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CK 2006/014630/23 **VAT NO.: 4360226270**

**FINAL REPORT ON A HERITAGE IMPACT ASSESSMENT
FOR THE PROPOSED ESTABLISHMENT OF A NEW POULTRY FACILITY
LOCATED ON PORTIONS OF THE FARM ROODEWAL 322JQ AND
ELANDSFONTEIN 366JQ, NEAR DERBY
IN THE RUSTENBURG DISTRICT OF NORTHWEST**

For:

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SINOVILLE
0129***

REPORT: APAC016/55 – Final Version

by:

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March 2017

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A handwritten signature in black ink, appearing to be 'A. Pelsers', written in a cursive style.

SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Labesh (Pty) Ltd to conduct a detailed HIA and PIA for a proposed Poultry Facility on portions of the farm Roodewal 322JQ & Elandsfontein 366JQ, near Derby in the Northwest Province. APAC was contracted initially in 2015 by Shangoni Management Services, to conduct a Heritage & Palaeontological Impact Assessment (Desktop and Phase 1 Field Verification) for the same proposed development (See APAC015/57 – November 2015).

Background research indicated that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study portion falls. The 2015 heritage field assessment of the specific study area recorded a number sites, features or objects of archaeological & recent historical origin and significance. The 2015 report discussed the results of both the background research and physical survey and provided a number of mitigation measures to minimize any possible negative impacts of the proposed development on any unknown heritage resources that could be located here and that was not identified during the assessment. **The results of the desktop Palaeontological Impact Assessment were provided in a separate report.**

Based on the findings of the Phase 1 HIA (field verification) it was recommended that the proposed development be allowed to continue, taking into consideration the recommendations put forward at the end of the report.

The October 2016 Heritage (mainly archaeological) assessment focused on specific areas earmarked for development actions (Chicken House Clusters; Wastewater Treatment Area; Reservoirs; and Water Reticulation Network). A number of previously unknown/unrecorded sites, features and objects were recorded and identified during the 2016 assessment. Based on this assessment the Roads; Powerline; Solar Plant; quarries; Egg Bank and New Entrance for the Rearing Farm were determined and final maps produced. The mitigation of sites impacted by the development is determined by this and will be implemented as part of the recommended Phase 2 Archaeological work.

Finally, the development should be allowed to continue taking into consideration the recommendations put forward at the end of the report. Mitigation measures required will include Phase 2 archaeological excavations for which a permit will be applied for at SAHRA.

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1. INTRODUCTION

APeiser Archaeological Consulting (APAC) was appointed by Labesh (Pty) Ltd to conduct a detailed HIA and PIA for a proposed Poultry Facility on portions of the farm Roodewal 322JQ & Elandsfontein 366JQ, near Derby in the Northwest Province. APAC was contracted initially in 2015 by Shangoni Management Services, to conduct a Heritage & Palaeontological Impact Assessment (Desktop and Phase 1 Field Verification) for the same proposed development (See **APAC015/57 – November 2015**).

Background research indicated that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study portion falls. The 2015 heritage field assessment of the specific study area recorded a number sites, features or objects of archaeological & recent historical origin and significance. The 2015 report discussed the results of both the background research and physical survey and provided a number of mitigation measures to minimize any possible negative impacts of the proposed development on any unknown heritage resources that could be located here and that was not identified during the assessment. The results of the desktop Palaeontological Impact Assessment were provided in a separate report.

The October 2016 Heritage (mainly archaeological) assessment focused on specific areas earmarked for development actions (Chicken House Clusters; Wastewater Treatment Area; Reservoirs; and Water Reticulation Network). A number of previously unknown/unrecorded sites, features and objects were recorded and identified during the 2016 assessment. Based on this assessment the Roads; Powerline; Solar Plant; quarries; Egg Bank and New Entrance for the Rearing Farm were determined and final maps produced. The mitigation of sites impacted by the development is determined by this and will be implemented as part of the recommended Phase 2 Archaeological work.

The client indicated the location and boundaries of the study areas and the assessment concentrated on this. The specialists were accompanied during the fieldwork by a representative of RCL Foods, who showed them the development areas and locations of the various structures and other features that are related to the development.

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;

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 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- 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 this act deals with archaeology, palaeontology and meteorites. The act 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; or
- 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 of 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.

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 study area is situated on the Remaining Extent of Portion 6 & Portions 8, 11, 12, 15 and 17 of the farm Roodewal 322JQ & Portion 58 of the farm Elandsfontein 366JQ, between Rustenburg and Derby in the Northwest Province. The aims of the assessment were to determine if there were any known and/or unknown cultural heritage (archaeological and/or historical) sites, features or cultural material in the areas of proposed development actions related to the planned new RCL Foods Poultry Farm, as well as to determine any possible negative impacts on the Heritage sites and to recommend any mitigation measures to negate these impacts if required.

The topography of the study area varies between relatively flat and open to very hilly and rocky with dense Bushveld and Thornveld vegetation in certain areas. Visibility in some of these areas were difficult, although some open sections/patches existed throughout. A number of archaeological and historical sites were however be identified (including those found

during the November 2015 assessment) and recorded. The results of the assessments will be discussed in the next section.

