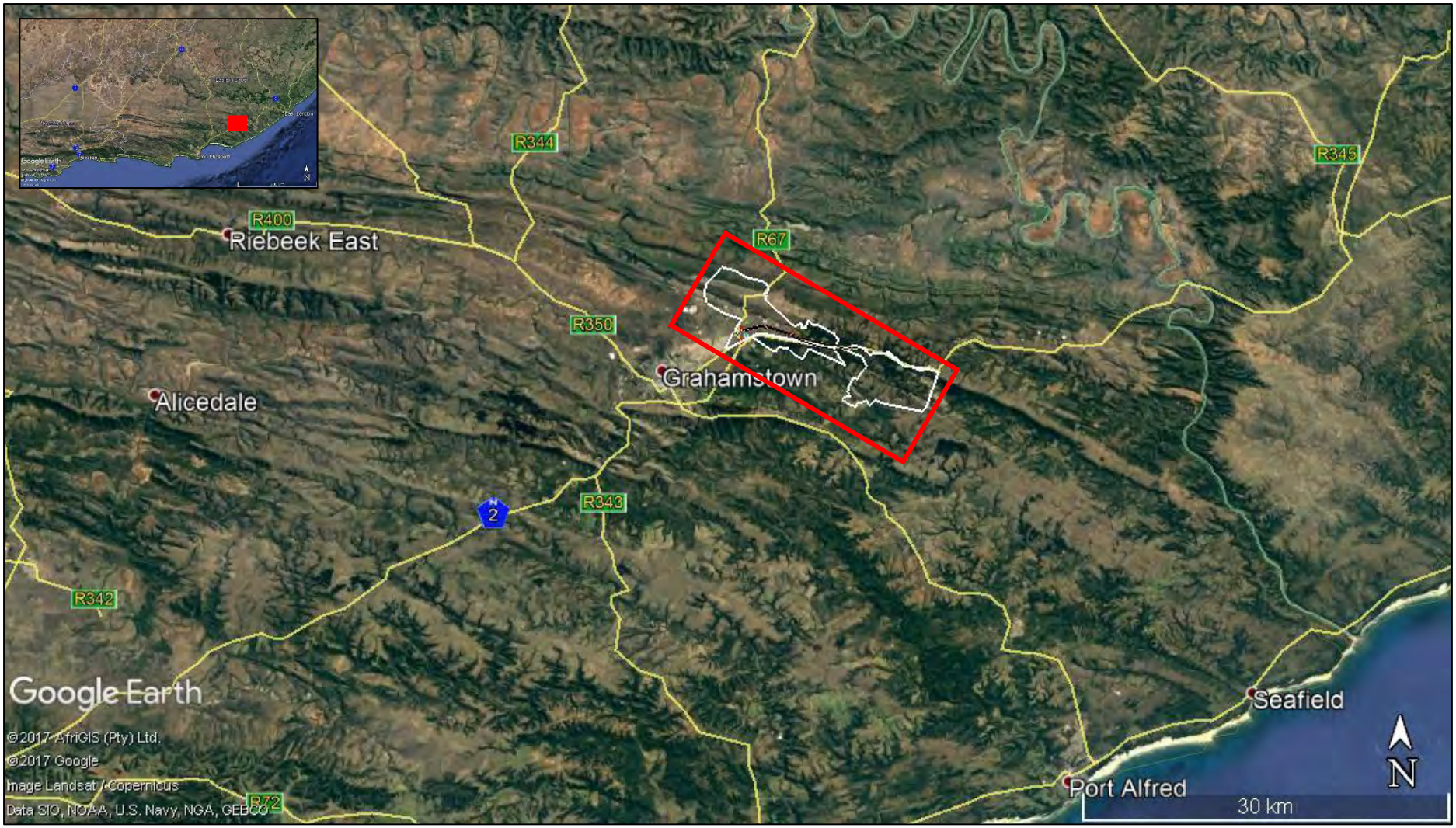

Figure 3. Aerial view showing the location of the proposed Albany Wind Energy Facility (WEF) and associated infrastructure situated near Grahamstown, Makana Local Municipality.

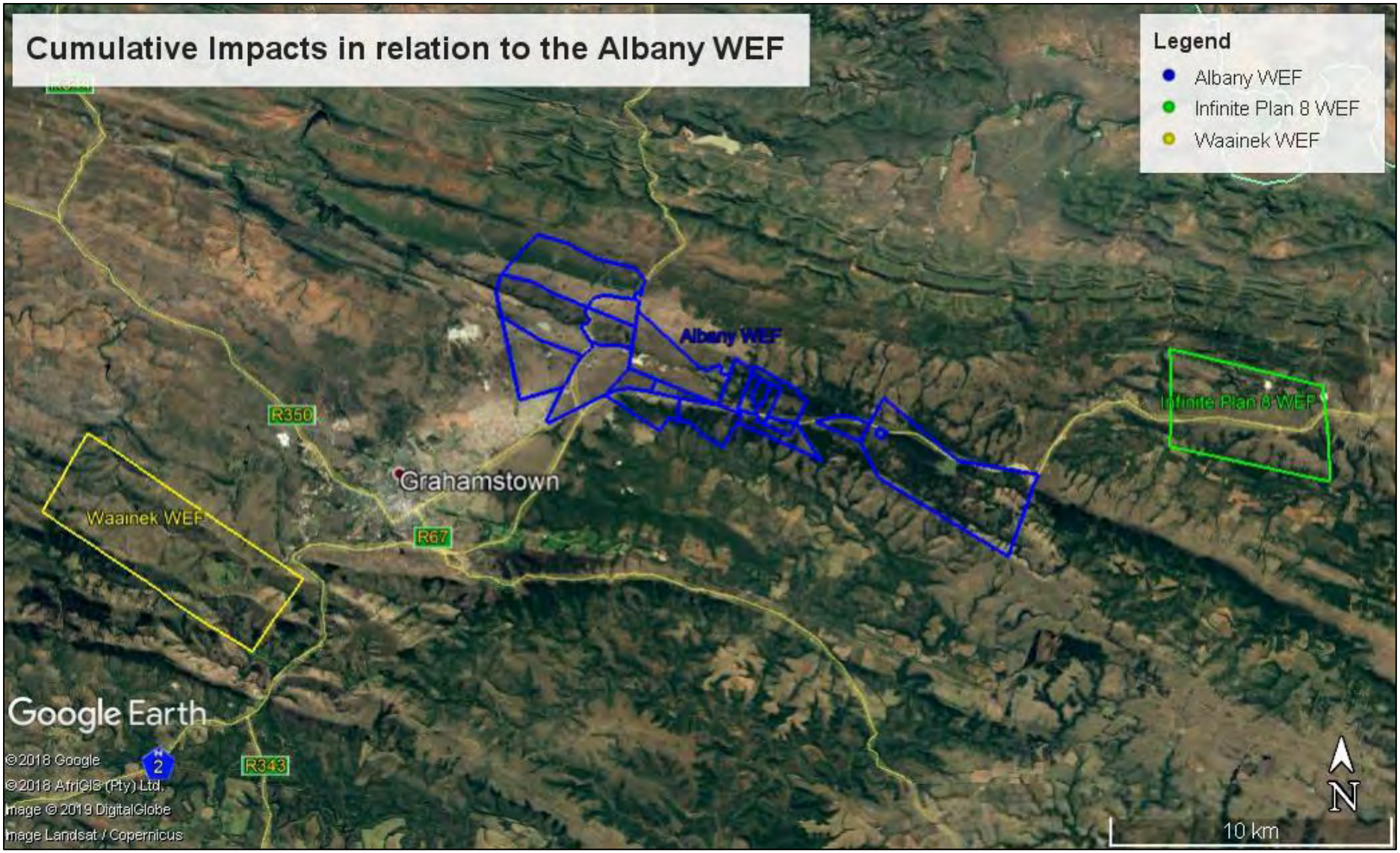

Figure 4. Aerial view showing the cumulative impacts (Waainek and Infinite Plan 8 Wind Energy Facilities).

