

PHASE 1 HERITAGE IMPACT ASSESSMENT REPORT

PROPOSED ELDORADO PARK EXTENSION 6 HOUSING
DEVELOPMENT – ERF 6459 WITHIN THE CITY OF JOHANNESBURG
METROPOLITAN MUNICIPALITY.
GAUTENG PROVINCE

FOR: K2M Environmental (Pty) Ltd
Postnet Suite 509, Private Bag X4,
Kloof, 3640

Frans Roodt
NOVEMBER 2020

M *HUFA* *Heritage*
H *ashu* *onsultancy CC*

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EXECUTIVE SUMMARY

No heritage resources were recorded on the terrain. The Proposed Establishment of the Eldorado Park Extension 6 Housing Project on Erf 6459 poses no threat to known heritage resources and there will be no foreseen cumulative impacts relating to the project.

No specific mitigation measures are recommended other than should any heritage remains be discovered by chance, then the heritage authority and the archaeologist must be informed and work ceased at that place.

From a heritage management perspective, there is no reason why the proposed development may not continue.

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1. INTRODUCTION AND SITE DESCRIPTION

The author was appointed by K2M Environmental (Pty) Ltd, the independent Environmental Assessment Practitioner to undertake a heritage impact assessment for the proposed project. Erf 6459 of Eldorado Park Extension 6 make up the project area. This property forms part of the Gauteng Rapid Land Release Programme, which is aimed at fast tracking the release of State-owned land for development.

The proposed housing development is aimed at providing suitable housing to beneficiaries within the City of Johannesburg. The property will be rezoned from 'Educational' to 'Residential 4' to facilitate the development of high-density housing units. The proposed development will entail the construction of:

- Approximately 858 housing units.
- Internal water reticulation. Pipeline length and sizes will be confirmed during the design process.
- Internal sewer reticulation. The pipes will be 160mm uPVC (Heavy Duty) Class 34 and the manholes will be 1000mm to 1500mm diameter precast rings with concrete covers.
- Internal roads and stormwater infrastructure. The minimum sizes of the stormwater pipes will be 450mm within the site and 600mm diameter in road reserves.
- An internal MV network to supply the proposed development with electricity.

The total extent of the project area is approximately 11.02Ha and is situated within the Metropolitan Municipality at coordinates -26.286094° 27.907022°. The site is surrounded by formal housing and is adjacent to Cavendish Primary School and Willow Crescent Secondary School to the west and the Suliman Supermarket to the south.

A watercourse runs through the south-eastern portion of the project area where a high voltage ESKOM power line also passes. The terrain is extensively used for dumping rubble and refuse.

2. TERMS OF REFERENCE

- Review baseline information;
- Impact assessment – identify and assess potential impacts and determine cumulative impacts relating to the project;
- Identify mitigation measures;
- Provide guidance with regard to additional information, if applicable; and
- Provide project recommendations.

3. LEGAL REQUIREMENTS

3.1 The National Heritage Resources Act (25 of 1999) (NHRA)

This Act established the South African Heritage Resources Agency (SAHRA) and makes provision for the establishment of Provincial Heritage Resources Authorities (PHRAs). The Act makes provision for the undertaking of heritage resources impact assessments for various categories of development as determined by Section 38. It also provides for the grading of

heritage resources (Section 7) and the implementation of a three-tier level of responsibilities and functions for heritage resources to be undertaken by the State, Provincial authorities and Local authorities, depending on the grade of the Heritage resources (Section 8).

In terms of the National Heritage Resources Act (1999) the following is of relevance:

Historical remains

Section 34(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.

Archaeological remains

Section 35(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.

Subsection 35(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 with the detection or recovery of metals or archaeological material or objects, or use such equipment for the recovery of meteorites.

Subsection 35(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 no heritage resources management procedures 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 an 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.

Subsection 35(6) The responsible heritage resources authority may, after consultation with the owner of the land on which an archaeological or palaeontological site or 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.

Burial grounds and graves

Subsection 36(3)

- (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-
- (c) 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
- (d) 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 detection or recovery of metals.