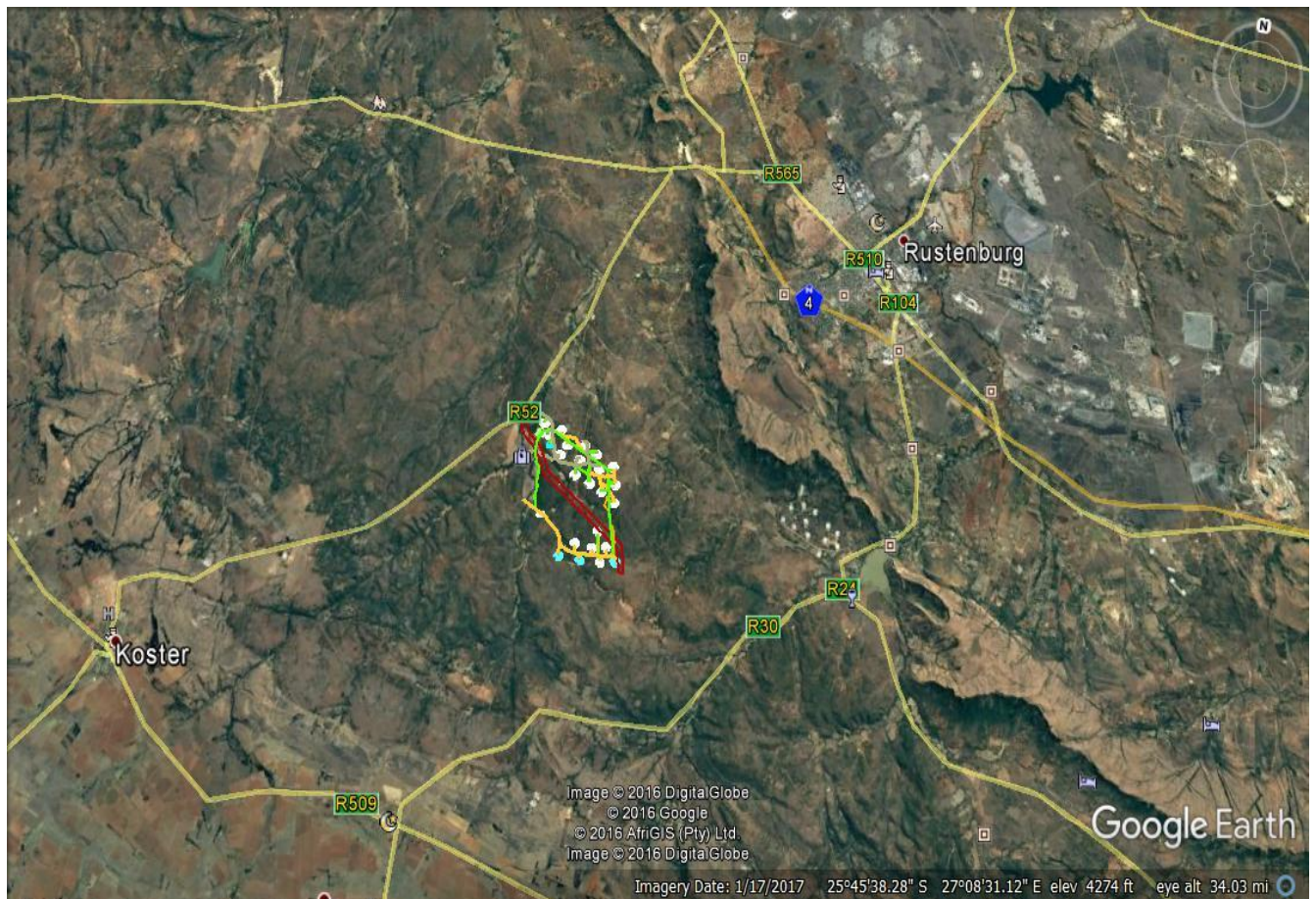


Figure 1: General location of study area (Google Earth 2016).

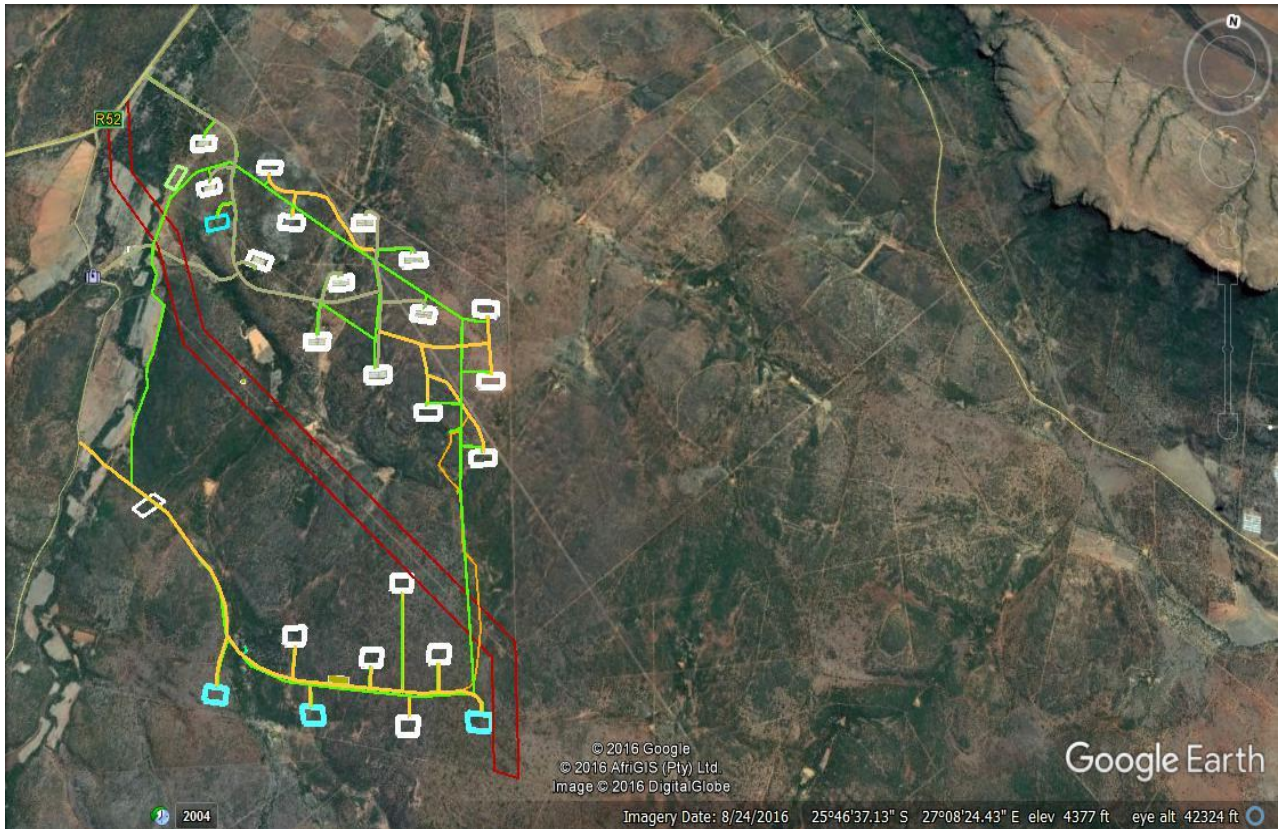


Figure 2: Closer view of study area showing various development clusters including roads, powerlines, quarries, water treatment works Solar plant and Egg Bank(Google Earth 2016).



Figure 3: View of an open section in the study area. Note the dense vegetation around it.



Figure 4: A view of another section showing the fairly dense vegetation and rocky terrain found in some areas.



Figure 5: Another view of the general area.

6. DISCUSSION

The Stone Age is the period in human history when primarily stone was used to manufacture tools. In South Africa the Stone Age are basically separated into three periods. It should be noted that these dates are relative and provide a broad framework for interpretation only. 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 needs to be indicated that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

The Iron Age is the period of human history when primarily metal was used to manufacture tools and other artifacts. In South Africa it is 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.

There are no known Stone Age sites in the area, although some rock engravings are known to occur in the area around Koster & Rustenburg (Bergh 1999: 4-5). A number of Stone Age occurrences (single tools) and open-air sites were found in the study area during the 2015 assessment, sometimes in conjunction with Iron Age finds and features.

Again, for the Iron Age, none were known to exist in the specific study area prior to the 2015 & 2016 assessments, although a large number of stonewalled LIA sites are known to exist in the bigger geographical area between Rustenburg and Zeerust (Bergh 1999: 7). According to the work done by Huffman on Iron Age pottery, it is possible that Iron Age sites related to the following industries could be present in the larger area. This is the Uitkomst facies of the Urewe Tradition dating to between AD1650 & 1820; the Olifantspoort facies of the same dating to between AD1500 & 1700; the Madikwe facies also of Urewe (AD1500 – AD1700) and finally the Buispoort facies of Urewe dating to between AD1700 & 1840 (Huffman 2007: 171; 191; 199 & 203).

