

**Cultural Heritage Assessment for the Proposed Construction of a Treated
Waste Water Pipeline from Welgedacht Waste Water Treatment Works
(WWTW) to the Sappi Enstra Mill, Springs, Ekurhuleni Metropolitan
Municipality, Gauteng**

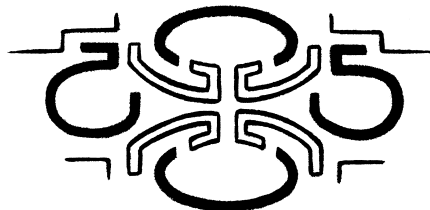


For

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Executive Summary

This report contains a comprehensive heritage impact assessment investigation in accordance with the provisions of Sections 38(1) and 38(3) of the *National Heritage Resources Act* (Act No. 25 of 1999) and focuses on the survey results from a cultural heritage survey. SRK Consulting (Pty) Ltd (SRK) is undertaking a Basic Assessment (BA) in terms of the National Environmental Management Act (NEMA) (Act 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 (Listing Notice 1 requiring a BA process) on behalf of the client Sappi Paper and Paper Packaging (Sappi). The cultural heritage assessment focussed on the proposed treated water pipeline connecting the Welgedacht Waste Water Treatment Works (WWTW) and Sappi Enstra Mill in Springs, Ekurhuleni Metropolitan Municipality, Gauteng.

Archaeological and Historical Structures

No archaeological (both Stone Age and Iron Age) and historical structures, features, assemblages or artefacts were recorded during the survey.

The remains of a single rectangular stone-built house were recorded during the survey (Site 1). Although the remains are older than 60 years and therefore protected by the NHRA (Act No. 25 of 1999) no impact is foreseen during the construction of the proposed water pipeline. No further action is required.

Site No	Site Type	Statement of Significance	Impact	Proposed Mitigation
1	Historical house remains	Generally Protected C: Low significance	None	None

Graveyard

No grave or graveyards were recorded during the survey.

Conclusion and Recommendations

Site 1 is situated approximately 140 metres away from the nearest trajectory point of the Preferred Alternative Route and approximately 160 metres away from Alternative 1 and 2. Based on the assessment, from a heritage perspective, there is no impact on cultural heritage remains and it is recommended that the proposed development should be allowed to continue. There is no objection to any of the proposed alternative pipeline routes (Preferred Alternative, Alternative 1 and Alternative 2), taking cognizance of the following as aspects:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).

Definitions and abbreviations

Midden:	Refuse that accumulates in a concentrated heap.
Stone Age:	An archaeological term used to define a period of stone tool use and manufacture
Iron Age:	An archaeological term used to define a period associated with domesticated livestock and grains, metal working and ceramic manufacture
NHRA:	National Heritage Resources Act (Act No. 25 of 1999)
SAHRA:	South African Heritage Resources Agency
SAHRIS:	South African Heritage Resources Information System
PHRA-G:	Provincial Heritage Resources Authority - Gauteng
GDARD:	Gauteng Department of Agriculture and Rural Development
HIA:	Heritage Impact Assessment
DMR:	Department of Mineral Resources

I, Francois Coetzee, hereby confirm my independence as a cultural heritage specialist and declare that I do not have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of the listed environmental processes, other than fair remuneration for work performed on this project.



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1. Introduction

SRK Consulting (Pty) Ltd (SRK) has been appointed as the independent environmental assessment practitioner (EAP) by Sappi Paper and Paper Packaging (Sappi), to undertake a Basic Assessment (BA) in terms of the National Environmental Management Act (NEMA) (Act 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 (Listing Notice 1 requiring a BA process). The cultural heritage assessment will focus on the three proposed alternative treated water pipeline routes connecting the Welgedacht Waste Water Treatment Works (WWTW) and Sappi Enstra Mill in Springs, Gauteng.

2. Objectives

The general aim of this cultural heritage survey is to record and document cultural heritage remains consisting of both tangible and intangible archaeological and historical artefacts, structures (including graves), settlements and oral traditions of cultural significance.

As such the terms of reference of this survey are as follows:

- Identify and provide a detailed description of all artefacts, assemblages, settlements and structures of an archaeological or historical nature (cultural heritage sites) located on the study area,
- Estimate the level of significance/importance of the these remains in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value,
- Assess any possible impact on the archaeological and historical remains within the area emanating from the proposed development activities, and
- Propose possible mitigation measures which will limit or prevent any impact provided that such action is necessitated by the development.

3. Study Area

The survey area is situated on various portions of the following farms:

- Geduld 123 IR,
- Cloverfield 75 IR, and
- Welgedacht 74 IR.

The proposed project is situated in Ekurhuleni Metropolitan Municipality, north of Springs in Gauteng. Springs is situated on the East Rand and lies 50 km east of Johannesburg. The survey area is surrounded by several long-term industrial, mining and residential developments, such as:

- East Geduld Mines (with associated diggings, slimes dams, sewage disposal works, hospital and residential area)
- Enstra Sappi Mill and associated infrastructure
- Cowles Dam (with dam wall and other canal infrastructure)
- Welgedacht Sewage Works
- Geduld Proprietary Mines (with diggings and slimes dam)
- Modderfontein East Gold Mine
- Railway tracks, tarred and dirt access roads
- Bakerton, Welgedacht, Eastvale, Petersfield and Dersley residential areas

As a result of long-term cumulative impacts due to mining and industrial developments (which stretched over more than a century, see Addendum 1) most of the area has been extensively disturbed and landscaped.

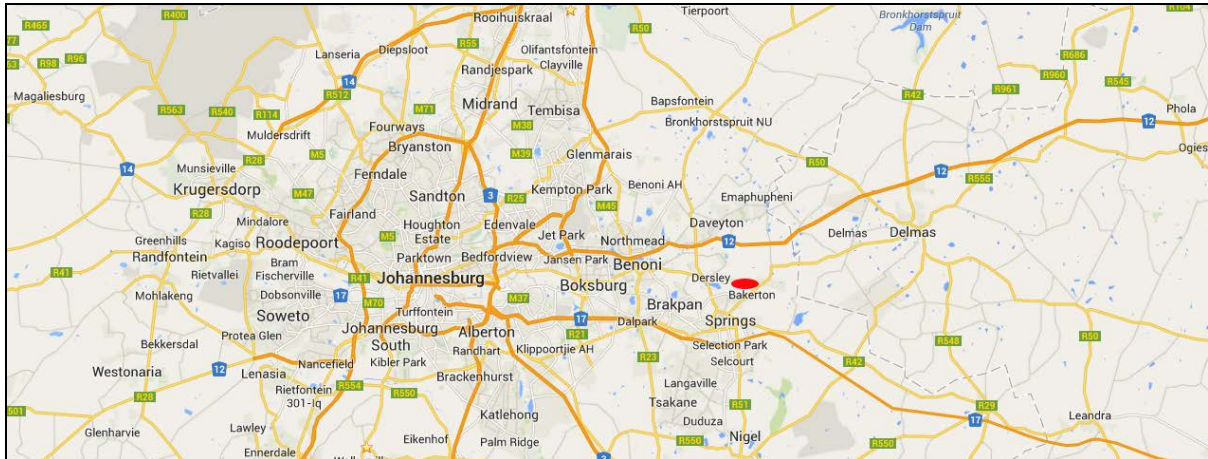


Figure 1: Regional context of the survey area (indicated by the red circle)