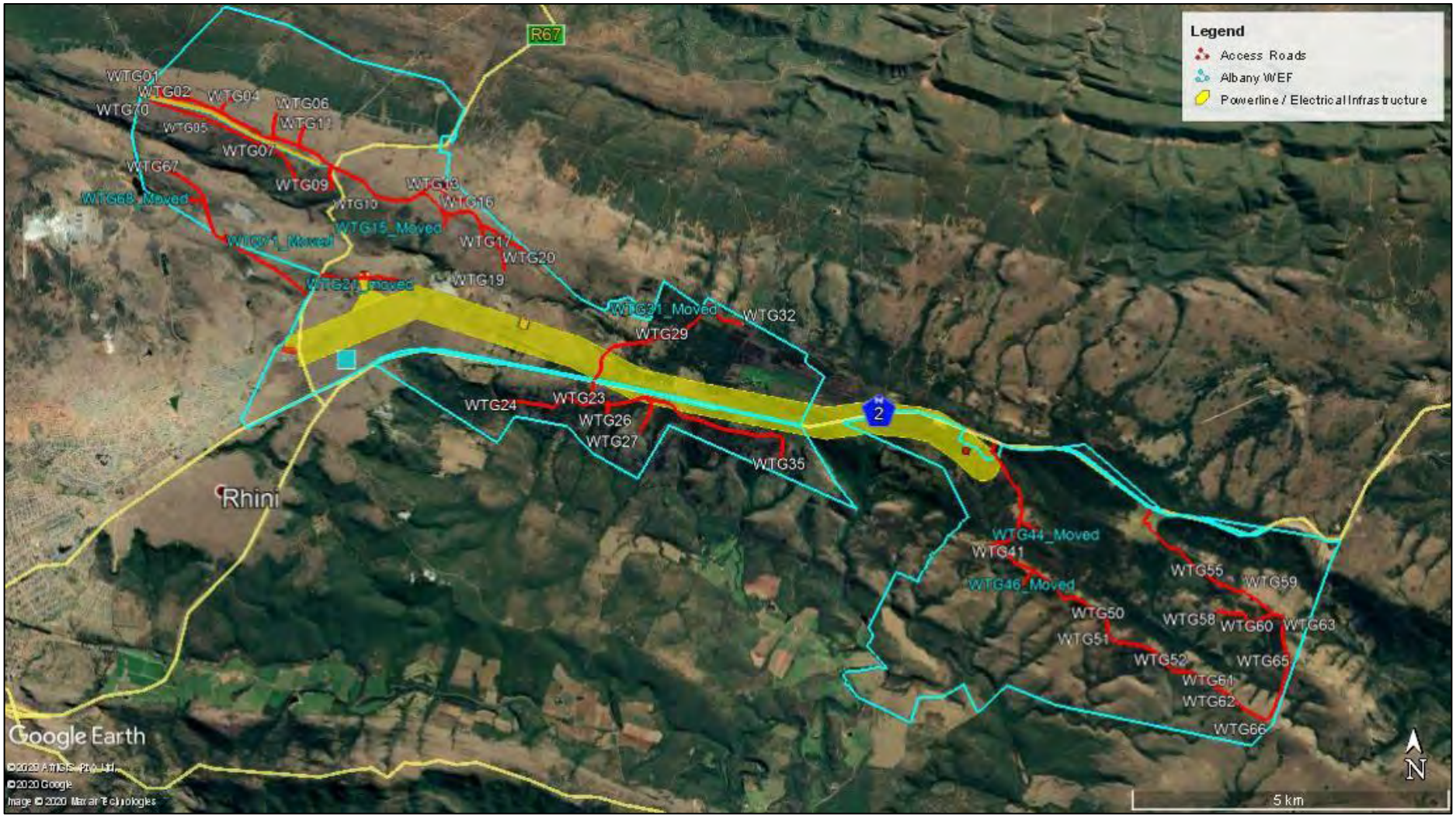

Figure 5. Aerial view showing the most recently revised layout of the proposed Albany WEF.

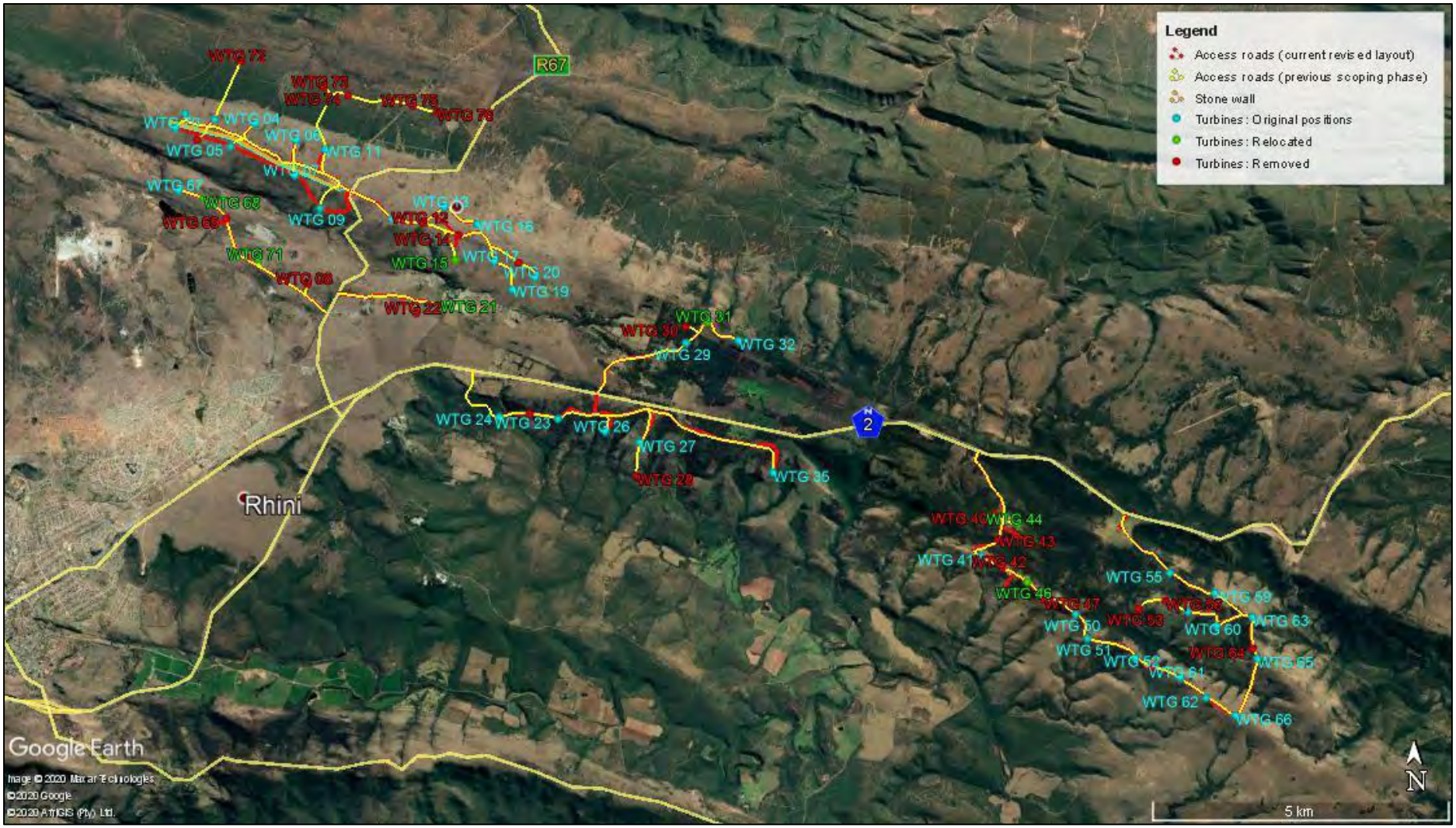

Figure 6. Turbine locations showing the previous 2019 scoping layout in relation to the currently revised layout for the proposed Albany WEF.

