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**A HERITAGE IMPACT ASSESSMENT REPORT  
FOR THE GILMOE MINING RIGHTS APPLICATION  
ON VARIOUS FARMS AND FARM PORTIONS  
IN THE TAUNG DISTRICT OF THE NORTHWEST PROVINCE**

For:

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REPORT: **APAC020/42**

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## SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Gudani Consulting Environmental & Social Scientists to conduct a Desktop-based Heritage Impact Assessment for a Mining Rights Application (MRA) on various farms and farm portions in the Taung District of the Northwest Province. The work is requested on behalf of Gilmoie Mining (Pty) Ltd.

Background research indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. This includes the well-known Taung Skull Fossil Site. This report discusses the results of the background research and provides recommendations on the way forward at the end.

**It is recommended that the MRA be allowed to continue, taking into consideration the mitigation measures and recommendations put forward at the end of the report.**

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## 1. INTRODUCTION

APelser Archaeological Consulting (APAC) was appointed by Gudani Consulting Environmental & Social Scientists to conduct a Desktop-based Heritage Impact Assessment for a Mining Rights Application (MRA) on various farms and farm portions in the Taung District of the Northwest Province. The work is requested on behalf of Gilmoie Mining (Pty) Ltd.

Background research indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. This includes the well-known Taung Skull Fossil Site.

The client indicated the location and boundaries of the study area and the assessment concentrated on this portion.

## 2. TERMS OF REFERENCE

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;
2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;
4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;
5. Review applicable legislative requirements;

***It should be noted that No Field-Based Assessment was conducted as part of this Appointment and that the results and recommendations made in this report are based on the scrutiny of previous research and assessments in the area, as well as archival research and aerial images of the study area.***

## 3. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

### 3.1. The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

- a. Archaeological artifacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

**The National Estate includes the following:**

- 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 features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. Sites of Archaeological and palaeontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 000m<sup>2</sup> or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m<sup>2</sup>
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

**Structures**

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

### **Archaeology, palaeontology and meteorites**

Section 35(4) of the Act deals with archaeology, palaeontology and meteorites and states that no person may, without a permit issued by the responsible heritage resources authority (National or Provincial):

- 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;
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites;
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

**The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.**

### **Human remains**

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries

- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant 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 or 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, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

### **3.2. The National Environmental Management Act**

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

## **4. METHODOLOGY**



#### **4.1. Survey of literature**

A survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

#### **4.2. Field survey**

The field assessment section of the study was conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

***No field work was undertaken as part of this assessment.***

#### **4.3. Oral histories**

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

#### **4.4. Documentation**

All sites, objects, features and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

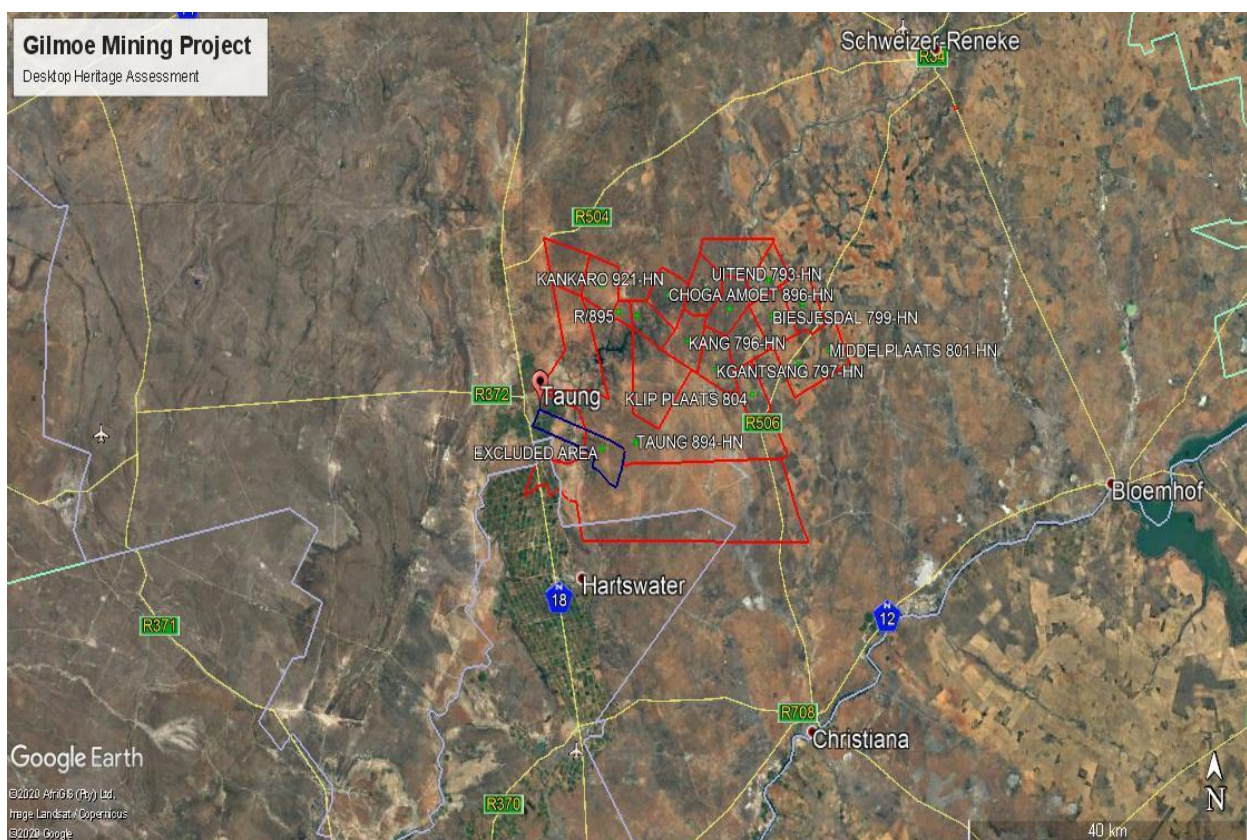
### **5. DESCRIPTION OF THE AREA**

The Mining Rights Application area is located in the Taung District of the Northwest Province, west of Taung. The following farms form part of the application:

1. Taung 894HN
2. Klip Plaats804HN
3. Bast Plaats 802HN
4. Middelplaats 801HN
5. Kgantsang 797HN
6. Gladdefontein 798HN
7. Biesjesdal 799HN
8. Saltpetre Pan 800HN
9. Kang 796HN
10. Letsilabelung 794HN
11. Uitend 793HN

12. Marea Amoet 895HN
13. Choga Amoet 896HN
14. Mapana 795HN
15. Kankaro 921HN

The topography and general landscape of the study area can't be described from a personal observation perspective as no physical fieldwork was undertaken for this study. However, based on aerial images (Google Earth) of the area it is clear that large portions of the study area is fairly flat and open and has been utilized for large-scale agricultural purposes. There is however also some outcrops, ridges and hills present in sections, especially around the Hartsvier and its tributaries, while deep gullies and valleys are also formed by these rivers and smaller streams. The same is true for the areas around the Taung Dam that falls within the study area boundaries. There are a number of rural and other settlements situated in the area and bordering it and as result there has been substantial impacts on the original landscape. Farmsteads and farming-related settlements are also present. Large sections of the study and application area has however not been impacted heavily at all and it is in these sections that the possibility of the presence of cultural heritage (archaeological and/or historical) sites, features or material is possible.



**Figure 1: General location of the MRA and the study area (Google Earth 2020). The blue area is excluded from the study.**

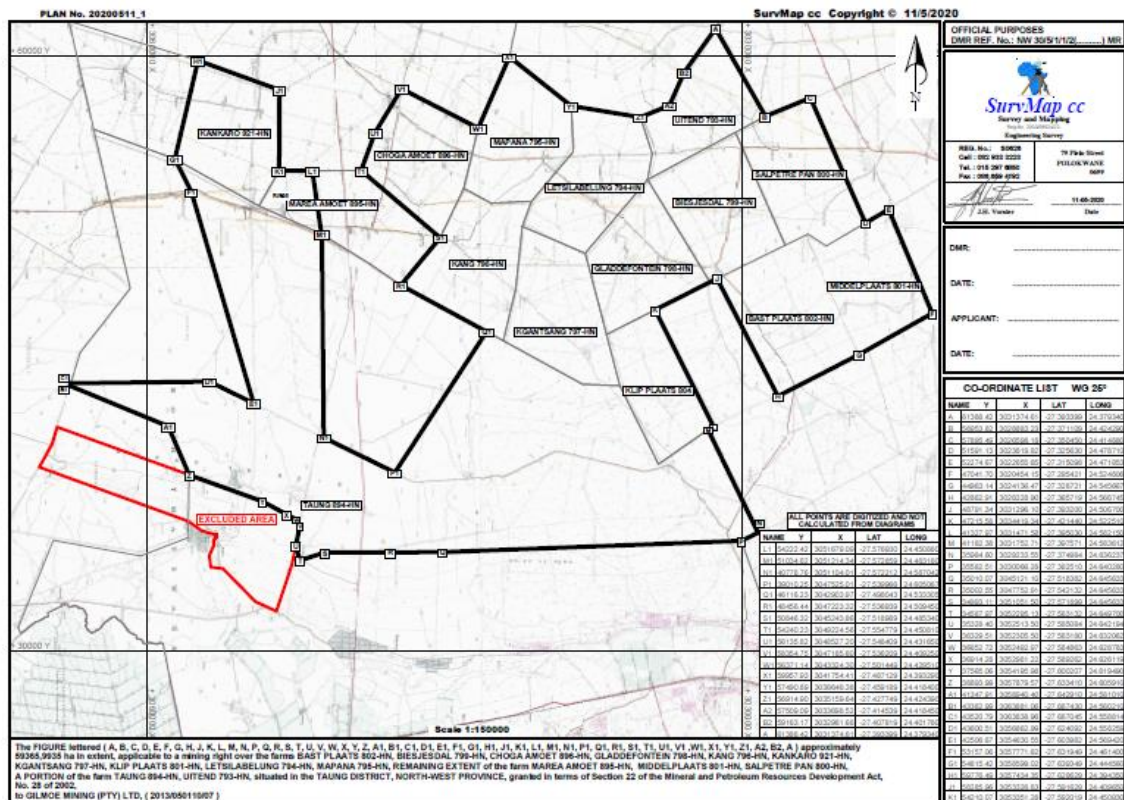
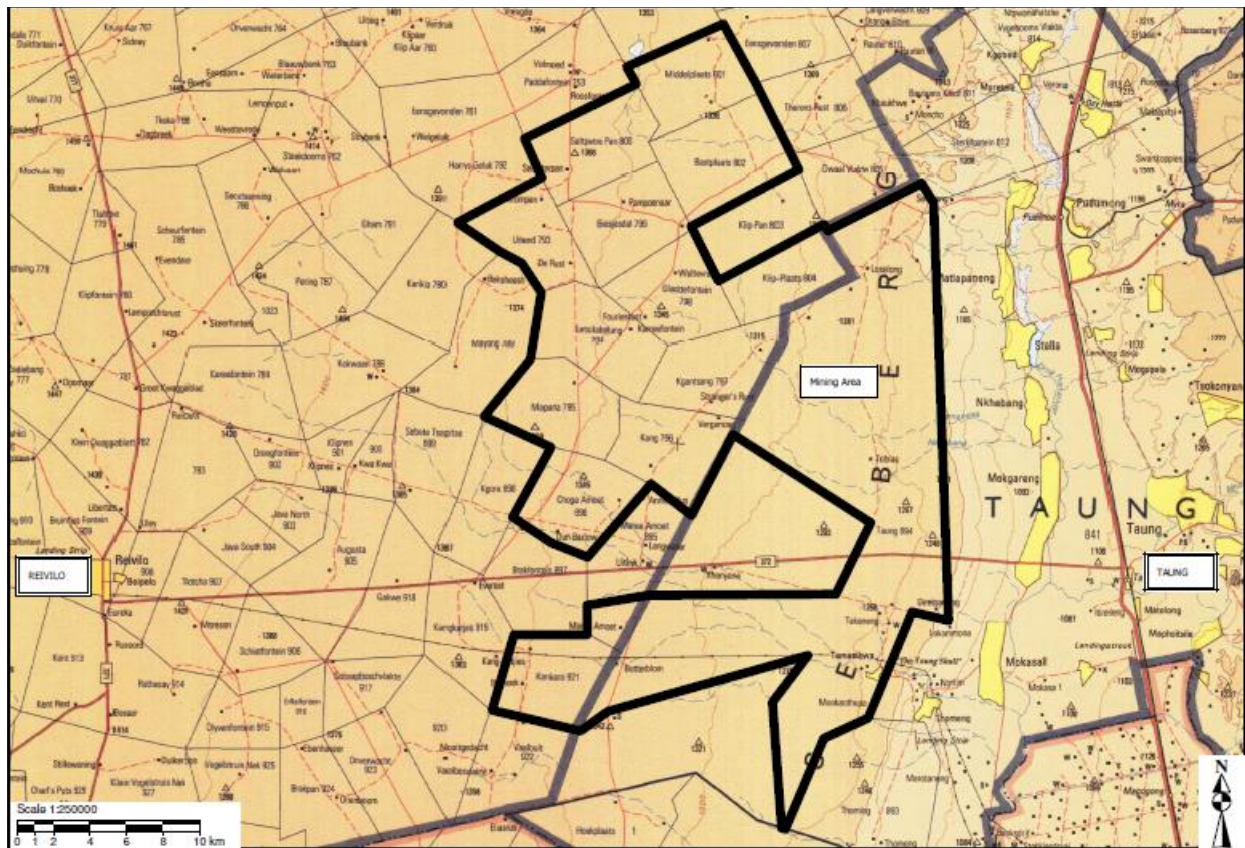