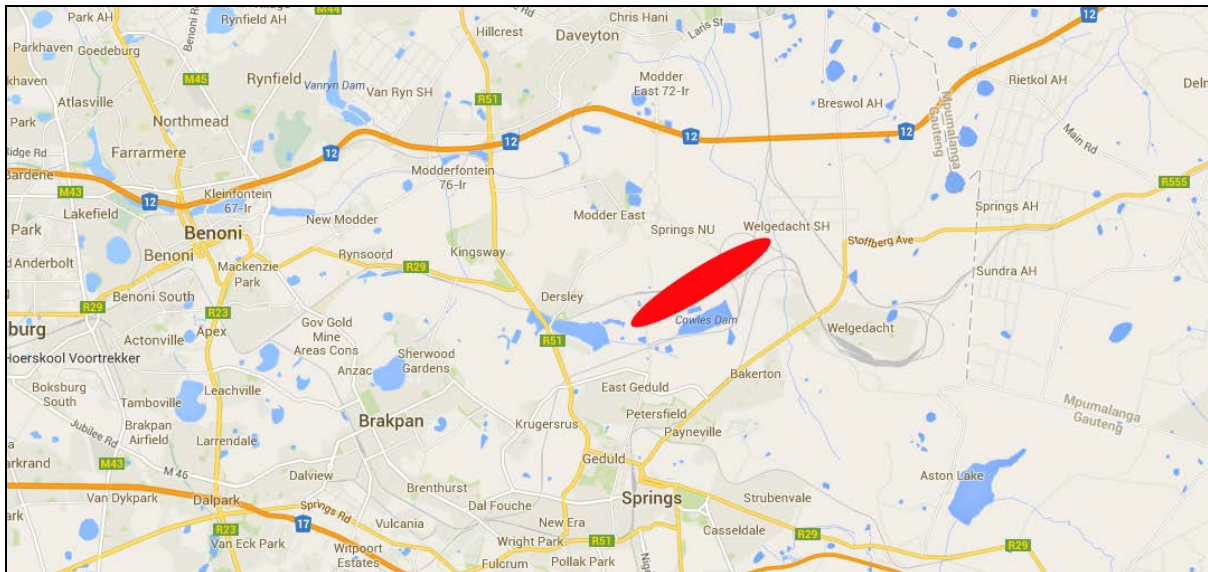


Figure 2: Local context of the survey area

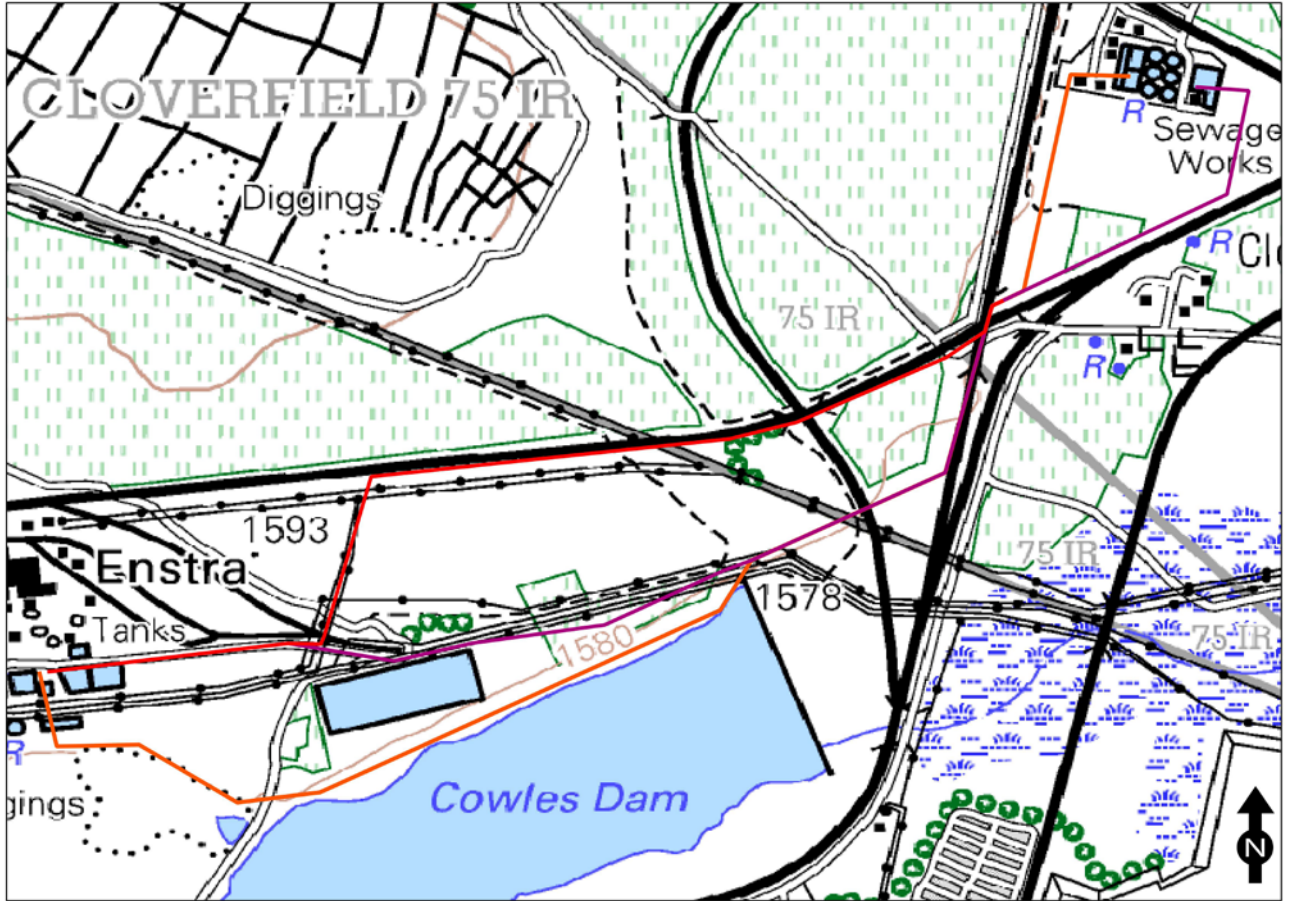


Figure 3: The context of the survey area as indicated on the 1:50 000 topographic map 2628AB