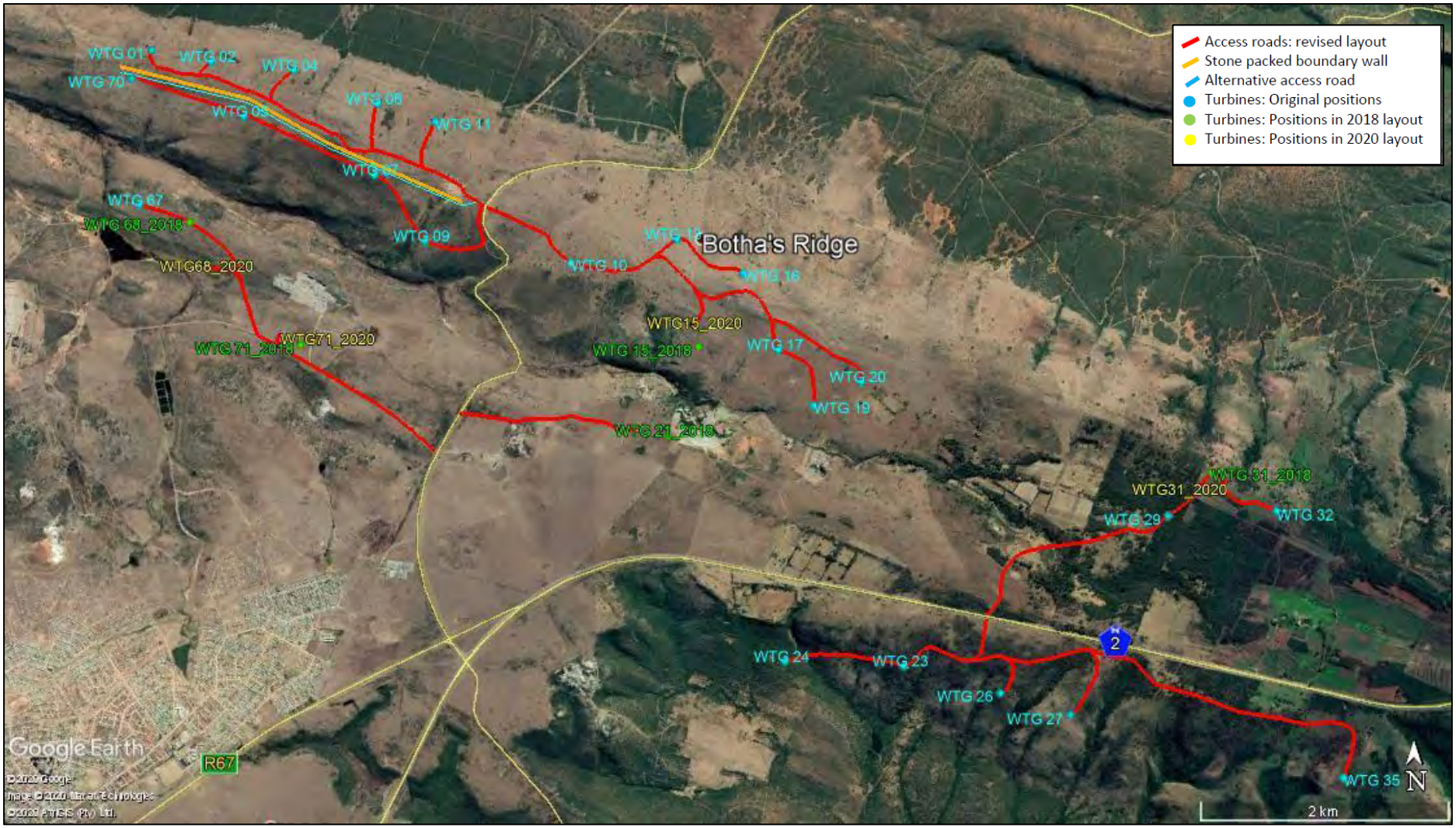

Figure 7. Turbine locations showing the previous 2019 scoping layout in relation to the currently revised layout on the Farms Tempe 241, Glen Craig 240, and The Orchards 233, Collingham 226, and Grobbelaars Kloof.

Figure 8. Turbine locations showing the previous 2019 scoping layout in relation to the currently revised layout on the Farm Greenhills 358.

5. ARCHAEOLOGICAL INVESTIGATION

5.1. Methodology

An overview of archaeological research within the wider region and relevant archaeological, heritage, and cultural impact assessments have been included as an overview to the possible archaeological, historical and other heritage resources that may occur within the proposed development area. It was, therefore, expected to encounter stone artefacts associated with precolonial occupation on the landscape as well as historical heritage resources associated with Dutch and British settlement.

The area surveyed was conducted by inspecting the areas proposed for the associated infrastructure such as the batching and site office areas, the substations and following the power line routes. The routes and positions of the turbines were also investigated. Owing to vast extent of the area the existing gravel roads were followed and the proposed turbines positions were surveyed on foot where there were no access roads.

Photographs and the GPS co-ordinates were taken using a Garmin Oregon 650. The relevant GPS coordinates have been plotted on Google Earth generated maps.

5.2. Limitations

Archaeological visibility mostly determined by vegetation and exposed surface areas and disturbances was limited over most of the proposed development. The vegetation cover varied from karroid scrub in the west to woodlands and dense grass vegetation towards the east.

5.3. Results of the Archaeological Survey

5.3.1. Substations (SS1–SS4), powerline alternatives and associated infrastructure

Three potential on-site substation locations were assessed and one extension of the existing substation situated on the outskirts of Grahamstown.

Substation 1 (SS1) (Figures 5, 9-10) is the proposed extension the existing substation situated on the outskirts of Grahamstown near Kings Flats. The area has been heavily disturbed by the construction of the existing substation, associated powerlines and tarred road. Some illegal dumping is also evident in the area. No archaeological, historical or other heritage resources were documented within this area (Figures 11-12). This proposed substation site is the preferred alternative as it will not impact on any heritage resources as none were observed within the area during the survey.

Substation 2 (SS2) (Figure 9) is proposed to be situated on the Farm Glen Craig 240, located east of the R67 road and north-west of the N2. No archaeological, historical or other heritage resources were documented within this area.

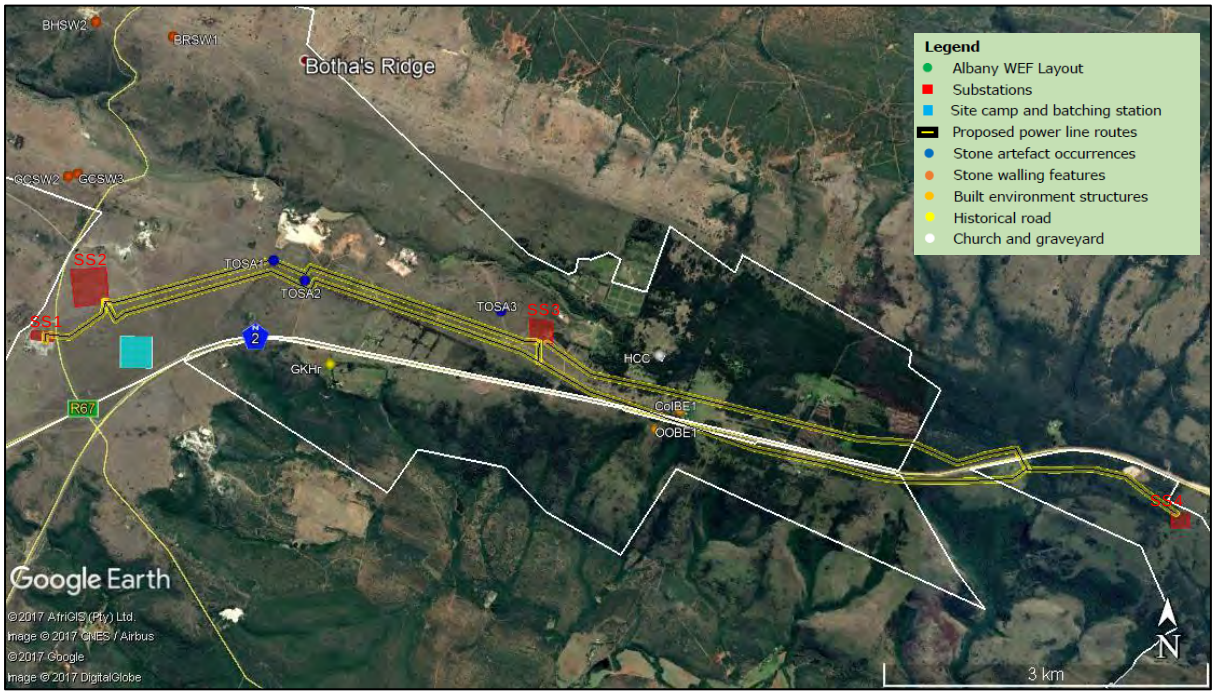

Figure 9. Aerial view showing the location of the power lines for the Albany Wind Energy Facility (WEF) and archaeological / historical sites (Albany Museum Database) and sites recorded during the survey.

Substation 3 (SS3) (Figure 9) is proposed to be situated on the Farm The Orchards 233, located north of the N2. No archaeological, historical or other heritage resources were documented within this area.

Substation 4 (SS4) (Figure 9) is proposed to be situated on the Farm Greenhills 258, located south of the N2. No archaeological, historical or other heritage resources were documented within this area.

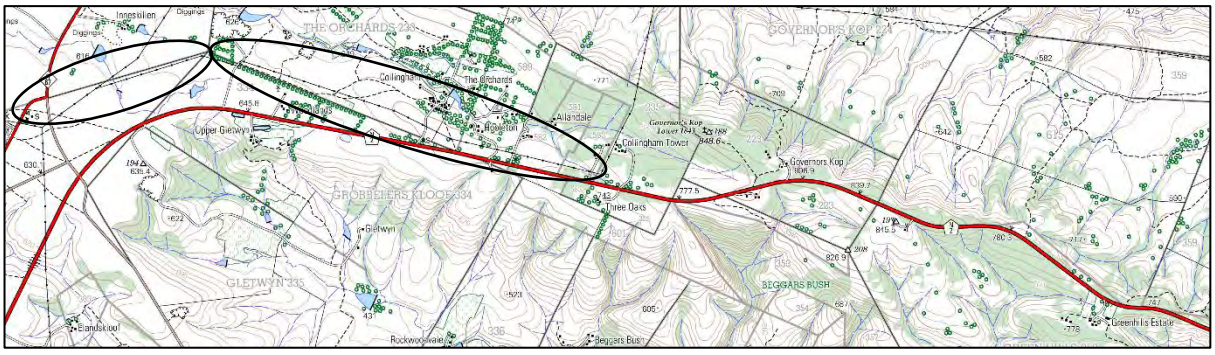

Figure 10. 1:50 000 topographic map 3326BC GRAHAMSTOWN (2002 edition) showing the route and extent of the existing power lines.

The proposed powerline routes run parallel to the existing powerline route (Figure 10) situated north of the N2 then diverges north and south across the N2 national road to connect to the proposed Substation 4 (SS4) on the Farm Greenhills 358 (Figures 13-20). Isolated surface scatters of Middle Stone Age stone artefacts were identified along a portion of the powerline route situated on the Farm The Orchards 233. The stone artefacts have been manufactured from quartzite raw materials and comprise mostly flakes and cores (Figures 40-43).

The proposed area for the batching and construction compound and site office is situated on the Farm Glen Craig 240, south-east of the proposed location for Substation 2 (SS2). No archaeological, historical or other heritage resources were documented within this area.

