

# **ARCHAEOLOGICAL DESKTOP STUDY**

**for the Application of a Prospecting Right  
on several Portions of the Farms  
Blaauwbank 505 JQ, Delarey 164 IQ,  
Delarey 168 IQ, Delarey 171 IQ, Greenway  
715 IQ, Malonys Eye 169 IQ, Steenekoppie  
153 IQ, Vlakplaats 160 IQ, Wallis Haven  
154 IQ, Wolvekrans 156 IQ and  
Zuikerboschfontein 151 IQ, Magaliesburg,  
Gauteng**

**Author ©:  
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April 2021**

An Archaeological Desktop Study for the Application of a Prospecting Right on several Portions of the Farms Blaauwbank 505 JQ, Delarey 164 IQ, Delarey 168 IQ, Delarey 171 IQ, Greenway 715 IQ, Malonys Eye 169 IQ, Steenekoppie 153 IQ, Vlakplaats 160 IQ, Wallis Haven 154 IQ, Wolvekrans 156 IQ and Zuikerboschfontein 151 IQ, Magaliesburg, Gauteng

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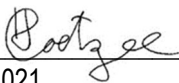
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Report No: ColdGold\_1804212

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- I, Tobias Coetzee, declare that –
- I act as the independent specialist;
- I am conducting any work and activity relating to the proposed Cold Gold Prospecting Project in an objective manner, even if this results in views and findings that are not favourable to the client;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have the required expertise in conducting the specialist report and I will comply with legislation, regulations and any guidelines that have relevance to the proposed activity;
- I have not, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this declaration are true and correct.

  
Date: 18 April 2021

## List of Abbreviations

**AIA** – Archaeological Impact Assessment

**CRM** – Cultural Resource Management

**EIA** – Environmental Impact Assessment

**ESA** – Early Stone Age

**ha** – Hectare

**HIA** – Heritage Impact Assessment

**km** – Kilometre

**LIA** – Late Iron Age

**LSA** – Later Stone Age

**m** – Metre

**MASL** – Metres Above Sea Level

**MEC** – Member of the Executive Council

**MSA** – Middle Stone Age

**NHRA** – National Heritage Resources Act

**SAHRA** – South African Heritage Resources Agency

**WMA** – Water Management Area

## Executive Summary

The author was appointed by Elemental Sustainability (Pty) Ltd to undertake an Archaeological Desktop study for Cold Gold on the demarcated project area intersecting the Farm Portions listed in **Table 1**. The project falls within the Mogale City Local Municipality and the West Rand District Municipality in the Gauteng Province. The study area borders Magaliesburg to the south, while Krugersdorp is located 15 km to the east and Carletonville 32 km to the southwest. The aim of this report is to contextualise the general study area in terms of heritage resources and will provide the developers with general information regarding potentially sensitive areas. This will also shed light on what is to be expected during a Phase 1 Archaeological Impact Assessment (AIA) and aid in interpreting finds.

The study area is considered significant and sensitive from a heritage perspective as sites dating to the Stone Age, Iron Age and historic period have been identified. These include, graves/cemeteries, early gold mining activity, historical buildings, structures and sites associated with the South African War. The inspection of historical topographical maps and aerial images resulted in the identification of 192 potentially sensitive areas.

The surface and potential subsurface material remains of the identified sites might be significant from a heritage perspective. These sites should therefore be avoided by the proposed prospecting activities. Should this not be possible, a qualified archaeologist should be present on-site during the prospecting phase in order to limit the potential impact on heritage resources. Areas surrounding perennial/non-perennial rivers and dams are potentially sensitive as well and care should be exercised when prospecting in these vicinities.

A full Phase 1 AIA must be done should any development that triggers an AIA result from the prospecting project, including if the cumulative impact of the proposed prospecting exceeds 0.5 ha.

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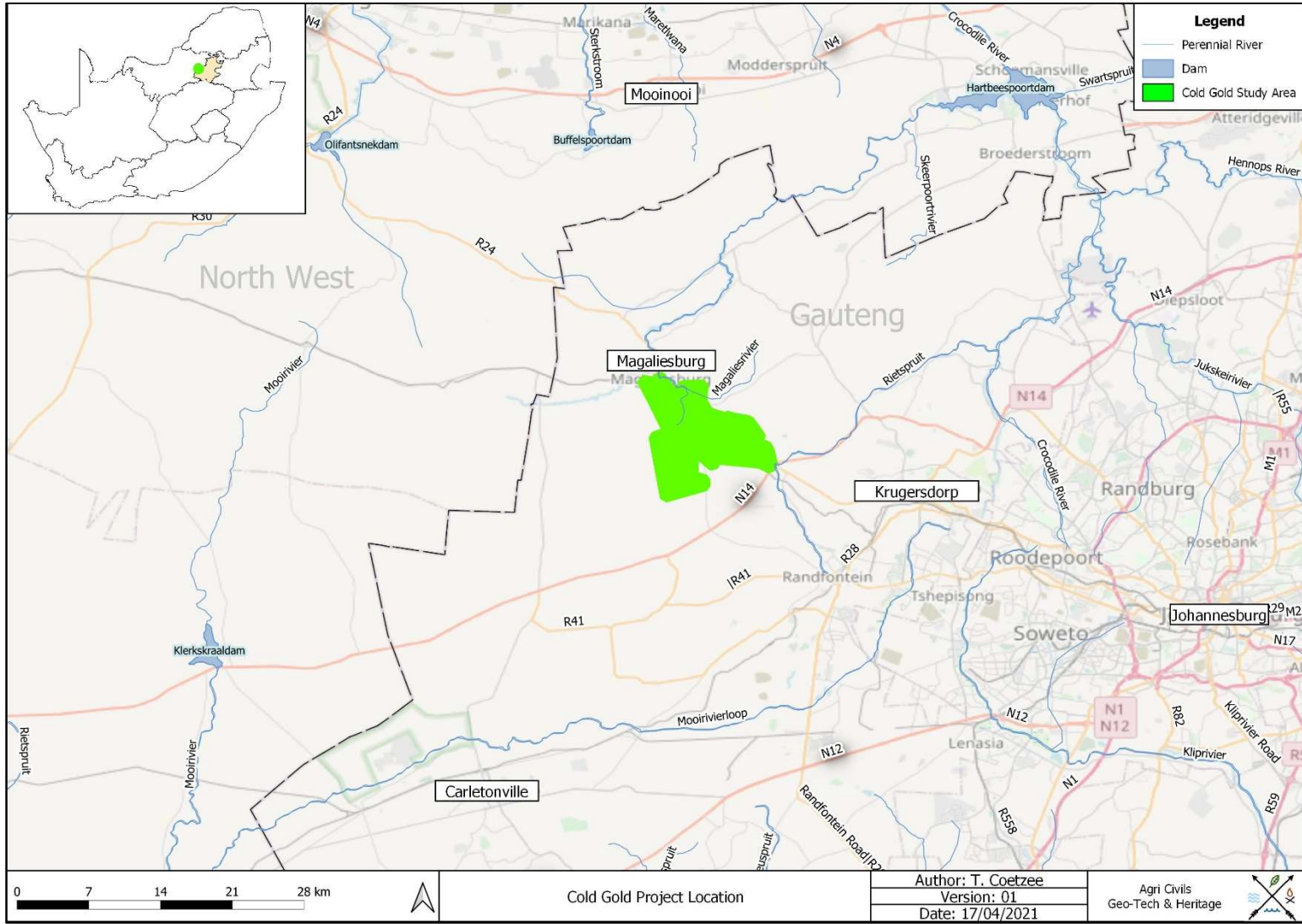
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# 1. Project Background

## 1.1 Introduction

Elemental Sustainability (Pty) Ltd appointed the author to undertake an Archaeological Desktop study for Cold Gold on the demarcated area intersecting several farm portions (**Table 1**) of the farms Blaauwbank 505 JQ, Delarey 164 IQ, Delarey 168 IQ, Delarey 171 IQ, Greenway 715 IQ, Malonys Eye 169 IQ, Steenekoppie 153 IQ, Vlakplaats 160 IQ, Wallis Haven 154 IQ, Wolvekrans 156 IQ and Zuikerboschfontein 151 IQ within the Mogale City Local Municipality and the West Rand District Municipality in the Gauteng Province. The study area borders Magaliesburg to the south, while Krugersdorp is located 15 km to the east and Carletonville 32 km to the southwest (**Figure 1**). The purpose of this study is to contextualise the demarcated study area in order to determine the scope of heritage resources that might be encountered during the prospecting phase and subsequent heritage studies, as well as to provide recommendations for the safeguarding of archaeological resources during prospecting. The aim of this report is to provide the developer with information regarding heritage resources in the vicinity of the study area based on results from previous studies, written historical information and historical aerial images and topographical maps.

In the following report, a broad overview of the proposed prospecting for gold is provided and the study area is contextualised in terms of heritage resources. The legislation section included serves as a guide towards the effective identification and protection of heritage resources and will apply to any such material unearthed during the prospecting phase.



**Figure 1:** Regional and Provincial Location of the Study Area.



## 1.2 Legislation

The South African Heritage Resources Agency (SAHRA) aims to conserve and control the management, research, alteration and destruction of cultural resources of South Africa and to prosecute if necessary. It is therefore crucially important to adhere to heritage resource legislation contained in the Government Gazette of the Republic of South Africa (Act No.25 of 1999), as many heritage sites are threatened daily by development. Conservation legislation requires an impact assessment report to be submitted for development authorisation that must include an AIA if triggered.

Archaeological Impact Assessments (AIAs) should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources that might occur in areas of development and (b) make recommendations for protection or mitigation of the impact of the sites.

### 1.2.1 The EIA (Environmental Impact Assessment) and AIA processes

Phase 1 Archaeological Impact Assessments generally involve the identification of sites during a field survey with assessment of their significance, the possible impact that the development might have, and relevant recommendations.

All Archaeological Impact Assessment reports should include:

- a. Location of the sites that are found;
- b. Short descriptions of the characteristics of each site;
- c. Short assessments of how important each site is, indicating which should be conserved and which mitigated;
- d. Assessments of the potential impact of the development on the site(s);
- e. In some cases a shovel test, to establish the extent of a site, or collection of material, to identify the associations of the site, may be necessary (a pre-arranged SAHRA permit is required); and
- f. Recommendations for conservation or mitigation.

This AIA report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential to also provide the heritage authority with sufficient information about the sites to enable the authority to assess with confidence:

- a. Whether or not it has objections to a development;
- b. What the conditions are upon which such development might proceed;
- c. Which sites require permits for mitigation or destruction;

- d. Which sites require mitigation and what this should comprise;
- e. Whether sites must be conserved and what alternatives can be proposed to relocate the development in such a way as to conserve other sites; and
- f. What measures should or could be put in place to protect the sites which should be conserved.

When a Phase 1 AIA is part of an EIA, wider issues such as public consultation and assessment of the spatial and visual impacts of the development may be undertaken as part of the general study and may not be required from the archaeologist. If, however, the Phase 1 project forms a major component of an AIA it will be necessary to ensure that the study addresses such issues and complies with Section 38 of the National Heritage Resources Act (NHRA).

## 1.2.2 Legislation regarding archaeology and heritage sites

### *National Heritage Resource Act No.25 of April 1999*

Buildings are among the most enduring features of human occupation, and this definition therefore includes all buildings older than 60 years, modern architecture as well as ruins, fortifications and Farming Community settlements. The Act identifies heritage objects as:

- objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens;
- visual art objects;
- military objects;
- numismatic objects;
- objects of cultural and historical significance;
- objects to which oral traditions are attached and which are associated with living heritage;
- objects of scientific or technological interest;
- books, records, documents, photographic positives and negatives, graphic material, film or video or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996), or in a provincial law pertaining to records or archives;
- any other prescribed category.