Figure 4: The detailed survey area as indicated on Google Earth

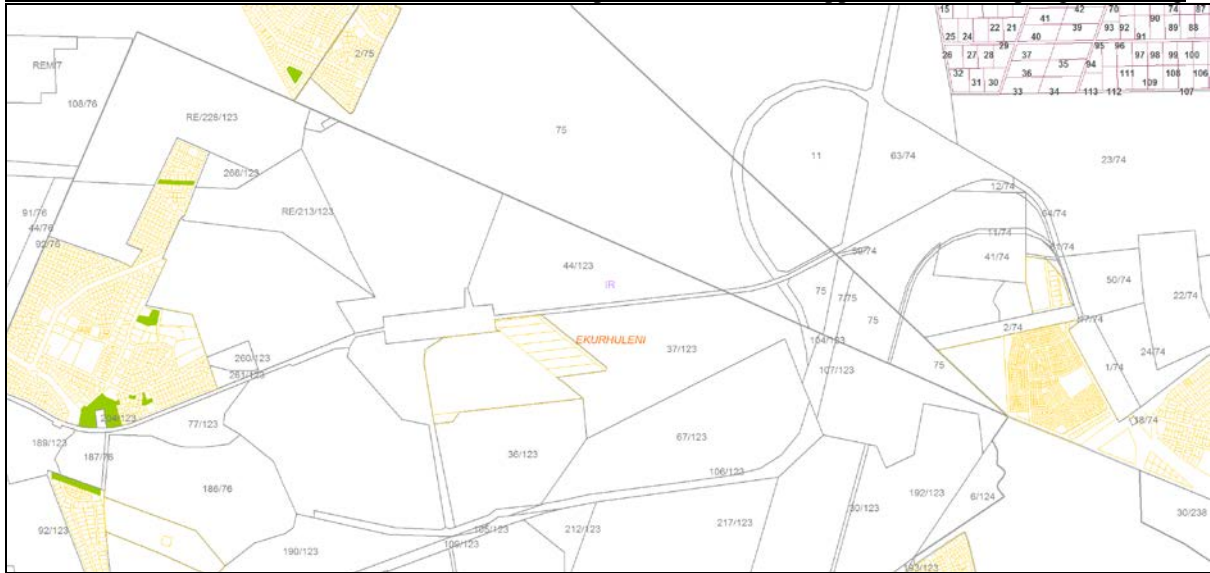


Figure 5: Relevant sections and portions of farms in the survey area



Figure 6: General view of the western section of the proposed pipeline (entering Sappi) (also note the existing pipeline's concrete access shafts)



Figure 7: Structures associated with the Cowles Dam



Figure 8: General view of area at the mid-section of the pipeline (intersecting railway tracks and roads)



Figure 9: Eastern end of pipeline at the water treatment works plant



Figure 10: General view of area south of the water treatment works plant



Figure 11: Evaporation dam next to the railway line (northern section)



Figure 12: Northern section of the proposed pipeline entering the sewage works

4. Proposed Project Activities

Sappi is proposing to divert outflow from Welgedacht Waste Water Treatment Works (WWTW) to the Sappi Enstra Mill. The project will comprise the construction of a treated waste water pipeline and associated pump stations along or in close proximity to existing tracks or roads.

Three alternative routes are being proposed for the water pipeline which will have a total length of approximately 4 km each (see Figures 13 & 14):

- Preferred Alternative (indicated by the red track);
- Alternative 1 (indicated by the purple track); and
- Alternative 2 (indicated by the orange track).

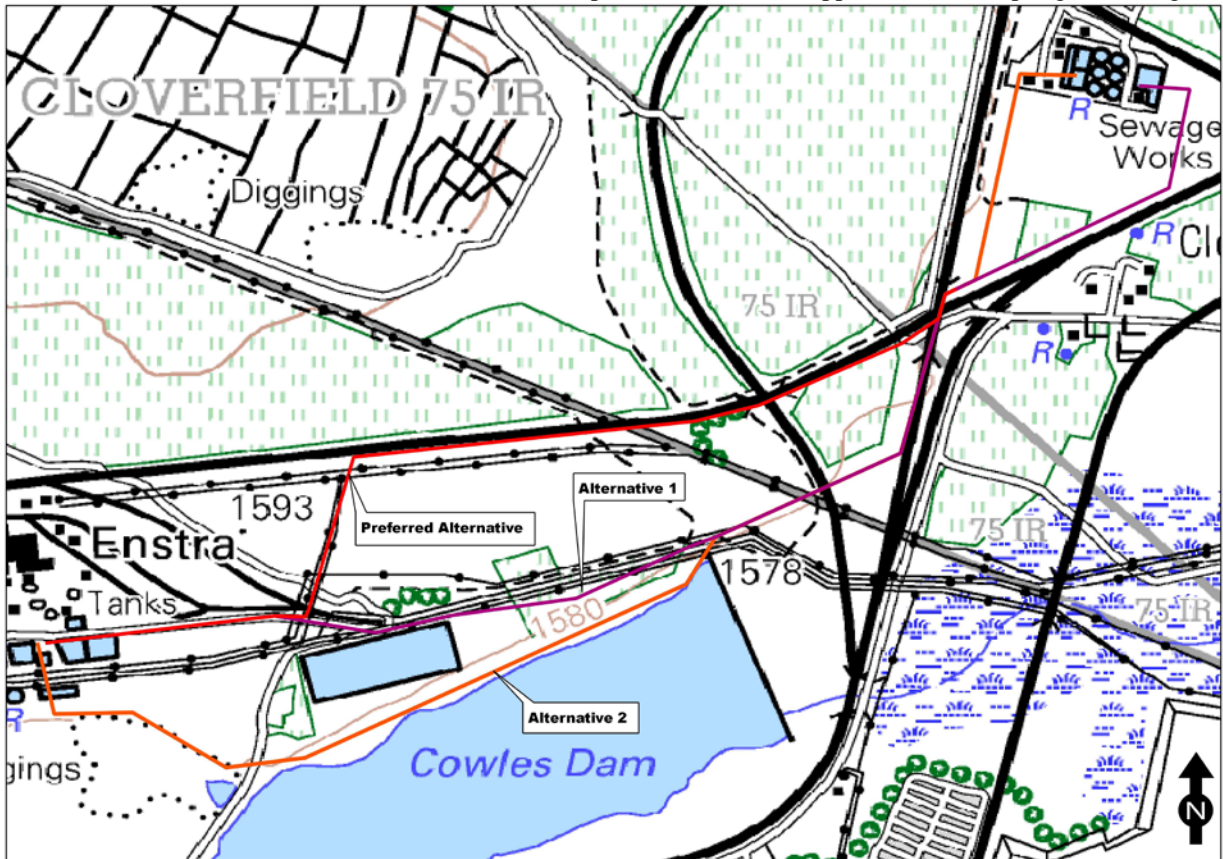


Figure 13: Topographic map indicating the routes of the three proposed alternative pipelines

