12 March, 2022

Attention: Ms Nokukhanya Khumalo (nkhumalo@sahra.org.za)
SAHRA Case Officer Mpumalanga
South African Heritage Resources Agency (SAHRA)

Dear Ms Khumalo

RE: ESKOM DUVHA POWER STATION: STORMWATER V-DITCH -Exemption from a Phase 1 Heritage Assessment

Introduction

Eskom intends to upgrade and rehabilitate the existing open canal V-Ditch at the Duvha Power Station. The Duvha Power Station is situated on the Old Bethal Road, between the R554 and R575, located approximately 20km southeast of Emalahleni (Witbank), within the Emalahleni Local Municipality of Mpumalanga Province (Figure 1.1 to 1.3). The approximate length of the V-Ditch earmarked for upgrade and rehabilitation is 703m. Setala Environmental was appointed as environmental assessment practitioner (EAP) to undertake an Environmental Impact Assessment (EIA) for the proposed upgrade. As part of the process Beyond Heritage was appointed to provide an assessment of the impact on possible heritage resources.

1. Project Background

The existing V-Ditch is an open, lined V-Ditch used for the transport of contaminated stormwater measuring approximately 703m. The lining of the ditch, consisting of a combination of concrete and paving bricks, has been badly eroded and broken over the years and the carrying capacity needs to be increased. The existing V-Ditch is to be upgraded and will occupy the exact same alignment as the current footprint.

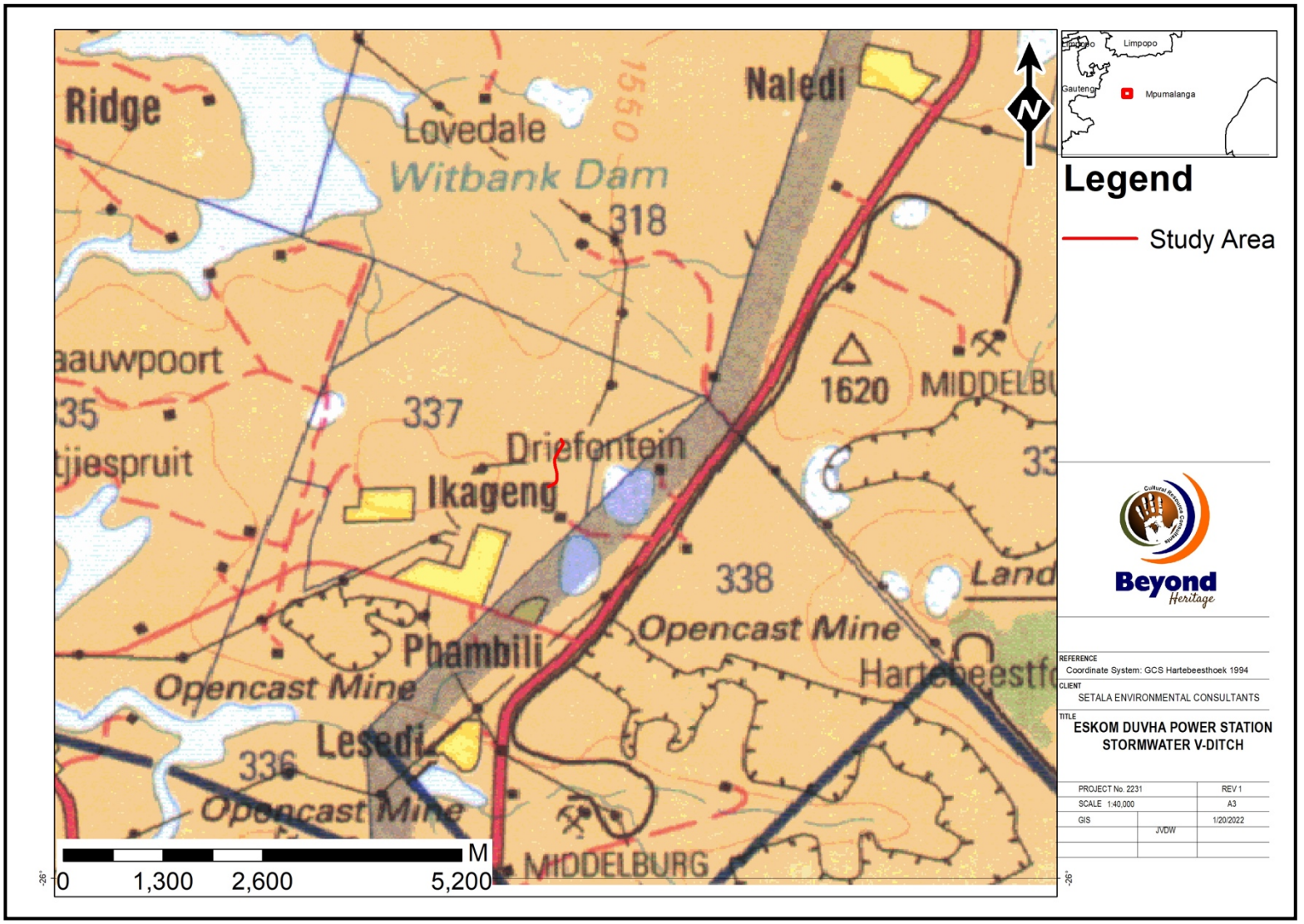

Figure 1.1. Regional setting of the project (1: 250 000 topographical map).