A number of Iron Age sites, features and cultural material finds were identified during the 2015 & 2016 assessments, with some of these found in relation with Stone Age sites.

The first Europeans in the area were travellers, hunters and missionaries such as Schoon & McLuckie and Moffat & Archbell in 1829; Cornwallis Harris in 1836 & Livingstone in 1847 (Berg 1999: 12-13). They were followed by the first Voortekkers after 1844. The town of Derby is named after Lord Derby, the British Secretary of State, and the town had its origins after the Anglo-Boer War (1899-1902) as a settlement for destitute people. Towards the end of that War, there was a battle between Boer forces and a Scottish Cavalry Regiment in the area, with a cemetery for killed Scottish soldiers located in Derby (www.wikipedia.co.za & www.sa-venues.com).

The oldest map for the farm Roodewal that could be obtained from the database of the Chief Surveyor General dates to 1907 (www.csg.dla.gov.za – CSG 10FZ3001). It indicates that the whole of the original farm was granted to one A.J. Pelser in February 1857 and that it was surveyed in May 1894. Portion 6, 11 & 12 was surveyed in 1934, 1935 and 1944 respectively (CSG Documents 1009Y901; 10FZ5001 & 10FZ5701). The oldest map for Elandsfontein

(Portion 2) dates to 1904 and shows that it was granted in December 1858 to one L.A.S. du Plessis and was surveyed in April 1895 (CSG Document 10GK3W01), while Portion 58 (map dated to 1945) was originally granted to one F.W.S. du Plessis on 28 November 1862 (CSG Document 10FWB01). No historical sites or features are identifiable from any of these maps.

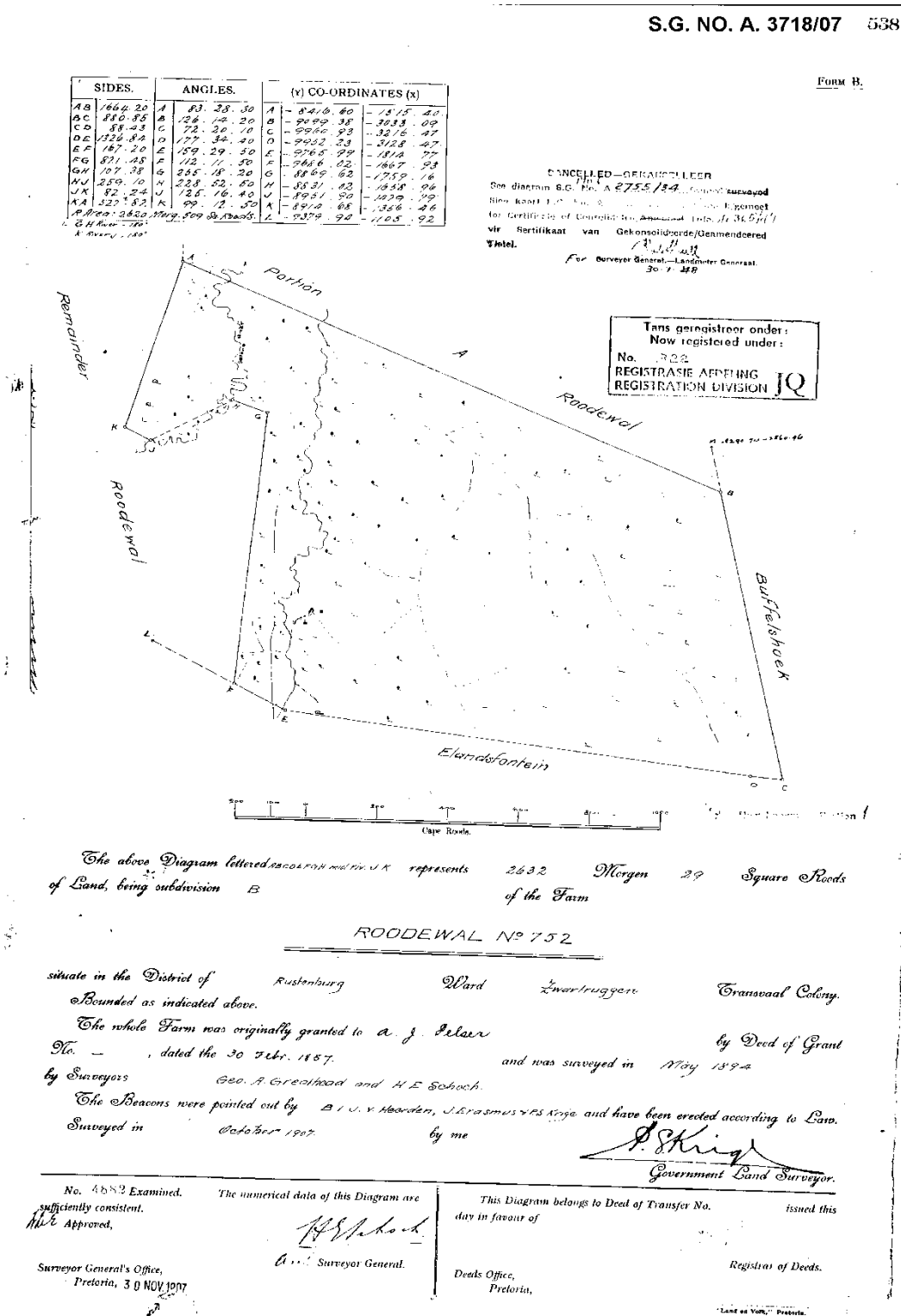


Figure 6: 1907 map of Roodewal (www.csg.dla.gov.za).