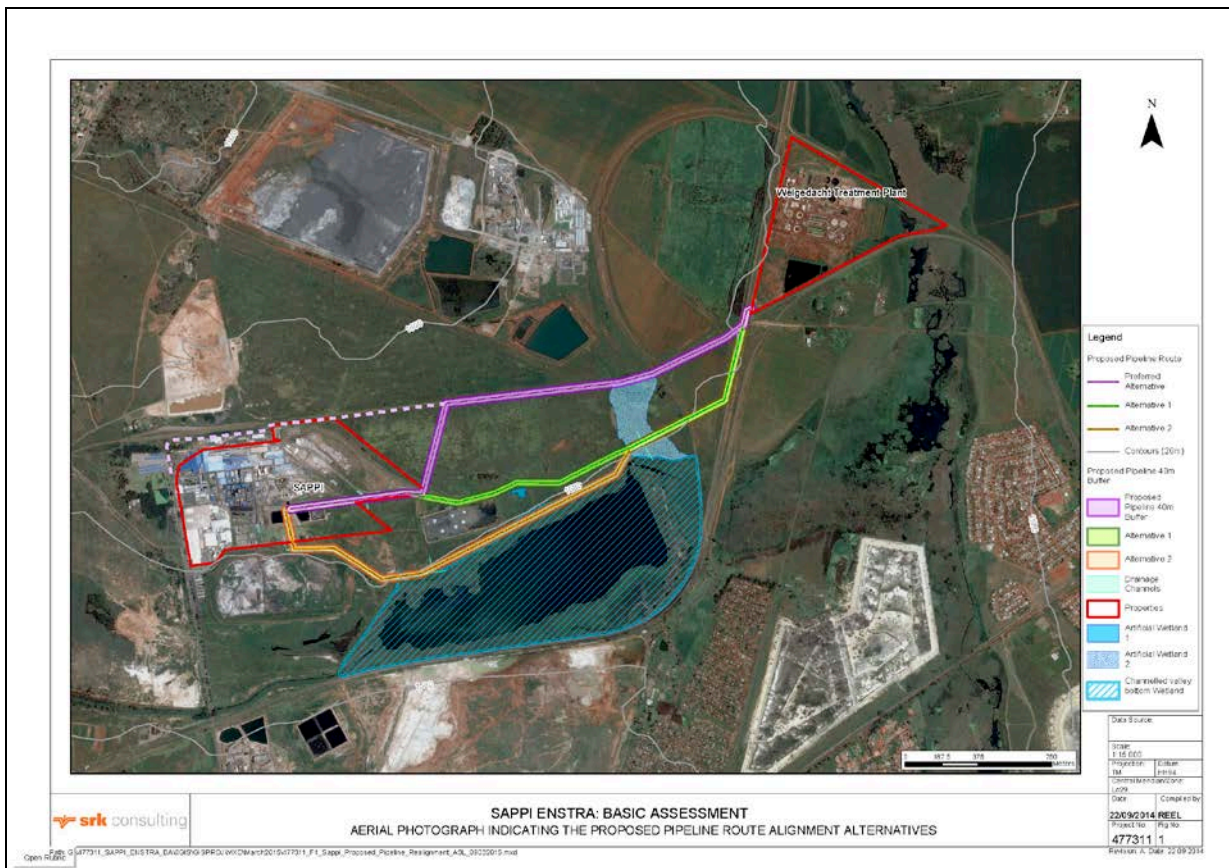


Figure 14: Proposed pipeline realignment in context of the existing infrastructure

5. Legal Framework

- Archaeological remains can be defined as man-made objects, which reflect past ways of life, deposited on or in the ground.
- Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and they are valuable, finite, non-renewable and irreplaceable.
- All archaeological remains, features, structures and artefacts older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the **National Heritage Resources Act (NHRA) (Act No. 25 of 1999, Section 34 & 35)**. The Act makes an archaeological impact assessment as part of an EIA and EMPR mandatory (see **Section 38**). No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the **South African Heritage Resources Agency (SAHRA)**. Full cognisance is taken of this Act in making recommendations in this report.
- Cognisance will also be taken of the **Mineral and Petroleum Resources Development Act (Act No 28 of 2002)** and the **National Environmental Management Act (Act No 107 of 1998)** when making any recommendations.
- Human remains older than 60 years are protected by the **NHRA**, with reference to **Section 36**. Human remains that are less than 60 years old are protected by the Regulations Relating to the Management of Human Remains (GNR 363 of 22 May 2013) made in terms of the National Health Act No. 61 of 2003 as well as local Ordinances and regulations.
- **Mitigation guidelines (The significance of the site):**

Rating the significance of the impact on a historical or archaeological site is linked to the significance of the site itself. If the significance of the site is rated high, the significance of the impact will also result in a high rating. The same rule applies if the significance rating of the site is low (also see Table 1).

Significance Rating	Action
Not protected	1. None
Low	2a. Recording and documentation (Phase 1) of site adequate; no further action required
	2b. Controlled sampling (shovel test pits, auguring), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction
Medium	3. Excavation of representative sample, C ¹⁴ dating, mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a & 2b]
High	4a. Nomination for listing on Heritage Register (National, Provincial or Local) (Phase 2 & 3 investigation); site management plan; permit required if utilised for education or

	tourism 4b. Graves: Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and reinterment [including 2a, 2b & 3]
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Table 1: Rating the significance of sites

- With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise.
- The guidelines as provided by the **NHRA (Act No. 25 of 1999)** in Section 3, with special reference to subsection 3, and the Australian ICOMOS (International Council on Monuments and Sites) Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- It should be kept in mind that archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf. NHRA (Act No. 25 of 1999)*, Section 36 (6)).
- **Architectural significance:**
 - Does the site contain any important examples of a building type?
 - Are any of the buildings important examples of a style or period?
 - Do any of the buildings contain fine details and or reflect fine workmanship?
 - Are any of the buildings the work of a major architect or builder?
 - Are the buildings important examples of an industrial, technological or engineering development?
 - What is the integrity of the buildings?
 - Are the buildings still utilised?
 - Has the buildings been altered and are these alterations sympathetic to the original intent of the design?
- **Spatial significance of architecture:**
 - Is the site or any of the buildings a landmark in the city or town?
 - Does the plant contribute to the character of the neighbourhood/region?
 - Do the buildings contribute to the character of the street or square?
 - Is the place or building part of an important group of buildings?
- **Architecture: Levels of significance are:**
 - Protect
 - Highly significant
 - Possible significance
 - Least significance
 - No significance

- **Architecture: Levels of protection are:**

Retain and protect	Considered to be of high significance. The building or structure can be used as part of the development but must be suitably protected. Should not include major structural alterations. If the building is older than 60 years a modification permit is required from SAHRA.
Retain and re-use	Considered to be of moderate significance. The building or structure can be altered to be accommodated within the development plans. Structural alterations can be included. If the building is older than 60 years a modification permit is required from SAHRA.
Alter and re-use	Considered to be of low significance. The building or structure can be structurally altered or destruction can be considered following further documentation. If the building is older than 60 years a modification/destruction permit is required from SAHRA.
Can be demolished	Considered to be of negligible significance and can be demolished. If the building is older than 60 years a destruction permit is required from SAHRA.

Table 2: Level of protection of buildings/structures

- A copy of this report will be lodged with the **SAHRA** as stipulated by the National Heritage Resources Act (NHRA) (Act No. 25 of 1999), Section 38 (especially subsection 4) and the relevant Provincial Heritage Resources Authority (PHRA).
- Note that the final decision for the approval of permits, or the removal or destruction of sites, structures and artefacts identified in this report, rests with the SAHRA (or relevant PHRA).

6. Study Approach/Methods

Regional maps and other geographical information (ESRI shapefiles) were supplied by SRK Consulting. In addition Google images and topographic maps were used to indicate the survey area. The survey area was localised on the 1:50 000 topographic maps 2628AB. Please note that all maps are orientated with north facing upwards (unless stated otherwise).

The survey area was preliminary surveyed and selected areas were investigated on foot using both systematic and intuitive pedestrian survey techniques. Local residents were also consulted during ad hoc interviews to determine the location of any known heritage sites, especially graves.