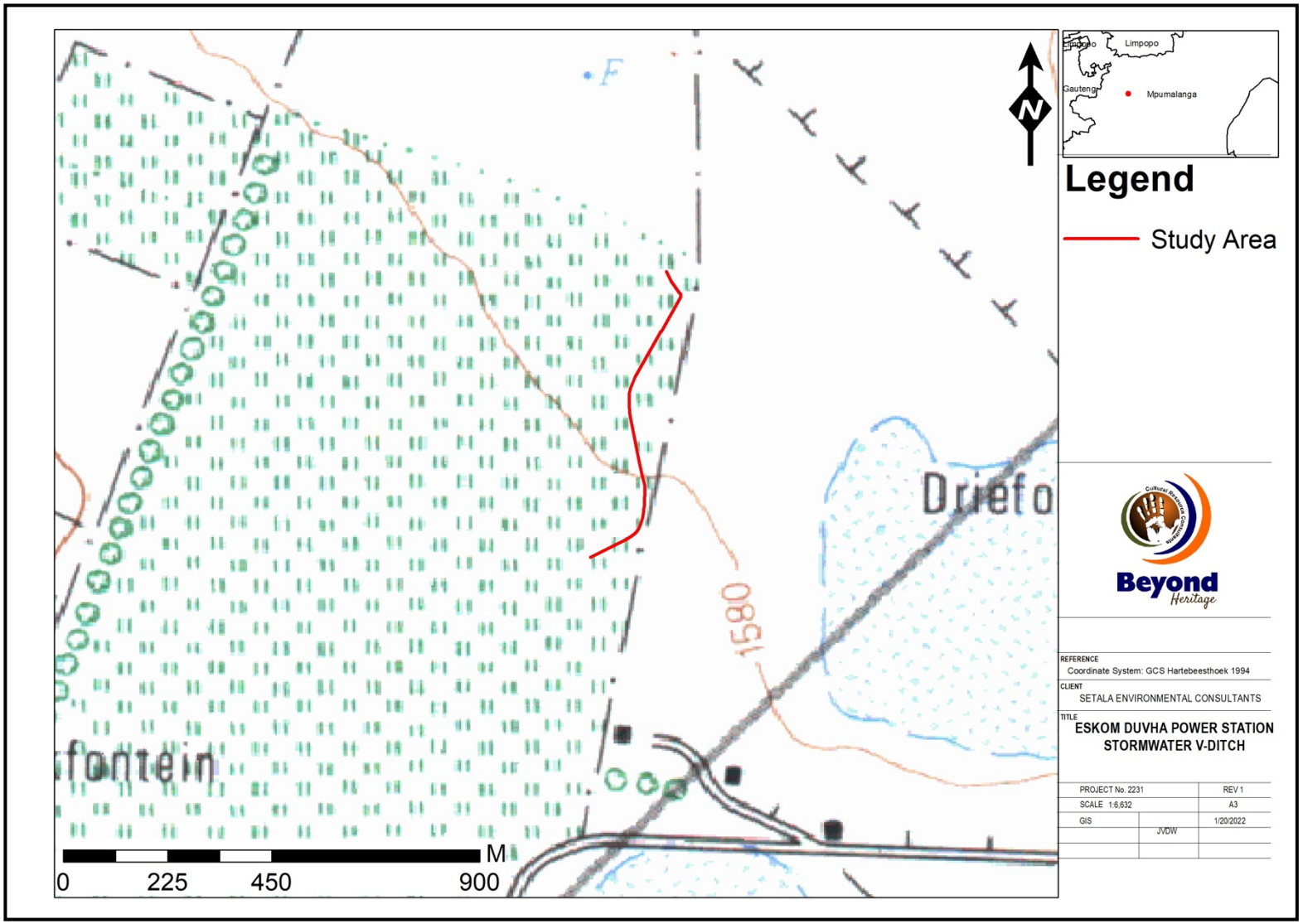

Figure 1.2. Local setting of the project (1: 50 000 topographical map) showing that the area used to be cultivated in 1976.