Figure 11. View of the existing substation and powerlines situated on the outskirts of Grahamstown facing northeast.

Figure 12. View of the existing substation situated on the outskirts of Grahamstown showing the various surface disturbances.

Figure 13. View of the general landscape of the proposed route for the powerline alternatives.

Figure 14. View of the general landscape of the proposed route for the powerline alternatives.

Figure 15. View of the general landscape of the proposed route for the powerline alternatives.

Figure 16. View of the general landscape of the proposed route for the powerline alternatives.

Figure 17. View of the general landscape of the proposed route for the powerline alternatives.

Figure 18. View of the general landscape of the proposed route for the powerline alternatives.

Figure 19. View of the general landscape of the proposed route for the powerline alternatives.

Figure 20. View of the general landscape of the proposed route for the powerline alternatives.

5.3.2. Positions of the Wind Turbines

A total of 43 Turbines are proposed for the most recent revised layout of the Albany WEF. The proposed area includes several private farms and municipal land north of Grahamstown along R67 and east of Grahamstown along the N2 national road. The landscape is varied; however, the turbines positions are mostly limited to the hilltops north and south of the N2 national road (Figures 21-37). Owing to the mostly dense vegetation cover exposed surface areas such as internal gravel road, surface diggings, erosion, and disturbances were investigated for the possibility of observing any archaeological and / historical artefact occurrences (Figures 38-39).

The proposed turbine positions on the Farm Glen Craig 240 mostly remain the same from the scoping layout, turbines 67 and 71 (WTG 67 and WTG 71) situated west of the farm house have been relocated. The turbines located on Botha's Hill overlooking Grahamstown and Botha's River, on the northern boundary of the farm, have remained in position. Turbines 69 and 8 (WTG 69 and WTG 8) have been completely removed.

The proposed turbines positions on the Farm Tempe 241 on Botha's Hill, on the northern boundary on Glen Craig 240 have been removed (WTG 72-WTG 76).

A very well-preserved stone packed wall, presumably a historical boundary wall between farms Glen Craig 240 and Tempe 241, extends east − west (BHSW2, Figure 5), running parallel to the internal gravel road on the southern slope overlooking Grahamstown (Figures 47-50). The stone foundation outline of what once was a rectangular structure are visible on the northern slope of Botha's Hill north-east of Turbine 11 (BHSW1, Figures 5 and 51).

Potential negative impact on the stone walling is of concern. Access roads to the five turbines (WTG 70, WTG 3, WTG 5, WTG 7, WTG 9) located on the southern slopes of Botha's Hill on the northern boundary of the Farm Glen Craig 241, if constructed off the existing internal road that runs along the hilltop, would need to break down portions of the stone walling. It was suggested that a road be constructed south of the stone walling to access the five turbines, this recommendation has been considered and an alternative road has been identified to run south of the stone packed wall.

Surface scatters of Middle stone Age stone artefacts were documented towards the western boundary of the proposed WEF layout (BHSA1-BHSA2, Figure 9) (Figures 40 − 45). The stone artefacts occurred north and south of the internal gravel road. The stone artefacts comprised flakes and cores and were manufactured mostly on quartzite raw material and silcrete.

A well-known rock art site is situated along the bank of Botha's River on the Farm Glen Craig 240. It is unlikely that the long-term effect of the wind turbines would have a negative impact on the shelter below.

Three stone packed walling features (GCSW1-CGSW3) were documented on the Farm Glen Craig 240, these will not be negatively impacted by the proposed development (Figures 45-46).

One circular stone packed feature representing a kraal was documented near the farmstead Armistice (BRSW1, Figures 9 and 52-53). No other archaeological or heritage resources were identified over the rest of the area proposed for the wind turbines. One turbine, turbine 12 (WTG 12) has been removed.

The proposed turbine positions on the Farm Grobbeler's Kloof 334 situated south of the N2 national road, have mostly remained the same as in the scoping layout, except turbine 22 (WTG 22) has been completely removed. An old historical wagon route was pointed out by the owner of the Farm Grobbeler's Kloof situated at the entrance to the farm south off the N2 national, running parallel to N2 national road (GKHr), will not be negatively impacted by the development (Figures 9 and 60).

The turbines on the Farm Grobbeler's Kloof 334 are proposed to be positioned on the southern slope overlooking the valley below. The vegetation cover varies over area from short scrub vegetation in the western area and wattle woodlands towards the east that

hindered archaeological visibility. No archaeological or heritage resources were identified over the rest of the area proposed for the wind turbines.

Three turbine positions on the farm The Orchards 233 have remained the same as the scoping layout, turbines 15 and 21 (WTG 15 and WTG 21) have been relocated and three turbines (WTG 12, WTG 14, and WTG 22) have been completely removed.

The turbine positions on the Farm Collingham 226 have mostly remained in the same positions of the scoping layout positioned on the hilltops instead of the slopes. This confines the proposed turbines into a smaller area range. The area is mostly covered in dense wattle woodlands that hindered archaeological visibility. Turbine 31 (WTG 31) has been relocated and turbine 30 (WTG 30) has been completely removed). The ruins of the Church and associated graveyard are situated on Hooleton (HCC, Figures 6 and 56-59). No other archaeological or heritage resources were identified over the rest of the area proposed for the wind turbines.

The turbine positions on the Farm Greenhills 358 have also mostly remained the same as in the scoping layout, confined to the hilltops, which would impact on the landscape to a much lesser degree. Two turbines (WTG 44 and WTG 46) have been relocated and eight turbines (WTG 40, WTG 42, WTG 43, WTG 47, WTG 53, WTG 57, WTG 58, and WTG 64) have been completely removed. The area is located at the eastern end of the proposed WEF boundary. Similarly, the vegetation cover varies over area from short scrub vegetation in the western area and wattle woodlands towards the east that hindered archaeological visibility. No other archaeological or heritage resources were identified over the rest of the area proposed for the wind turbines.

The built environment component included a variety of historical and modern buildings including farm houses, staff housing and other associated buildings (Figures 54 and 55). Structures older than 60 years are protected under section 34 of NHRA 25 of 1999. It is unlikely that the built environment structures will be negatively affected by the proposed development.

Figure 21. View of the general landscape of the areas proposed for the establishment of the wind turbines.

Figure 22. View of the general landscape of the areas proposed for the establishment of the wind turbines.

Figure 23. View of the general landscape of the areas proposed for the establishment of the wind turbines.

Figure 24. View of the general landscape of the areas proposed for the establishment of the wind turbines.

Figure 25. View of the general landscape of the areas proposed for the establishment of the wind turbines.

Figure 26. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 27. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 28. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 29. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 30. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 31. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 32. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 33. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 34. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 35. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 36. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 37. View of the general landscape of the areas proposed for the establishment of the wind turbines

Figure 38. Example of surface exposed burrowing investigated within the dense grass vegetation covered areas.

Figure 39. Example of surface exposed internal gravel roads investigated within the densely covered areas.

Figures 40-41. Examples of Middle Stone Age stone artefacts observed during the survey of the proposed WEF area.

Figures 42-43. Examples of Middle Stone Age stone artefacts observed during the survey of the proposed WEF area.

Figure 44. Examples of Middle Stone Age stone artefacts observed during the survey of the proposed WEF area.

Figure 45. View of the remains of a stone walling feature situated on the Farm Glen Craig 240.

Figure 46. View of the remains of a circular stone walled feature.

Figures 47-48. Different views of the stone packed boundary wall running east-west on **Botha's** Hill.

Figure 49**. Side view of the stone packed boundary wall on Botha's Hill.**

Figure 50**. View of the stone packed boundary wall on Botha's Hill.**

Figure 51. View of the remains of the outline of a structure situated on **Botha's Hill.**

Figure 52**. View of a stone packed circular feature situated on Botha's** Ridge.

Figure 53. Side view of a stone packed circular features situated on **Botha's Ridge.**

Figure 54. Examples of the built environment structures located within the boundaries of the proposed layout of the Albany WEF.

Figure 55. Examples of the built environment structures located within the boundaries of the proposed layout of the Albany WEF.

Figure 56. View of the remains of the Church on Hooleton.

Figure 57. View of the remains of the Church on Hooleton.

Figure 58. View of the remains of the Church on Hooleton showing some of the informal graves in the **church's cemetery.**

Figure 59. View of the more formal graves in the graveyard.

Figure 60. View of the of the historical wagon route.

6. DESCRIPTION AND GRADING OF SITES

6.1. Stone Artefact Occurrences (TOSA1-3 and BHSA1-5)

Isolated surface scatters of Middle Stone Age stone artefacts (TOSA1-3) were identified along a portion of the powerline route situated on the Farm The Orchards 233. The stone artefacts have been manufactured from quartzite raw materials and comprise mostly flakes. Surface scatters of Middle stone Age stone artefacts were documented towards the western boundary of the proposed WEF layout (BHSA1-BHSA2). The stone artefacts occurred north and south of the internal gravel road. It is possible that stone artefacts will occur between the surface and 50 cm – 80 cm below the surface.