Figure 2: The MRA & study area location map (provided by Gudani Consulting Environmental & Social Scientists).





**Figure 3: The Mining Rights Area Locality Map (provided by Gudani Consulting Environmental & Social Scientists).**

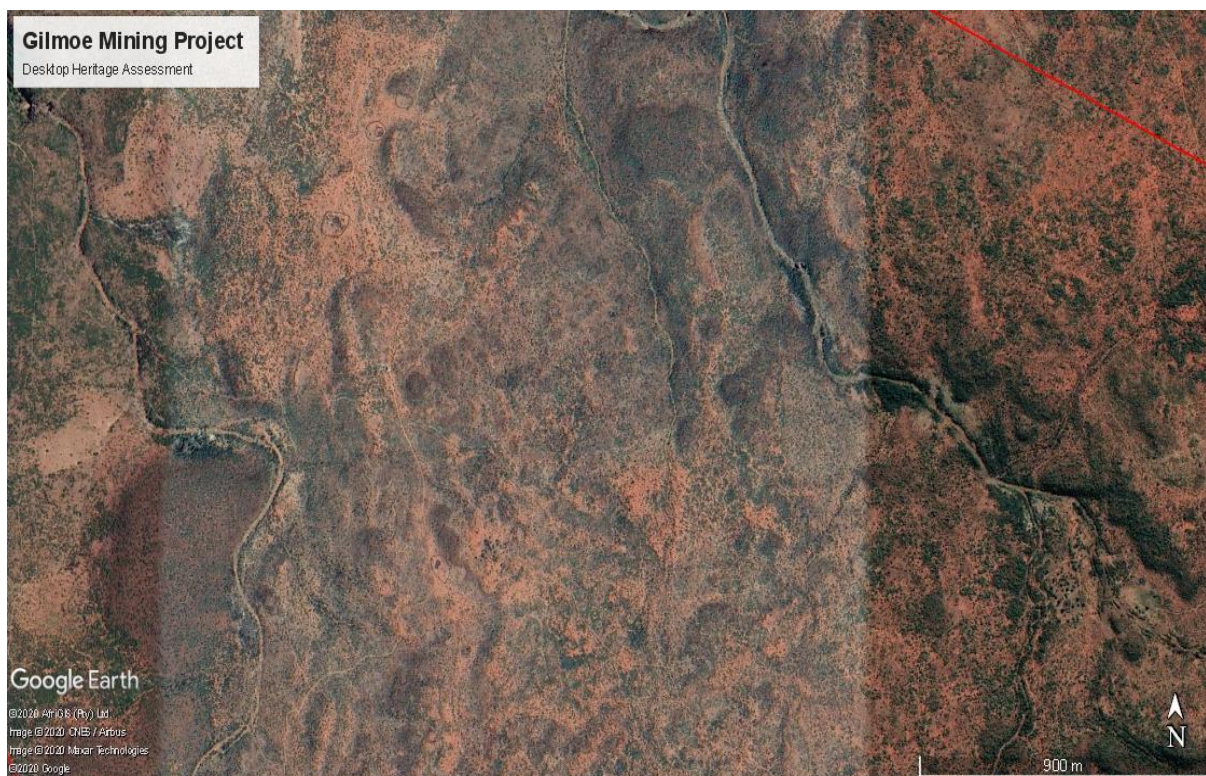


**Figure 4: Closer view of a section of the study area. Note the rural settlements (Google Earth 2020).**



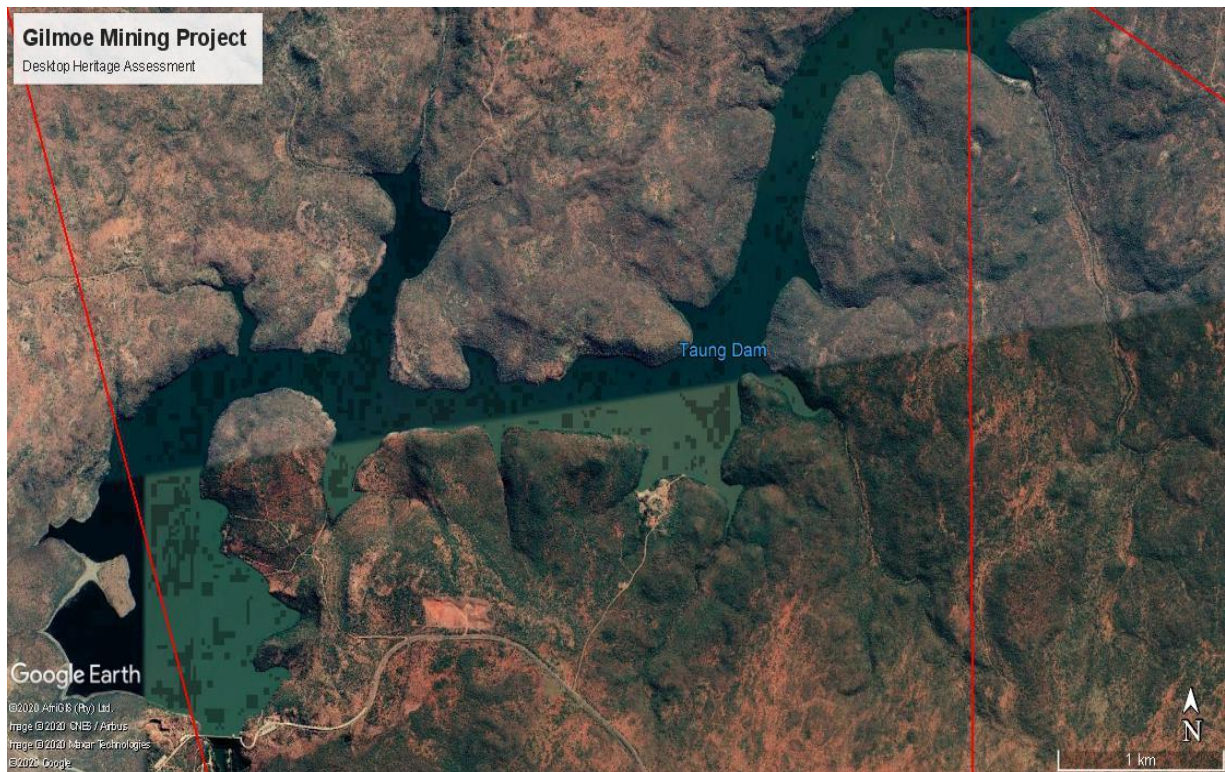


**Figure 5: Closer view of another section. Note the extensive agricultural development (Google Earth 2020).**



**Figure 6: A view of a portion of the study area showing some water courses (riverbeds/streams), rocky ridges/outcrops and gullies (Google Earth 2020).**





**Figure 7: A view of the area around the Taung Dam (Google Earth 2020).**



**Figure 8: Another area showing old/existing farm land and rural settlement areas (Google Earth 2020).**





**Figure 9: A larger view of a section of the area indicating the extensive agricultural activities and impact (Google Earth 2020).**



**Figure 10: Closer view of one of the typical farming set-ups in the area, with the fields & farmstead and related infrastructure visible (Google Earth 2020).**

## 6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided in basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago

Middle Stone Age (MSA) less than 300 000 – 20 000 years ago

Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