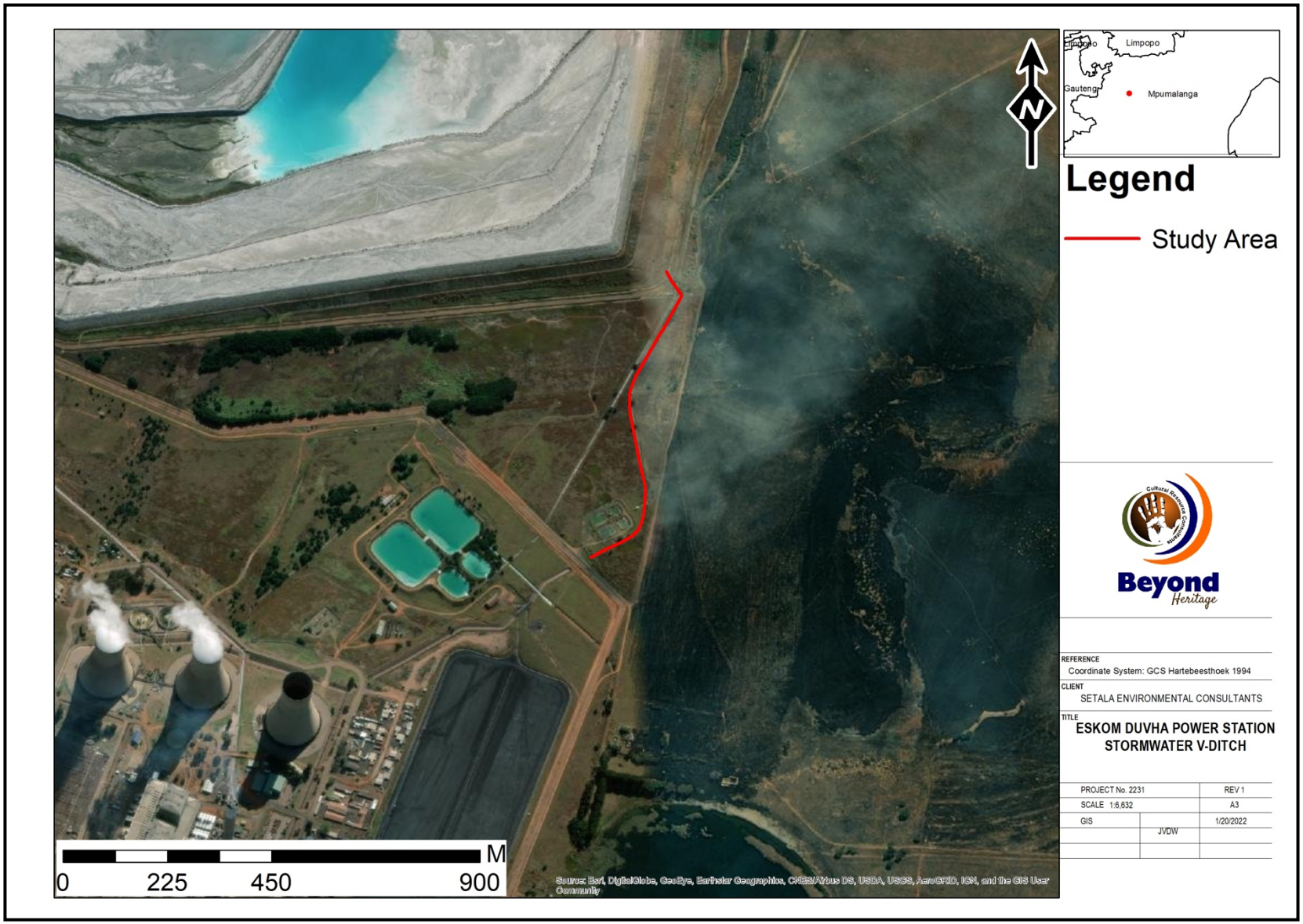

Figure 1.3. Aerial image of the study area. Note the extent of industrial developments in the surrounding area.

2. The Heritage Character of the Study area

2.1. Literature review

The following studies were conducted in the general vicinity of the project and were consulted for this report:

Table 2-1: Heritage Assessments conducted in the area.

Author	Year	Project	Findings
Van Schalkwyk, J.A.	2003	Eskom Transmission Line Duvha (Witbank) to Janus (Mecklenburg): Cultural Heritage Scoping Report.	Iron Age sites
Pistorius, J.C.C.	2013	A Phase I Heritage Impact Assessment (HIA) study for the proposed construction of a clean water pipeline from the Middelburg Water Reclamation Plant to the Middelburg Colliery in the Mpumalanga Province	No Sites
Van Schalkwyk, J.A.	2016	Cultural Heritage Impact Assessment for The Proposed Development Of The Bravo 5 By-Pass Power Line, Duvha Power Station, Mpumalanga Province	No Sites
Kitto, J.	2021	Heritage impact assessment for the proposed ash dam seepage drains at Duvha Power Station, Emalahleni Municipality, Mpumalanga	Demolished farmstead and burial site outside of the impact area.