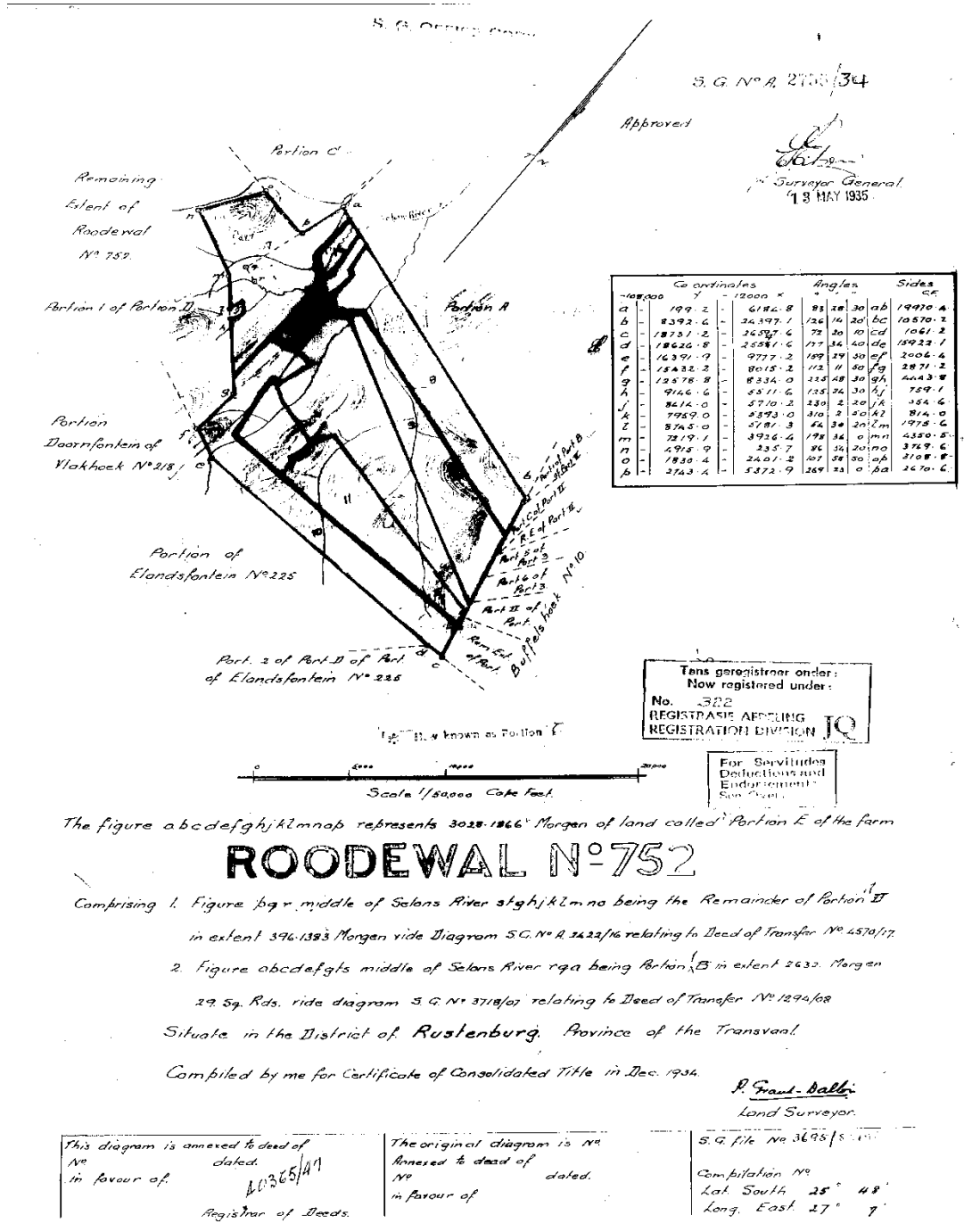


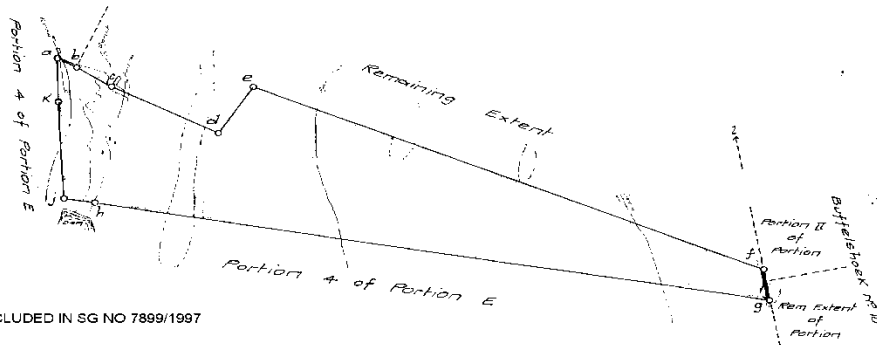
Figure 7: The 1934 map of Portion 6 of Roodewal (www.csg.dla.gov.za).

ACCEPTED FOR APPROVAL
21 NOV 1935
L. J. ZIEGLER - General

S.G. No. A. 1067/35

Approved
Surveyor-General
11-11-1934

SIDES		ANGLES		CO-ORDINATES	
Case	Feet			System	
ab	514.4	a	69 11 40	a	- 4293.1 + 10163.9
bc	978.4	b	179 38 20	b	- 4773.4 + 10348.0
cd	2788.1	c	183 52 0	c	- 5678.4 + 10719.8
de	1500.0	d	264 5 10	d	- 8322.9 + 11602.9
ef	12897.6	e	100 14 30	e	- 8942.1 + 10236.7
fg	221.8	f	122 35 0	f	- 21430.3 + 13584.5
gh	15979.6	g	70 41 0	g	- 21639.2 + 14164.1
hj	714.7	h	181 51 0	h	- 5721.6 + 13920.5
jk	2641.5	j	100 9 10	j	- 5007.0 + 13922.7
ka	1194.5	k	178 42 10	k	- 4487.1 + 11340.8
Direction		lm	341 33 20	l	- 19014.0 + 6112.4
ll	7665.9	m		m	- 22360.3 + 16145.7
sm	2089.1				

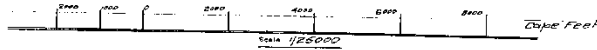


NOW INCLUDED IN SG NO 7899/1997

The line XY represents the centre line of an Electric Power Line.
Diag. S.G. No. A. 1067/35
11-11-1934

Description of Beacons:
b Planted stone 2' x 6" x 3"
All others = Iron pegs and cairns.

This registration order:
Now registered under:
322
REGISTRATION DIVISION JQ



The figure abcdefghjk represents
47A. 9422 Morgen of land called Portion 5 of Portion E
Roodewal No 752
of the farm

situate in the DISTRICT of RUSTENBURG PROVINCE of TRANSVAAL
Surveyed in November 1934 by me P. Gant-Dallo
Land Surveyor.

This diagram is annexed to Deed of No. <u>11360/147</u> dated <u>11-3-1934</u> in favour of <u>Registrar of Deeds</u>	The original diagram is No. <u>A2765/1934</u> annexed to Deed of No. <u>11360/147</u> dated <u>11-3-1934</u> in favour of <u>Registrar of Deeds</u>	S.G. File No. <u>3696/12/15380/35</u> Survey Records No. <u>11360/147</u> Compilation No. <u>11360/147</u> Lat. South <u>28 30 00</u> Long. East <u>28 30 00</u>
-----------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Printed by Groot & Sherrin, P.O. Box 2416, Johannesburg.

Figure 8: 1935 map of Portion 11 of Roodewal (www.csg.dla.gov.za).