In terms of known Stone Age sites located in the larger geographical area, some rock engravings have been found near Taung (Bergh 1999: 5), while of course the famous Taung fossil skull site is also located near Taung (Pelsner et.al. 2010: 11). Wonderwerk cave near Kuruman retain evidence of early peoples in its 6 meter midden deposit, especially in the rear portions of the cave. Towards the front rock-art from later Stone Age peoples are also preserved. Furthermore the engraving sites Wildebeestkuil, Driekopseiland and Nooitgedacht near Kimberly confirm a continued presence of Later Stone Age peoples in the general region (Miller 2016: 14). During a 2017 assessment in the Taung-Buxton area, Mlilo recorded some scatters of ESA & MSA artifacts (Mlilo 2017: 53-55).

The Taung Fossil Site is not located close to the MRA area (it is around 14km to the west of the area, but the location of the site in the general area should be taken into account and the possibility of similar sites in the study area should be noted as well. The Taung Skull Fossil Site was designated as a National Heritage Site in 2002. It is also inscribed on the World Heritage List (WHL) forming part of serial World Heritage Site (WHS), together with Sterkfontein, Swartkrans, Kromdraai and Environs, and Makapan Valley fossil hominid sites in South Africa, together named the Fossil Hominid-bearing Sites of South Africa (FHSSA) (EcoAfrica: 2015.1).