With regards to activities and work on archaeological and heritage sites this Act states that:

*"No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority."*(34. [1] 1999:58)

and

*"No person may, without a permit issued by the responsible heritage resources authority:*

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or*
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites."*(35. [4] 1999:58)

and

*"No person may, without a permit issued by SAHRA or a provincial heritage resources authority:*

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) destroy, damage, alter, exhume, 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;*
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals."*(36. [3] 1999:60)

On the development of any area the gazette states that:

*"...any person who intends to undertake a development categorised as:*

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50m in length;*
- (c) any development or other activity which will change the character of a site-*

- i. exceeding 5000m<sup>2</sup> in extent; or*
  - ii. involving three or more existing erven or subdivisions thereof; or*
  - iii. involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - iv. the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*
- (d) the re-zoning of a site exceeding 10000m<sup>2</sup> in extent; or*
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.”(38. [1] 1999:62-64)*

and

*“The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:*

- (a) The identification and mapping of all heritage resources in the area affected;*
- (b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;*
- (c) an assessment of the impact of the development on such heritage resources;*
- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;*
- (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;*
- (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and*
- (g) plans for mitigation of any adverse effects during and after the completion of the proposed development.”*  
*(38. [3] 1999:64)*

*Human Tissue Act and Ordinance 7 of 1925*

The Human Tissues Act (65 of 1983) and Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925) protects graves younger than 60 years. These fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC (Member of the Executive Council) as well as the relevant Local Authorities. Graves 60 years or older fall under the jurisdiction of the National Heritage Resources Act as well as the Human Tissues Act, 1983.

## 2. Study Area and Project Description

### 2.1 Location & Physical Environment

According to the project boundary supplied by Elemental Sustainability (2021) the proposed Cold Gold Prospecting Project is situated across the following 146 properties (**Table 1 & Figures 2 – 3**):

**Table 1: Farm Portions & coordinates.**

Property	Portion	Map Reference (1:50 000)	Lat (y)	Lon (x)	Extent (ha)
Zuikerboschfontein 151 IQ	26/151	2627BA	-26.015174	27.526431	237.73
Zuikerboschfontein 151 IQ	27/151	2527DC	-26.006515	27.522471	213.74
Steenekoppie 153 IQ	RE/10/153	2627BA	-26.006518	27.535638	31.07
Steenekoppie 153 IQ	44/153	2627BA	-26.006823	27.539281	34.38
Steenekoppie 153 IQ	45/153	2527DC & 2627BA	-26.004787	27.54638	86.98
Steenekoppie 153 IQ	52/153	2627BA	-26.017472	27.554832	179.06
Steenekoppie 153 IQ	81/153	2627BA	-26.022728	27.55357	60.24
Steenekoppie 153 IQ	82/153	2627BA	-26.013195	27.547276	200.15
Steenekoppie 153 IQ	100/153	2627BA	-26.002722	27.533094	7.28
Steenekoppie 153 IQ	101/153	2627BA	-26.007252	27.535102	1.61
Wallis Haven 154 IQ	154	2627BA	-26.037498	27.585141	97.70
Wolvekrans 156 IQ	1/156	2627BA	-26.073005	27.562122	2015.16
Wolvekrans 156 IQ	9/156	2627BA	-26.056476	27.590104	9.03
Wolvekrans 156 IQ	10/156	2627BA	-26.056849	27.587746	9.03
Wolvekrans 156 IQ	11/156	2627BA	-26.059405	27.590946	9.03
Wolvekrans 156 IQ	12/156	2627BA	-26.059862	27.588057	9.03
Wolvekrans 156 IQ	13/156	2627BA	-26.06187	27.591654	9.03
Wolvekrans 156 IQ	14/156	2627BA	-26.062398	27.588319	9.03
Wolvekrans 156 IQ	15/156	2627BA	-26.064041	27.592278	9.03
Wolvekrans 156 IQ	16/156	2627BA	-26.064631	27.58855	9.03
Wolvekrans 156 IQ	17/156	2627BA	-26.066004	27.592842	9.03
Wolvekrans 156 IQ	18/156	2627BA	-26.06665	27.588759	9.03
Wolvekrans 156 IQ	19/156	2627BA	-26.068959	27.588287	9.29
Wolvekrans 156 IQ	20/156	2627BA	-26.069293	27.591229	9.80
Wolvekrans 156 IQ	21/156	2627BA	-26.069096	27.593523	9.38
Wolvekrans 156 IQ	22/156	2627BA	-26.068898	27.595333	9.19
Wolvekrans 156 IQ	44/156	2627BA	-26.075353	27.592492	8.86
Wolvekrans 156 IQ	45/156	2627BA	-26.073106	27.595026	8.85
Wolvekrans 156 IQ	46/156	2627BA	-26.072574	27.592953	8.65
Wolvekrans 156 IQ	47/156	2627BA	-26.071963	27.590434	8.69
Wolvekrans 156 IQ	48/156	2627BA	-26.0719	27.587884	8.70
Wolvekrans 156 IQ	64/156	2627BA	-26.050854	27.57775	9.12
Wolvekrans 156 IQ	65/156	2627BA	-26.050988	27.580789	8.60
Wolvekrans 156 IQ	66/156	2627BA	-26.051145	27.584359	9.29
Wolvekrans 156 IQ	67/156	2627BA	-26.053033	27.578836	8.88
Wolvekrans 156 IQ	68/156	2627BA	-26.05298	27.58391	9.13
Wolvekrans 156 IQ	69/156	2627BA	-26.054627	27.578857	8.88

Property	Portion	Map Reference (1:50 000)	Lat (y)	Lon (x)	Extent (ha)
Wolkekrans 156 IQ	70/156	2627BA	-26.054574	27.58393	9.13
Wolkekrans 156 IQ	71/156	2627BA	-26.056222	27.578878	8.88
Wolkekrans 156 IQ	72/156	2627BA	-26.056168	27.583951	9.13
Wolkekrans 156 IQ	73/156	2627BA	-26.057816	27.578898	8.88
Wolkekrans 156 IQ	74/156	2627BA	-26.057762	27.583971	9.13
Wolkekrans 156 IQ	75/156	2627BA	-26.05941	27.578918	8.88
Wolkekrans 156 IQ	76/156	2627BA	-26.059357	27.583992	9.13
Wolkekrans 156 IQ	77/156	2627BA	-26.061004	27.578939	8.88
Wolkekrans 156 IQ	78/156	2627BA	-26.060951	27.584013	9.13
Wolkekrans 156 IQ	79/156	2627BA	-26.062598	27.57896	8.88
Wolkekrans 156 IQ	80/156	2627BA	-26.062545	27.584033	9.13
Wolkekrans 156 IQ	81/156	2627BA	-26.064192	27.57898	8.87
Wolkekrans 156 IQ	82/156	2627BA	-26.064138	27.584054	9.13
Wolkekrans 156 IQ	83/156	2627BA	-26.065786	27.579001	8.88
Wolkekrans 156 IQ	84/156	2627BA	-26.065733	27.584074	9.14
Wolkekrans 156 IQ	85/156	2627BA	-26.067588	27.57861	8.84
Wolkekrans 156 IQ	86/156	2627BA	-26.067807	27.582183	8.95
Wolkekrans 156 IQ	87/156	2627BA	-26.068033	27.585246	9.90
Wolkekrans 156 IQ	90/156	2627BA	-26.070557	27.584412	11.03
Wolkekrans 156 IQ	110/156	2627BA	-26.044416	27.578727	138.45
Wolkekrans 156 IQ	111/156	2627BA	-26.051531	27.587953	25.27
Vlakplaats 160 IQ	1/160	2627BA	-26.071898	27.639788	19.93
Vlakplaats 160 IQ	9/160	2627BA	-26.071896	27.617694	18.08
Vlakplaats 160 IQ	10/160	2627BA	-26.071689	27.624857	39.81
Vlakplaats 160 IQ	11/160	2627BA	-26.073756	27.638268	3.93
Vlakplaats 160 IQ	12/160	2627BA	-26.069771	27.635598	22.38
Vlakplaats 160 IQ	13/160	2627BA	-26.067146	27.638754	0.77
Vlakplaats 160 IQ	20/160	2627BA	-26.071671	27.633853	26.38
Vlakplaats 160 IQ	125/160	2627BA	-26.062074	27.630043	8.75
Vlakplaats 160 IQ	126/160	2627BA	-26.066121	27.630849	8.81
Vlakplaats 160 IQ	127/160	2627BA	-26.061713	27.631859	8.44
Vlakplaats 160 IQ	128/160	2627BA	-26.065834	27.632683	8.42
Vlakplaats 160 IQ	129/160	2627BA	-26.061443	27.633679	8.62
Vlakplaats 160 IQ	130/160	2627BA	-26.065529	27.634488	8.55
Vlakplaats 160 IQ	131/160	2627BA	-26.06115	27.63551	8.57
Vlakplaats 160 IQ	132/160	2627BA	-26.065243	27.636326	8.77
Vlakplaats 160 IQ	133/160	2627BA	-26.060829	27.637339	8.59
Vlakplaats 160 IQ	134/160	2627BA	-26.0649	27.638155	8.63
Vlakplaats 160 IQ	135/160	2627BA	-26.05979	27.639678	9.14
Vlakplaats 160 IQ	136/160	2627BA	-26.062033	27.640522	9.20
Vlakplaats 160 IQ	137/160	2627BA	-26.063932	27.641157	8.91
Vlakplaats 160 IQ	138/160	2627BA	-26.065646	27.641536	8.62
Vlakplaats 160 IQ	139/160	2627BA	-26.064595	27.615122	8.53
Vlakplaats 160 IQ	140/160	2627BA	-26.068906	27.615075	9.04
Vlakplaats 160 IQ	141/160	2627BA	-26.068431	27.616954	9.10
Vlakplaats 160 IQ	142/160	2627BA	-26.064177	27.616921	8.62
Vlakplaats 160 IQ	143/160	2627BA	-26.068128	27.618845	8.86
Vlakplaats 160 IQ	144/160	2627BA	-26.06386	27.61873	8.70
Vlakplaats 160 IQ	145/160	2627BA	-26.067788	27.620727	9.01
Vlakplaats 160 IQ	146/160	2627BA	-26.063584	27.620547	8.54
Vlakplaats 160 IQ	147/160	2627BA	-26.067501	27.622636	9.01
Vlakplaats 160 IQ	148/160	2627BA	-26.06329	27.622354	8.53
Vlakplaats 160 IQ	149/160	2627BA	-26.067133	27.62449	8.56
Vlakplaats 160 IQ	150/160	2627BA	-26.06332	27.624291	8.46
Vlakplaats 160 IQ	151/160	2627BA	-26.067066	27.626446	9.05
Vlakplaats 160 IQ	194/160	2627BA	-26.074054	27.620493	10.72
Vlakplaats 160 IQ	201/160	2627BA	-26.071684	27.629359	10.31
Vlakplaats 160 IQ	202/160	2627BA	-26.073413	27.631844	9.24
Vlakplaats 160 IQ	267/160	2627BA	-26.072786	27.642309	70.32
Vlakplaats 160 IQ	291/160	2627BA	-26.074093	27.634073	5.41
Vlakplaats 160 IQ	292/160	2627BA	-26.062794	27.625215	1.68
Vlakplaats 160 IQ	293/160	2627BA	-26.066664	27.627497	1.53
Delarey 164 IQ	7/164	2627BA	-26.058618	27.59796	208.44