The stone artefact occurrences are considered as having a *low archaeological significance* and has been allocated a heritage grading of:
'General' Protection C (Field Rating IV C): This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

6.2. Stone Packed Features (BHSW1-2 and GCSW1-3 and BRSW1)

A very well-preserved stone packed wall, presumably a historical boundary wall between farms, extends east – west (BHSW2), running parallel to the internal gravel on the southern slope overlooking Grahamstown, is situated on Botha's Hill. The stone foundation

outline of what once was a rectangular structure are visible on the northern slope of Botha's Hill east of Turbine 6 (BHSW1).

Stone walling and a circular stone packed feature (GCSW1-3) were recorded on the Farm Glen Craig 240 near the farmstead. It is unlikely that these stone packed features will be negatively affected by the proposed development.

One circular stone packed feature representing a kraal was documented near the farmstead Armistice (BRSW1).

The stone packed features are considered as having a *medium heritage significance* and has been allocated a heritage grading of:
'General' Protection A (Field Rating IV A): This site should be mitigated before destruction (usually High/Medium significance).

6.3. Built Environment

The built environment component included a variety of historical and modern buildings. Structures older than 60 years are protected under section 34 of NHRA 25 of 1999.

It is unlikely that the built environment structures will be negatively affected by the proposed development.

6.4. Church and associated graveyard on the Farm Hooleton (HCC)

The ruins of the Church and associated cemetery are situated on Hooleton. It is unlikely that the remains of the church and graveyard will be negatively affected by the proposed development.

The stone packed features are considered as having a *high heritage significance* and has been allocated a heritage grading of:
Local: This site is suggested to be Grade IIIA significance. This site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised.

6.5. Old Wagon Road (GKHr)

An old historical wagon route was pointed out by the owner of the Farm Grobbeler's Kloof situated at the entrance to the farm south off the N2 national, running parallel to N2 national road.

It is unlikely that this particular area will be negatively affected by the proposed development.

7. COORDINATES AND SITES FOR THE PROPOSED ALBANY WIND ENERGY FACILITY (WEF) AND ASSOCIATED INFRASTRUCTURE, SITUATED NEAR GRAHAMSTOWN, MAKANA LOCAL MUNICIPLAITY, SARAH BAARTMAN DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE.

Table 1: Coordinates and Sites for the Proposed Albany Wind Energy Facility (WEF) and Associated Infrastructure, situated near Grahamstown, Makana Local Municipality, Sarah Baartman District Municipality, Eastern Cape Province.

REFERENCE	DESCRIPTION	COORDINATE	HERITAGE GRADING
STONE ARTEFACTS			
TOSA1	(Farm The Orchards)	33°16'0.41"S; 26°36'49.13"E	'General' Protection C (Field Rating IV C) *Low significance*
TOSA2	(Farm The Orchards)	33°16'06.42"S; 26°37'0.56"E	'General' Protection C (Field Rating IV C) *Low significance*
TOSA3	(Farm The Orchards)	33°16'15.08"S; 26°38'11.92"E	'General' Protection C (Field Rating IV C) *Low significance*
BHSA1	(Farm Botha's Hill)	33°14'15.69"S; 26°34'10.04"E	'General' Protection C (Field Rating IV C) *Low significance*
BHSA2	(Farm Botha's Hill)	33°14'13.70"S; 26°34'08.10"E	'General' Protection C (Field Rating IV C) *Low significance*
BHSA3	(Farm Botha's Hill)	33°14'13.34"S; 26°34'10.07"E	'General' Protection C (Field Rating IV C) *Low significance*
BHSA4	(Farm Botha's Hill)	33°14'13.04"S; 26°34'09.39"E	'General' Protection C (Field Rating IV C) *Low significance*
BHSA5	(Farm Botha's Hill)	33°14'12.71"S; 26°34'10.85"E	'General' Protection C (Field Rating IV C) *Low significance*
STONE WALLING FEATURES			
BHSW1	(Farm Botha's Hill)	33°14'27.31"S; 26°35'41.50"E	'General' Protection C (Field Rating IV C) *Low significance*
BHSW2	(Farm Botha's Hill)	33°14'13.61"S; 26°33'55.51"E, 33°14'24.66"S; 26°34'42.43"E, 33°41'48.93"S; 26°34'42.43"E	'General' Protection A (Field Rating IV A) *Medium significance*
GCSW1	(Farm Glen Craig)	33°15'16.21"S; 26°34'41.60"E, 33°15'05.85"S; 26°34'46.35"E	'General' Protection C (Field Rating IV C) *Low significance*
GCSW2	(Farm Glen Craig)	33°15'35.31"S; 26°35'33.83"E	'General' Protection C (Field Rating IV C) *Low significance*
GCSW3	(Farm Glen Craig)	33°15'34.54"S; 26°35'37.24"E	'General' Protection C (Field Rating IV C) *Low significance*
BRSW1	(Botha's Ridge)	33°14'53.30"S; 26°36'12.68"E	'General' Protection A (Field Rating IV A) *Medium significance*

BUILT ENVIRONMENT			
ColBE1	(Farm Collingham)	33°16′44.54″S; 26°39′17.02″E	Not graded
OOBE1	(Farm One Oak)	33°16′50.25″S; 26°39′07.87″E	Not graded
CHURCH AND GRAVEYARD			
HCC	(Farm Hooleton Church and Graveyard)	33°16′27.94″S; 26°39′09.26″E	Grade IIIA *High significance*
OTHER HERITAGE			
GKHr	(Farm Grobbelaars Kloof)	33°16′31.62″S; 26°37′09.89″E	Not graded

8. CULTURAL LANDSCAPE

Cultural landscapes are increasingly becoming a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. This section gives a brief introduction to the concept of cultural landscape and its relation to various aspects of the dynamic interaction of humans as cultural agents and the landscape as a medium. A description of the interwoven relationships of humans with the landscape over time will be given including the archaeological, historical, and contemporary connections. Lastly, the living heritage makes up a small part of the study undertaken, its significance will be highlighted in relation to the communities who still identify with the area and retain a sense of identity to the landscape.

8.1. Concept of Cultural Landscape

Cultural landscapes can be interpreted as complex and rich extended historical records conceptualised as organisations of space, time, meaning, and communication moulded through cultural process. The connections between landscape and identity and, hence, memory are fundamental to the understanding of landscape and human sense of place. Cultural landscapes are the interface of culture and nature, tangible and intangible heritage, and biological and cultural diversity. They represent a closely woven net of relationships, the essence of culture and people's identity. They are symbol of the growing recognition of the fundamental links between local communities and their heritage, human kind, and its natural environment. In contemporary society, particular landscapes can be understood by taking into consideration the way in which they have been settled and modified including overall spatial organisation, settlement patterns, land uses, circulation networks, field layout, fencing, buildings, topography, vegetation, and structures. The dynamics and complex nature of cultural landscapes can be regarded as text, written and read by individuals and groups for very different purposes and with very

many interpretations. The messages embedded in the landscape can be read as signs about values, beliefs, and practices from various perspectives. Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes.

The impact of human action of the landscape occurs over time so that a cultural landscape is the result of a complex history and creates the significance of place in shaping historical identities by examining a community's presence or sense of place. The deeply social nature of relationships to place has always mediated people's understanding of their environment and their movements within it and is a process which continues to inform the construction of people's social identity today. Social and spatial relationships are dialectically interactive and interdependent. Cultural landscape reflects social relations and institutions and they shape subsequent social relations.

Cultural landscapes tell the story of people, events, and places through time, offering a sense of continuity, a sense of the stream of time. Landscapes reflect human activity and are imbued with cultural values. They combine elements of space and time and represent political as well as social and cultural constructs. Culture shapes the landscape through day-to-day routine and these practices become traditions incorporated with a collective memory the ultimate embodiments of memorial consciousness', examples such as monuments, annual events and, archives. As they have evolved over time, and as human activity has changed, they have acquired many layers of meaning that can be analysed through archaeological, historical, geographical, and sociological study.

Indigenous people, European explorers, missionaries, pastoralists, international and domestic travellers all looked or look at similar landscapes and experience different versions of reality. Regardless of the power of different cultural groups, however, all groups create cultural landscape and interpret them from their own perspectives. This gives rise to tensions and contradictions between groups, invariably expressed in landscape forms as well.

The dynamics and complex nature of cultural landscapes can be regarded as text, written and read by individuals and groups for very different purposes and with very many interpretations. The messages embedded in the landscape can be read as signs about values, beliefs, and practices from various perspectives.

Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes. A common theme underpinning the concept of ideology of landscape itself it the setting for everything we do is that of the landscape as a repository of intangible values and human meaning that nurture our very existence. Intangible elements are the foundation of the existence of cultural

landscapes, and that are still occupied by contemporary communities, Landscape, culture and collective memory of a social group are intertwined and that this binds the individuals to their community. Culture shapes their everyday life, the values bind gradually, change slowly, and transfer from generation to generation – culture is a form of memory. We see landscapes as a result of our shared system of beliefs and ideologies. In this way landscape is a cultural construct, a mirror of our memories and myths encoded with meanings which can be read and interpreted. Pivotal to the significance of cultural landscapes and the ideas of the ordinarily sacred is the realisation that it is the places, traditions, and activities of ordinary people that create a rich cultural tapestry of life, particularly through our recognition of the values people attach to their everyday places and concomitant sense of place and identity.