The information below is from ***EcoAfrica, 2015. Heritage Impact Assessment for Improvement on Visitor Facilities, Site Infrastructure and Heritage Conservation Measures at the Taung Skull Fossil Site. p.11-12.***

The Taung Skull Fossil Site at the Buxton Lime Works is best known for the 1924 discovery of the type specimen of *Australopithecus africanus*. The tufa accretions of the Buxton Lime Works are riddled with fossil sites sampling the Pliocene and Pleistocene fauna, dating back several million and hundreds of thousands of years. Most of these sites have not been excavated, and thus have potential for future research to investigate long term ecological changes in an area at the edge of the Ghaap Escarpment. The main palaeontological sites are Hrdlička Deposits, Dart Deposits, Tobias Pinnacle Deposit, Berger Cave Complex, Lucky Moon Cave, LSN Cave, Innominate Cave, Quinney Cave, Cut-Through Alley, Black Earth Cave,



Peabody's Equus Site, Equus Cave, Blom Cave, Satan Cave, Alcove Cave, Oxland Large Mammal Site and Acacia Cave.

Intermittent fieldwork over the past six decades at the TSFS has shown that it was occupied by Stone Age peoples for a fair portion of the past hundred or more millennia, with arguably the four most important of the dozen known localities there, being as follows:

1. Witkrans Cave has yielded Middle Stone Age artifacts and associated large mammal bones including two to three un-described modern human molars, all dated to the last 89 000 years ago. This site falls outside the Core Area of the TSFS. It is however included in the Buffer Zone.
2. Black Earth Cave, where one of the three strata yielded a large fossil mammal fauna including two modern human fragments that may be as old as or even earlier than those of the Witkrans.
3. Equus Cave, where the deposits produced a vast 30 000 large mammal samples. Identification representing 48 species, including modern human pieces, reflects its use for over 30 millenia as a brown hyena maternity den.
4. Power House Cave, where Later Stone Age artifacts and associated large mammal bones relate to an occupation between 3 700 and 2 000 years ago. Schematic rock paintings here and at other sites in the area may be more recent.

Although these sites are not located close or in the Gilmoie Mining Rights Application Area, it indicates the type and range of sites that could potentially be located in sections of the study area.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts. In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D

Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.

Middle Iron Age (MIA) 900 – 1300 A.D.

Late Iron Age (LIA) 1300 – 1840 A.D.

No Early or Late Iron Age sites are known to exist on the area of Taung, although by the beginning of the 19th century Taung was a known Thlaping (Tswana) settlement (Bergh 1999: 9-11). No Iron Age occurrences were identified during a survey in the Taung area by the author of this Desktop Report (Pelser et.al. 2010:12). Early Iron Age remains are mainly known

in the water rich areas of Botswana, Transvaal and Natal, normally associated with rich red loam soils. Even so these sites are few in number as the Early Iron Age populations in the landscape were limited in numbers. As these sites are entirely unknown in this region, it is rather unlikely that material from the period will be encountered in the study area (Miller 2016: 14).

From the fifteenth century onwards we find a diverse population in the regions to the west, north, north-east and east of the site under investigation. Again the settlement of these peoples was dictated by the availability of permanent water and soils suitable for the production of a variety of crops. The Limpopo River and its tributaries, the Harts River and the Vaal River and its tributaries to a large extent regulated the settlement pattern of the Later Iron Age peoples. To certain extent, the Ghaap Dolomite formations drained a large quantity of water from the high-Veld and delivered it at a number of fountain sites. Some of the best known are the Pretoria Fountains, Wonderfontein and the Eye of Kuruman. These water sources were then also utilized by Later Iron Age peoples (Miller 2016: 14).

The first Europeans to travel close to this area were the groups of De Buys in 1821 & 1825 and Bain in 1834 (Bergh 1999: 12-13).

**The information below is from Miller 2016 (p.15-16) – See List of References.**

Even though it is known that the mysterious figure of Coenraad Buis operated in the uruman Klerksdorp and Zeerust area from the earliest part of the nineteenth century, it is defiantly unlikely that any European during that time endeavoured to settle in this dry, featureless landscape. The first real effort for European settlement in the region was initiated by the London Missionary Society. Between 1812 and 1814 reverend John Campbell one of the L.M.S. directors undertook an inspection tour of all their stations in the Cape Colony. Owing to information received of large populations of indigenous people to the north and northeast of Griekwatown he undertook a journey to investigate. At Old Lithako Campbell and the reverend Edward Read met the Thlaping Tswana people under the regency of one Mothibi, son of Molehabangue. From Mothibi they obtained permission to establish a mission station at old Lithako.

Two years later in February 1816 the L.M.S. endeavored to establish this new venture as a fact. This venture proofed to be unsuccessful, but in June 1817 Mothibi was convinced by the reverend Edward Read to move his whole community some thirty miles (fifty kilometers) to the south to new Lithako eventually to be known as Kuruman. Here he established the Kuruman mission station. In May 1821 the reverend Robert Moffat established the Kuruman Mission Station. From Moffat's journals and the informative writings of Rex, we learn that a few years before the arrival of the trekker community the Marico area was targeted by two groups of missionaries, first the French and later the Americans. The site for these two groups' short-lived endeavours was focused on the site generally known as Sendelingspos (Mosega) located just to the southwest of Jacobsdal. After the L.M.S. successfully founded the Kuruman mission station at New Lithako in 1817, the reverend John Campbell and Dr. John Philip returned to South Africa in 1818 to investigate the possibilities to expand their work. Campbell reached the infantile New Lithako mission station in April 1820 and in May 1820, as

he describes it, reached the central city of the Marootze (Bahurutsi) nation at Kurreechane (Khaditshwene.)

In a week of interaction and negotiations, it was concluded that the regent and his brother gave permission for the placement of missionaries near this community. After the arrival of the Voortrekkers in the Transvaal efforts to revive the mission stations were abandoned, and for the next forty years these newcomers followed in the tracks of the Later Iron Age peoples, as their needs for farming and hunting was similar. They in turn settled near permanent water sources and on soils conducive for the production of crops.

Then in the latter part of the nineteenth century the Hopetown diamond was discovered that led to the establishment of the Kimberly Diamond fields. This still not influenced the area under investigation. In Jeppe's Map of the Transvaal of 1899 the area is still demarcated as a Native Reserve, showing the absence of European occupation. It is only during the development of the Vaal-Harts irrigation scheme between 1933 and 1940 that the Harts River valley was finally settled on by Europeans.