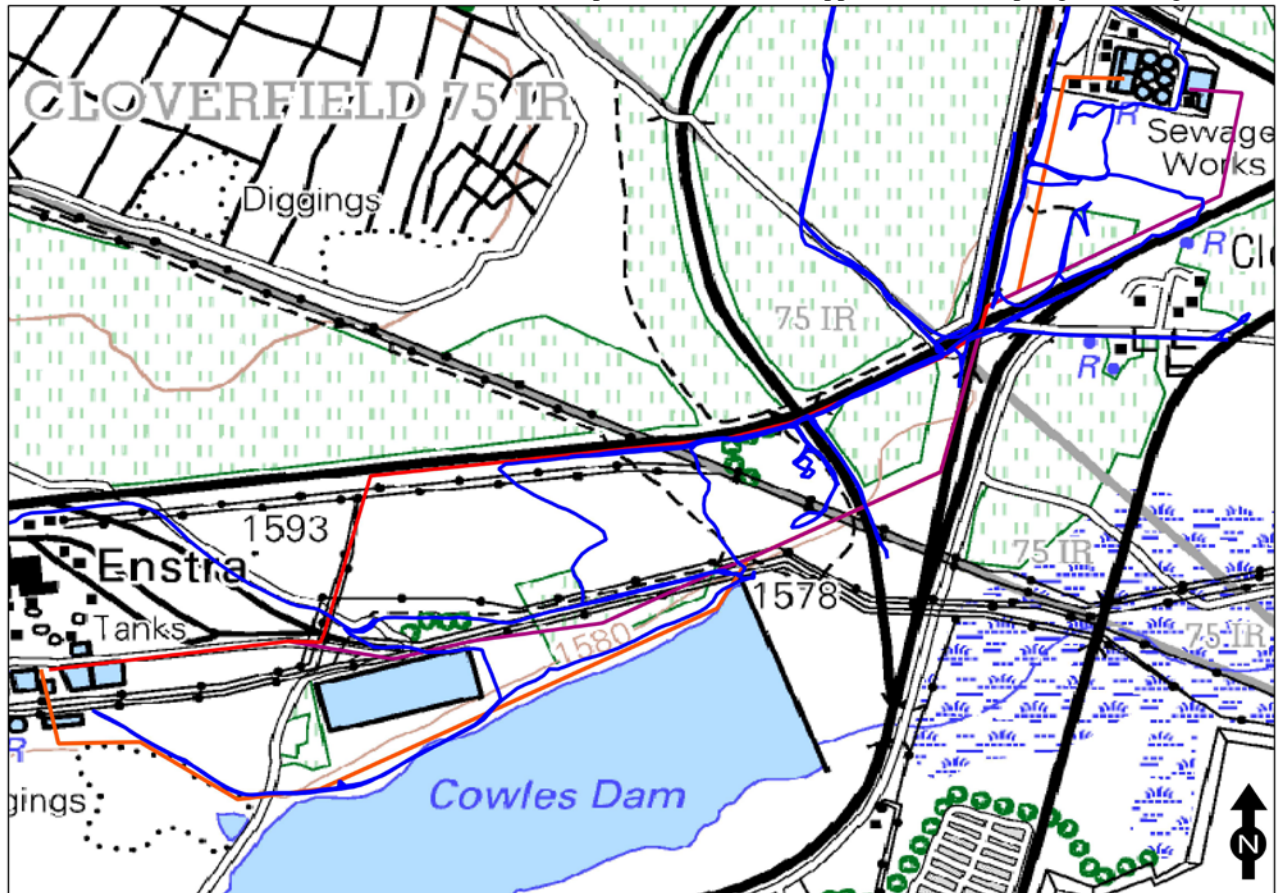


Figure 15: Recorded survey tracks for the project

6.1 Review of existing information/data

Additional information on the cultural heritage of the area was sourced from the following records:

- National Mapping Project by SAHRA (which lists heritage impact assessment reports submitted for South Africa)
- Online SAHRIS database
- Maps and information documents supplied by the client
- Published material on the area
- Previous heritage survey completed in the area

The Surveyor General's database shows the farms Geduld 123 IR, Cloverfield 75 IR and Welgedacht 74 IR were first surveyed in 1899, 1916 (1893) and 1905 respectively (see Addendum 3). Coupled with the initial late 19th gold and coal mining in the area it is clear the region has over a century of mining and industrial history (see Addendum 2). Also note that the Sappi Enstra Mill as established in 1936. However all these records confirmed that no known historically and archaeologically significant features or settlements have been recorded in the survey area.

6.2 Site visit

The site investigation took place on 20 August and 24 October 2014.

6.3 Impact assessment

The criteria used to describe heritage resources and to provide a significance rating of recorded sites are listed in the NHRA (Act No. 25 of 1999) specifically Section 7(7) and Section 38. SAHRA also published various regulations including: Minimum standards: Archaeological and palaeontological components of impact assessment reports in 2006 and updated requirements in 2012.

6.4 Assumptions, restrictions and gaps in knowledge

No severe physical restrictions were encountered. However, please note that due to the subterranean nature of cultural remains this report should not be construed as a record of all archaeological and historic sites in the area.

7. Description and Evaluation of Cultural Heritage Sites

The survey of the proposed area of development revealed a historical settlement (Site 1) that consists of two components which were probably functionally closely associated (see Figure 16). Site 1 consists mainly of a mostly dilapidated multi-room dressed stone house. A small midden deposit was recorded in association with the house remains. The house probably dates to the late 19th or early 20th centuries and was probably still intact until the roof was removed. The remains of a square brick-walled structure that was probably a secondary dwelling is situated approximately 30 metres away.

Site 1 is situated approximately 140 metres away from the nearest trajectory point of the Preferred Alternative Route and approximately 160 metres away from Alternative 1 and 2.

Site No	Site Type	Statement of Significance	Impact	Proposed Mitigation
1	Historical house remains	Generally Protected C: Low significance	None	None