2.2. Brief heritage background of the study area

2.2.1 The Study Area and the South African War

After the British occupation of Pretoria on the 5th of June 1900, the British victories at Diamond Hill and Dalmanutha and the retreat of the republican forces under General Louis Botha toward the eastern boundary of the Zuid-Afrikaansche Republiek (Z.A.R.), the Boer commandoes started to reform themselves into smaller and more mobile groups. This led to the guerrilla phase of the South African War which mostly consisted of hit and- run tactics. With one or two exceptions, this method of warfare by the republican forces lasted for the remaining two years of the war until the signing of the peace treaty at Melrose House on the 31st of May 1902. During this period of guerrilla warfare a number of small skirmishes took place in the general vicinity of the study area, but no indication could be found for any of these to have taken place within the study area itself. One of the most important battles from the South African War to have taken place in the general vicinity of the study area, was the Battle of Bakenlaagte, just to the South of the present study area. The origins of this battle can be found in the tendency of the British forces in this part of Southern Africa to move columns between the British camps at Syferfontein (Bethal) in the south and Brugspruit (Clewer) in the north. This movement of columns led General Louis Botha to plan a strategy whereby such a column could be successfully attacked. During the end of October 1900 he determined that another column was about to leave Bethal for Brugspruit and subsequently ordered all available commandos in the general vicinity to gather at a pre-destined place, from where a massed force of some 2000 horsemen could attack the column.

The column that General Louis Botha got wind of was a reasonably large force consisting of the 3rd Mounted Infantry (501 men), 25th Mounted Infantry (462 men), 2nd Scottish Horse (434 men), 84th Battery of the Royal

Field Artillery (comprised of four guns and 84 men), CC and R sections of Vickers-Maxims (36), 1st Field Troop Royal Engineers (14 men) and the 2nd Battalion The Buffs (650 men). The column was commanded by Lieutenant-Colonel G. E. Benson. At 5 AM on the morning of the 30th October 1901 Benson's column left the camp at Syferfontein near Bethal and started moving in a north-western direction. Their aim was to camp on the farm Bakenlaagte between Brugspruit and Bethal. However, the numerous drifts and watercourses which the units had to negotiate caused the entire column to be spread out over a large area in a reasonably short period of time. Therefore, although Benson and his advance guard reached Bakenlaagte at 9 AM, the remainder of the column was still far behind. During the afternoon the rear guard became even more isolated from the remainder of the column when one of their wagons got embedded in the mud of a river crossing. This rear guard group consisted of two companies of the 3rd Mounted Infantry, one company of The Buffs and a Vickers-Maxim gun. At this point the republican forces that had followed the column all the way from Bethal started to press closer to the rear guard. This led the rear guard's commanding officer Brevet Major F.G. Anley to order that the wagon be abandoned and the men to push hard for Bakenlaagte. Meanwhile, Benson had ordered two of the artillery guns onto a ridge between Bakenlaagte camp and the rear guard units, to provide support for the latter. However, when he heard of the rear guard's retreat back to camp he ordered two squadrons of the 2nd Scottish Horse to accompany him toward the rear guard to rescue the abandoned wagon. At this opportune moment General Louis Botha ordered his men to attack. Twelve hundred armed horsemen appeared on the scene and decimated the retreating units of the rear guard. The advance of the Boer horsemen was so severe that Benson ordered the two artillery pieces onto a ridge closer to Bakenlaagte. The Boer attack also stopped Benson's advance and he and the men of the 2nd Scottish Horse who was accompanying him were forced to make for the same ridge. At this point the force on this ridge consisted of two guns of the 84th Royal Field Artillery, 25 men of the 25th Mounted Infantry, a company of the 3rd Mounted Infantry, 20 men of the 2nd Scottish Horse and 70 men of The Buffs. The republican forces now charged towards the British position on the ridge. In the words of Grant (1910:310):"On came the federal regiments, their outriders swarming over the heels of the hindmost men of the Scottish Horse. As they galloped their numbers swelled. Two thousand horsemen raced down upon Benson and the men with him around the guns. So grand and terrible a spectacle had not been seen nor had the earth so shaken on a battlefield in South Africa. Alone on the gigantic bosom of the veld the little knot with Benson calmly faced the approaching catastrophe." As the Boer horsemen approached the occupied ridge they dismounted and crawled toward the summit. Within a short while a fierce fighting broke out and before long the Boer forces occupied the ridge. The losses on British side were catastrophic. Of the 280 officers and men who had occupied the ridge, 66 had been killed and 165 wounded. The losses on Boer side were not recorded. Although their successful assault on the ridge left the camp at Bakenlaagte largely undefended, the Boer forces did not attack it and subsequently withdrew from the battlefield (Birkholtz 2007).