Property	Portion	Map Reference (1:50 000)	Lat (y)	Lon (x)	Extent (ha)
Delarey 164 IQ	16/164	2627BA	-26.069868	27.605766	10.27
Delarey 164 IQ	17/164	2627BA	-26.069873	27.608659	20.11
Delarey 164 IQ	19/164	2627BA	-26.069805	27.599636	21.13
Delarey 164 IQ	22/164	2627BA	-26.069899	27.612072	20.44
Delarey 164 IQ	29/164	2627BA	-26.060105	27.621683	7.71
Delarey 164 IQ	30/164	2627BA	-26.059522	27.606192	9.03
Delarey 164 IQ	31/164	2627BA	-26.061364	27.605755	8.18
Delarey 164 IQ	32/164	2627BA	-26.063189	27.605245	8.90
Delarey 164 IQ	33/164	2627BA	-26.065034	27.604807	8.48
Delarey 164 IQ	34/164	2627BA	-26.06686	27.604336	8.77
Delarey 164 IQ	35/164	2627BA	-26.06637	27.608376	8.47
Delarey 164 IQ	36/164	2627BA	-26.064212	27.608872	8.58
Delarey 164 IQ	37/164	2627BA	-26.061961	27.60936	8.81
Delarey 164 IQ	38/164	2627BA	-26.059421	27.609631	8.44
Delarey 164 IQ	39/164	2627BA	-26.058861	27.612391	8.69
Delarey 164 IQ	40/164	2627BA	-26.061549	27.612584	8.77
Delarey 164 IQ	41/164	2627BA	-26.063938	27.612457	8.50
Delarey 164 IQ	42/164	2627BA	-26.066084	27.612041	8.52
Delarey 164 IQ	43/164	2627BA	-26.058374	27.61509	8.73
Delarey 164 IQ	44/164	2627BA	-26.060989	27.615625	8.49
Delarey 164 IQ	45/164	2627BA	-26.060484	27.618714	8.67
Delarey 164 IQ	46/164	2627BA	-26.057949	27.617763	8.39
Delarey 164 IQ	47/164	2627BA	-26.057682	27.620292	7.61
Delarey 164 IQ	50/164	2627BA	-26.069796	27.603588	10.18
Delarey 164 IQ	53/164	2627BA	-26.038927	27.595118	238.81
Delarey 164 IQ	54/164	2627BA	-26.048739	27.597369	105.20
Delarey 164 IQ	55/164	2627BA	-26.059778	27.62321	1.00
Delarey 164 IQ	56/164	2627BA	-26.057233	27.621553	1.22
Delarey 168 IQ	RE/168	2627BA	-26.03135	27.615283	217.32
Delarey 168 IQ	1/168	2627BA	-26.040712	27.617724	252.06
Delarey 168 IQ	3/168	2627BA	-26.048637	27.606744	120.45
Malonys Eye 169 IQ	RE/169	2627BA	-26.019923	27.573958	228.33
Malonys Eye 169 IQ	3/169	2627BA	-26.030419	27.579058	188.76
Malonys Eye 169 IQ	4/169	2627BA	-26.023139	27.563766	53.14
Malonys Eye 169 IQ	6/169	2627BA	-26.034092	27.559499	490.49
Malonys Eye 169 IQ	12/169	2627BA	-26.024564	27.587773	0.20
Malonys Eye 169 IQ	14/169	2627BA	-26.010196	27.577492	165.80
Delarey 171 IQ	RE/171	2627BA	-26.050509	27.626286	144.30
Delarey 171 IQ	1/171	2627BA	-26.049706	27.612926	108.97
Delarey 171 IQ	2/171	2627BA	-26.053017	27.618702	2.68
Delarey 171 IQ	3/171	2627BA	-26.049511	27.616364	0.26
Greenway 715 IQ	715	2627BA	-26.080673	27.623665	155.12
Blaauwbank 505 JQ	RE/505	2527DC & 2627BA	-25.997557	27.538783	56.76
Blaauwbank 505 JQ	1/505	2627BA	-26.001888	27.537811	10.32
Blaauwbank 505 JQ	66/505	2627BA	-26.00137	27.544494	1.72
Blaauwbank 505 JQ	68/505	2527DC & 2627BA	-26.000234	27.544221	4.68

The study area borders Magaliesburg to the south, while Krugersdorp is located 15 km to the east and Carletonville 32 km to the southwest. The study area falls within the Mogale City Local Municipality and the West Rand District Municipality in the Gauteng Province. The R24 primary road runs northwest-southeast along the majority of the eastern border of the study area and intersects the Farms Steenekoppie 153 IQ and Blaauwbank 505 JQ.

In terms of vegetation, the southern half of the study area falls within the Grassland Biome, Dry Highveld Grassland Bioregion and the Carletonville Dolomite Grassland vegetation unit. The remaining area falls within the Savanna Biome, Central Bushveld Bioregion and is divided between Gauteng Shale Mountain Bushveld and

Moot Plains Bushveld (Mucina & Rutherford 2006).

Carletonville Dolomite Grassland is found in the North West and Gauteng Provinces and marginally in the Free State Province. Areas include Potchefstroom, Ventersdorp and Carletonville, but also extends to Ottoshoop in the west and Centurion and Bapsfontein in the east. Carletonville Dolomite Grassland is considered vulnerable with a conservation target of 24%. A small area is conserved in statutory and in several private conservation areas. Roughly a quarter of this vegetation unit has been transformed for cultivation, by urban sprawl, or mining activities, as well as by the building of the Boskop and Klerkskraal Dams. Erosion varies between low and very low for this vegetation unit (Mucina & Rutherford 2006).

Gauteng Shale Mountain Bushveld occurs in the Gauteng and North West Provinces and mainly on the ridge of the Gatsrand south of Carletonville-Westonaria-Lenasia. A narrow band also runs from between Tarlton and Magaliesberg in the west, through Sterkfontein, Pelindaba and Atteridgeville to Klapperkop and south-eastern Pretoria in the east. Gauteng Shale Mountain Bushveld is considered vulnerable and has a conservation target of 24%. Approximately 2% is conserved in nature reserves, while about 21% has been transformed mainly by urban and built-up areas, mines and quarries, cultivation and plantations. Wattles is a common invasive plant species and erosion ranges between low and very low (Mucina & Rutherford 2006).

Moot Plains Bushveld is associated with the Gauteng and North West Provinces. The main belt occurs immediately south of the Magaliesberg from the Selons River Valley in the west through Maanhaarand, filling the valley bottom of the Magalies River, proceeding east of the Hartebeestpoort Dam between the Magaliesberg and Daspoort mountain ranges to Pretoria. A narrow belt also occurs immediately north of the Magaliesberg from Rustenburg in the West to just east of the Crocodile River in the east. Moot Plains Bushveld is considered vulnerable with a conservation target of 19%. Some 13% is statutorily conserved mainly in the Magaliesberg Nature Reserve Area, while about 28% is transformed mainly by cultivation and urban and built-up areas. Very scattered occurrences of alien vegetation are found while erosion varies between very low and low (Mucina & Rutherford 2006).

The average elevation for Carletonville Dolomite Grassland ranges from 1360 to 1620 MASL (Metres Above Sea Level), Gauteng Shale Mountain Bushveld from 1300 to 1750 MASL and Moot Plains Bushveld from 1050 to 1450 MASL (Mucina & Rutherford 2006). The average elevation of the project area is 1560 MASL and is associated with mountainous terrain along the western border.

The study area falls within the summer rainfall region and the average annual rainfall is roughly 751 mm per year. The average annual temperature is 16.9 °C. The average summer temperature is 20.8 °C, while the average winter temperature averages 10.5 °C (Climate-data.org accessed 15/04/2021).



The majority of the study area falls within the A21F quaternary catchment, while a small section to the east intersects A21D of the Crocodile West and Marico WMA (Water Management Area). The closest perennial river to the study area is the Magalies River that flows along the northern boundary of the study area. Also, several perennial and non-perennial offshoots, as well as minor dams are associated with the demarcated study area.

When the general environment is considered, the study area appears to be associated with crop cultivation and grazing veldt for cattle. Access to the farm portions appears to be through the R24 primary road, as well as local farm roads (**Figures 2 & 3**).

Topographical maps dating to 1943, 1944, 1957, 1968, 1975, 1976, 1985, 2006 and 2010 (**Figure 2 & Appendix A**) show that in terms of cultivation, the demarcated study areas experienced an increase in cultivated fields. Mining activity is also indicated as early as 1944.

## 2.2 Project description

The prospecting right application for gold covers about 6264 ha (**Figures 2 & 3**). For the prospecting phase, however, several sites will be selected for geotechnical drilling. These boreholes and its associated activities will impact on a surface area of between 250 and 625 m<sup>2</sup>. The full extent of the drill site will also be demarcated and no drilling will be done outside of the boundary.

### **Prospecting activities will include the following:**

Current access roads will be used as far as possible, but in cases where access roads to drill sites do not exist, a single track will be selected based on the area where the least environmental impact will occur. The same tracks will be used should repeated access be required. Vegetation and topsoil excavated during the drilling process will be stockpiled next to sumps where it will serve as a storm water diversion berm. On completion of the drilling process, the rehabilitated sumps will be backfilled with the stockpiled material. Because a constant water supply is needed for the drilling process, 15 000l will be stored in tanks. The plastic-lined sumps will be used to recycle water through a filter process in order to maintain a constant clean water source for the purpose of drilling. In terms of potable water for employees and workers, a temporary 260l tank will be placed on-site. Additional facilities will include temporary portable toilets, berms, and a maximum of 60m<sup>3</sup> of diesel fuel located on an impermeable surface with bunds.