Living heritage means cultural expressions and practices that form a body of knowledge and provide for continuity, dynamism, and meaning of social life to generations of people as individuals, social groups, and communities. It also allows for identity and sense of belonging for people as well as an accumulation of intellectual capital current and future generation in the context of mutual respect for human, social and cultural rights.

Protection of these cultural landscapes involves some management issues such as successful conservation is based on the continuing vital link between people and their landscapes. This link can be disrupted or affected by for instance economic reasons. Other threats can also be attributed to urban expansion and development, tourism, war and looting and something beyond our human intervention: natural disasters and climate change. Cultural landscape management and conservation processes bring people together in caring for their collective identity and heritage and provide a shared local vision within a global context. Local communities need, therefore, to be involved in every aspect of identification, planning and management of the areas as they are the most effective guardians of landscape heritage.

Most elements of living heritage are under threat of extinction due to neglect, modernisation, urbanisation, globalisation, and environmental degradation. Living heritage is at the centre of people's culture and identity, it is important to provide space for its continued existence. Living heritage must not be seen as merely safeguarding the past, but it must be seen as safeguarding the logic of continuity of what all communities or social groups regard as their valuable heritage, shared or exclusive.

In some instances, villages may capitalise on local landscape assets in order to promote tourism. Travel and tourism activities are built around the quest for experience, and the experience of place and landscape is a core element of that quest. It is a constant desire for new experiences that drives tourism, rather than a quest for authenticity. It is, therefore, important to engage actively with the tourism industry so that aspects of life

and landscape important to cultural identity, including connection with place are maintained.

8.2. Archaeological Landscape

The area was once part of an ancient landscape inhabited by various families of the genus *Homo*. Various studies recording archaeological sites and occurrences within the wider region stretching from Grahamstown inland to Fort Beaufort, Adelaide, Peddie, and Alicedale and towards the coast and Port Elizabeth of the proposed development area have reported on the evidence of the presence of *Homo erectus* (Early Stone Age), *Homo sapiens* (Middle Stone Age), and *Homo sapiens* (Later Stone Age). The only remains dating to the Early and Middle Stone Ages are stone artefacts as the organic evidence and sites have not been preserved. The influence of climatic conditions and the rising and falling of the sea levels may also attribute to much archaeological site information being lost.

Pre-colonial human remains are mostly unmarked and invisible on the landscape, however, in some instances, they may be marked by organised piles of stones.

8.3. Historical Landscape

The archaeological interpretation of the cultural landscape relies solely on the presence and surface visibility of artefacts left behind on the landscape by the populations who occupied and migrated through the proposed development area. A more comprehensive historical layer is able to be fitted onto the cultural landscape owing to the availability of written documents and the continuing existence of the traces left behind by European Settlers and the moulding of these traces used to shape the contemporary communities that occupies and regards itself attached to its present cultural landscape.

The contemporary cultural landscape is the product of centuries of human interaction, more so when the European Settlers entered the area. Remnants of these cultural interactions remain on the landscape, such as the built environment, features, artefacts, and marked and unmarked graves / burials with only oral histories and stories handed down from one generation to the next to remain in the collective memory of the community/ies living on the landscape.

8.4. Contemporary Landscape

The contemporary landscape remains very much rural although being close to Grahamstown. Although some of the farms are no longer occupied by their original inhabitants' agricultural activities, such as stock farming and agriculture, continue. The change of the socio-political landscape over the last 20 years has also influenced the ownership and use of land. However, the lack of employment opportunities in

Grahamstown have allowed for the increase of crime within this area putting undue pressure on those living close to town.

9. CUMULATIVE IMPACTS

Two wind energy facilities (Waainek WEF and Infinite Plan 8 WEF) that are situated within a 200 km radius of the proposed Albany WEF as well as the adjacent regions may spark a concern with regards to cumulative impacts that these projects may have on the heritage resources and the cultural landscape.

It must be borne in mind that archaeological heritage resources are not renewable. If archaeological sites or any other heritage site, including informal graves are negatively impacted or destroyed during development it cannot be replaced and that information is lost. Therefore, it is of the utmost importance to provide a thorough documentation of the archaeological and historical heritage resources, sites and features within the specific project area. The archaeological and historical heritage resources must be appropriately mitigated at a project / site specific level so that there is less of a risk of losing the information after the construction of these alternative energy facilities. The loss of information at regional scale is at risk as these facilities cause an immense amount of surface disturbance and destruction where archaeological and historical heritage resources are at risk of being destroyed without justification.

10. RECOMMENDATIONS

The overall area is considered as having a *low archaeological heritage significance and a medium-high heritage significance*. The following recommendations must be considered before development continues:

1. An archaeological walk-through assessment must be conducted when the final layout of the Albany wind energy facility is determined. The walk-through assessment will be conducted to assess changes in the positions of the turbines, access roads and cabling between the turbines as well as other associated infrastructure relative to the original footprint. Further mitigatory recommendations may be necessary if any of the changes may impact negatively upon heritage resources.

2. The stone packed features and stone walling must be noted and a no-impact / no-development buffer of 20 m be established. Potential negative impact on the stone walling (BHSW2) is of concern. It was recommended that an alternative access road be constructed south of the stone walling to access the five turbines (WTG 70, WTG 3, WTG 5, WTG 7, WTG 9) on the northern boundary of the Farm Glen Craig 241.
   (It is noted that the latest revised layout has followed this recommendation and the road has been realigned to the south running parallel to the stone walling.)

3. If any of the buildings are planned to be demolished during the course of development, a built environment specialist, historical architect should be appointed to assess the buildings proposed for demolition.

4. If concentrations of pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

5. A person must be trained as a site monitor to report any archaeological sites found during the development. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

6. The developer / ECO / or construction manager must apply to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for a destruction permit to disturb the stone artefact scatters prior to the commencement of the development.

11. SENSITIVITY ANALYSIS

The recently revised layout proposes the establishment of 43 turbines, a decrease from 66 turbines from the 2017-2018 study and 2019 scoping layput on the same farm portions. Thirty-six (36) of the original turbine positions remain the same as the scoping layout, seven (seven) have been relocated, and twenty-three (23) have been completely removed. The revised layout has removed twenty-three (23) turbines and confines the turbines to the hilltops, therefore, imposing a lesser footprint impact on the landscape.

The main sensitivity with regards to the heritage resources documented in the potential negative impact on the stone packed boundary wall between the Farms Glen Craig 240 and Tempe 241. Access roads to the five turbines (WTG 70, WTG 3, WTG 5, WTG 7, WTG 9) located on the southern slopes of Botha's Hill on the northern boundary of the Farm Glen Craig 241, if constructed off the existing internal road that runs along the hilltop, would need to break down portions of the stone walling. It is, therefore recommended that an alternative road be constructed south of the stone walling to access the five turbines. It is noted that the latest revised layout has followed this recommendation and the road has been realigned to the south running parallel to the stone walling.

12. CONCLUSION

The revised layout shows a lesser footprint impact on the landscape and confines the most of the turbines to the hilltops. Negative impact on the heritage resources is expected to be minimal if the recommendation and mitigation measures are followed. The main concern is the stone wall boundary; however, the road has been realigned to follow an alternative route. Final recommendations with regards to heritage will be made once the archaeological heritage walk-through has been conducted once the final layout has been confirmed.

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15. GENERAL REMARKS AND CONDITIONS

NOTE: This report is a phase 1 archaeological impact assessment (AIA) only and does not include or exempt other required specialist assessments as part of the heritage impact assessments (HIAs).

The National Heritage Resources Act (Act No. 25 of 1999, Section 35 [Brief Legislative Requirements]) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources including all places or objects of aesthetics, architectural, historic, scientific, social, spiritual, linguistic, or technological value or significance are protected. Thus, any assessment should make provision for the protection of all these heritage components including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasized that the conclusions and recommendations expressed in this phase 1 archaeological impact assessment (AIA) are based on the visibility of archaeological remains, features and, sites and may not reflect the true state of affairs. Many archaeological remains, features and, sites may be covered by soil and vegetation and will only be located once this has been removed. In the event of such archaeological heritage being uncovered (such as during any phase of construction activities), archaeologists or the relevant heritage authority must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The onus is on the developer to ensure that this agreement is honoured

in accordance with the National Heritage Resources Act No. 25 of 1999 (NHRA 25 of 1999).

Archaeological Specialist Reports (desktops and AIA's) will be assessed by the relevant heritage resources authority. The final comment/decision rests with the heritage resources authority that may confirm the recommendations in the archaeological specialist report and grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: HERITAGE LEGISLATIVE REQUIREMENTS

Sections 3, 34, 35, 36, 38, 48, 49 and 51 of the National Heritage Resources Act 25 of 1999 apply:

S3. National estate

(1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

(2) Without limiting the generality of subsection (1), the national estate may include –

(a) places, buildings, structures and equipment of cultural significance;
(b) places to which oral traditions are attached or which are associated with living heritage;
(c) historical settlements and townscapes;
(d) landscapes and natural features of cultural significance;
(e) geological sites of scientific or cultural importance;
(f) archaeological and palaeontological sites;
(g) graves and burial grounds, including –
    (i) ancestral graves;
    (ii) royal graves and graves of traditional leaders;
    (iii) graves and 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 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 (Act No. 43 of 1996).