**The information below is from Rossouw 2017 (p.6-7):**

The alluvial formations of the Vaal River basin are best developed along the lower 300 km of the river. These alluvial formations are well known for their unique record of the Pleistocene. Numerous Early Stone Age hand axes as well as the remains of Pleistocene mammalian fossils have been recovered in the region, from gravel deposits 20 m to 50 m above the current riverbed. Early to Middle Stone Age artifacts are derived from the Vaal gravels and include an abundance of Acheulian (Early Stone Age) hand axes, cleavers and core-axes, primarily made from quartzite. In addition, the gravel deposits are largely mantled by undifferentiated deposits of unconsolidated to semi-consolidated sediments, including calcrete, aeolianite, clay and Kalahari/Hutton Sands, of which the lower levels have shown evidence of high densities of Fauresmith blades, which is regarded as an important transitional stone tool industry at the beginning of the Middle Stone Age. Later Stone Age artifacts preserved in open-site scatters have been recorded on the modern land surfaces flanking the river and its tributaries.

There are plentiful rock art sites with engravings in the Lower Vaal River Basin including the area around Christiana on the farm Stowlands and Stows Kopje. Further south, rock engravings have been recorded at Four Streams, Nazareth and Schoolplaats that include human figures, animals, therianthropes and geometric motifs. Koranna and Bushman bands occupied the Harts-Vaal valley by the beginning of the 19th century and competed for territory with the Tswana/Thlaping immigrants from the north. In 1867 the discovery of diamonds near the Vaal/Gariep confluence brought about enormous changes in the social and economic make-up of the region. Diamond diggers first located the diamondiferous alluvial gravels of the Vaal River in the vicinity of Christiana and Bloemhof in the mid 1880's and by 1912, the rich diggings on Mooifontein and London, south of Schweizer Reneke, had been discovered, as had the equally rich deposits to the southwest of Wolmaransstad. Hartswater was laid out as part of the Vaal – Harts Irrigation Scheme in 1948 and reached municipal status in 1960.

**The information below is from Mlilo 2017 (p.40-44). It again focus to a large degree on the Taung Fossil & related sites close to Taung, but does give an indication again of the types and range of sites that could be expected in the larger study area:**

1. The various tufa deposits, particularly the still largely intact and still accreting Blue Pool Tufa. The Blue Pool Tufa's cavitous nature and fossilizing leaves preserved in the carbonate-rich waters flowing over the tufa also make interesting discoveries, yet to be fully explored. The still actively accreting portion of the Blue Pool Tufa provides a modern analogue for tufa formation. The Thabasikwa River (historically known as the Thabaseek River) flowing over the surface of the tufa is still today adding to its mass as well as caving out rock shelters and cavities along its winding course. The tufa accretions of the Buxton Limeworks are riddled with fossil sites sampling the Pliocene and Pleistocene fauna.
2. The Underground Cave – this feature, sometimes also referred to in print as “the underground river”, was exposed during the course of earth-moving operations in the north-western extremity of the Blue Pool Picnic Site.
3. Dart Pinnacle and Hrdlička's Pinnacle - it is tragic that the site of the original Taung Skull find has been irreplaceably mined away but there remain two pillars (pinnacles) of unexcavated tufa deposit flank the approximate site of the discovery and preserve the original surface of the tufa prior to mining. They also preserve relic sandy and stony breccial deposits - still fossiliferous - which represent cavity in-fills similar to those that once entombed the Taung skull. They provide a valuable analogue for the discovery site which no longer exists. As such, they should be preserved at all costs.
4. Precambrian fossils-The Taung Skull Fossil Site has become a world famous site in terms of palaeoanthropology mainly as a result of the discovery of the Taung Skull in late 1924 during quarrying operations at this site. This skull was described by Raymond Dart and assigned to a new species *Australopithecus africanus*. This discovery in addition to other hominid remains found elsewhere in South Africa have indicated that the sub-continent may well have been a significant geographical region in the origin of very early humans. The majority of these early hominid remains occur in a karst environment associated with the Malmani Dolomite of Transvaal and the dolomites of the Griqualand West Supergroup outcropping in the Northern Cape and North West Provinces dated at approximately 2300my. Little research on the Precambrian palaeontology of these sites which contains evidence of some of the earliest forms of life (stromatolites and microfossils) positively identified and palaeo-environmental conditions which were a major catalyst to the initiation of an oxygenic environment (atmosphere) which allowed for the later diversification of life forms and the establishment of life on land.
5. Palynology - Most layers in the Taung limestone accumulations were not productive but a rare pocket of sediment from Equus Cave did contain fossil pollen grains that give extremely valuable information about long-term environmental change. Potentially similar undiscovered pockets with pollen bearing inclusions might exist in

the heritage area that can in future help to elucidate the long environmental history at the site.