2.2.2. Historical Period

The closest town closest to the Project Area is Emahlaleni (Witbank) and a brief historical background to the town is applicable for the study. Witbank was established as a town when the railway line between Pretoria and Lourenzo Marques was built in 1894 that passed close to where Witbank is located today. The first Europeans who came to the area observed the abundance of coal, which is evident on the surface or in the beds of streams. By 1899, at least four colliers were operating in the Middelburg-Witbank district, also supplying the gold mining industry. A stage post for wagons close to a large outcrop of whitish stones (a 'white ridge') gave the town its name. Witbank was established in 1903 on a farm known as Swartbos which belonged to Jacob Taljaard.

Vernacular stone buildings dating from the second half of the 19th century well into the early 20th century can be found scattered over the eastern Highveld. During this time period stone (sandstone, ferricrete, dolerite granite and slate) was used to build farmsteads and dwellings.

2.2.3. Archaeological Background

In Mpumalanga Province the Drakensberg separates the interior plateau also known as the Highveld from the low-lying subtropical Lowveld which stretches to the Indian Ocean. A number of rivers amalgamate into two main river systems, the Olifants River and the Komati River. This fertile landscape has provided resources for humans and their predecessors for more than 1,7million years (Esterhuizen & Smith in Delius, 2007) starting with the Stone Age. This sequence can be divided into 3 distinct phases. Early, Middle and Later Stone Age. The Later Stone Age is also associated with rock painting and engravings although some Late Iron Age engravings are also documented. For the area in question few Stone Age sites, rock paintings and engravings have been recorded. Most notable are Maleoskop on the farm Rietkloof (well to the northeast of the current study area) where ESA tools have been found. This is one of only a handful of such sites in Mpumalanga. The MSA has not been extensively studied in Mpumalanga but evidence of this period has been excavated at Bushman Rock Shelter, a well-known site on the farm Klipfonteinhoek in the Ohrigstad district. Known sites in the larger area include rock paintings associated with the Khoi San, that are found in numerous rock shelters throughout Eastern Mpumalanga (Bornman, 1995; Schoonraad in Barnard, 1975; Delius, 2007). These include areas such as Witbank, Ermelo, Barberton, Nelspruit, White River, Lydenburg and Ohrigstad. Few Stone Age sites of significance occur in the province, the closest is the Late Stone Age site at Fort Troje, a small shelter close to Cullinan (Bergh 1999: 4). Due to the lack of shelters in the study area it is assumed that no sites of significance occurred here.

The Iron Age is associated with the first agro-pastoralists who lived in semi-permanent villages and who practised metal working during the last two millennia. For the study area the Iron Age is divided into the, Early Iron Age (covers the 1st millennium AD) and the Later Iron Age (covers the first 880 years of, the 2nd millennium AD). The Eastern Highveld has not been occupied by Early Iron Age communities but was occupied by Late Iron Age communities such as the Sotho, Pedi, Swazi and Ndebele (Berg 1999, Pistorius 2000) who established settlement complexes that are associated with stone walls. No stone walled sites are on record for the study area however some stone walled settlements associated with the Ndebele are found to the west.

2.3. Cultural Landscape

The project area used to be fallow land with limited cultivation in 1954 (Figure 2.1). Cultivation intensified and in the 1970's the entire area was cultivated (Figure 1.2). By the 1990's the area forms part of an industrial site (Figure 2.2).