(3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of –

(a) its importance in the community, or pattern of South Africa's history;
(b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
(c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
(d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
(e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
(f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
(g) its strong or special association with 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.

S34. Structures

(1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
(2) Within three months of the refusal of the provincial heritage resources authority to issue a permit, consideration must be given to the protection of the place concerned in terms of one of the formal designations provided for in Part 1 of this Chapter.
(3) The provincial heritage resources authority may at its discretion, by notice in the Provincial Gazette, make an exemption from the requirements of subsection (1) within a defined geographical area, provided that it is satisfied that heritage resources falling into the defined area or category have been identified and adequately provided for in terms of the provisions of Part 1 of this Chapter.
(4) Should the provincial heritage resources authority believe it to be necessary if by, following a three-month notice period published in the Provincial Gazette, withdraw or amen a notice under subsection (3).

S35. Archaeology, palaeontology and meteorites

(1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and maritime cultural zone shall be the responsibility of SAHRA.
(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collation policy acceptable to the heritage resources authority and may in doing so establish such terms and conditions as it sees fit for the conservation of such objects.
(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority or museum, which must immediately notify such heritage resources authority.
(4) No person may, without a permit issued by the responsible heritage resources authority—
    (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
    (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
    (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
    (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

(5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and not heritage resources management procedure in terms of section 38 has been followed, it may –
    (a) Serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
    (b) Carry out and investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
    (c) If mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
    (d) Recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.
(5) The responsible heritage resources authority may, after consultation with the owner of the land on which archaeological or palaeontological site or a meteorite is situated, serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.

(6)(a) Within a period of two years from the commencement of this Act, any person in possession of any archaeological or palaeontological material or object or any meteorite which was acquired other than in terms of a permit issued in terms of this Act, equivalent provincial legislation or the National Monuments Act, 1969 (Act No. 28 of 1969), must lodge with the response heritage resources authority lists of such objects and other information prescribed period shall be deemed to have been recovered after the date on which this Act came into effect.

(b) Paragraph (a) does not apply to any public museum or university.

(c) The responsible authority may at its discretion, by notice in the Gazette or the Provincial Gazette, as the case may be, exempt any institution from the requirements of paragraph (a) subject to such conditions as may be specified in the notice, and may by similar notice withdraw or amen such exemption.

(8) and object or collection listed under subsection (7) −

(a) remains in the ownership of the possessor for the duration of his or her lifetime, and SAHRA must be notified who the successor is; and

(9) must be regularly monitored in accordance with regulations by the responsible heritage authority.

S36. Burial grounds and graves

(1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3)(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(3) SAHRA or provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority -

(a) Made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and

(b) Reached agreements with such communities and individuals regarding the future of such grave or burial ground.

(5) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority −

(a) Carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and

(b) If such grave is protected or is of significance, assist any person who or community which is the direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

(6)(a) SAHRA must, over a period of five years from the commencement of this Act, submit to Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which,

after a process of public consultation, it believes should be included among those protected under this section.

(c) The Minister must publish such lists as he or she approved in the Gazette.

(6) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.

(7) SAHRA must assists other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re0inter the remains of that person in a prominent place in the capital of the Republic.

S.37 Public monuments and memorials

Public monuments and memorials must, without the need to publish a notice to this effect, be protected in the same manner as places which are entered in a heritage register referred to in section 30.

S38. Heritage resources management

(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as −

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

(b) the construction of a bridge or similar structure exceeding 50 m in length;

(c) any development or other activity which will change the character of the site −

(i) exceeding 5 000 m^2 in extent, or

(ii) involving three or more erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;

(d) the re-zoning of a site exceeding 10 000 m^2 in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

(2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection (1) −

(a) if there is a reason to believe that heritage reso8rces will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or

(b) notify the person concerned that this section does not apply.

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

(a) The identification and mapping of all heritage resources in the area affected;

(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;

(c) An assessment of the impact of development on such heritage resources;

(d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

(f) If heritage resources will be adversely affected by the proposed development, the consideration of alternative; and

(g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.

(4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide –

(a) whether or not the development may proceed;

(b) any limitations or conditions to be applied to the development;

(c) what the general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;

(d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of development; and

(e) whether the appointment of specialists is required as a condition of approval of the proposal.

(5) A provincial heritage resources authority may not make any decision under subsection (4) with respect to any development with impacts on a heritage resource protected at national level unless it has consulted SAHRA.

(6) The applicant may appeal against the decision of the provincial heritage resources authority to the MEC, who –

(a) must consider the views of both parties; and

(b) may at his or her discretion –

(i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the responsible heritage resources authority;

And

(ii) consult SAHRA; and

(c) must uphold, amend or overturn such decision.

(7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by SAHRA unless the authority concerned decides otherwise.

(8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms in terms of the impact of such development of heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environmental Affairs and Tourism, or the Mineral Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regards to such development have been taken into account prior to the granting of the consent.

(9) The provincial heritage resources authority, with the approval of the MEC, may, by the notice in the Provincial Gazette, exempt from the requirements of this section any place specified in the notice.

(10) Any person who has complied with the decision of a provincial heritage resources authority in subsection (4) or of the MEC in terms of subsection (6) or other requirements referred to in subsection (8), must be exempted from compliance with all other protections in terms of this part, but any existing heritage agreements made in terms of section 42 continue to apply.

S48. Permits

(1) A heritage resources authority may prescribe the manner in which an application is made to it for any permit in terms of this Act and other requirements for permit applications, including –

(a) any particulars or information to be furnished in the application and any documents, drawings, plans, photographs and fees which should accompany the application;

(b) minimum qualifications and standards of practice required of persons making application for a permit to perform specified actions in relation to particular categories of protected heritage resources;

(c) standards and conditions for the excavation and curation of archaeological and palaeontological objects and material and meteorites recovered by authority of a permit;

(d) the conditions under which, bore a permit is issued, a financial deposit must be lodged and held in trust for the duration of the permit or such period as the heritage resources authority may specify, and conditions of forfeiture of such deposit;

(e) conditions for the temporary export and return of objects under section 32 or section 35;

(f) the submission of reports on work done under authority of a permit; and

(g) the responsibilities of the heritage resources authority regarding monitoring of work done under authority of a permit.

(2) On application by any person in the manner prescribed under subsection (1), a heritage resources authority may in its discretion issue to such person a permit to perform such actions at such time and subject to such terms, conditions and restrictions or directions as may be specified in the permit, including a condition −

(a) that the applicant give security in such form and such amount determined by the heritage resources authority concerned, having regard to the nature and extent of the work referred to in the permit, to ensure the satisfactory completion of such work or the curation of objects and material recovered during the course of the work; or

(b) providing for the recycling or deposit in a materials bank of historical building materials; or

(c) stipulating that design proposals be revised; or

(d) regarding the qualifications and expertise required to perform that actions for which the permit is issued.

(3) A heritage resources authority may at its discretion, in respect of any heritage resource protected by it in terms of the provisions of Chapter II, by notice in the Gazette or the Provincial Gazette, as the case may be, grant an exemption from the requirement to obtain a permit from it for such activities or class of activities by such persons or class of persons in such circumstances as are specified in the notice.

S49. Appeals

(1) Regulations by the Minister and the MEC must provide for a system of appeal to the SAHRA Council for a provincial heritage resources council against a decision of a committee or other delegated representative of SAHRA or a provincial heritage resources body authority.

(2) Anybody wishing to appeal against a decision of the SAHRA Council or the council of a provincial heritage resources authority must notify the Minister or MEC in writing within 30 days. The Minister or MEC, must have due regards to −

(a) the cultural significance of the heritage resources in question;

(b) heritage conservation principles; and

(c) any other relevant factor which is brought to its attention by the appellant or the heritage resources authority.

S51. Offences and penalties

(1) Notwithstanding the provisions of any other law, any person who contravenes −

(a) sections 27(18), 29(10), 32(13) OR 32(19) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 1 of the Schedule;

(b) sections 33(2), 35(4) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 2 of the Schedule;

(c) sections 28(3) or 34(1) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 3 of the Schedule;

(d) sections 27(22), 32(15), 35(6), or 44(3) is guilty of an offence and liable to a fine or imprisonment or both such fie and imprisonment as set out in item 4 of the Schedule;

(e) sections 27(23)(b), 32(17), 35(3) or 51(8) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 5 of the Schedule;

(f) sections 32(13), 32(16), 32(20), 35(7)(a), 44(2), 50(5) or 50(12) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 6 of the Schedule.

(2) The Minister, with the concurrence of the relevant MEC, may prescribe a penalty of a fine or of imprisonment for a period not exceeding six months for any contravention or failure to comply with regulations by heritage resources authorities or by-laws by local authorities.

(3) The Minister or the MEC, as the case may be, may make regulations in terms of which the magistrate of the district concerned may −

(a) levy admission of guild fines up to a maximum amount of R10 000 for infringement of the terms of this Act for which such heritage resources authority is responsible; and

(b) serve a notice upon a person who is contravening a specified provision of this Act or has not complied with the terms of a permit issued by such authority, imposing a daily fine of R50 for the duration of the contravention, subject to a maximum period of 365 days.