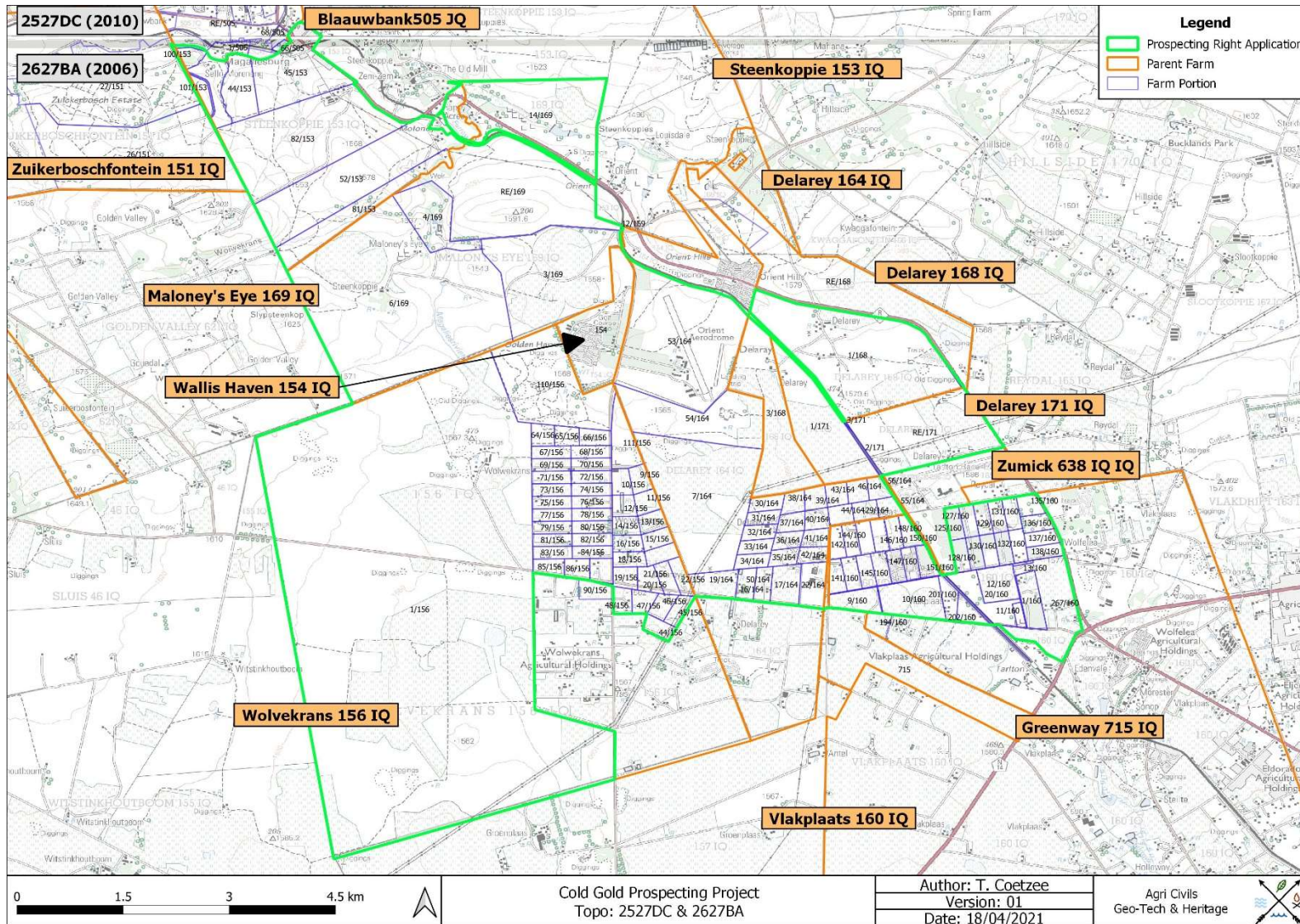


Figure 2: Segments of SA 1: 50 000 2527DC and 2627BA indicating the study area.

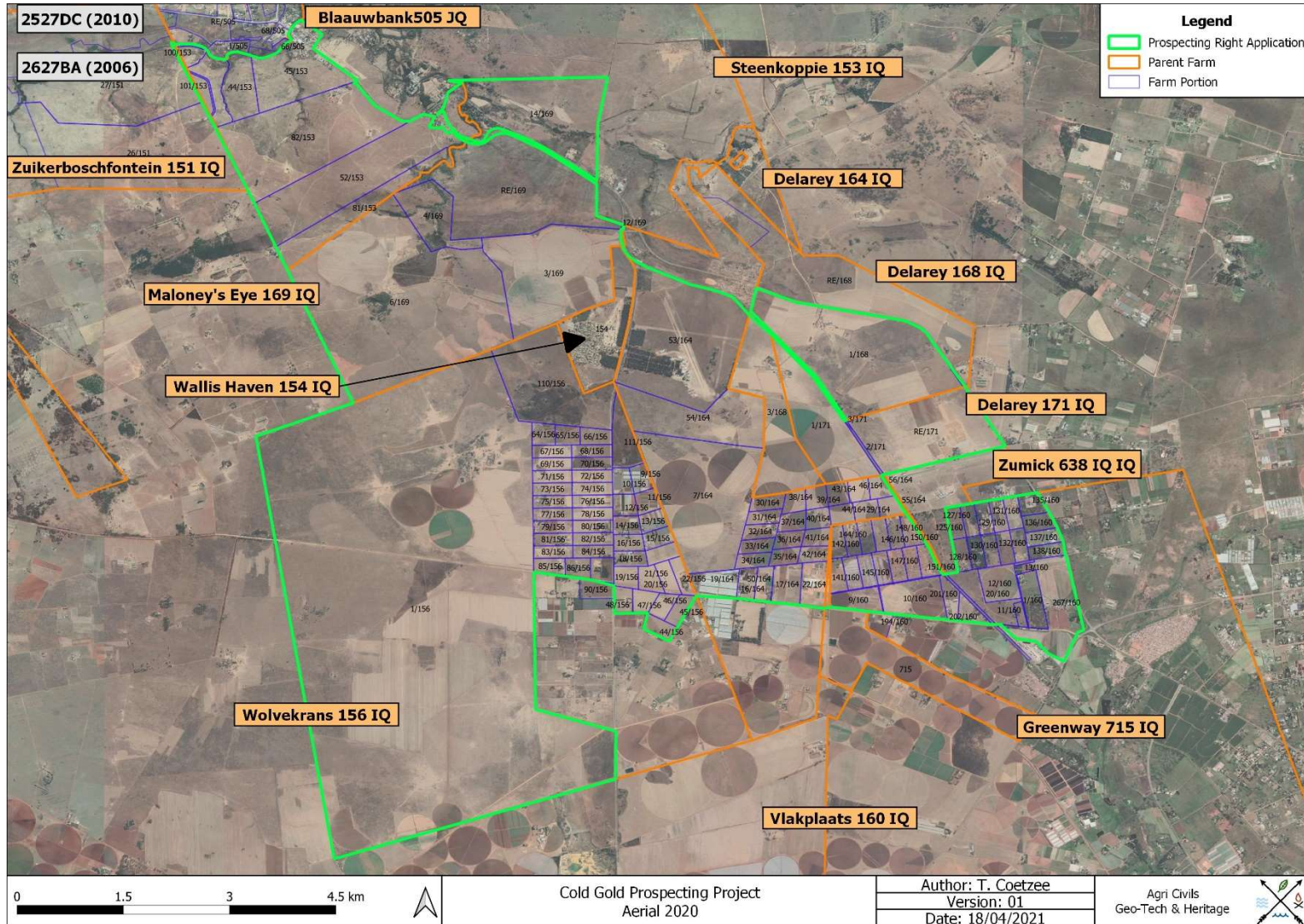


Figure 3: Proposed prospecting area portrayed on a 2020 aerial backdrop.

### 3. Archaeological Background

Southern African archaeology is broadly divided into the Early, Middle and Later Stone Ages; Early, Middle and Later Iron Ages; and Historical or Colonial Periods. This section of the report provides a general background to archaeology in South Africa.

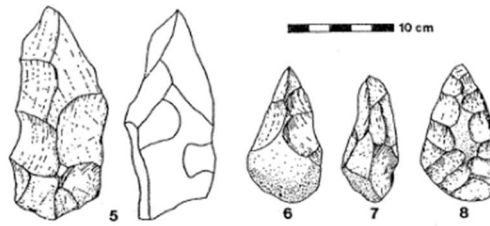
#### 3.1 The Stone Age

The earliest stone tool industry, the Oldowan, was developed by early human ancestors which were the earliest members of the genus *Homo*, such as *Homo habilis*, around 2.6 million years ago. It comprises tools such as cobble cores and pebble choppers (Toth & Schick 2007). Archaeologists suggest these stone tools are the earliest direct evidence for culture in southern Africa (Clarke & Kuman 2000). The advent of culture indicates the advent of more cognitively modern hominins (Mitchell 2002: 56, 57).

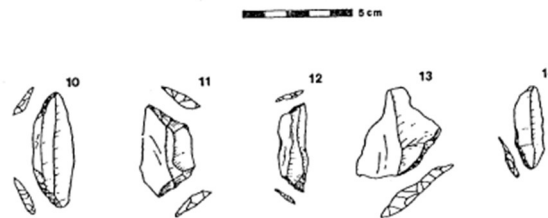
The Acheulean industry completely replaced the Oldowan industry. The Acheulian industry was first developed by *Homo ergaster* between 1.8 to 1.65 million years ago and lasted until around 300 000 years ago. Archaeological evidence from this period is also found at Swartkrans, Kromdraai and Sterkfontein. The most typical tools of the ESA (Early Stone Age) are handaxes, cleavers, choppers and spheroids. Although hominins seemingly used handaxes often, scholars disagree about their use. There are no indications of hafting, and some artefacts are far too large for it. Hominins likely used choppers and scrapers for skinning and butchering scavenged animals and often obtained sharp ended sticks for digging up edible roots. Presumably, early humans used wooden spears as early as 5 million years ago to hunt small animals.

Middle Stone Age (MSA) artefacts started appearing about 250 000 years ago and replaced the larger Early Stone Age bifaces, handaxes and cleavers with smaller flake industries consisting of scrapers, points and blades. These artefacts roughly fall in the 40-100 mm size range and were, in some cases, attached to handles, indicating a significant technical advance. The first *Homo sapiens* species also emerged during this period. Associated sites are Klasies River Mouth, Blombos Cave and Border Cave (Deacon & Deacon 1999).

Although the transition from the Middle Stone Age to the Later Stone Age (LSA) did not occur simultaneously across the whole of southern Africa, the Later Stone Age ranges from about 20 000 to 2000 years ago. Stone tools from this period are generally smaller, but were used to do the same job as those from previous periods; only in a different, more efficient way. The Later Stone Age is associated with: rock art, smaller stone tools (microliths), bows and arrows, bored stones, grooved stones, polished bone tools, earthenware pottery and beads. Examples of Later Stone Age sites are Nelson Bay Cave, Rose Cottage Cave and Boomplaas Cave (Deacon & Deacon 1999). These artefacts are often associated with rocky outcrops or water sources. **Figures 4 – 6** below shows examples of stone tools often associated with the ESA, MSA and LSA of southern Africa.



**Figure 4:** ESA artefacts from Sterkfontein (Volman 1984).



**Figure 5:** MSA artefacts from Howiesons Poort (Volman 1984).



**Figure 6:** LSA scrapers (Klein 1984).

### 3.2 The Iron Age & Historical Period

The Early Iron Age marks the movement of farming communities into South Africa in the first millennium AD, or around 2500 years ago (Mitchell 2002:259, 260). These groups were agro-pastoralist communities that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Archaeological evidence from Early Iron Age sites is mostly artefacts in the form of ceramic assemblages. The origins and archaeological identities of this period are largely based upon ceramic typologies. Some scholars classify Early Iron Age ceramic traditions into different “streams” or “trends” in pot types and decoration, which emerged over time in southern Africa. These “streams” are identified as the Kwale Branch (east), the Nkope Branch (central) and the Kalundu Branch (west). Early Iron Age ceramics typically display features such as large and prominent inverted rims, large neck areas and fine elaborate decorations. This period continued until the end of the first millennium AD (Mitchell 2002; Huffman 2007). Some well-known Early Iron Age sites include the Lydenburg Heads in Mpumalanga, Happy Rest in the Limpopo Province and Mzonjani in Kwa-Zulu Natal.

The Middle Iron Age roughly stretches from AD 900 to 1300 and marks the origins of the Zimbabwe culture. During this period cattle herding appeared to play an increasingly important role in society. However, it was proved that cattle remained an important source of wealth throughout the Iron Age. An important shift in the Iron Age of southern Africa took place in the Shashe-Limpopo basin during this period, namely the development of

class distinction and sacred leadership. The Zimbabwe culture can be divided into three periods based on certain capitals. Mapungubwe, the first period, dates from AD 1220 to 1300, Great Zimbabwe from AD 1300 to 1450, and Khami from AD 1450 to 1820 (Huffman 2007: 361, 362).

The Late Iron Age (LIA) roughly dates from AD 1300 to 1840. It is generally accepted that Great Zimbabwe replaced Mapungubwe. Some characteristics include a greater focus on economic growth and the increased importance of trade. Specialisation in terms of natural resources also started to play a role, as can be seen from the distribution of iron slag which tend to occur only in certain localities compared to a wide distribution during earlier times. It was also during the Late Iron Age that different areas of South Africa were populated, such as the interior of KwaZulu Natal, the Free State, the Gauteng Highveld and the Transkei. Another characteristic is the increased use of stone as building material. Some artefacts associated with this period are knife-blades, hoes, adzes, awls, other metal objects as well as bone tools and grinding stones.