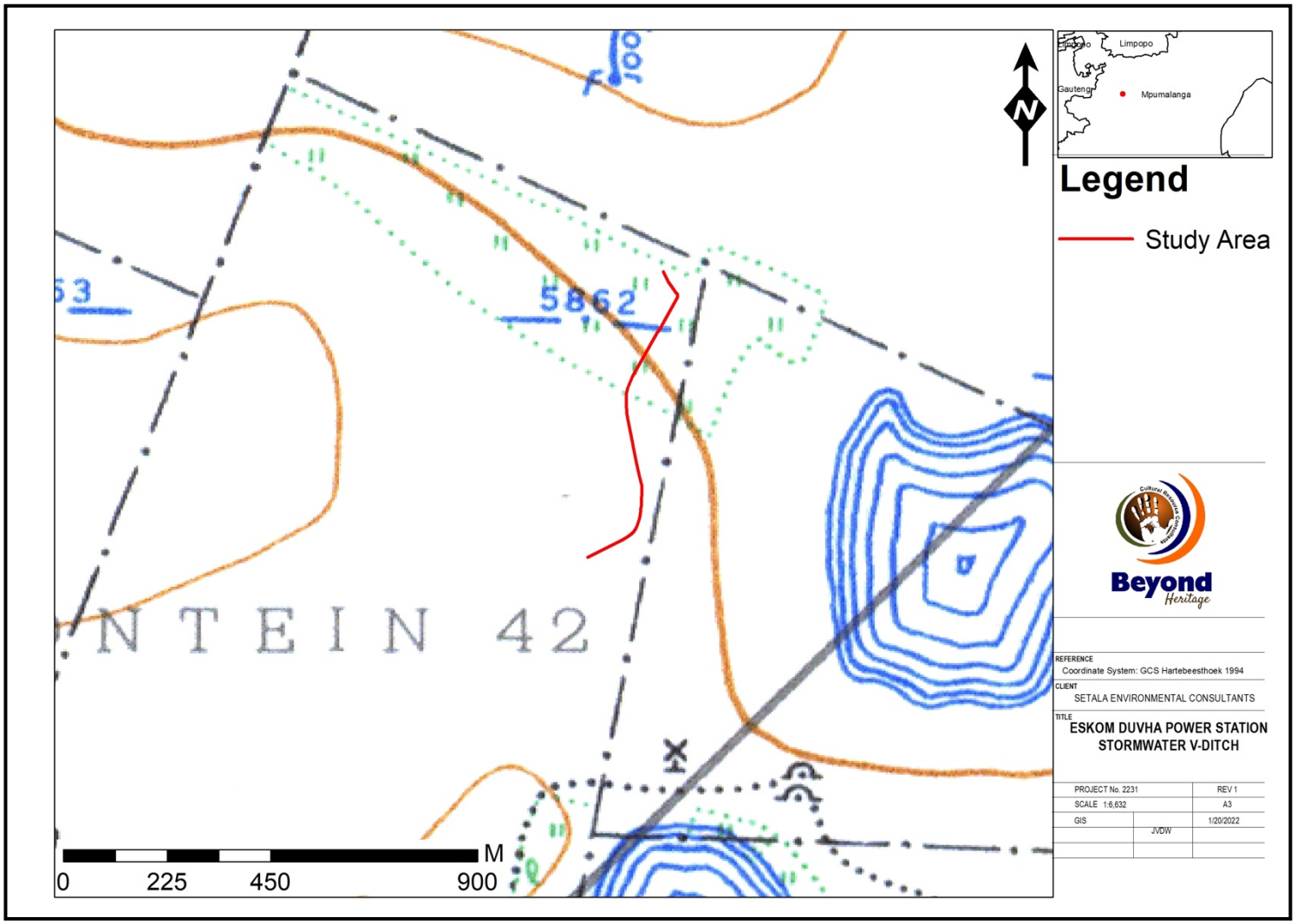

Figure 2.1. 1954 Topographical map of the study area showing no developments apart from small scale cultivation.