(4) The Minister may from time to time by regulation adjust the amounts referred to in subsection (3) in order to account for the effect of inflation.

(5) Any person who-

(a) fails to provide any information that is required to be given, whether or not on the request of a heritage resources authority, in terms of this Act;

(b) for the purpose of obtaining, whether for himself or herself or for any other person, any permit, consent or authority in terms of this Act, makes any statement or representation knowing it to be false or not knowing or believing it to be true;

(c) fails to comply with or perform any act contrary to the terms, conditions, restrictions or directions subject to which any permit, consent or authority has been issued to him or her in terms of this Act;

(d) obstructs the holder of a permit in terms of this Act in exercising a right granted to him or her by means of such a permit;

(e) damages, takes, or removes, or causes to be damaged, taken or removed from a place protected in terms of this Act any badge or sign erected by a heritage authority or a local authority under section 25(2)(j) or section 27(17), any interpretive display or any other property or thing.

(f) receives any badge, emblem or any other property or thing unlawfully taken or removed from a place protected in terms of this Act; and

(g) within the terms of this Act, commits or attempts to commit any other unlawful act, violates any prohibition or fails to perform any obligation imposed upon him or by its terms, or who counsels, procures, solicits or employs any other person to do so.

shall be guilty of an offence and upon conviction shall be liable to such maximum penalties, in the form of a fine or imprisonment or both such fine and such imprisonment, as shall be specified in the regulations under subsection (3).

(6) Any person who believes that there has been an infringement of any provision of this Act, may lay a charge with the South African Police Service or notify a heritage resources authority.

(7) A magistrate's court shall, notwithstanding the provisions of any other law, be competent to impose any penalty under this Act.

(8) When any person has been convicted of any contravention of this Act which has resulted in damage or to alteration of a protected heritage resource the court may –

(a) order such person to put right the result of the act of which he or she was guilty, in the manner so specified and within such period as may be so specified, and upon failure of such person to comply with the terms of such order, order such person to pay to the heritage resources authority responsible for the protection of such resource a sum equivalent to the cost of making good; or

(b) when it is of the opinion that such a person is not in a position to make good damage done to a heritage resources by virtue of the offender not being the owner or occupier of a heritage resources or for any other reason, or when it is advised by the heritage resources authority responsible for the protection of such resource that it is unrealistic or undesirable to require that the results of the act be made good, order such person to pay the heritage resources authority a sum equivalent to the cost of making good.

(9) In addition to other penalties, if the owner of a place has been convicted of an offence in terms of this Act involving the destruction of, or damage to, the place, the Minister on the advice of SAHRA or the MEC on the advice of a provincial heritage resources authority, may serve on the owner an order that no development of such place may be undertaken, except when making good the damage and maintaining the cultural value of the place, or for a period not exceeding 10 years specified in the order.

(10) Before making the order, the local authority and any person with a registered interest in the land must be given a reasonable period to make submissions on whether the order should be made and for how long.

(11) An order of no development under subsection (9) attaches to the land and is binding not only on the owner as at the date of the order, but also on any person who becomes an owner of the place while the order remains in force.

(12) The Minister on the advice of SAHRA, may reconsider an order of no development and may in writing amend or repeal such order.

(13) In any case involving vandalism, and whenever else a court deems it appropriate, community service involving conservation of heritage resources may be substituted for, or instituted in addition to, a fine or imprisonment.

(14) Where a court convicts a person of an offence in terms of this Act, it may order for forfeiture to SAHRA or the provincial heritage resources authority concerned, as the case may be, of a vehicle, craft, equipment or any other thing used or otherwise involved in the committing of the offence.
(15) A vehicle, craft, equipment or other thing forfeited under subsection (14) may be sold or otherwise disposed of as the heritage resources authority concerned deems fit.

APPENDIX B: GRADING SYSTEM

The National Heritage Resources Act 25 of 1999 stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act and the South African Heritage Resources Agency:

- National: This site is suggested to be considered of Grade 1 significance and should be nominated as such. Heritage resources with qualities so exceptional that they are of special national significance.
- Provincial: This site is suggested to be considered of Grade II significance and should be nominated as such. Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region
- Local: This site is suggested to be Grade IIIA significance. This site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised.
- Local: This site is suggested to be Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance).
- 'General' Protection A (Field Rating IV A): This site should be mitigated before destruction (usually High/Medium significance).
- 'General' Protection B (Field Rating IV B): This site should be recorded before destruction (usually Medium significance).
- 'General' Protection C (Field Rating IV C): This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

APPENDIX C: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM COASTAL AND INLAND AREAS: guidelines and procedures for developers

1. Stone artefacts

Stone artefacts are the most common and identifiable precolonial artefacts occurring on the South Africa landscape. Early Stone Age, Middle Stone Age and Later Stone Age stone artefacts occur in various concentrations on the South Africa landscape. Stone artefacts are very commonly found occurring on flat floodplains in a mostly secondary or disturbed context. However, they can be also be found in an *in situ* or undisturbed context in areas where little human or animal impact happens such as open sites mostly near rocky outcrops, amongst boulders and caves.

These may be difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified.

Early Stone Age (ESA) stone artefact
(1.5 million years ago – 250 000 years ago)

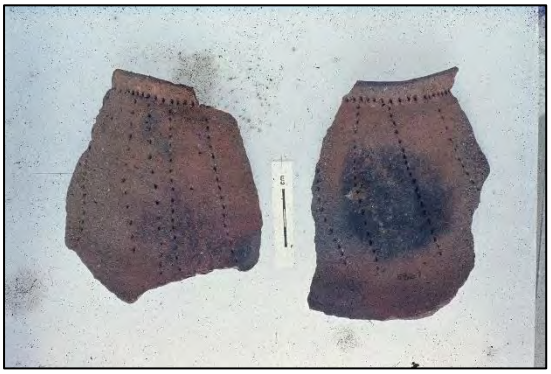
Middle Stone Age stone artefacts
(250 000 – 30 000 years ago)

Later Stone Age stone artefacts
(30 000 years ago – historical times)

2. Pottery scatters

Pottery scatters can be associated with either Khoekhoen pastoralists, the Nguni first farming communities (referred to as the South African Iron Age) or colonial settlement and can be dated to within the last 2 000 years which occur both at the coast and inland. Pottery associated with Bushmen / hunter-gatherers is generally thought to occur in the Karoo region. The most obvious difference between Khoekhoen and Nguni pottery are the decorations, shapes, sizes and wall thickness. Khoekhoen pottery is generally thinner than the thicker walled and robust Nguni pottery. Colonial ceramics ranges from earthenware, stoneware, porcelain and European glazed and unglazed ceramics.

Precolonial pottery and Colonial ceramics are more easily identifiable by the layman and should be reported.



Khoekhoen earthenware pottery (last 2 000 years)

Iron Age earthenware pottery (last 2 000 years)

3. Historical artefacts and features

These are easy to identify and include colonial artefacts (such as ceramics, glass, metal, etc.), foundations of buildings or other construction features and items from domestic and military activities associated with early travellers' encounters on the landscape and European settlement.

Example of a Fortified Structure (Fort Double Drift)

Ruin of stone packed dwelling

Glass artefacts

4. Shell middens (marine and freshwater)

Shell middens can be defined as an accumulation of marine or freshwater shell deposited by past human populations rather than the result of natural or animal activity. Marine shell middens occur all along the coast and may extend within 5 km of the coastline. This area is generally regarded as being archaeologically sensitive. The shells are concentrated in a specific locality above the high-water mark and frequently contain various edible and sometimes inedible marine shells, stone tools, pottery, bone (fish and animal) and occasionally also human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m^2 in extent, should be reported to an archaeologist. Freshwater shell middens occur along river banks and comprise freshwater shell, fish and animal bone, stone tools, pottery, and sometimes human remains.

Examples of the occurrence of coastal shell middens

5. Large stone features

They come in different forms and sizes but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters. Others consist of large piles of stones of different sizes and heights and are known as *isisivane.* They are usually near river and mountain crossings. Their purpose and meaning are not fully understood; however, some are thought to represent burial cairns while others may have symbolic value.

Examples of stone packed features

6. Graves, Burials and Human Skeletal material

Formal historical graves are easily identifiable as they are in most cases fenced off or marked with engraved headstones. Informal stone packed graves in several instances also occur within these fenced off areas.

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. Several human remains have been rescued eroding out of the dunes along this coastline and dongas in inland areas. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials.

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general, the remains are buried in a flexed position on their sides but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

Exposed human remains eroding out a coastal shell midden.

Exposed human remains eroding out an inland donga

7. Identification of Precolonial and Historical Iron Age Occupation

7.1. Circular hollows / sunken soil: may indicate storage pits and possible hut floors.
7.2. Ash heaps / middens that contain cultural material and food waste.
7.3. Khaki green soils / dung accumulations that would indicate the kraal area.
7.4. Baked clay blocks that would indicate the remains of hut structures.
7.5. Pitted upper and lower grindstones that show evidence of utilisation. These artefacts may be whole or broken.
7.6. Thick walled decorated and undecorated pot sherds.
7.7. Iron slag / blow pipes (tuyeres) that would indicate iron working.
7.8. Metal artefacts and ornaments.