The Historical period mainly deals with Europe's discovery, settlement and impact on southern Africa. Some topics covered by the Historical period include Dutch settlement in the Western Cape, early mission stations, Voortrekker routes and the Anglo Boer War. This time period also saw the compilation of early maps by missionaries, explorers, military personnel, etc.

### **3.2.1 General History**

Henry Lewis, an Australian prospector who is generally credited with discovering the first quartz gold in the Witwatersrand area, announced the discovery of gold in 1874 on the Farm Blaauwbank that is located directly north of the proposed Cold Gold Project area. On 28 January 1875 Albert Broderick, a Pretoria storekeeper, took the lead in the establishment of the Nil Desperandum Cooperative Quartz Company, but was unsuccessful as the company lasted only 14 years (Shorten 1970, cited in Birkholtz 2006).

Hind's Store, a store that became significant during the Jameson Raid of 1895-6, appears to be located in the general study area. Although some discrepancy exists, it is possible that the store was located either on the Farm Blaauwbank or Steenkoppie. The store is regarded as Dr Leaner Starr Jameson's last halting place before reaching Krugersdorp. Prior to the raid, Dr Henry Wolf established resting stops all along Jameson's intended route to Johannesburg. The column consisted of 350 volunteers and 150 members of the Bechaunaland Border Police. Upon nearing Hind's store, scouts realised they were surrounded by Boer Commando's. The column surprised the Boers, who retreated to Krugersdorp. The column reached the store at 13:30 on 1 January 1896, but found few supplies left in the store. After resting for an hour and a half the column continued to Krugersdorp, where the first battle of the raid took place a short distance to the northwest of Krugersdorp (Birkholtz 2006).

Thomas Hinds was a burger of the Zuid-Afrikaansche Republiek and fought on the side of the Boers during the initial stages of the South African War (1899 – 1902). However, in June 1899 he surrendered, received a protection pass and continued to live at the store until January 1901 when he was ordered to move to Krugersdorp. During his stay at the store the British, as well as the Boers, frequented him to obtain forage (Birkholtz 2006).

During the South African War, several battles and skirmishes took place in the general area. The most noteworthy of these is the Battle of Nooitgedacht that took place on 13 December 1900. The battle saw the Boer commandos of De La Rey, Beyers and Kemp clash with Major-General R.A.P. Clement. Clement and his 1500 men camped at the southern foot of the Magaliesberg mountain on the farm Nooitgedacht. The signalling corps posted to the top of the mountain were overrun by the commandos which resulted in Clement ordering retreat to a nearby hill known as Vaalkop or Yeomanry Hill and successfully defended it. From here Clement moved back to Pretoria (Carruthers 2000 cited in Fourie 2006). According to Grant (1910, cited in Fourie 2006), 74 British soldiers were killed, 186 were wounded and 368 were missing or taken prisoner. On the Boers side between 15 and 30 were killed and between 46 and 61 wounded (Oosthuizen 1949, cited in Birkholtz 2006).

According to the Archival Study done by Birkholtz (2006), the possibility exists that David Beresford Pratt's house and property might be located in the vicinity of the project area. David Beresford Pratt is known for the attempt on Prime Minister H.F. Verwoerd's life on 9 April 1960 during a speech at the Rand Easter Show. Pratt fired two rounds at the Prime Minister, was arrested and declared mentally disordered and epileptic. Pratt eventually hanged himself in the Oranje Mental Hospital on his 52<sup>nd</sup> Birthday (1 October 1961). According to the study, Pratt owned two undivided half-shares of the Farm Steenkoppie. The one half-share was obtained from the Arthur Pratt Trust under Deed of Sale, while the second was comprised of a certain remaining extent of a portion of the Freehold Farm Steenkoppie, a certain portion 2 of Portion C of quitrent Farm Delarey and the Remaining Extent of a Portion called "Rietfontein" on the Freehold Farm Steenkoppie.

Another prominent feature in the general area is the railway line running in an east-west direction. According to Birkholtz (2006) the railway line was constructed between 1902/1903 and 1913. Accordingly, the line forms part of the Krugersdorp – Zeerust line that was constructed to serve the needs of farmers in the Zeerust and Rustenburg areas to provide ease of access to the Witwatersrand markets.

The area was also associated with tobacco factories. The first tobacco factory was established in the 1870s on the farm Blaauwbank by J. & J. Jennings. Shortly afterwards another tobacco factory was established on the farm Vaalbank by F. H. Hartley. Frederick Beer took over the factory in 1891, renamed it to 'The Orient Magaliesberg Tobacco Company' and eventually moved the operation to the Farm Steenkoppie. In 1905 the tobacco was so popular that it was transported across South Africa, as well as to England, Europe, Australia and other British Colonies (Birkholtz 2006).

### 3.2.2 Examples of heritage sites often encountered

Figures 7 – 14 are examples of some heritage sites often encountered – such areas should be avoided.



**Figure 7:** Example of undecorated potsherds.



**Figure 8:** Example of a decorated potsherd.





**Figure 9:** Example of a potential granary base.



**Figure 10:** Example of a stone-walled site.



**Figure 11:** Example of a broken lower grinding stone.



**Figure 12:** Example of a dilapidated stone-walled site.



**Figure 13:** Example of a historical building.



**Figure 14:** Example of a potential informal grave.

### 3.3 Previous Heritage Studies

#### **Blaauwbank Historic Gold Mine, Magaliesburg**

A Heritage Scoping Study was conducted by Matakoma Consultants on the farm Suikerboschfontein 151 IR near Magaliesburg for a mining and tourism project. The study area borders the proposed Cold Gold Prospecting Project to the northwest. During the survey, several sites of heritage significance were observed. These include circular and angular stone-walled remains that likely date to the 1890s and the early mining days, old mine shafts, as well as stone cairns that could indicate graves (Fourie 2002).

#### **Maloney's Eye 169 IQ and Steenkoppie 153 IQ**

A Heritage Impact Assessment (HIA) was done for the development of a low to medium density estate on the farm Maloney's Eye 169 IQ and Steenkoppie 153 IQ. The demarcated impact area was approximately 600 ha and it should be noted the proposed Cold Gold project intersects the area. The study recorded 16 sites of cultural significance. These include one stone age site, one Iron Age site, two cemeteries and 13 sites or clusters of historical structures (Fourie 2006).

#### **Kruitfontein 511 JQ**

A Phase 1 Heritage Impact Assessment was conducted for the access road on portions 11, the Remaining Extent of Portion 12, the Remaining Extent of Portion 13 and portions of Portion 24 and 74 of the Farm Kruitfontein 511 JQ (Marais 2018). The Kruitfontein project is located roughly 800 m north of the proposed Cold Gold Prospecting Project study area concerned in this report. The study identified three cemeteries and structures older than 60 years.

## 4. Evaluation

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

A fundamental aspect in the conservation of a heritage resource relates to whether the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. There are many aspects that must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and if appropriate mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed.

## 5. Statement of Significance & Recommendations

### 5.1 Statement of significance

**The study area: Select portions of the Farms Farms Blaauwbank 505 JQ, Delarey 164 IQ, Delarey 168 IQ, Delarey 171 IQ, Greenway 715 IQ, Malonys Eye 169 IQ, Steenekoppie 153 IQ, Vlakplaats 160 IQ, Wallis Haven 154 IQ, Wolvekrans 156 IQ and Zuikerboschfontein 151 IQ, Magaliesburg, Gauteng**

As can be seen from previous research done in the area, the general region is significant from a heritage perspective. Heritage sites are likely to include cemeteries/graves, Stone Age Sites, Iron Age and historical sites. Since gold mining can be dated to at least 1874 on the Farm Blaauwbank that is located directly north of the study area, it can be assumed that similar mining activities took place in the general area during the same time. Remnants of the South African War of 1899 – 1902 are also likely to be encountered within the study area. Since heritage sites, such as burial sites, are not always clearly identifiable due to disturbed/removed surface features, care must be exercised when prospecting.

The **Appendix A** figures indicate the study area on 1943, 1944, 1957, 1968, 1976, 1985, 2006 and 2010 topographical maps, as well as on 1961 aerial images. **Table 2** lists the 192 potential sites and sensitive areas, type of site, location, estimated extent and current status as observed on recent aerial imagery. **Figures 15 – 18** indicate the identified potential sites on a 2020 aerial backdrop, while hills and areas surrounding water sources that are often associated with archaeological sites, are indicated on **Figure 19**. **Figure 20** shows the potential sites classified according to sites that appear to be associated with surface remains and those that appear to be demolished. It should also be noted that the ‘mining’ category in **Figures 15 – 18** consists of early mines, as well as prospecting pits. The ‘building’ category includes any building, school, shop etc., while ‘structures’ refer to any other form of construction such as windmills and kraals.

**Table 2 and Figures 15 – 18** show that 112 buildings or clusters of buildings were identified, 56 which appear to have been demolished. Four locations associated with graves or cemeteries were identified. The status of these sites, however, could not be determined as no surface indications are visible on aerial imagery.

Forty-four areas associated with huts were identified, while only 13 areas appear to be associated with surface remains.

Twenty-three areas show the presence of historical mining activity. Only seven of these areas shows the presence of surface remains.

In four instances historical topographical maps indicate the presence of ruins. On contemporary aerial imagery, however, surface remains are visible at one of the sites only.

The four instances where structures were identified on historical data sources appear to have been demolished as these areas are associated with cultivated fields or open veldt.

One site is indicated as a 'stone wall' on historical topographical maps. Although the site appears to be demolished, a strong possibility exists that the site is intact as the 2006 heritage study by Fourie (2006) recorded the site.

The identified sites dating to 1943, 1944, 1957 and 1961 exceed 60 years of age and are therefore protected by the NHRA 25 of 1999. The sites dating to 1968 and 1976 might not be visible on earlier data sources, which means that these sites might exceed 60 years as well. It should also be noted that demolished sites might be associated with surface/subsurface cultural material remains and would be protected by the NHRA 25 of 1999 as well.