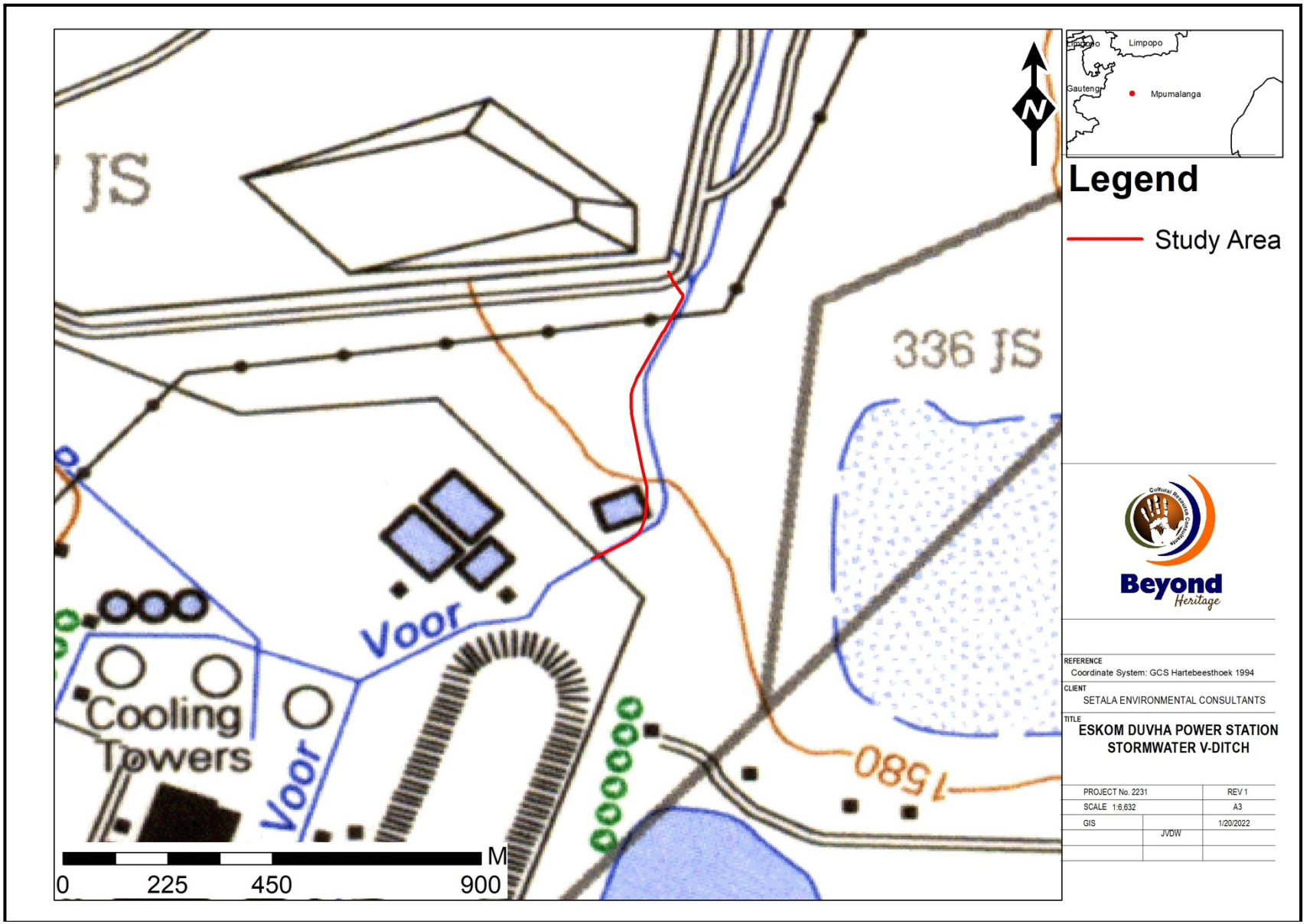

Figure 2.2. 1996 Topographical map of the study area indicating the industrial development of the study area.

3. Findings

The existing V-Ditch that will be upgraded is in the exact same footprint as the current alignment and has been in use prior to 2009 till present (Figure 3.2). The approximate length of the V-Ditch earmarked for upgrade and rehabilitation is 703m. This section was entirely cultivated in the 1970's (Figure 1.2) and further altered by developments associated with the Duvha Power Station (Figure 3.1). These developments would have obliterated any surface indicators of heritage resources if any ever occurred in the study area

The study area is indicated as of low palaeontological significance on the SAHRA paleontological map (Figure 3.3) and no impacts to palaeontological resources is expected during the proposed upgrade.