6. Early Stone Age occurrences - "ACHEULIAN HOLE": About 150 m northeast of Black Earth Cave.
7. Middle Stone Age occurrences - WITKRANS CAVE: On escarpment, about 5km south of Buxton. A small (~2 x 8m) collapsed cave, the floor of which was largely excavated by Peabody (1954) in 1947/8. Calcified Layer C there yielded a largish faunal assemblage and MSA lithics comparable to Middle Pietersburg material from the Cave of Hearths (Clark 1971). Of heritage significance because that stratum also yielded 2 or 3 as yet un-described human molars, presumably *Homo sapiens*. These have a minimum age of ~89 kyr ago in terms of a U-series date on overlying travertine on the upslope side of the site.
8. NORLIM 2: "Visitor's House" small collection of MSA artifacts within vicinity. 400m east-southeast of Powerhouse Cave.
9. Later Stone Age occurrences - NORLIM 1: In a gully ~100 m north of the road and ~200 m due east of Powerhouse Cave. A fairly extensive and rich LSA [variant of the Kuruman (Oakhurst) Industry] workshop artifact assemblage from a surface collection (MMK 6501) and a small excavation (MMK 6500). This area is part of an eastern buffer zone.
10. LITTLE WITKRANS SHELTER: A small (4 x 13m) overhang at the base of a low Tufa cliff about 200m north of Witkrans Cave. The unstratified up to 0.8 m deep deposit probed by the latter dig yielded some fauna plus an abundance of lithic and organic artifacts ascribable to the Wilton (~8.5 - 1.8 kyr BP) and to Ceramic LSA from 1.8 - historical times.
11. POWERHOUSE CAVE: A "bilobial" cave, ~10 x 15 m in extent, in Norlim Tufa, on the east wall of Thabasikwa gorge. The latter investigation revealed that the up to 0.6 m deep deposit contained a fair density of fauna (including fish) and Wilton material dated to age between 3.7 and ~2.0 kyr BP. Also present were paintings in the form of red smudges, finger lines and one "asterisk"
12. TOBIA'S CAVE: Mining operations in "Quarry C" exposed an unconsolidated cave deposit in which a small partly-mineralized pentagonoid skull (parietals and much of frontal) of San type was found, leading to a visit by Tobias in 1952 located west south-west of Blue Pool. He retrieved further human fragments (teeth), many large mammal bones and a LSA lithic sample from the blasting debris, while excavation into the deposit produced further human and animal bones plus LSA material similar to that from Powerhouse Cave.
13. NORLIM 5: On the hill crest ~200 m east north-east of Equus Cave. A mapped ~60 x 80m area covered by a dozen or so low rubble covered stone walls, mainly in the form

of arcs and semi-circles, lacking a clear overall layout, of the sort noted elsewhere in this region. Excavations in 1982 (MMK 6604 - 8) produced amorphous associated Ceramic LSA assemblages and faunal remains that include a possible cow tooth, all dated to 390 - 400 years BP. Of interest was an area with only ceramics and evidence of ostrich eggshell bead-making, thereby suggesting some degree of activity patterning.

14. NORLIM 6: On the south slope of the same hill, ~100 m south south-east of Norlim 5. A somewhat larger cluster of the same sort of stone walling that was roughly sketched in 1982 but that still remains to be excavated.
15. OCHRE CAVE: On the west wall of Thabasikwa R channel, ~250 m south of Powerhouse Cave. A small cave, ~1 m above the river-bed, with a 3m deep rubbly floor deposit. His pits yielded very sparse faunal and LSA assemblages that may relate to finger paintings on its west side that comprise short vertical strips and a grid pattern. Both of these patterns are very typical of the parietal art along the Ghaap Escarpment.
16. Hyena-Related occurrences - BLACK EARTH CAVE: ~300 m north north-west of the A. africanus cairn. Discontinuous galleries of a cave system in the Norlim Tifa that were largely destroyed by quarrying before 1947, with the most interesting of those recorded by Peabody (1954) being Gallery A, where three successive fossiliferous strata occurred. The lowest of these, with a "mash" of leached bones, was overlain by one with many hyena coprolites and a well-preserved fauna, including E. capensis (suggesting a pre-Holocene age) and "two types" of Homo. Capping that unit was dusty black earth with bones of recent appearance (sheaths on some horn-cores) and complete animal skulls.
17. EQUUS CAVE: A small (~8 x 20 m) cave, partly destroyed by prior mining, where excavations established an up to 2.5 m depth of sediments, divisible into four strata (1a - 2b) that range from younger than 2.4 to before 27.2 kyr BP. These deposits yielded a vast mammal fauna (over 30 000 identifications) representing 48 species (of which 3 are now extinct), including fragments of Homo sapiens, that reflect the use of the cave for 30 millennia or more as a brown hyena maternity den. Sporadic amorphous artifacts in the lower levels were probably flushed in from upslope subsoil sources, together with the sediments which eventually filled the cave to almost roof level. Pollen and 15N isotope analysis show a shift from the present climate and Kalahari Thornveld cover in Stratum 1a to one in Strata 2a and 2b when temperatures were ~4 °C lower and the vegetation a karroid grass land, sustained by rainfall above half of the present ~420 mm per annum.
18. Pre-colonial history to c.1830 - Taung's first human inhabitants where the Khoi and San peoples. Unfortunately, the evidence for this is scanty but rock engravings do occur. Supporting evidence for the imprint of the Khoi and San is found in place names such as the river Thabasikawa (claimed to be a corruption of the original Khoi name !Xabasingqua), the Ghaap limestone plateau or escarpment west of Taung (derived

from a Khoikhoi word referring to the succulent Hoodia pilifera which was used as an appetite suppressant and arrow poison).

Historical Sotho-Tswana evidence is inferred from the Rolong, who king Tau most certainly gave rise to the Taung. This community was displaced from the Marico (Madikwe) river and moved south of the Molopo River some time before 1700. When Tau was killed in battle at Taung itself, the Rolong disintegrated under the impact of this defeat and divisions that led to their “migration” (much more like changing the location of main town than actual abandoning of the area) further north to the Setlagoli district. The resultant “power vacuum” in the Taung district was filled by the Thlaping, with their 19th century capital at Dithakong. From 1840 Taung’s history is associated with the main Thlaping branch under Mahura, who ruled until 1869, and then under Mankurwane who was chief until his death in 1892. The Thlaping were affected by the settlement of whites in and around Taung, and by the impact of diamond discoveries. In the late 19th century, a D.A. O’Reilly was asked to remove lions from the Taung area, for which he was given a farm, named Thumeng, which later became the site of the present lime works and Taung Skull.