**Table 2:** Potential site location.

Site No	Type	Parent Farm	Farm Portion	Current Status	Estimated Extent (ha)	Lat (y)	Lon (x)
B001	Building - 1943	Steenekoppie 153 IQ	45/153	Surface remains	0.68	-26.000246	27.546817
B002	Building - 1943	Steenekoppie 153 IQ	45/153	Surface remains	0.92	-25.999268	27.548251
B003	Building - 1968	Steenekoppie 153 IQ	45/153	Surface remains	0.67	-25.999347	27.547197
B004	Hut - 1944	Wolvekrans 156 IQ	1/156	Demolished	2.15	-26.098787	27.570117
B005	Structure - 1944	Wolvekrans 156 IQ	1/156	Demolished	1.80	-26.098253	27.571498
B006	Ruin - 1944	Delarey 164 IQ	22/164; 17/164	Surface remains	4.32	-26.070603	27.610415
B007	Hut - 1944	Vlakplaats 160 IQ	267/160	Surface remains	10.18	-26.073146	27.642931
B008	Building - 1944	Vlakplaats 160 IQ	1/160; 11/160; 267/160/ 20/160;	Surface remains	3.81	-26.074572	27.638741
B009	Mining - 1944	Delarey 171 IQ	1/168; RE/171; 1/171; 2/171; 3/171	Demolished	4.26	-26.049233	27.617313
B010	Ruin - 1944	Delarey 164 IQ	53/164; 54/164	Demolished	5.71	-26.046718	27.598515
B011	Mining - 1944	Delarey 164 IQ	54/164	Demolished	2.57	-26.048661	27.600560
B012	Grave/Cemetery - 1944	Delarey 168 IQ	1/168	Unknown	3.16	-26.041909	27.626095
B013	Hut - 1944	Delarey 168 IQ	1/168; RE/168	Demolished	14.67	-26.040207	27.624734
B014	Building - 1944	Delarey 164 IQ	54/164	Demolished	2.03	-26.047318	27.602350
B015	Hut - 1944	Delarey 164 IQ	53/164; RE/154	Demolished	10.66	-26.031773	27.590649

Site No	Type	Parent Farm	Farm Portion	Current Status	Estimated Extent (ha)	Lat (y)	Lon (x)
B016	Mining - 1944	Wolvekrans 156 IQ	1/156	Demolished	4.24	-26.052769	27.570562
B017	Grave/Cemetery - 1944	Wolvekrans 156 IQ	110/156	Unknown	3.27	-26.043126	27.575763
B018	Ruin - 1944	Wolvekrans 156 IQ	110/156	Demolished	6.62	-26.043730	27.577905
B019	Mining - 1944	Wolvekrans 156 IQ	110/156	Surface remains	2.85	-26.040349	27.574777
B020	Structure - 1944	Wolvekrans 156 IQ	110/156	Demolished	2.39	-26.043410	27.573758
B021	Mining - 1944	Wolvekrans 156 IQ	110/156; 1/156	Surface remains	3.41	-26.040908	27.571771
B022	Structure - 1944	Wolvekrans 156 IQ	1/156	Demolished	3.50	-26.044902	27.567249
B023	Hut - 1944	Wolvekrans 156 IQ	1/156; 6/169	Demolished	4.61	-26.044090	27.563350
B024	Hut - 1944	Malonys Eye 169 IQ	6/169	Demolished	3.70	-26.036917	27.571922
B025	Hut - 1944	Malonys Eye 169 IQ	6/169	Demolished	9.70	-26.037221	27.567081
B026	Hut - 1944	Malonys Eye 169 IQ	6/169	Demolished	5.12	-26.033840	27.563399
B027	Hut - 1944	Malonys Eye 169 IQ	6/169; 3/169	Demolished	6.03	-26.030046	27.572898
B028	Building - 1944	Malonys Eye 169 IQ	4/169	Surface remains	5.15	-26.023804	27.564674
B029	Stone wall - 1944	Malonys Eye 169 IQ	RE/169	Demolished	15.80	-26.022886	27.573440
B030	Hut - 1944	Steenekoppie 153 IQ	52/153; 81/153	Demolished	5.48	-26.013276	27.564722
B031	Building - 1944	Steenekoppie 153 IQ	44/153; RE/10/153	Demolished	3.22	-26.004371	27.538539
B032	Hut - 1944	Steenekoppie 153 IQ	45/153	Surface remains	3.17	-26.002944	27.548468
B033	Building - 1944	Steenekoppie 153 IQ	45/153	Surface remains	3.05	-26.002797	27.546748
B034	Building - 1944	Steenekoppie 153 IQ	45/153	Demolished	1.88	-26.002101	27.545270
B035	Hut - 1944	Wolvekrans 156 IQ	110/156	Demolished	5.04	-26.045157	27.574913
B036	Hut - 1944	Wolvekrans 156 IQ	1/156	Demolished	9.51	-26.072713	27.575139
B037	Mining - 1957	Wolvekrans 156 IQ	1/156	Demolished	6.40	-26.095495	27.580580
B038	Hut - 1957	Wolvekrans 156 IQ	1/156	Demolished	2.23	-26.070032	27.570013
B039	Mining - 1957	Wolvekrans 156 IQ	1/156	Demolished	33.34	-26.052999	27.547931
B040	Hut - 1957	Wolvekrans 156 IQ	1/156	Demolished	2.85	-26.048877	27.552321
B041	Mining - 1957	Wolvekrans 156 IQ	1/156	Demolished	2.80	-26.050909	27.557698
B042	Hut - 1957	Wolvekrans 156 IQ	1/156	Demolished	2.48	-26.043814	27.566058
B043	Hut - 1957	Wolvekrans 156 IQ	1/156	Demolished	9.75	-26.049265	27.564571
B044	Building - 1957	Wolvekrans 156 IQ	1/156	Surface remains	10.64	-26.053996	27.567300
B045	Building - 1957	Wolvekrans 156 IQ	1/156	Demolished	2.79	-26.052517	27.564462
B046	Mining - 1957	Wolvekrans 156 IQ	1/156	Demolished	11.69	-26.054926	27.562619
B047	Mining - 1957	Wolvekrans 156 IQ	1/156	Demolished	5.70	-26.053467	27.573116
B048	Building - 1957	Wolvekrans 156 IQ	1/156	Demolished	1.55	-26.060284	27.571905

Site No	Type	Parent Farm	Farm Portion	Current Status	Estimated Extent (ha)	Lat (y)	Lon (x)
B049	Hut - 1957	Wolvekrans 156 IQ	74/156	Demolished	1.93	-26.058091	27.583955
B050	Building - 1957	Wolvekrans 156 IQ	72/156	Demolished	0.96	-26.056150	27.584144
B051	Hut - 1957	Wolvekrans 156 IQ	83/156; 85/156; 86/156	Surface remains	2.68	-26.066369	27.580442
B052	Hut - 1957	Wolvekrans 156 IQ	86/156; 87/156	Demolished	1.50	-26.068745	27.584301
B053	Hut - 1957	Wolvekrans 156 IQ	15/156; 17/156; 15/156; 20/156;21/156; 22/156;7/164	Surface remains	24.91	-26.067240	27.593403
B054	Hut - 1957	Delarey 164 IQ	50/164; 16/164; 16/164	Surface remains	11.76	-26.069874	27.602624
B055	Hut - 1957	Delarey 164 IQ	22/164	Surface remains	2.41	-26.071251	27.611909
B056	Hut - 1957	Wolvekrans 156 IQ	48/156; 19/156	Surface remains	5.51	-26.071679	27.588125
B057	Hut - 1957	Wolvekrans 156 IQ	9/156; 10/156	Demolished	3.40	-26.056743	27.588555
B058	Mining - 1957	Delarey 164 IQ	3/168; 30/164; 38/164; 39/164; 40/164; 37/164	Surface remains	21.69	-26.059474	27.610754
B059	Building - 1957	Delarey 164 IQ	16/164; 17/164	Surface remains	4.36	-26.070760	27.606701
B060	Hut - 1957	Vlakplaats 160 IQ	20/160; 11/160	Surface remains	1.56	-26.073442	27.637569
B061	Building - 1957	Vlakplaats 160 IQ	126/160; 20/160	Surface remains	1.65	-26.068013	27.631291
B062	Building - 1957	Vlakplaats 160 IQ	135/160; 136/160	Demolished	2.79	-26.061160	27.639766
B063	Hut - 1957	Vlakplaats 160 IQ	134/160; 136/160; 137/160	Demolished	1.13	-26.063673	27.638589
B064	Building - 1957	Vlakplaats 160 IQ	129/160; 127/160; 131/160	Surface remains	5.69	-26.062243	27.633980
B065	Hut - 1957	Vlakplaats 160 IQ	147/160; 149/160	Surface remains	1.98	-26.067912	27.623988
B066	Building - 1957	Vlakplaats 160 IQ	151/160	Surface remains	1.44	-26.067851	27.626963
B067	Hut - 1957	Vlakplaats 160 IQ	148/160; 149/160; 150/160; 151/160	Surface remains	1.55	-26.064833	27.624314
B068	Building - 1957	Vlakplaats 160 IQ	146/160; 148/160	Demolished	1.21	-26.061850	27.621054
B069	Mining - 1957	Delarey 164 IQ	46/164; 47/164; 56/164; 45/164; 29/164; 146/160	Demolished	11.28	-26.059388	27.620376
B070	Building - 1957	Vlakplaats 160 IQ	140/160; 141/160	Surface remains	1.11	-26.067154	27.615754
B071	Hut - 1957	Delarey 171 IQ	1/171	Demolished	4.05	-26.054758	27.618148
B072	Hut - 1957	Delarey 171 IQ	RE/171	Demolished	2.46	-26.054575	27.623240

Site No	Type	Parent Farm	Farm Portion	Current Status	Estimated Extent (ha)	Lat (y)	Lon (x)
B073	Hut - 1957	Delarey 171 IQ	RE/171	Demolished	1.39	-26.053926	27.626778
B074	Building - 1957	Delarey 171 IQ	RE/171	Surface remains	2.50	-26.053266	27.630388
B075	Hut - 1957	Delarey 171 IQ	1/168; RE/171	Demolished	16.72	-26.045149	27.629182
B076	Hut - 1957	Delarey 168 IQ	1/168	Surface remains	16.04	-26.042146	27.619580
B077	Hut - 1957	Delarey 168 IQ	1/168	Demolished	3.33	-26.045938	27.617263
B078	Hut - 1957	Delarey 171 IQ	1/171	Demolished	4.87	-26.048328	27.612901
B079	Building - 1957	Delarey 168 IQ	1/168	Surface remains	9.37	-26.037393	27.613130
B080	Building - 1957	Delarey 168 IQ	1/168	Demolished	1.47	-26.040088	27.609980
B081	Building - 1957	Delarey 168 IQ	1/168	Surface remains	1.44	-26.040597	27.614950
B082	Hut - 1957	Wolvekrans 156 IQ	110/156; RE/154	Demolished	6.10	-26.043848	27.581083
B083	Mining - 1957	Wolvekrans 156 IQ	110/156; 66/156;65/15 6;67/156;68/1 56;69/156;70/ 156	Surface remains	66.40	-26.049421	27.583120
B084	Mining - 1957	Delarey 164 IQ	53/164	Demolished	4.21	-26.043021	27.588811
B085	Building - 1957	Wallis Haven 154 IQ	RE/154; 53/164; 3/169	Surface remains	47.18	-26.038316	27.583743
B086	Building - 1957	Wallis Haven 154 IQ	RE/154	Demolished	1.28	-26.032164	27.588052
B087	Structure - 1957	Malonys Eye 169 IQ	6/169	Demolished	1.58	-26.035602	27.568168
B088	Building - 1957	Malonys Eye 169 IQ	6/169	Surface remains	2.16	-26.027624	27.561904
B089	Building - 1957	Malonys Eye 169 IQ	6/169; 4/169	Surface remains	2.17	-26.024706	27.561282
B090	Building - 1957	Malonys Eye 169 IQ	4/169	Surface remains	1.73	-26.025302	27.563870
B091	Building - 1957	Steenekoppie 153 IQ	81/153; RE/169	Demolished	1.47	-26.015530	27.565507
B092	Hut - 1957	Steenekoppie 153 IQ	81/153	Demolished	13.13	-26.022939	27.549118
B093	Hut - 1957	Steenekoppie 153 IQ	82/153	Demolished	4.43	-26.015154	27.547920
B094	Hut - 1957	Steenekoppie 153 IQ	82/153	Surface remains	1.76	-26.010561	27.544814
B095	Building - 1957	Steenekoppie 153 IQ	82/153	Surface remains	1.91	-26.012282	27.556766
B096	Building - 1957	Steenekoppie 153 IQ	52/156	Surface remains	1.70	-26.008583	27.566386
B097	Building - 1957	Malonys Eye 169 IQ	14/169; 52/156	Surface remains	26.78	-26.010729	27.572328
B098	Hut - 1957	Malonys Eye 169 IQ	14/169	Demolished	2.23	-26.013633	27.583026
B099	Building - 1957	Malonys Eye 169 IQ	14/169	Surface remains	1.33	-26.011398	27.579675
B100	Building - 1957	Malonys Eye 169 IQ	14/169	Demolished	0.81	-26.013560	27.579609
B101	Hut - 1957	Steenekoppie 153 IQ	44/153; RE/10/153	Demolished	4.12	-26.006527	27.537175
B102	Building - 1957	Steenekoppie 153 IQ	RE/10/153	Surface remains	1.24	-26.004290	27.535758
B103	Hut - 1957	Vlakplaats 160 IQ	267/160	Surface remains	9.87	-26.078149	27.642745