Table 3: Description and evaluation of the recorded site

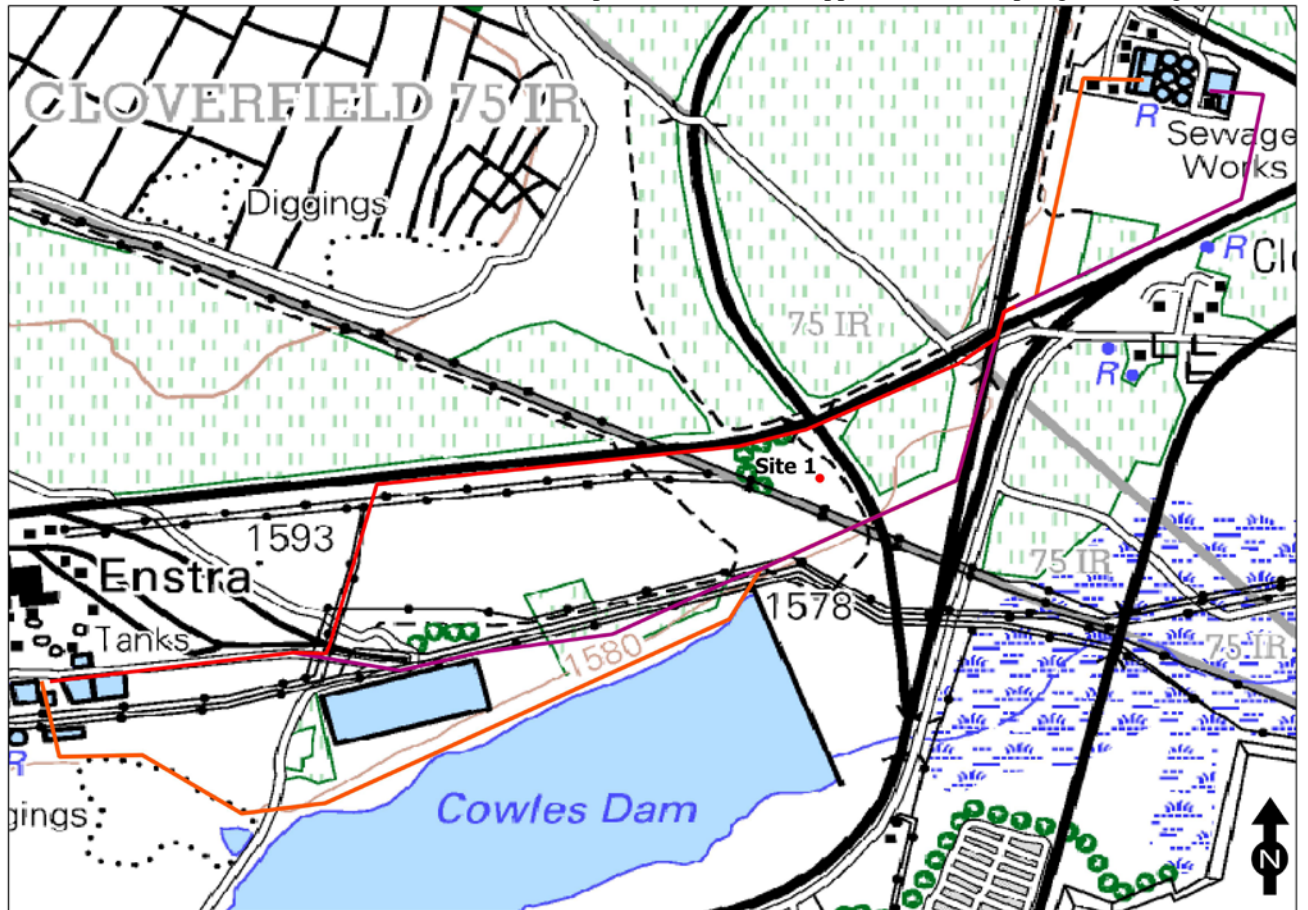


Figure 16: Location of the recorded heritage site

8. Summary of Site Locations

Site No	Coordinates
Site 1	28.464822°E 26.202077°S

Table 4: Summary of the site coordinates

9. Recommendations and Conclusions

Archaeological and Historical Structures

No archaeological (both Stone Age and Iron Age) and historical structures, features, assemblages or artefacts were recorded during the survey.

The remains of a single rectangular stone-built house were recorded during the survey (Site 1). Although the remains are older than 60 years and therefore protected by the NHRA (Act No. 25 of 1999) no impact is foreseen during the construction of the proposed water pipeline. No further action is required.

Graveyard

No grave or graveyards were recorded during the survey.

Conclusion and Recommendations

Site 1 is situated approximately 140 metres away from the nearest trajectory point of the Preferred Alternative Route and approximately 160 metres away from Alternative 1 and 2. Based on the assessment, from a heritage perspective, there is no impact on cultural heritage remains and it is recommended that the proposed development should be allowed to continue. There is no objection to any of the proposed alternative pipeline routes (Preferred Alternative, Alternative 1 and Alternative 2), taking cognizance of the following as aspects:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).

10. References

National Heritage Resources Act. Act No. 25 of 1999. Government Printer: Pretoria.

SAHRIS Website: www.sahra.org.za

South African Heritage Resources Agency (SAHRA). Report Mapping Project. Version 1.0, 2009

Addendum 1: Archaeological and Historical Sequence

The table provides a general overview of the chronological sequence of the archaeological periods in South Africa.

PERIOD	APPROXIMATE DATE
Early Stone Age	More than c. 2 million years ago - c. 250 000 years ago
Middle Stone Age	c. 250 000 years ago – c. 25 000 years ago
Later Stone Age (Includes San Rock Art)	c. 25 000 years ago - c. AD 200 (up to historic times in certain areas)
Early Iron Age	c. AD 400 - c. AD 1025
Late Iron Age (Stonewalled sites)	c. AD 1025 - c. AD 1830 (c. AD 1640 - c. AD 1830)

Archaeological Context

Stone Age Sequence

Concentrations of Early Stone Age (ESA) sites are usually present on the flood-plains of perennial rivers and may date to over 2 million years ago. These ESA open sites may contain scatters of stone tools and manufacturing debris and secondly, large concentrated deposits ranging from pebble tool choppers to core tools such as handaxes and cleavers. The earliest hominins who made these stone tools, probably not always actively hunted, instead relying on the opportunistic scavenging of meat from carnivore kill sites.

Middle Stone Age (MSA) sites also occur on flood plains, but are also associated with caves and rock shelters (overhangs). Sites usually consist of large concentrations of knapped stone flakes such as scrapers, points and blades and associated manufacturing debris. Tools may have been hafted but organic materials, such as those used in hafting, seldom preserve. Limited drive-hunting activities are also associated with this period.

Sites dating to the Later Stone Age (LSA) are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic materials such as wood, bone, hearths, ostrich eggshell beads and even bedding material. By using San (Bushman) ethnographic data a better understanding of this period is possible. South African rock art is also associated with the LSA.

Iron Age Sequence

In the northern regions of South Africa at least three settlement phases have been distinguished for early prehistoric agropastoralist settlements during the **Early Iron Age** (EIA). Diagnostic pottery assemblages can be used to infer group identities and to trace movements across the landscape. The first phase of the Early Iron Age, known as **Happy**

Rest (named after the site where the ceramics were first identified), is representative of the Western Stream of migrations, and dates to AD 400 - AD 600. The second phase of **Diamant** is dated to AD 600 - AD 900 and was first recognized at the eponymous site of Diamant in the western Waterberg. The third phase, characterised by herringbone-decorated pottery of the **Eiland** tradition, is regarded as the final expression of the Early Iron Age (EIA) and occurs over large parts of the North West Province, Northern Province, Gauteng and Mpumalanga. This phase has been dated to about AD 900 - AD 1200. These sites are usually located on low-lying spurs close to water.

The **Late Iron Age** (LIA) settlements are characterised by stone-walled enclosures situated on defensive hilltops c. AD 1640 - AD 1830). This occupation phase has been linked to the arrival of ancestral Northern Sotho, Tswana and Ndebele (Nguni-speakers) in the northern regions of South Africa with associated sites dating between the sixteenth and seventeenth centuries AD. The terminal LIA is represented by late 18th/early 19th century settlements with multichrome Moloko pottery commonly attributed to the Sotho-Tswana. These settlements can in many instances be correlated with oral traditions on population movements during which African farming communities sought refuge in mountainous regions during the processes of disruption in the northern interior of South Africa, resulting from the so-called *difaqane* (or *mfecane*).

Historical Background

Springs was originally founded as a coal and gold mining town in 1904, but its history can be traced back to the second half of the 19th century.

From about 1840 farmers moved into the area and declared farms for themselves, especially after the Zuid-Afrikaansche Republiek (ZAR) (later Transvaal) became an independent republic with the signing of the Sand River Convention in 1852. The original odd piece (685 ha) of land on the Witwatersrand, was given the name 'The Springs' by the land surveyor James Brooks, probably because of all the springs (and abundant surface water) in the area.

On 16 September 1884 the official map of 'The Springs' was registered in Pretoria, the then ZAR capital. Initially, the land's value was equal to R200. But the discovery of coal and gold and its subsequent mining increased the value considerably.

The original farm on which the city of Springs was later to be built was surveyed in 1883. Coal was discovered in the area in 1887 and three years later the ZAR's first railway was built to carry coal from the East Rand coalfields to the gold mines of the Witwatersrand.