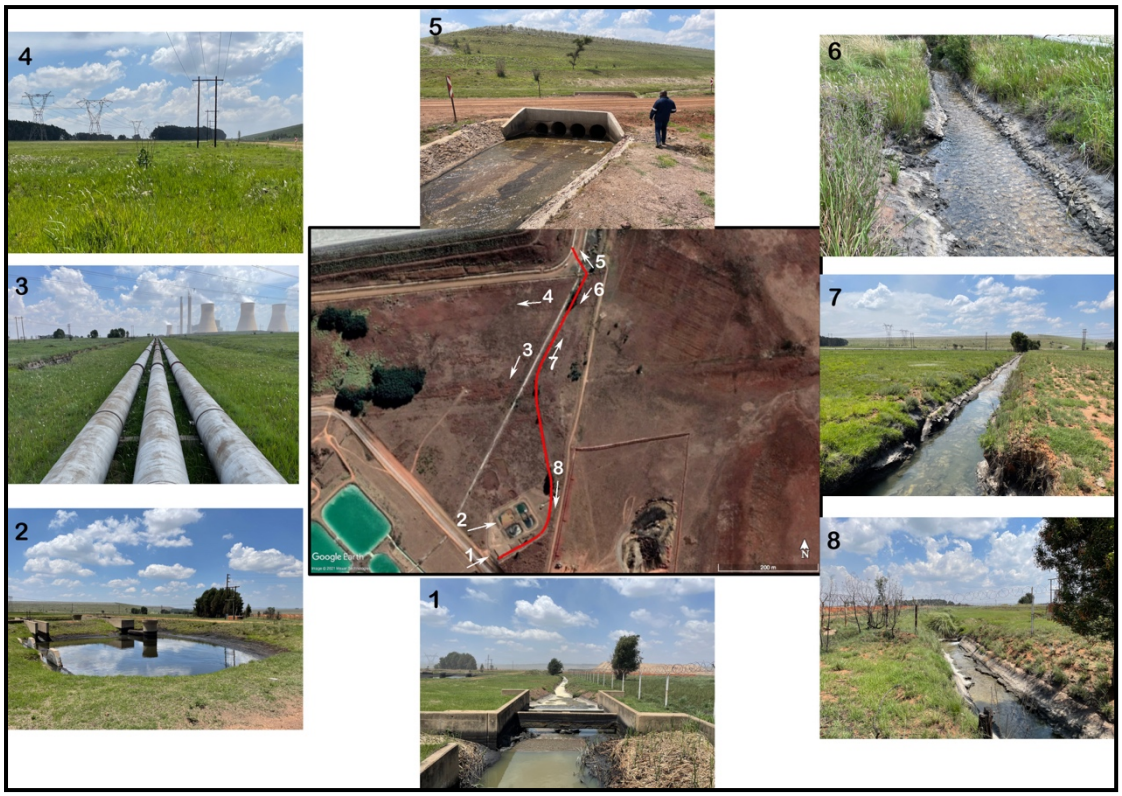

Figure 3.1.General site conditions along the existing V-Ditch.

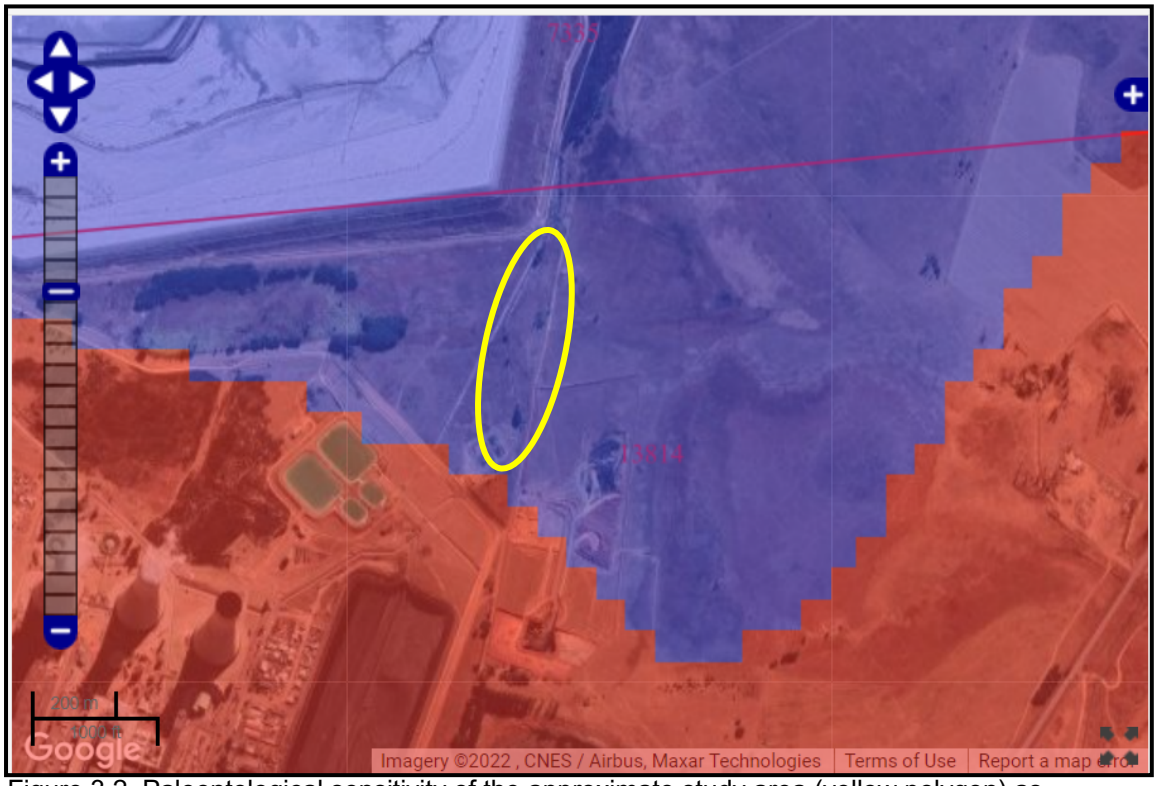

Figure 3.2. Paleontological sensitivity of the approximate study area (yellow polygon) as indicated on the SAHRA Paleontological Map (Key below)

Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 3.3: 2009 Google image on the left and 2022 image showing the V-Dich to be in the same position.

4. Conclusion

The study area has been impacted upon by cultivation of the project site and since 1984 by the operations of the Duvha Power Station. The V-Dich is visible on aerial imagery dating back to 2009 is therefore of low heritage potential. The impact of the afore mentioned activities that include clearing, levelling and construction would have obliterated any indicators of heritage resources if any ever occurred in the study area. It is unlikely that the upgrade of the existing V-Ditch will impact on any sites of significance and no further heritage remedial action, or mitigation is needed. Therefore, an application for exemption from further heritage studies is supported.

Any further queries can be forwarded to Jaco van der Walt on Cell: +27 82 373 8491 or to jaco@heritageconsultants.co.za.

Jaco van der Walt
Archaeologist
Beyond Heritage

5. References

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