Site No	Type	Parent Farm	Farm Portion	Current Status	Estimated Extent (ha)	Lat (y)	Lon (x)
B104	Hut - 1957	Delarey 164 IQ	54/164	Demolished	3.78	-26.049473	27.597773
B105	Mining - 1957	Delarey 164 IQ	7/164; 54/164	Demolished	22.19	-26.050949	27.592873
B106	Building - 1957	Delarey 164 IQ	53/164; 54/164	Surface remains	1.20	-26.045792	27.600662
B107	Building - 1976	Steenekoppie 153 IQ	82/153; 45/153	Surface remains	5.45	-26.007424	27.551799
B108	Building - 1976	Steenekoppie 153 IQ	45/153	Surface remains	2.56	-26.004512	27.550416
B109	Building - 1976	Malonys Eye 169 IQ	4/169	Demolished	0.78	-26.023297	27.562118
B110	Grave/Cemetery - 1976	Steenekoppie 153 IQ	52/153; 81/153	Unknown	1.25	-26.028814	27.545786
B111	Building - 1976	Malonys Eye 169 IQ	6/169	Surface remains	1.67	-26.028029	27.559985
B112	Building - 1976	Malonys Eye 169 IQ	6/169	Surface remains	1.03	-26.032532	27.557954
B113	Mining - 1961	Malonys Eye 169 IQ	6/169	Surface remains	15.27	-26.034240	27.556055
B114	Building - 1961	Steenekoppie 153 IQ	82/153	Surface remains	5.06	-26.012352	27.555240
B115	Grave/Cemetery - 1976	Malonys Eye 169 IQ	14/169	Unknown	0.85	-26.011978	27.572103
B116	Building - 1961	Malonys Eye 169 IQ	14/169	Surface remains	1.75	-26.014767	27.580981
B117	Building - 1961	Malonys Eye 169 IQ	14/169	Demolished	2.10	-26.014663	27.583408
B118	Mining - 1961	Wolvekrans 156 IQ	110/156; 64/156; 65/156	Demolished	4.49	-26.048924	27.578877
B119	Mining - 1961	Wolvekrans 156 IQ	110/156; 1/156	Surface remains	17.04	-26.047041	27.575543
B120	Mining - 1961	Wolvekrans 156 IQ	1/156	Demolished	28.69	-26.050113	27.561712
B121	Building - 1961	Wolvekrans 156 IQ	1/156	Surface remains	6.12	-26.055293	27.569574
B122	Building - 1976	Wolvekrans 156 IQ	77/156; 79/156	Surface remains	2.37	-26.061571	27.577634
B123	Building - 1976	Wolvekrans 156 IQ	76/156; 78/156	Surface remains	1.94	-26.059633	27.583249
B124	Building - 1961	Wolvekrans 156 IQ	68/156; 70/156	Demolished	2.73	-26.053186	27.582190
B125	Building - 1961	Wolvekrans 156 IQ	64/156; 67/156; 1/156	Demolished	2.84	-26.051911	27.576631
B126	Building - 1976	Wolvekrans 156 IQ	80/156; 82/156	Surface remains	2.44	-26.062839	27.585181
B127	Building - 1976	Wolvekrans 156 IQ	12/156; 14/156; 16/156	Surface remains	8.95	-26.061651	27.588097
B128	Building - 1976	Wolvekrans 156 IQ	11/156	Demolished	1.69	-26.059989	27.591038
B129	Building - 1976	Delarey 164 IQ	19/164	Surface remains	1.68	-26.069783	27.598044
B130	Building - 1961	Wolvekrans 156 IQ	9/156; 10/156	Demolished	2.53	-26.055858	27.588628
B131	Building - 1961	Wolvekrans 156 IQ	110/156; 66/156	Demolished	2.64	-26.050000	27.583358
B132	Building - 1976	Wolvekrans 156 IQ	44/156	Surface remains	1.84	-26.075867	27.592210
B133	Building - 1976	Vlakplaats 160 IQ	141/160; 142/160; 143/160; 144/160;145/ 160;146/160	Demolished	6.72	-26.066308	27.619130

Site No	Type	Parent Farm	Farm Portion	Current Status	Estimated Extent (ha)	Lat (y)	Lon (x)
B134	Building - 1961	Delarey 164 IQ	30/164; 31/164; 32/164; 36/164; 37/164; 38/164	Surface remains	19.46	-26.061518	27.607388
B135	Building - 1976	Delarey 164 IQ	7/164; 31/164; 32/164	Demolished	2.65	-26.062382	27.603559
B136	Building - 1976	Vlakplaats 160 IQ	10/160; 201/160; 202/160; 291/160	Surface remains	8.13	-26.073452	27.630417
B137	Building - 1976	Vlakplaats 160 IQ	10/160	Demolished	2.47	-26.070116	27.627020
B138	Building - 1976	Vlakplaats 160 IQ	144/160; 146/160; 45/164	Demolished	1.69	-26.061695	27.619153
B139	Ruin - 1976	Vlakplaats 160 IQ	201/160; 202/160; 291/160; 20/160	Demolished	1.75	-26.070717	27.630215
B140	Mining - 1976	Vlakplaats 160 IQ	201/160; 10/160	Surface remains	3.44	-26.071738	27.629292
B141	Building - 1961	Vlakplaats 160 IQ	1/160; 12/160; 267/160	Demolished	5.06	-26.069112	27.638180
B142	Building - 1976	Vlakplaats 160 IQ	1/160	Surface remains	2.01	-26.071332	27.639763
B143	Building - 1961	Vlakplaats 160 IQ	128/160; 126/160; 20/160; 128/160	Surface remains	2.36	-26.067526	27.632737
B144	Building - 1976	Vlakplaats 160 IQ	267/160; 1/160	Surface remains	1.59	-26.073379	27.641221
B145	Building - 1976	Vlakplaats 160 IQ	267/160	Surface remains	1.58	-26.074245	27.645147
B146	Building - 1976	Vlakplaats 160 IQ	131/160; 133/160	Surface remains	5.11	-26.059721	27.636054
B147	Building - 1961	Delarey 171 IQ	RE/171	Demolished	2.28	-26.054389	27.621284
B148	Building - 1976	Delarey 171 IQ	1/168; RE/171	Demolished	6.32	-26.046958	27.627417
B149	Building - 1976	Delarey 171 IQ	RE/171	Demolished	1.68	-26.048362	27.631632
B150	Building - 1976	Delarey 168 IQ	1/168	Demolished	2.76	-26.046484	27.615296
B151	Building - 1961	Delarey 168 IQ	1/168	Demolished	0.73	-26.047281	27.618290
B152	Building - 1976	Delarey 168 IQ	1/168	Demolished	6.17	-26.043251	27.615731
B153	Building - 1976	Delarey 168 IQ	1/168	Surface remains	2.42	-26.041481	27.613446
B154	Building - 1976	Delarey 168 IQ	1/168	Demolished	1.68	-26.040070	27.612208
B155	Building - 1976	Delarey 168 IQ	1/168	Demolished	2.42	-26.039267	27.616001
B156	Building - 1976	Delarey 164 IQ	53/164	Surface remains	11.01	-26.040779	27.593299
B157	Building - 1976	Delarey 168 IQ	3/168; 53/164	Demolished	2.27	-26.042476	27.602013
B158	Building - 1976	Delarey 168 IQ	1/168; 3/168	Surface remains	1.41	-26.042680	27.607358
B159	Building - 1961	Delarey 164 IQ	53/164	Surface remains	1.46	-26.044950	27.600031

Site No	Type	Parent Farm	Farm Portion	Current Status	Estimated Extent (ha)	Lat (y)	Lon (x)
B160	Mining - 1961	Delarey 164 IQ	54/164	Demolished	6.45	-26.050888	27.601203
B161	Mining - 1961	Delarey 164 IQ	54/164	Demolished	2.57	-26.050128	27.595810
B162	Mining - 1961	Wolvekrans 156 IQ	1/156	Demolished	53.23	-26.055446	27.552823
B163	Building - 1961	Steenekoppie 153 IQ	45/153	Demolished	3.53	-26.000547	27.548335
B164	Building - 1961	Malonys Eye 169 IQ	4/169	Demolished	1.78	-26.021866	27.565187
B165	Building - 1961	Malonys Eye 169 IQ	3/169	Demolished	0.64	-26.028925	27.579938
B166	Building - 1961	Malonys Eye 169 IQ	3/169	Demolished	0.67	-26.031198	27.579808
B167	Building - 1961	Malonys Eye 169 IQ	3/169	Demolished	0.59	-26.031974	27.577806
B168	Building - 1961	Malonys Eye 169 IQ	6/169	Surface remains	0.81	-26.033530	27.568292
B169	Building - 1961	Malonys Eye 169 IQ	6/169	Surface remains	0.46	-26.032016	27.566018
B170	Building - 1961	Wolvekrans 156 IQ	1/156; 6/169	Demolished	1.04	-26.044359	27.561193
B171	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.62	-26.053484	27.571649
B172	Building - 1961	Delarey 164 IQ	54/164	Demolished	0.69	-26.048743	27.594320
B173	Building - 1961	Delarey 164 IQ	54/164	Demolished	0.47	-26.050842	27.598104
B174	Building - 1961	Delarey 164 IQ	7/164; 54/164	Demolished	1.33	-26.052664	27.602342
B175	Building - 1961	Wolvekrans 156 IQ	69/156; 70/156; 71/156; 72/156	Surface remains	0.72	-26.055223	27.581160
B176	Building - 1961	Wolvekrans 156 IQ	69/156; 71/156; 1/156	Surface remains	0.54	-26.055334	27.576693
B177	Building - 1961	Wolvekrans 156 IQ	75/156	Surface remains	0.50	-26.059770	27.576876
B178	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.33	-26.056634	27.566461
B179	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.51	-26.058789	27.571446
B180	Building - 1961	Wolvekrans 156 IQ	73/156; 75/156	Demolished	0.35	-26.058619	27.579829
B181	Building - 1961	Wolvekrans 156 IQ	76/156; 78/156	Demolished	0.68	-26.060135	27.584776
B182	Building - 1961	Vlakplaats 160 IQ	144/160; 146/160	Demolished	0.49	-26.062608	27.619737
B183	Building - 1961	Wolvekrans 156 IQ	79/156; 80/156	Surface remains	0.80	-26.062952	27.581382
B184	Building - 1961	Wolvekrans 156 IQ	86/156	Demolished	0.51	-26.068520	27.583148
B185	Building - 1961	Delarey 164 IQ	19/164; 7/164	Surface remains	1.19	-26.068425	27.598430
B186	Building - 1961	Delarey 164 IQ	34/164; 35/164; 16/164; 17/164	Demolished	1.07	-26.067736	27.606333
B187	Building - 1961	Delarey 164 IQ	50/164	Demolished	0.36	-26.067954	27.604324
B188	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.65	-26.084479	27.576521
B189	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.55	-26.090980	27.577524

<b>Site No</b>	<b>Type</b>	<b>Parent Farm</b>	<b>Farm Portion</b>	<b>Current Status</b>	<b>Estimated Extent (ha)</b>	<b>Lat (y)</b>	<b>Lon (x)</b>
B190	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.72	-26.090250	27.576622
B191	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.84	-26.098266	27.573140
B192	Building - 1961	Wolvekrans 156 IQ	1/156	Demolished	0.86	-26.096132	27.565247