S.G. OFFICE USE

SUBOL DIAGRAM
 No. 24/1945 No. 9 of 1945

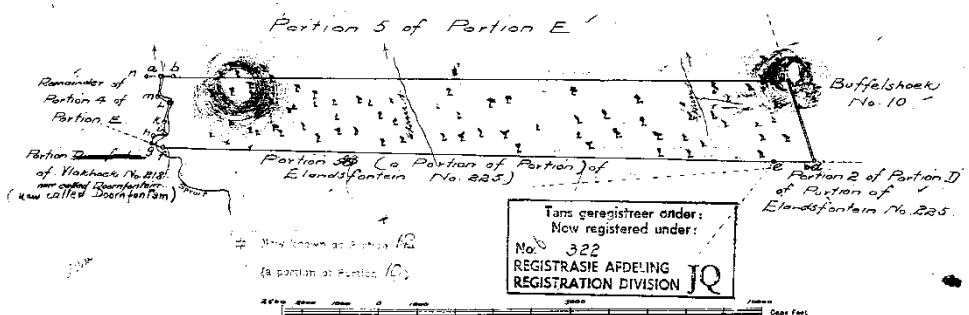
S.G. No. A. 1932/45

Approved

R. M. Hill
 Surveyor-General

DESCRIPTION OF BEAGONS
 a, b, c, f, m are 1/2" iron pegs under cairns of stones.
 d, e, n are ironoliths. g is an 1/2" iron peg under cairn of stones.
 h, k, l are 3/4" iron pipes in cairns of stones.
 u is an 1" iron peg under cairn of stones.
 Witness marks placed at a, b, f, d 15 on each of
 the boundaries are ab, ba, bc, fe, fg.

SIDES Cass Feet	ANGLES OF DIRECTION	SYSTEM	CO-ORDINATES
ab 326.63	268° 59' 52"	a +	14607.5 + 33328.1
bc 1537.5	270° 53' 28"	b +	14281.2 + 33322.4
cd 2068.8	341° 06' 10"	c -	1634.2 + 34163.2
de 1061.75	89° 25' 40"	d -	2553.4 + 34701.2
ef 1589.8	31° 20' 4"	e -	1231.7 + 35121.3
fg 300.54	112° 8' 20"	f +	14535.2 + 35020.3
ga 176.54	184° 3' 40"	g +	14873.6 + 35336.0
ha 305.23	258° 40' 20"	h +	14861.1 + 35408.9
ka 284.63	186° 37' 00"	k +	14561.6 + 35349.9
la 482.04	131° 48' 50"	l +	14532.1 + 35066.8
ma 471.09	157° 28' 20"	m +	14433.2 + 34954.0
na 500.83	124° 28' 50"	n +	14694.3 + 34427.2
oa 327.36	268° 53' 50"	o +	14995.1 + 33934.9



The figure a, b, c, d, e, f, g, h, i, k, l, m represents 364.5660 Morgen of land, being Portion 12 (a Portion of Portion 4 of Portion E) of the farm

Roodewal No. 752

situate in the DISTRICT of RUSTENBURG PROVINCE OF TRANSVAAL

Surveyed in October 1944, by me *R. M. Hill* Land Surveyor.

This diagram relates to Deed of No. _____ dated _____ in favour of _____	The original diagram is No. 19.1000/45 annexed to Deed of No. _____ dated _____ in favour of _____	S.G. File No. 3695/4/4293/45 Survey Records No. 510 45 Compilation No. 29104 Lat. South Long. East
Registrar of Deeds <i>R. M. Hill</i>		

Figure 9: 1945 map of Portion 12 of Roodewal (www.csg.dla.gov.za).

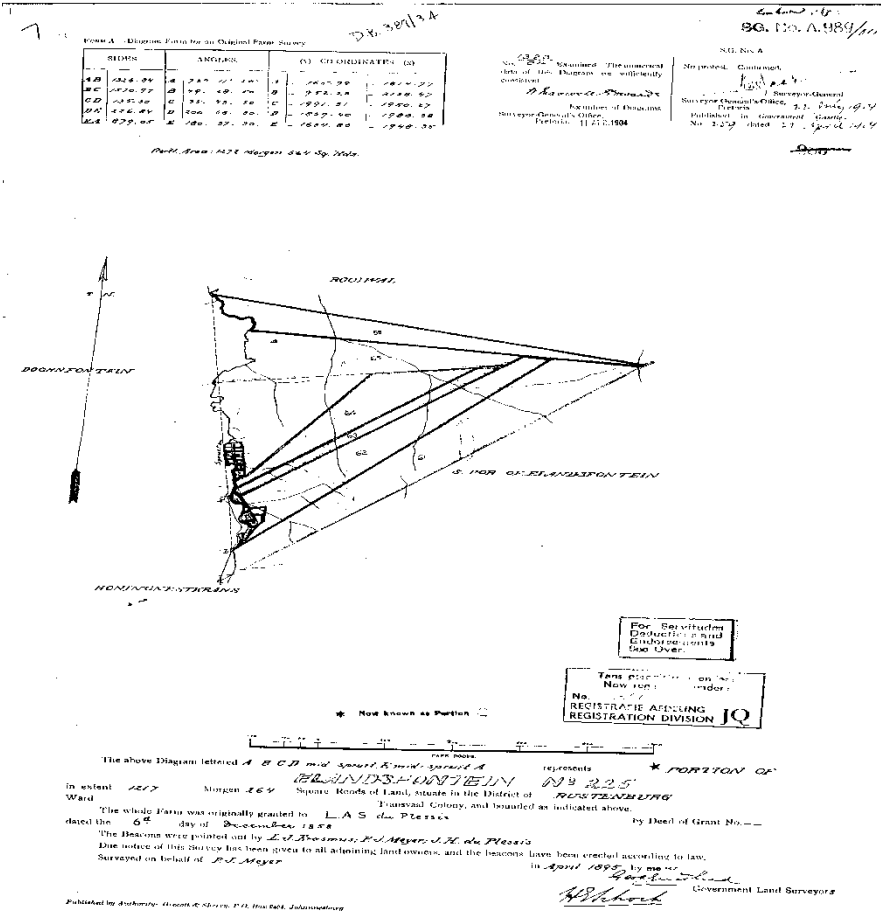


Figure 10: 1904 map of Elandsfontein (www.csg.dla.gov.za).