Subsection 36(6) Subject to the provision of any 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 a direct descendant to make arrangements for the exhumation and re-interment of the content of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

Culture Resource Management

Subsection 38(1) Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development* ...

must at the very earliest stages of initiating such development notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

***‘development’** means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including-

- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (b) carry out any works on or over or under a place*;

- (e) any change to the natural or existing condition or topography of land, and
- (f) any removal or destruction of trees, or removal of vegetation or topsoil;

place means a site, area or region, a building or other structure* ...”

structure means any building, works, device or other facility made by people and which is fixed to the ground ...”

3.2 The Human Tissues Act (65 of 1983) and Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925)

This Act and Ordinance protects graves younger than 60 years. These fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities.

4. METHODOLOGY

4.1 Sources of information

The project area was surveyed on foot. As most archaeological material occurs in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. In addition, the SAHRIS database was consulted and no previous heritage impact assessments that covers the immediate area was found. Google Earth was consulted.

4.2 Limitations

No limitations were experienced. It must be noted that archaeological remains are generally subterranean and may have been missed. Such remains may only become visible during earthwork disturbances.

4.3 Categories of significance

The significance of heritage sites is ranked into the following categories.

No significance: sites that do not require mitigation.
Low significance: sites, which <i>may</i> require mitigation.
Medium significance: sites, which require mitigation.
High significance: sites, which must not be disturbed at all.

The significance of specifically an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

4.4 Terminology

Early Stone Age:	Predominantly the Oldowan artefacts and Acheulian hand axe industry complex dating to \pm 1 Myr yrs – 250 000 yrs before present.
Middle Stone Age:	Various lithic industries in SA dating from \pm 250 000 yrs - 22 000 yrs before present.
Late Stone Age:	The period from \pm 22 000-yrs to contact period with either Iron Age farmers or European colonists.
Early Iron Age:	Most of the first millennium AD.
Middle Iron Age:	10 th to 13 th centuries AD.
Late Iron Age:	14 th century to colonial period. <i>The entire Iron Age represents the spread of Bantu speaking peoples.</i>
Phase 1 assessments:	Scoping surveys to establish the presence of and to evaluate heritage resources in a given area.
Phase 2 assessments:	In depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collect-ing material, small test pit excavations or auger sampling could be undertaken.
Sensitive:	Often refers to graves and burial sites, as well as ideologically significant sites such as ritual / religious places. <i>Sensitive</i> may also refer to an entire landscape / area known for its significant heritage remains.

5. GENERIC BASELINE INFORMATION

5.1 Palaeoanthropology

Approximately 40 km north-west of the project area is the original Cradle of Humankind World Heritage Site (excluding Taung and the Makapans Valley). It stretches over an area of about 470 km² that is dotted with about 300 caves. Inside these caves, palaeoanthropologists have discovered thousands of fossils of hominids and other animals, dating back about 4-million years, to the birth of humankind. The most famous of these fossils are “Mrs Ples”, a skull which is more than 2-million years old, and “Little Foot”, a skeleton which is between 4-million and 3-million years old.

Archaeological finds at the Cradle of Humankind include 1.7-million-year-old stone tools from the Early Stone Age period, the oldest recorded in Southern Africa. At Swartkrans, near Sterkfontein, a collection of about 270 burnt bones tells us that our ancestors could manage fire more than 1-million years ago. This early technological innovation helped these hominids to keep themselves warm and to cook, thus expanding their diet.

Sterkfontein is one of many palaeontological sites in the Cradle of Humankind – all together, there are 13 sites which make up this World Heritage Site. The important sites are:

1. **Bolt's Farm:** 20 caves with antelope, baboon, sabre-toothed cats and rodents, some of which are between 5-million and 4-million years old.
2. **Swartkrans:** *Paranthropus robustus*, *Homo ergaster*, baboons, leopards, sabre-toothed cats, hyenas and antelope. Evidence of the earliest controlled use of fire in Southern Africa, and some of the earliest evidence of controlled use of fire anywhere in the world.
3. **Sterkfontein:** One of the world's richest hominid sites. Finds include *Australopithecus africanus* and an almost complete *Australopithecus* skeleton.
4. **Minnaar's Cave:** Animal fossils include a jackal skull.
5. **Cooper's Site:** Notable for diverse fauna including pigs, carnivores, antelope and *Paranthropus robustus*.
6. **Kromdraai:** The first specimen of *Paranthropus robustus* was discovered at this site by a schoolboy, Gert Terblanche, in 1938. The site at which this fossil was discovered (known as "KB") dates to at least 1.95-million years ago. "KA" is a separate site, associated primarily with the activities of sabre-tooth cats such as *Dinofelis*.
7. **Plover's Lake:** Abundant fauna including baboon, antelope and an extinct form of zebra. Part of the site was probably a leopard lair. Middle Stone Age deposits with artefacts have been excavated recently.
8. **Wonder Caves:** Spectacular cave formations. Fossils include rodents, frogs, lizards and birds.
9. **Drimolen:** 92 hominid specimens have been discovered here, including *Paranthropus robustus* and early *Homo*.
10. **Motsetse:** Site with well-preserved fauna, including a sabre-tooth cat.
11. **Gladysvale:** Rich fossil site with clear stratigraphy (levels). Two hominid teeth, much fauna and plant remains up to 3-million years old.
12. **Haasgat:** Variety of early monkeys.
13. **Gondolin:** Many fossils, including an enormous molar tooth of *Paranthropus robustus*. About 90,000 fossil specimens have been discovered here since 1979.

5.2 The Stone Age

The Stone Age covers most of southern Africa and the earliest consist of the Oldowan and Acheul artefacts assemblages. Oldowan tools are regularly referred to as "choppers". Oldowan artefacts are associated with *Homo habilis*, the first true humans. In South Africa definite occurrences have been found at the sites of Sterkfontein and Swartkrans. Here they are dated to between 1.7 and 2 million years old. This was followed by the Acheulian technology from about 1.4 million years ago which introduced a new level of complexity. The large tools that dominate the Acheulian artefact assemblages range in length from 100 to 200 mm or more. Collectively they are called bifaces because they are normally shaped by flaking on both faces. In plan view they tend to be pear-shape and are broad relative to their thickness. Most bifaces are pointed and are classified as handaxes, but others have a wide

cutting end and are termed cleavers. The Acheulian design persisted for more than a million years and only disappeared about 250 000 years ago.

The change from Acheulian with their characteristic bifaces, handaxes and cleavers to Middle Stone Age (MSA), which are characterized by flake industries, occurred about 250 000 years ago and ended about 30 000 – 22 000 years ago. For the most part the MSA is associated with modern humans, *Homo sapiens*. MSA remains are found in open spaces where they are regularly exposed by erosion as well as in caves. Characteristics of the MSA are flake blanks in the 40 – 100 mm size range struck from prepared cores, the striking platforms of the flakes reveal one or more facets, indicating the preparation of the platform before flake removal (the prepared core technique), flakes show dorsal preparation – one or more ridges or arise down the length of the flake – as a result of previous removals from the core, flakes with convergent sides (laterals) and a pointed shape, and flakes with parallel laterals and a rectangular or quadrilateral shape: these can be termed pointed and flake blades respectively. Other flakes in MSA assemblages are irregular in form.

The change from MSA to Later Stone Age (LSA) took place in most parts of southern Africa little more than about 20 000 years ago. It is marked by a series of technological innovations or new tools that, initially at least, were used to do much the same job as had been done before, but in a different way. Their introduction was associated with changes in the nature of hunter-gatherer material culture. The innovations associated with the LSA “package” of tools include rock art – both paintings and engravings – and smaller stone tools, so small that the formal tools less than 25mm long are called microliths (sometimes found in the final MSA) and bows and arrows. Rock art is an important feature of the LSA.

5.3 The Iron Age

In terms of *Huffman's (2007) distribution sequences of the Iron Age, the project area may contain the remains of the under-mentioned ceramic units which form distinct cultural groups:

➤ **The Urewe Tradition**, originating in the Great Lakes area of Central Africa, it was a secondary dispersal centre for eastern Bantu speakers. It represents the eastern stream of migration into Southern Africa. In the general project area the Uruwe Tradition consists of various Branches and their respective ceramic units which may occur in the project area:

- **Kwale Branch:**
Mzonjani facies AD 450 – 750 (Early Iron Age)
- **Blackburn Branch**
Ntsuanatsatsi facies AD 1450 – 1650 (Late Iron Age)
Uitkomst facies AD 1650 – 1820 (Late Iron Age)
- **Moloko Branch**
Olifantspoort facies AD 1500 – 1700 (Late Iron Age)
Buispoort facies AD 1700 – 1840 (Late Iron Age)

➤ **The Kalundu Tradition**, originating in the far North of Angola, was another secondary dispersal centre for eastern Bantu speakers and represents the western stream of migration into Southern Africa. This ceramic Tradition did not occur in the general project area.