Gradually, especially after coal was discovered further east in South Africa in Witbank, the Springs collieries were closed. In the meanwhile, however, gold had also been discovered in the area. A village was laid out in 1904 and in 1908 the first gold mining began. Springs was granted municipal status in 1912. By the late 1930s, there were eight gold mines near Springs, making it the largest single gold-producing area in the world.

The coal discovered in 'The Springs' was of a good quality and in 1888 the first contract was signed to mine coal. Initially mining was on a small scale, but rose when the Great Eastern mine was established. There were a number of corrugated iron houses around the mine and, although there were a few small hotels and general dealers, it was not a town yet. The settlement grew and in 1902 a health committee was appointed to look after the building and

location of structures and also the hygiene in the growing township. In 1904 the Grootvlei Proprietary Mines were registered and shafts were sunk. This followed the discovery in 1899 of gold on the farm Geduld and the further discovery of the main reef in 1902.

In April 1904 'The Springs' was proclaimed a town, called Springs, the health committee replaced by a town council, and it flourished as a mining town. In 1962, Springs produced 10% of the country's gold and 9% of its uranium. However, by the end of the 1960s the last mine in town, the Daggafontein Mine was exhausted. The town did not die, but instead developed into an industrial centre.

Springs is currently one of the industrial centers of the Witwatersrand and also the Eastern Gateway of Gauteng towards Mpumalanga and Northern KwaZulu Natal. Mining has been replaced by manufacturing and engineering industries of economic importance; products of the region include processed metals, chemicals, paper and foodstuffs.

Sappi Enstra Mill celebrated its 76th year of existence in 2012 having been established in 1936, producing its first paper in 1938 from Paper Machine 1. Enstra produces office paper, security paper and packaging paper products of superior quality for use in different industries. Currently the mill is a business unit of Sappi Paper and Paper Packaging; a division of Sappi Limited.

Addendum 2: Description of Sites**Site 1**

A. GENERAL SITE DESCRIPTION		
<p>The site comprises the remains of a rectangular stone-built house. The foundation is roughly 10 x 5 metres and the house probably had two rooms. Dressed stone was used in the construction and stone lintels with wooden door and window frames. The roof has been removed with the resultant internal walling collapse. Most of the fittings have also been removed from the house frame. No substantial midden was recorded near the site. The remains of a more recent square brick-walled structure that was probably a secondary dwelling is situated approximately 30 metres away. This structure was completely demolished.</p> <p>Please take note that structure is probably older than 60 years and is therefore protected by the NHRA (Act No. 25 of 1999).</p>		
B. SITE EVALUATION		
B1. HERITAGE VALUE	Yes	No
Historic Value		
It has importance to the community or pattern of South Africa's history or precolonial history.		√
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.		√
It has significance relating to the history of slavery in South Africa.		√
Aesthetic Value		
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.		√
Scientific Value		
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.		√
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.	√	
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.	√	
Social Value		
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).		√
Tourism Value		
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.		√
Rarity Value		
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.		√
Representative Value		
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.	√	
B2. REGIONAL CONTEXT		
Other similar sites in the regional landscape.	√	

B3. CONDITION OF SITE			
Integrity of deposits/structures.		Partly demolished, unstable	
C. SPHERE OF SIGNIFICANCE	High	Medium	Low
International			√
National			√
Provincial			√
Local			√
Specific community			√
D. FIELD REGISTER RATING			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			√
E. GENERAL STATEMENT OF SITE SIGNIFICANCE			
Low			√
Medium			
High			
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT			
None			√
Peripheral			
Destruction			
Uncertain			
G. RECOMMENDED MITIGATION			
<ul style="list-style-type: none"> • [None] 			
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS			
<ul style="list-style-type: none"> • NHRA (Act No. 25 of 1999), Section 34 			
I. PHOTOGRAPHS			