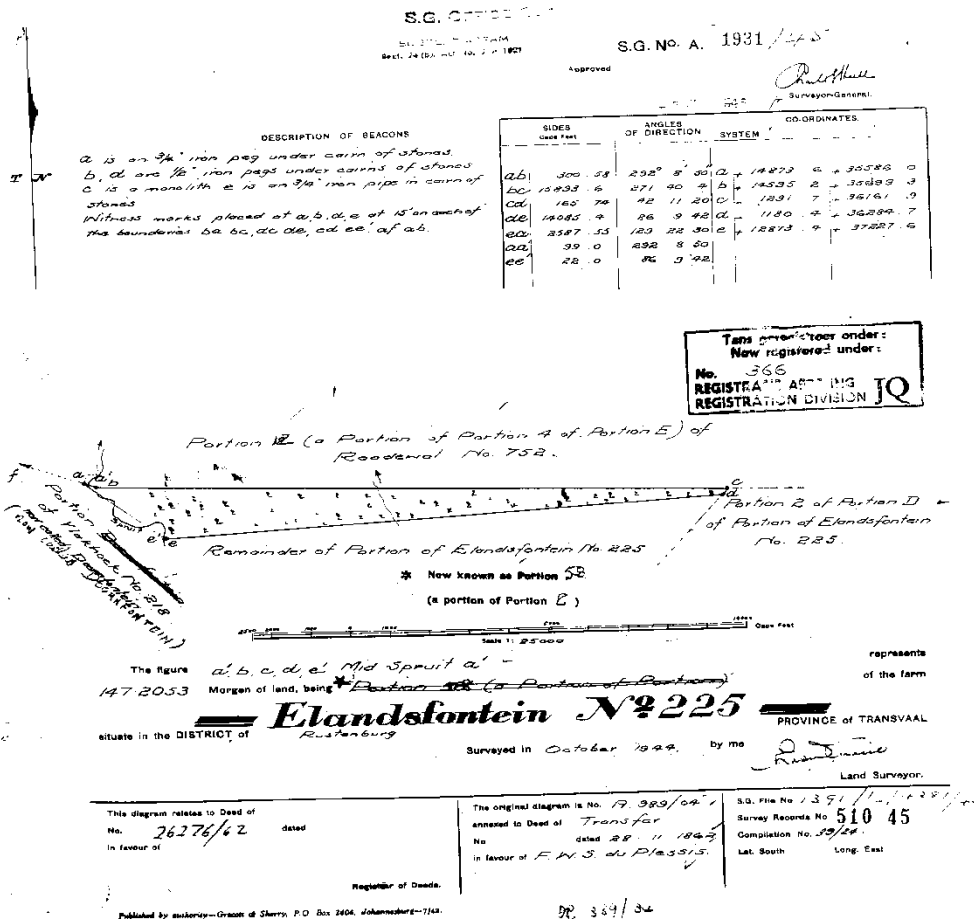


Figure 11: 1945 map of Elandsfontein (www.csg.dla.gov.za).

Results of the November 2015 Assessment

During this assessment we focused on areas that would have been favored for settlement and utilization by humans during prehistoric and later times, including ridges and areas close to drainage lines, while we also looked at areas with unnatural looking clumps of trees and erosion and open areas where evidence of human utilization and presence could be identified.

A total of 15 individual sites, dating to the Stone Age, Iron Age and more recent historical times were identified and recorded. In some cases the Stone Age and Iron Age occurrences were found on the same sites. It needs to be stated that due to the size of the land area that formed part of the study area, as well as time-constraints, it was not possible to cover the area in totality. It is therefore possible that many more similar sites could be located here. Dense vegetation in some sections also made visibility difficult, and some sites could have been missed. This would include unknown or unmarked graves. Also, as this was only a basic assessment, it was recommended that a more detailed, full AIA/HIA be carried out once the location of the Poultry Facility had been finalized. The October 2016 assessment was the result of this recommendation.

Stone Age & Iron Age Sites

Most of these sites are located close to drainage lines and in erosion areas and patches of open land. In some case small sections of stone walling in association with pieces of undecorated pottery were also identified, although these “stonewalls” could be the result of efforts to stop erosion in some areas.

The stone tools found are either single flakes or larger/denser scatters of stone tools including cores, flakes, scrapers and other flake-tools that could be an indication of these sites being areas where stone tool manufacturing took place (knapping areas). Based on a preliminary identification it seems as if the Stone Age tools date to the Middle and Later Stone Ages, giving it a date of between 300 000 and 2000 years ago. A number of these open-air Stone Age and Iron Age sites are large and significant from an archaeological point of view, and should be mitigated should there be any possible impact on them by any development actions.

GPS Coordinates for Sites

1. S25.79389 E27.09115: Stone Age
2. S25.79363 E27.09158: Stone Age
3. S25.79342 E27.09448: Stone Age
4. S25.79189 E27.09606: Stone Age
5. S25.78753 E27.09603: Iron Age
6. S25.78605 E27.09517: Iron Age
7. S25.78555 E27.09577: Iron Age
8. S25.79512 E27.09482: Stone Age
9. S25.79613 E27.09575: Stone Age & Iron Age
10. S25.79618 E27.09530: Iron Age
11. S25.79976 E27.09996: Stone Age & Iron Age
12. S25.80000 E27.10020: Stone Age & Iron Age
13. S25.80318 E27.10055: Stone Age & Iron Age

Historical Sites

Site 14 is the location of the main farmhouse on the property, and it is definitely older than 60 years of age. It is highly likely to date to between the mid19th and late 19th centuries when the first European farmers started to move into the area. The house is in a good condition, and

although it will more than likely not be impacted by the proposed development, the house needs to be preserved as it is part of the farm history.

Site 15 is an old graveyard containing around 10 possible graves located close to Site 14. Many of the graves are packed with bricks only with single stones without any inscription as headstones. There are two graves with more formal cement dressing and demarcation, containing a headstone with inscriptions. The headstone has been broken. The headstone contains the names of both individuals buried here, namely Barend Izak Jag Van Heerden (born in 1865 and died in 1929) & Susanna Sophia Van Heerden born Erasmus (born 1868 and died in 1926). The other graves might be those of their children and/or farmworkers. Graves always carry a High Significance in terms of Cultural Heritage and should at all costs be left intact and not disturbed. It is recommended that this site be cleaned and properly fenced and protected.

GPS Coordinates for Site

14. S25.79309 E27.08286: Historical/Main House

15. S25.79316 E27.08364: Historical Graves



Figure 12: Stone tools at Site 2.



Figure 13: Possible hammer stones at Site 4.



Figure 14: Stone walling Site 6.



Figure 15: Possible worked stone (anvil) Site 7.



Figure 16: Pottery at Site 9.



Figure 17: A possible stone packed feature (granary stand) at Site 9.



Figure 18: Section of possible stone walling at Site 10.



Figure 19: Undecorated pottery from Site 12.



Figure 20: Possible stone wall at Site 12. This is in a Semi-circle and could represent a windbreak.



Figure 21: A view of Site 13.



Figure 22: Stone tools from Site 13.



Figure 23: Stone feature on Site 13. A large number of stone tool flakes are found here and this could have been a knapping area.



Figure 24: A view of the historical farmhouse (Site 14) in the study area.



Figure 25: View of the Site 15 cemetery.



Figure 26: One of the brick-packed graves.



Figure 27: The headstone of Barend Izak van Heerden & Susanna Sophia van Heerden's grave.

Results of the October 2016 fieldwork

The October 2016 fieldwork focused on the new development areas indicated by the client. A known LIA stone-walled site, where a further Chicken House is planned, was also assessed. The roads that will connect these features basically follow existing dirt roads on the farms and the possible impact of upgrading these and the construction of new connections routes

was also taken into consideration. During the assessment which was done on foot areas wider than the footprints of the Chicken Houses and other development areas were also traversed, while the location of sites found during 2015 will also be considered in determining the possible impacts of the proposed development. The October 2016 Heritage (mainly archaeological) assessment also focused on specific areas earmarked for other development actions (Wastewater Treatment Area; Reservoirs; Roads; Powerline; Solar Plant; quarries; Egg Bank; New Entrance for the Rearing Farm and Water Reticulation Network). A number of previously unknown/unrecorded sites, features and objects were recorded and identified during the 2016 assessment. A number of previously unknown sites were identified and recorded during the October 2016 assessment.