No Iron Age period cultural remains were observed in the project area. However, the Johannesburg area is known for its pre-colonial Sotho-Tswana stonewalled settlements, such as at Melville koppies and Klipriviersberg Nature Reserve. A Google earth search revealed a number of these stonewalled settlements approximately 4km - 7km east of the Eldorado Park Township between the N1 and R82 roads near the Naturena Township (Figures 5 & 6).

5.4 The historical landscape

Although there is no precise date about the start of construction in Eldorado Park, it was established in the mid-1960's. In 1965, the land was declared an area for the exclusive settlement of Coloured South Africans, under the Group Areas Act. It became part of Johannesburg in 1970. An important heritage site in the vicinity is Mandela House, located in Ngakane Street, Orlando West, Soweto.

6. RESULTS OF THE SURVEY

6.1 Palaeontology

The area falls in the blue colour code on the Palaeo-Sensitivity map. No palaeontological study is required, but a protocol for find is required. This will be done by an accredited palaeontologist and will form a separate document.

6.2 Stone Age remains

No Stone Age material was observed in the project area.

6.3 Iron Age

No Iron Age cultural remains were observed in the project area.

6.4 Graves and burials

No graves or burial sites were observed on the terrain.

6.5 The built environment

There are no buildings older than 60 years in the demarcated area or surrounding area.

7. EVALUATION AND STATEMENT OF SIGNIFICANCE

The Proposed Establishment of the Eldorado Park Extension 6 Housing Project on Erf 6459 does not impact on any heritage resources.

7.1 Significance criteria in terms of Section 3(3) of the National Heritage Resources Act

	Significance	Rating
1.	The importance of the cultural heritage in the community or pattern of South Africa's history (Historic and political	None

	significance).	
2.	Possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage (Scientific significance).	None
3.	Potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage (Research/scientific significance)	None
4.	Importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects (Scientific significance).	None
5.	Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group (Aesthetic significance).	None
6.	Importance in demonstrating a high degree of creative or technical achievement at a particular period (Scientific significance).	None
7.	Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (Social significance).	None
8.	Strong or special association with the life and work of a person, group or organization of importance in the history of South Africa (Historic significance).	None
9.	The significance of the site relating to the history of slavery in South Africa.	None

7.2 **Section 38(3) (c) An assessment of the impact of the development on such heritage resources**

The development will have no effect on heritage sites.

7.3 **Section 38(3) (d) An evaluation of the impact of the development on heritage resources relative to the sustainable economic benefits to be derived from the development**

No significant heritage remains were recorded. The sustainable economic benefits outweigh the conservation benefits.

7.4 **Section 38(3) (e) The results of consultation with the communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources**

Consultation is ongoing.

7.5 **Section 38(3)(f) If heritage resources will be adversely affected by the proposed development the consideration of alternatives**

No viable alternatives exist.

7.6 **Section 38(3)(g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.**

No mitigation measures are recommended.

8. CONCLUSION

No heritage resources were recorded on the terrain. The Proposed Establishment of the Eldorado Park Extension 6 Housing Project on Erf 6459 poses no threat to known heritage resources and there will be no foreseen cumulative impacts relating to the project.

From a heritage management perspective, there is no reason why the proposed development may not continue.

9. RECOMMENDATIONS

No specific mitigation measures are recommended other than should any heritage remains be discovered by chance, then the heritage authority and the archaeologist must be informed and work ceased at that place.

10. REFERENCES

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FRANS ROODT (BA Hons, MA Archaeology, Post Grad. Dipl. Museology; UP)

11. VISUAL RECORD



Figure 1. General view of the terrain towards the south. Note dumping.



Figure 2. A view towards the northern residential area.



Figure 3. Google Earth image of the project location and GPS track.



Figure 4. Google Earth image of the project location indicated by the arrow in relation to Eldorado Park.