Figure 17: Detail view of the north-facing wall of the house



Figure 18: Detail view of the dressed stone work of the house

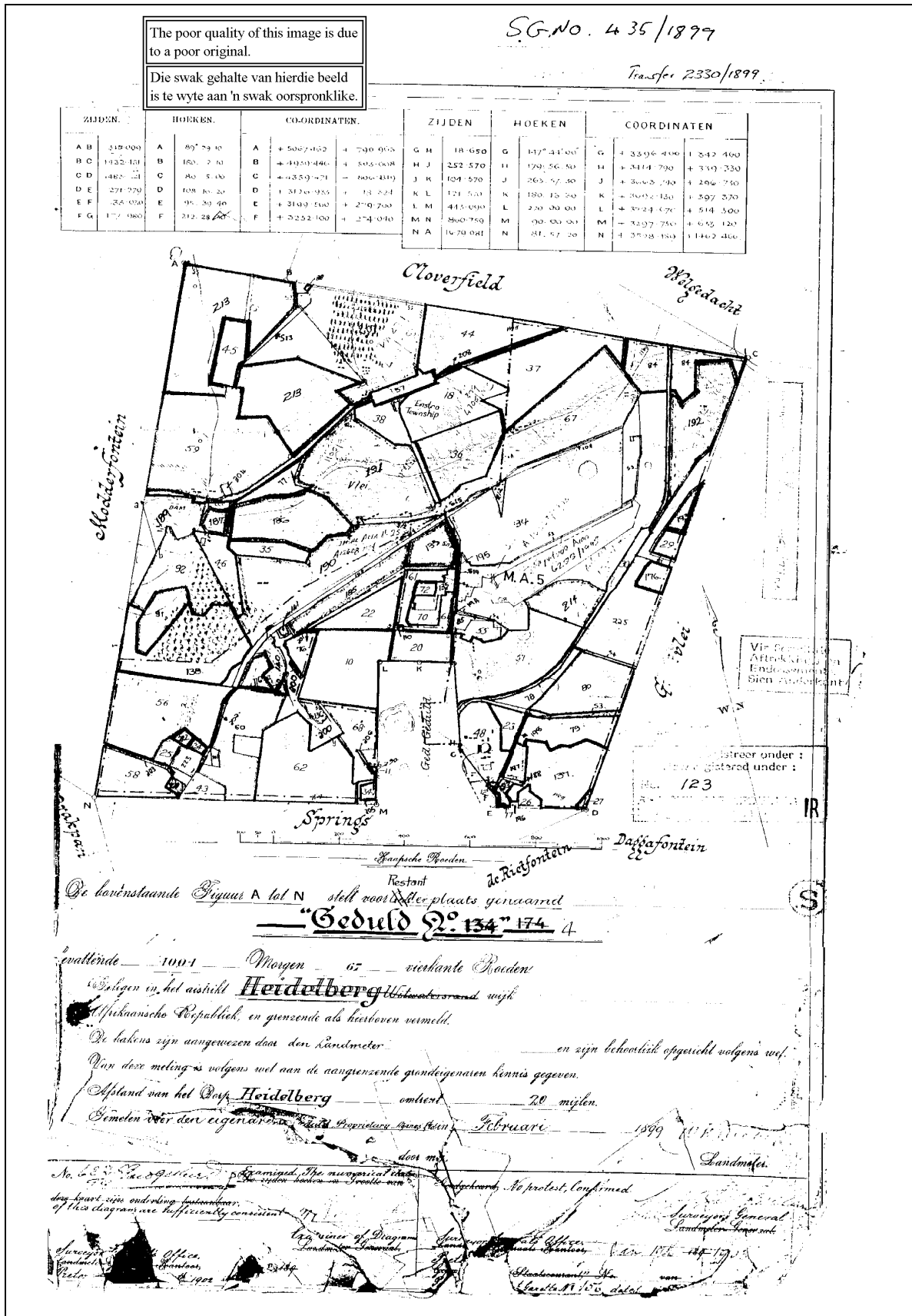


Figure 19: Surveyor General's map of the farm Geduld 123 IR surveyed in 1899

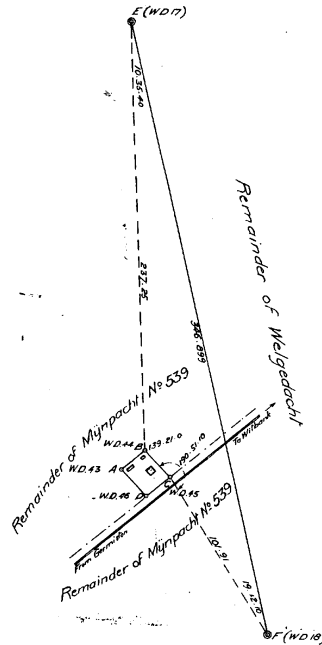
SOUTH AFRICAN RAILWAYS.

SG. NO. A. 720/18

Land Acquired for Ganger's Cottage

T 1027.

SIDES.		ANGLES.		(Y) CO-ORDINATES (X)	
AB	16.74	A	87. 5. 40"	A	+ 4423. 38 - 1695. 67
BC	20.17	B	92. 35. 20	B	+ 4434. 42 - 1709. 26
CD	16.64	C	87. 11. 30	C	+ 4419. 87 - 1722. 23
DA	20.11	D	93. 7. 30	D	+ 4408. 95 - 1709. 68
		E		E	+ 4671. 301 - 1695. 071
		F		F	+ 4334. 387 - 1777. 708



Framed for purpose of cancellation of portion of Mijnpacht No. 539.

is registered under ;
how registered under ;
No. 74
REGISTRAR OF DEEDS
REGISTRAR GENERAL
REGISTRATION DIVISION IR



The above Figure lettered **ABCD** represents
0 Morgen **334** Square Roods of land, being *portion of Mijnpacht No. 539* **Welgedacht No. 27 2** of the Farm

as appears on the Diagram S.G. No. **A. B. 150/05** framed by Surveyor **J. B. Tucker** In *May 1905*
relating to ~~Deed of Mijnpacht No. 539~~ granted on *15th January 1906* to *The Welgedacht Exploration Co. Ltd.*
dated ~~made in favour of~~

Situate in the District of **Botsburg, SPRINGS** *Ward Mining District Botsburg, Province of Transvaal.* Bounded as indicated above.

The Beacons were pointed out by **A. W. Irvine** and have been properly erected according to law.

Surveyed in **June 1912**

by me **J. B. Tucker**
Land Surveyor.

No. **A 720** Examined. The numerical data of this Diagram are sufficiently consistent.

Approved.

This Diagram belongs to Deed of Transfer No. **U 15** made this day in favour of

A. Schling
Acting Examiner of Diagrams.

J. Maxwell Pomeroy
Acting Surveyor-General.

Registrar of Deeds.

Surveyor-General's Office,
Pretoria. **28 FEB 1912**

Deeds Office,
Pretoria.

Figure 20: Surveyor General's map of the farm Welgedacht 74 IR surveyed in 1905

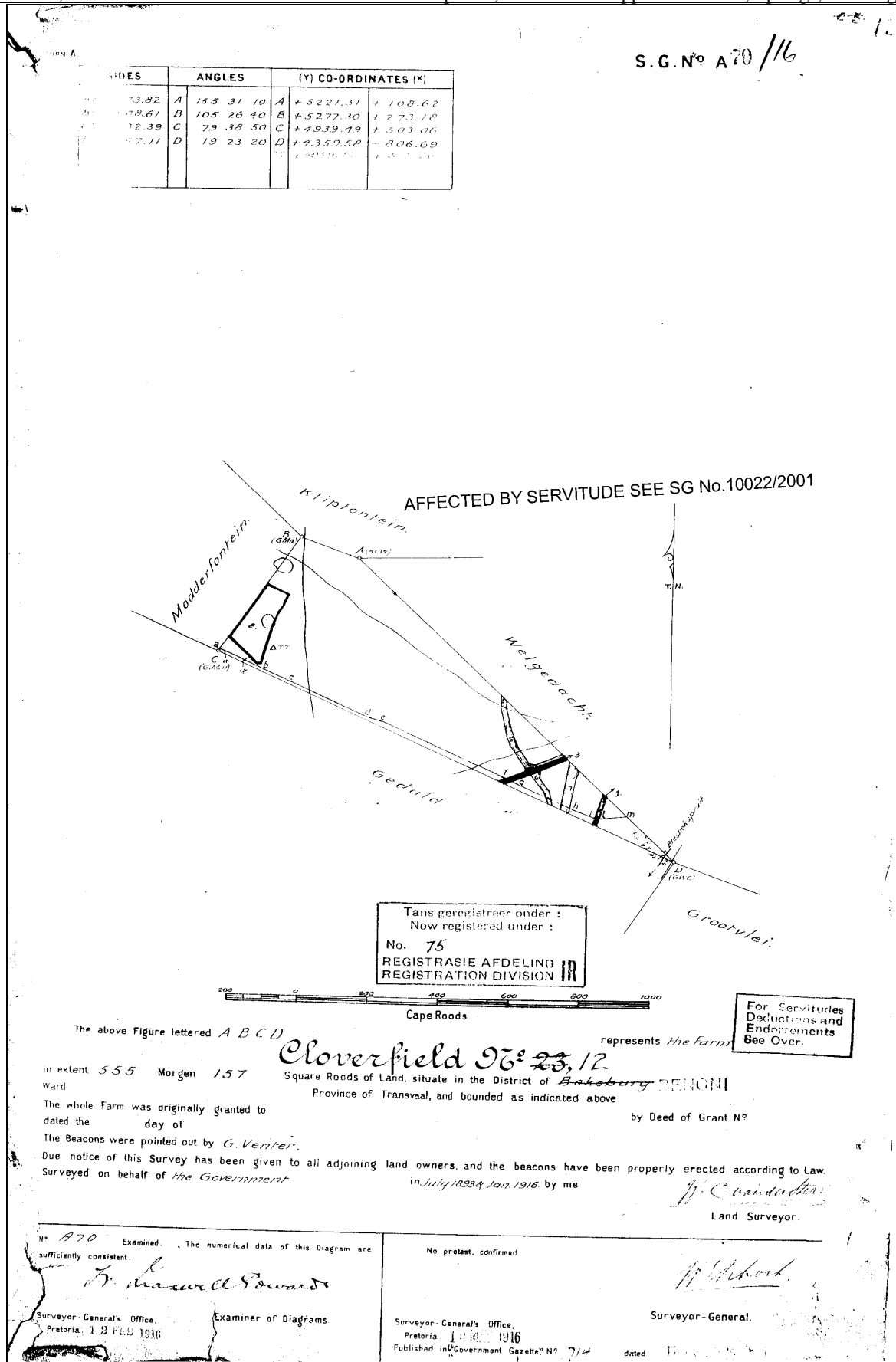


Figure 21: Surveyor General's map of the farm Cloverfield 75 IR surveyed in 1893 and 1916