Site 16

The remains of an old windmill (“windpomp”), cement and corrugated iron dam, irrigation pipes and bricks and cement rubble was found in the area. These remains are however not significant and fairly recent in age. **No further mitigation measures are required for this site.**

GPS Location: S25.78761 E27.10541.



Figure 28: Windmill (“windpomp”) at Site 1.



Figure 29: Cement dam at Site 1.



Figure 30: Corrugated iron & cement dam close to Site1.

Site 17

The site is characterized by a continuous boundary wall enclosing smaller enclosures such as livestock enclosures and hut bays. Some fragments of undecorated pottery were also identified. It is recommended that the site should not be impacted on and disturbed by the proposed development and that a buffer zone should be placed around it to prevent any damage to it. It should also be considered to fence-in the site.

GPS Location: S25.79369 E27.11707 & S25.79333 E27.11646 (**Site 17**)

Cultural Significance: Low to Medium

Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field Ratings: General protection B (IV B): site should be recorded before destruction (medium significance).

Mitigation: Do not disturb/damage. Buffer zone. Possible fencing of site.



Figure 31: View of some of the stone walling on Site 17.

Site 18

This site is represented by a small scatter of undecorated pottery fragments and the site is deemed of low significance. No mitigation is required.

GPS Location: S25.80069 E27.12185



Figure 32: Undecorated pottery Site 18.

Two cultural heritage sites (**Site 19 & Site 20**) was identified and recorded in close proximity to one of the Chicken Houses pointed out to the team by RCL Foods during the field assessment. CH7. Site 19 is a single rock with evidence of pecking on it and was most likely a gong rock. These rocks were used as gongs to sound alarm, call people to meetings or to make music. Site 20 is a single small circular enclosure, possibly used for cattle or smaller livestock or as hut bay. A possible lower grinding stone was also found close by. It is

recommended that these sites should not be disturbed by the proposed development and that a buffer zone be placed around them and that no development should take place close to them.

GPS Location: S25.80398 E27.12954 (**Site 19**) & S25.80433 E27.13078 (**Site 20**)

Cultural Significance: Low to Medium

Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field Ratings: General protection B (IV B): site should be recorded before destruction (medium significance).

Mitigation: Do not disturb/damage. Buffer zone.



Figure 33: Site 19 gong rock. Note the peckings on it as well as the smaller stones around it that could have been used to hit the rock with to make the sounds.



Figure 34: Site 20 stone-walled enclosure.



Figure 35: Lower grinding stone close to Site 20 enclosure.

Site 21

A single undecorated potsherd was found in the area, but as this is deemed to be an out of context find the site is of no significance and no mitigation is required. No other visible sites or features (such as stone walling that could be associated) were identified close by.

GPS Location: S25.80595 E27.12091.



Figure 36: A single piece of undecorated pottery at Site 21.

Site 22

A small scatter of undecorated pottery fragments was identified on Site 22). The site is of low significance as this is seen as an out of context find and therefore no mitigation measures are

required and the development can continue here. No other visible sites or features that could be associated with this find were identified here.

GPS Location: S25.79160 E27.12304.



Figure 37: Site 22 pottery scatter.

Site 23

A fairly extensive LIA stone-walled site was identified and recorded here. The site has a continuous surrounding/boundary wall, enclosing a number of smaller enclosures for livestock, huts and other features. Possible terracing for agricultural purposes is also present, while a piece of hut clay with pole marks was also found. Although the site will not be directly impacted on by the proposed development it is located a fairly close proximity to it and the site needs to be protected against any possible negative impacts. A buffer zone should be placed around the site and no development should be allowed close to it. The fencing-in of the site should be considered.

GPS Location: S25.76417 E27.08930 & S25.76303 E27.08920 (**Site 23**)

Cultural Significance: Medium

Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field Ratings: General protection B (IV B): site should be recorded before destruction (medium significance).

Mitigation: Do not disturb/damage. Buffer zone. Possible fencing of Site 23. If cannot be avoided then Phase 2 Archaeological work including mapping and excavations should be undertaken. SAHRA permit required.



Figure 38: A view of some of the stone walling at Site 17.



Figure 39: Another view of the stone walling at Site 23.



Figure 40: One of the circular enclosures on Site 23.



Figure 41: Possible terracing.



Figure 42: A lower grinding stone on the site.



Figure 43: A piece of hut clay with pole impression.

Site 24

This is the location of a fairly extensive stone-walled Late Iron Age (LIA) site, known to RCL Foods, that will be directly impacted on by the development of one of the Chicken Houses in the area. The client, as part of this assessment, requested APAC to determine the significance of the site and whether it would be possible to demolish the site once Phase 2 Archaeological Excavations on it has been conducted.

The stone-walled site) is fairly extensive, and consists of various stone walled enclosures bounded by a larger continuous boundary wall. The site also contains some granary stands (stone cairns), hut bays and other features. Archaeological deposit in the form of pottery was also identified on the site. The site has been partially disturbed in the recent past by Eskom Powerlines as well as the servitude road that runs with these lines. Large sections of the site

has however not been disturbed. As the site is located in the area close to where the chicken house position has been selected, it will be further impacted upon. It is believed however that the site is of some archaeological/heritage significance in that it is very good example of the LIA occupation of and settlement in the area and can serve as “control” for the other known sites on the property that will not be impacted and demolished. Through the archaeological mitigation measures that are to be recommended valuable information on settlement layout, time-frame of occupation, the cultural identity of its occupants and material and social economy can be determined. It is therefore recommended that the site be archaeologically investigated prior to demolition and commencement of any development. The client has already indicated their support of and willingness for this to take place.

GPS Location: S25.75346 E27.09635

Cultural Significance: Medium to High

Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field Ratings: General protection A (IV A): Site should be mitigated before destruction (High/Medium significance).

Mitigation: Archaeological mitigation measures. Map site in detail. Archaeological Excavations after obtaining permit from SAHRA. Demolition once work completed.



Figure 44: View of Powerlines across section of stonewalled site.



Figure 45: View of section of well-preserved stone walling.



Figure 46: More stone walling on Site 24.



Figure 47: More of the stone walling.



Figure 48: Some sections of well-preserved walling on Site 24.



Figure 49: Aerial view showing distribution of sites found during the 2015 & 2016 field assessments in relation to the various development clusters and areas (Google Earth 2016).