Figure 5. Google Earth image showing in red dots some archaeological sites east of Eldorado Park. The “boxed: cluster is detailed in Figure 6 below.

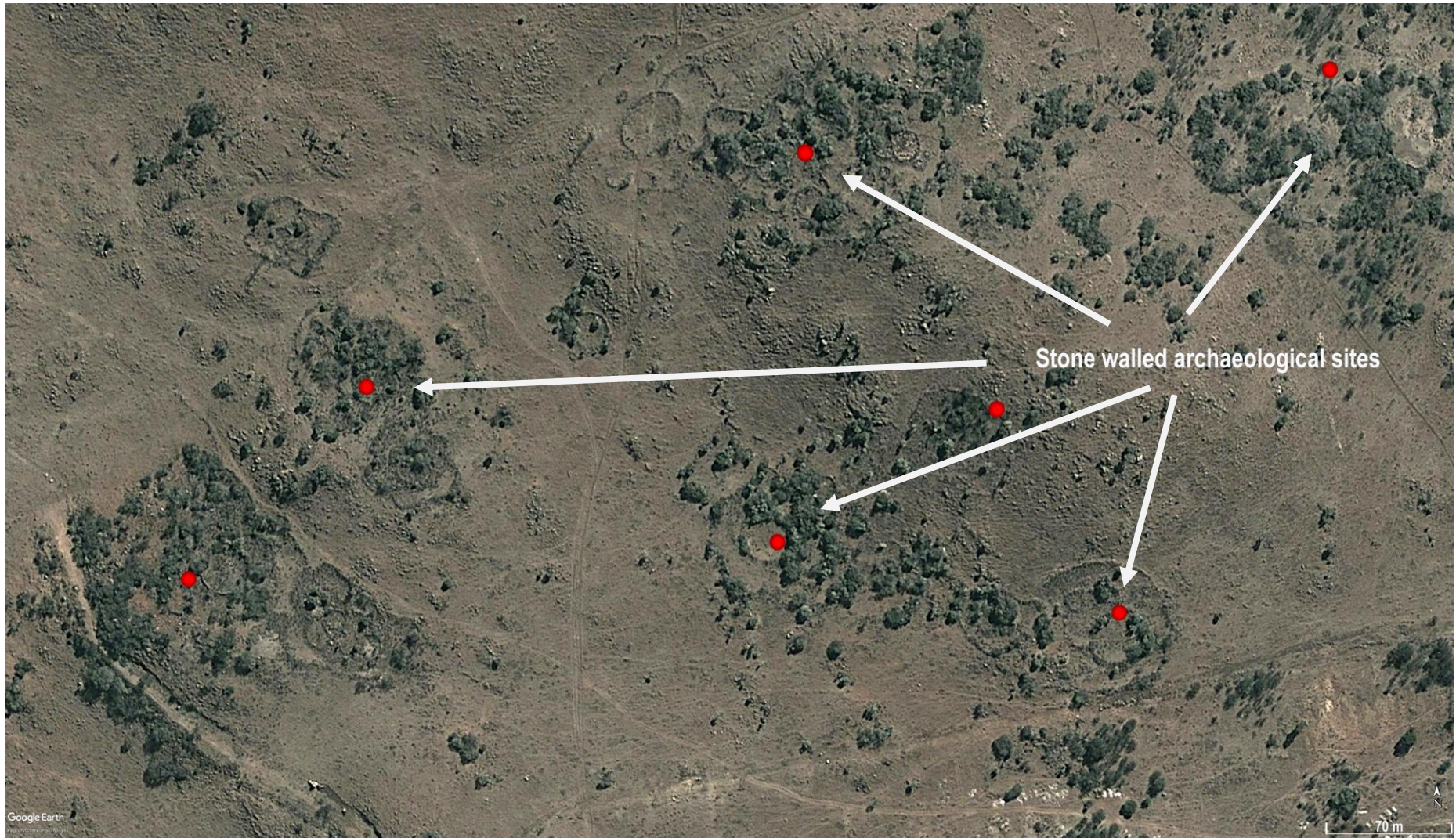


Figure 6. Google Earth image showing detail of archaeological stonewalled sites from the “boxed” area in figure 5 above.