Several battles were fought between the Sotho-Tswana’s and the encroaching Europeans but the notable ones include the June 1882 siege to Taung by about 500-600 white mercenaries against Mankurwane’s people who appealed to the Transvaal government. The result was that a boundary was drawn between the Kora and Thlaping, and land was given to the mercenaries. In May 1884 Mankurwane was visited at Taung by Rev. Mackenzie and was quite easily persuaded to accept British protection and by 1885 Bechuanaland was annexed. This led to the removal of the mercenaries by the Warren Expedition in January and the declaration of Bechuanaland a Crown Colony on the 30th of September 1886. In the South African War (1899-1902), Taung was occupied by a small detachment of British Police, to guard the long and vulnerable frontier and railway line between the Orange River and Mafikeng.

Quarrying of lime from the Thumeng tufa began after World War 1 by the Northern Lime Company. The quarry was closed in 1977. A private railway line was opened from Taung to Buxton in 1936. Buxton village was named in 1919, after Earl Sydney Buxton, the Second Governor General of the Union of South Africa from 1914-1920. The man who claimed to be the actual discoverer of the carapaces of limestone tufas at Buxton was Mr. M. G. Nolan, although the Thlaping of the Taung area must long have had this area. His name remained attached to the limeworks at Buxton until 1919, when the Northern Lime Company (previously associated with the Nolan Lime Company following a merger in about 1917) finally took over. In 1967 mining was undertaken under the name of Pretoria Portland Cement (PPC) and worked until the mine closed in 1977.

The Chief Surveyor General Database ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)) was scrutinized for old maps of the farms that make up the Mining Rights Application and study area. These maps will not be reproduced here but will be provided in a separate file for perusal by the client. The maps found are mostly for Portion 1 or the original whole farm, and date to between 1888 & 1929, with the oldest one for Taung 894HN dating to 1967. The maps show that the farms were at that time either situated in British Bechuanaland, Division of Taung or in various Wards or

Field Cornetries in the Vryburg Division. The farms were surveyed in the late 1880's and given by title deed to various individuals between 1890 & 1929. Unfortunately no historical sites or features are indicated on these farms on these maps, but it can be assumed that some historical sites such as farmsteads, related infrastructure and possibly graves and graveyards could be found on these farms.

With no fieldwork assessments conducted for the Mining Rights Application area it is difficult to determine if any sites, features or material of cultural heritage origin or significance are located in the area and if there will be any impacts on sites as a result. It is also clear from the desktop study that the area has not been researched in much depth from an archaeological and historical point of view, with most of the work having focused around the Taung Fossil and related sites area. Very few Impact Assessment studies seems to have been done in the MRA and study area region, with only some reports lodged in SAHRA's sahris database. However, based on these reports and on the landscape that is visible in aerial images it is highly likely that the following types of cultural heritage resources could be present:

1. Palaeo-archaeology sites
2. Stone Age Archaeological sites and scatters of open-air material
3. Possible Late Iron Age remnants although this is less likely
4. Historical farmsteads and related structures
5. Both formal and informal graveyards and graves
6. Possible rock art sites including engravings
7. Historical refuse middens

The following is recommended on the way forward:

**That the Mining Rights Application be allowed but that NO Prospecting and drilling be allowed in the area before detailed field assessments are undertaken. These field assessments will then focus on the areas where prospecting trenches and drilling will be undertaken and where future mining operations are planned in order to determine the location of possible archaeological and historical sites, features or material that could be negatively impacted by these activities. Only once this has been done and the way forward in terms of mitigation measures have been presented any possible Mining Activities might be allowed.**

## **7. CONCLUSIONS AND RECOMMENDATIONS**

APelser Archaeological Consulting (APAC) was appointed by Gudani Consulting Environmental & Social Scientists to conduct a Desktop-based Heritage Impact Assessment for a Mining Rights Application (MRA) on various farms and farm portions in the Taung District of the Northwest Province. The work is requested on behalf of Gilmoie Mining (Pty) Ltd.

Background research indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. This includes the well-known Taung Skull Fossil Site and various related sites.



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## 8. REFERENCES

General and Closer views of study area location: Google Earth 2020.

Mining Rights Application Area Location Maps: courtesy Gudani Consulting Environmental & Social Scientists.

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Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

Chief Surveyor General Database ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)): Various Documents on the farms that make up the study & Mining Rights Application Area.

## **APPENDIX A: DEFINITION OF TERMS:**

**Site:** A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

**Structure:** A permanent building found in isolation or which forms a site in conjunction with other structures.

**Feature:** A coincidental find of movable cultural objects.

**Object:** Artifact (cultural object).

(Also see Knudson 1978: 20).

## **APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE**

**Historic value:** Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

**Aesthetic value:** Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

**Scientific value:** Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

**Social value:** Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

**Rarity:** Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

**Representivity:** Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

## **APPENDIX C: SIGNIFICANCE AND FIELD RATING:**

### **Cultural significance:**

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

### **Heritage significance:**

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III: Other heritage resources of local importance and therefore worthy of conservation

### **Field ratings:**

- i. National Grade I significance: should be managed as part of the national estate
- ii. Provincial Grade II significance: should be managed as part of the provincial estate
- iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/medium significance)
- v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)
- vi. General protection B (IV B): site should be recorded before destruction (medium significance)
- vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

## **APPENDIX D: PROTECTION OF HERITAGE RESOURCES:**

### **Formal protection:**

National heritage sites and Provincial heritage sites – Grade I and II

Protected areas - An area surrounding a heritage site

Provisional protection – For a maximum period of two years

Heritage registers – Listing Grades II and III

Heritage areas – Areas with more than one heritage site included

Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

### **General protection:**

Objects protected by the laws of foreign states

Structures – Older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials

## **APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES**

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.
2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.
3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.
5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.