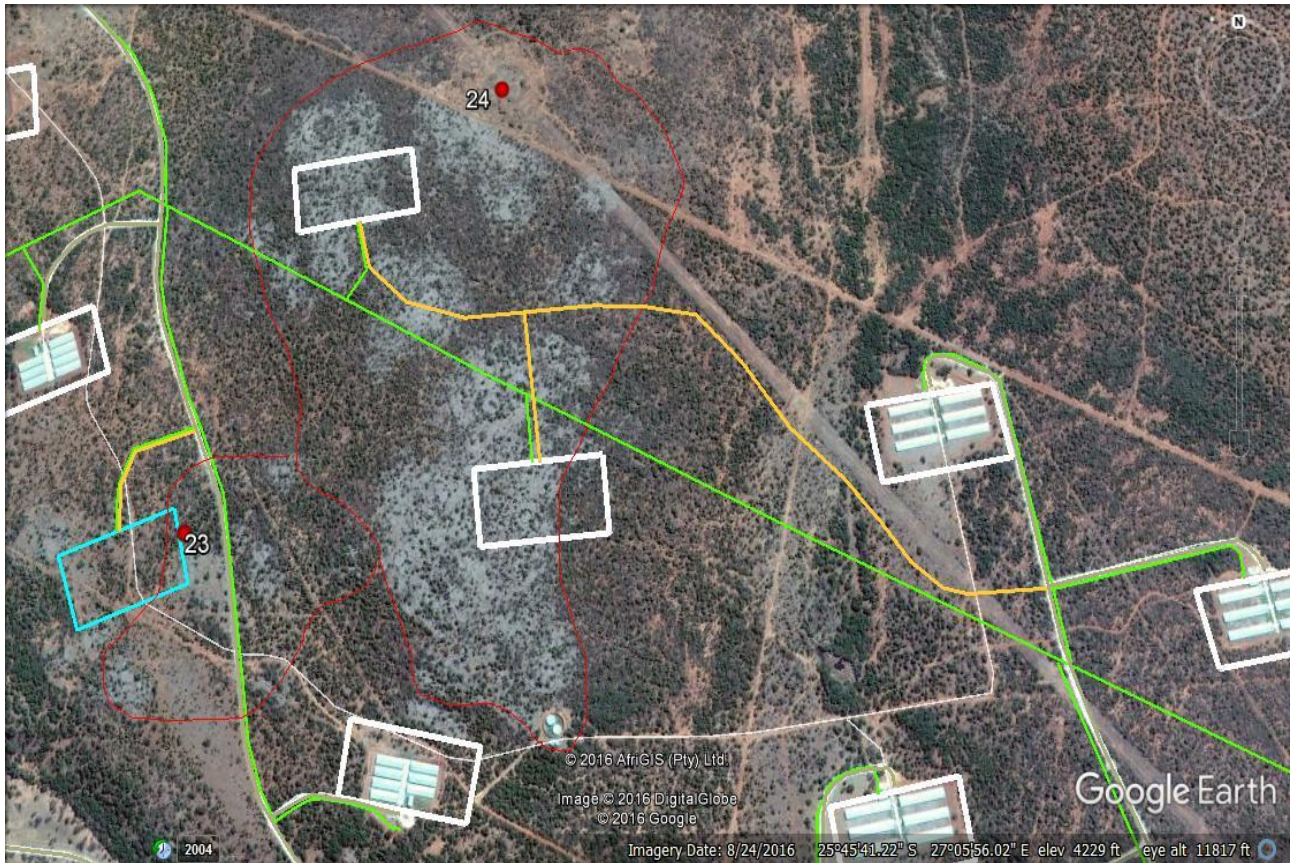


Fig.50: Closer view of LIA Stone Walled Settlement Sites 23 & 24. These sites form part of a large settlement complex on Roodewal that will be archaeologically mitigated as part of the agreed upon Phase 2 work (Google Earth 2016).

7. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the Phase HIA and fieldwork verification study for the proposed development of a new Poultry Facility on various portions of the farms Roodewal 322JQ & Elandsfontein 366JQ, close to Derby in the Northwest Province were conducted successfully.

Background research indicated that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study portion falls. During the initial 2015 assessment areas that would have been favored for settlement and utilization by humans during prehistoric and later times, including ridges and areas close to drainage lines were focused on, while the specialists also looked at areas with unnatural looking clumps of trees and erosion and open areas where evidence of human utilization and presence could be identified.

A total of 15 individual sites, dating to the Stone Age, Iron Age and more recent historical times (a historical house and graves) were identified and recorded during 2015. In some cases the Stone Age and Iron Age occurrences were found on the same sites. It needs to be stated that due to the size of the land area that formed part of the study area, as well as time-constraints, it was not possible to cover the area in totality. It is therefore possible that many more similar sites could be located here. Dense vegetation in some sections also made

visibility difficult, and some sites could have been missed. This would include unknown or unmarked graves.

As this the 2015 survey was only a Basic Assessment, it was recommended that a more detailed, full AIA/HIA be carried out once the location of the various structures and other related features for the Poultry Facility had been finalized. The October 2016 fieldwork focused on the new development areas indicated by the client. A known LIA stone-walled site, where a further Chicken House is planned, was also assessed. The roads that will connect these features basically follow existing dirt roads on the farms and the possible impact of upgrading these and the construction of new connections routes was also taken into consideration. During the assessment which was done on foot areas wider than the footprints of the Chicken Houses and other development areas were also traversed, while the location of sites found during 2015 will also be considered in determining the possible impacts of the proposed development. The October 2016 Heritage (mainly archaeological) assessment also focused on specific areas earmarked for other development actions (Wastewater Treatment Area; Reservoirs; Roads; Powerline; Solar Plant; quarries; Egg Bank; New Entrance for the Rearing Farm and Water Reticulation Network). A number of previously unknown/unrecorded sites, features and objects were recorded and identified during the 2016 assessment. The mitigation of sites impacted by the development is determined by this and will be implemented as part of the recommended Phase 2 Archaeological work.

Of these only Sites 13 (possible Stone Age knapping area and Open Air surface site) & Site 24 (LIA stone-walled settlement site) will be impacted on directly. Sites 18 & 21 (pottery scatters) are located close to Chicken House clusters but are of no significance. Sites 17, 19, 20 & 23 are situated in close proximity to developments but will not be directly impacted on. It is recommended that last mentioned sites are fenced-in or that a buffer zone be applied to avoid any impacts by the planned developments.

For Sites 13 & 24 the following is recommended:

Archaeological mitigation measures needs to be implemented. This will include mapping the sites in detail, the collection of representative samples of material (for Stone Age Site 13) as well as Archaeological Excavation work on Site 24 after obtaining permits from SAHRA. The sites can then be demolished once this work has been completed and the go-ahead has been obtained from SAHRA. The client has indicated their support of this and has given the go-ahead for the archaeological work to be conducted once valid permits have been obtained from SAHRA.

From a Cultural Heritage Point of view the development should be allowed to continue once the above recommendation has been adhered to. Furthermore, the subterranean presence of archaeological or historical sites, features or objects should always be kept in mind. Should any be uncovered during the development process an archaeologist should be called in to investigate and recommend on the best way forward. The presence of other low stone packed or unmarked graves should also be kept in mind.

8. REFERENCES

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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.