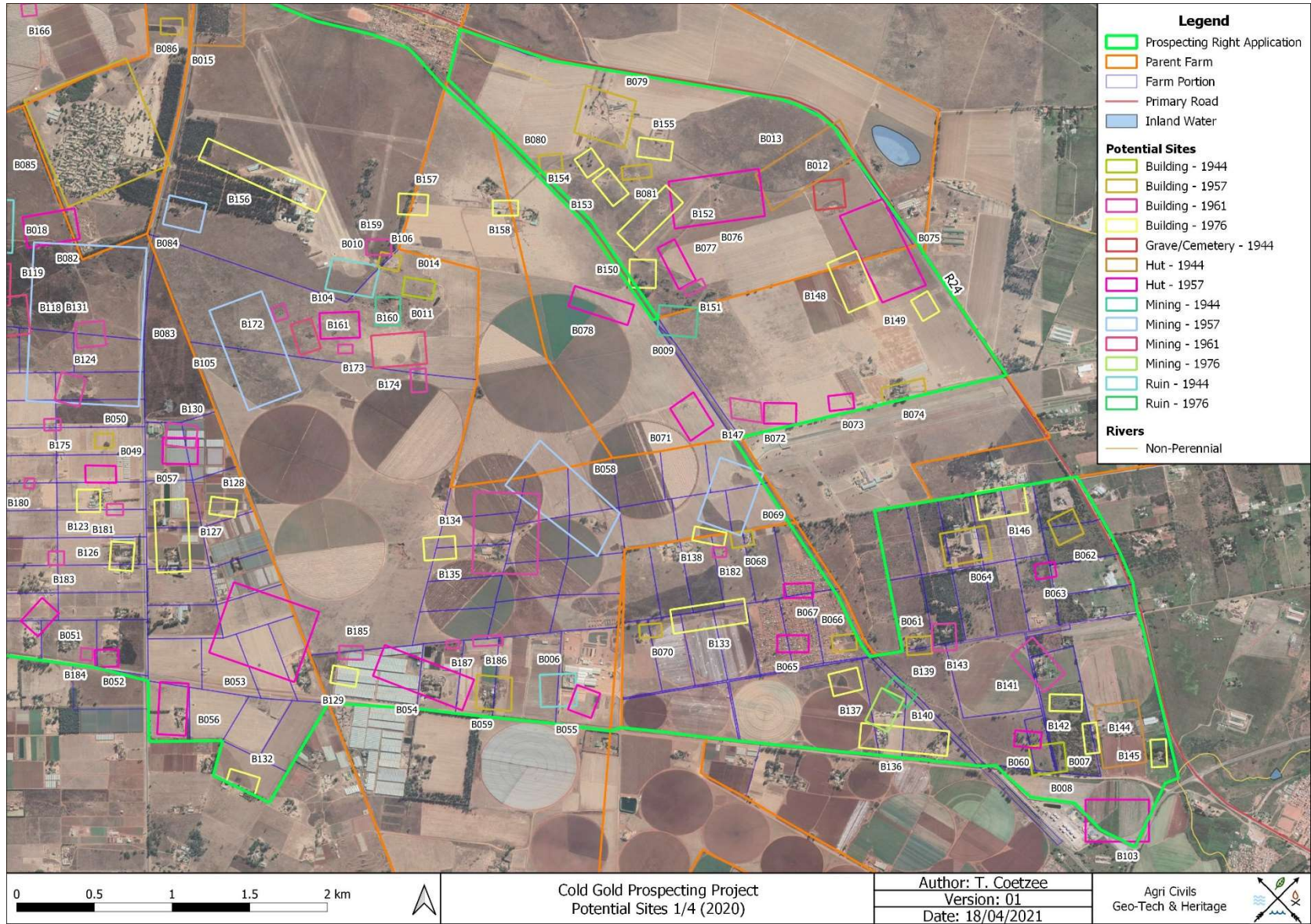


Figure 15: Potential Sites – 1/4.

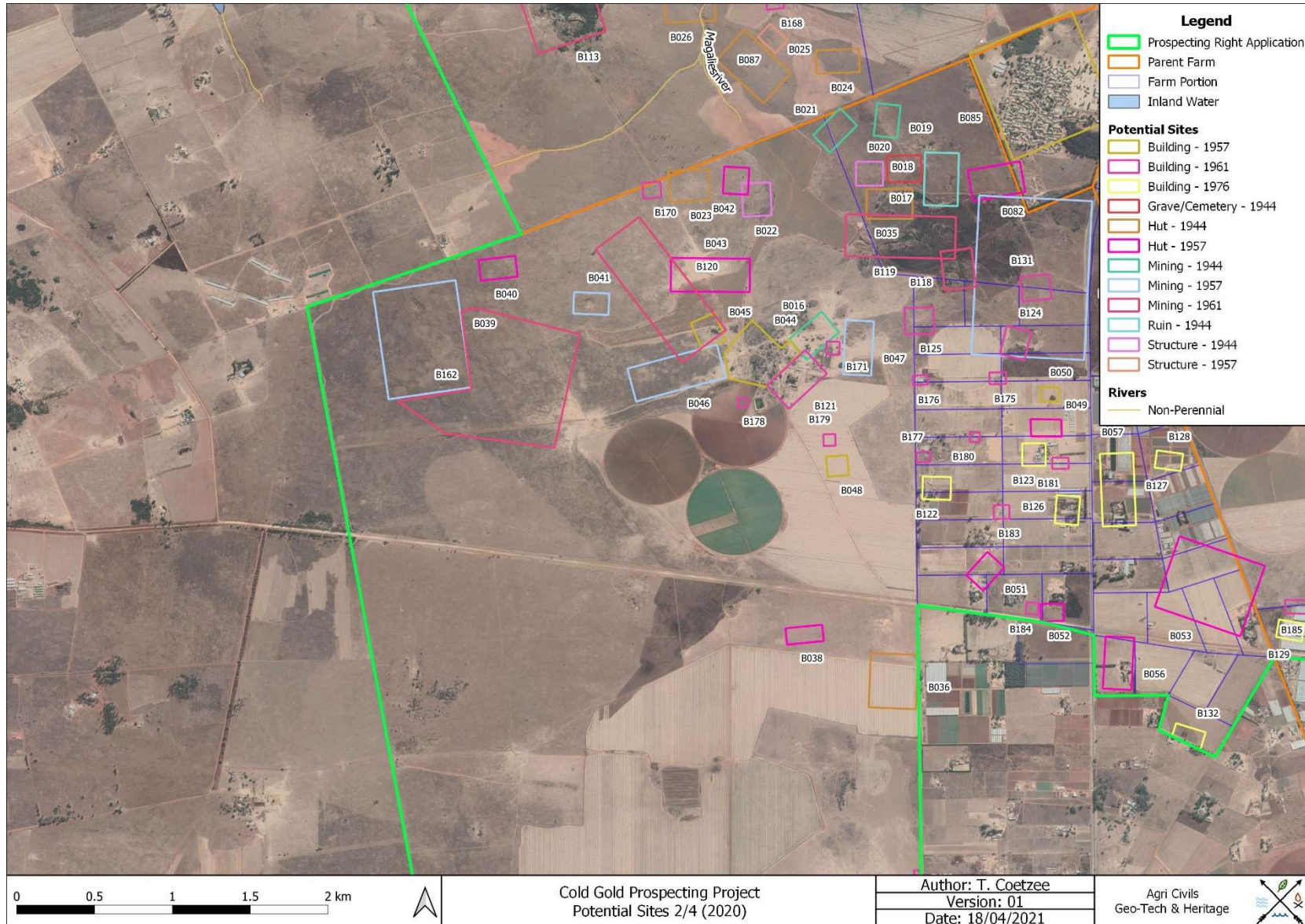


Figure 16: Potential Sites – 2/4.

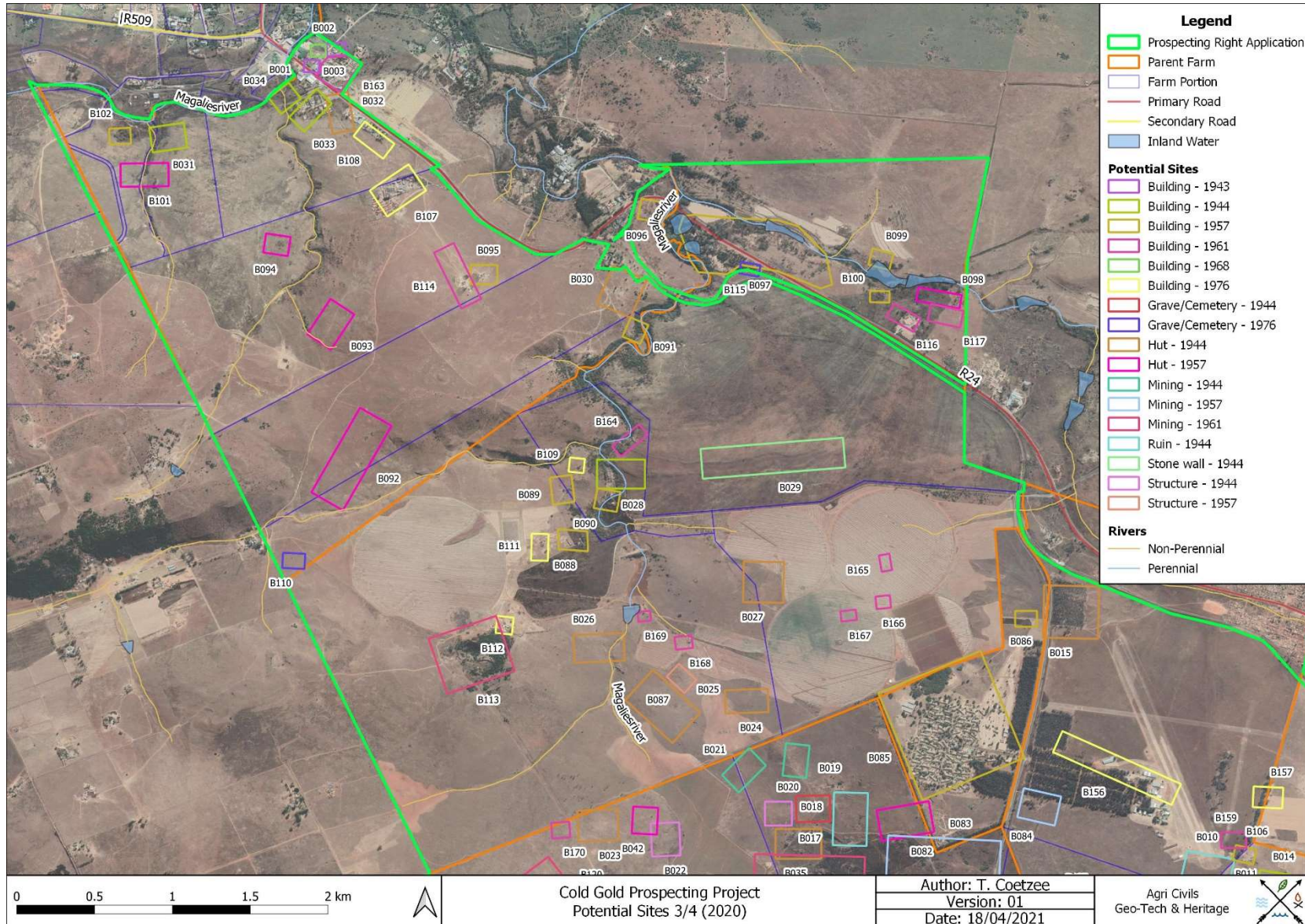


Figure 17: Potential Sites – 3/4.

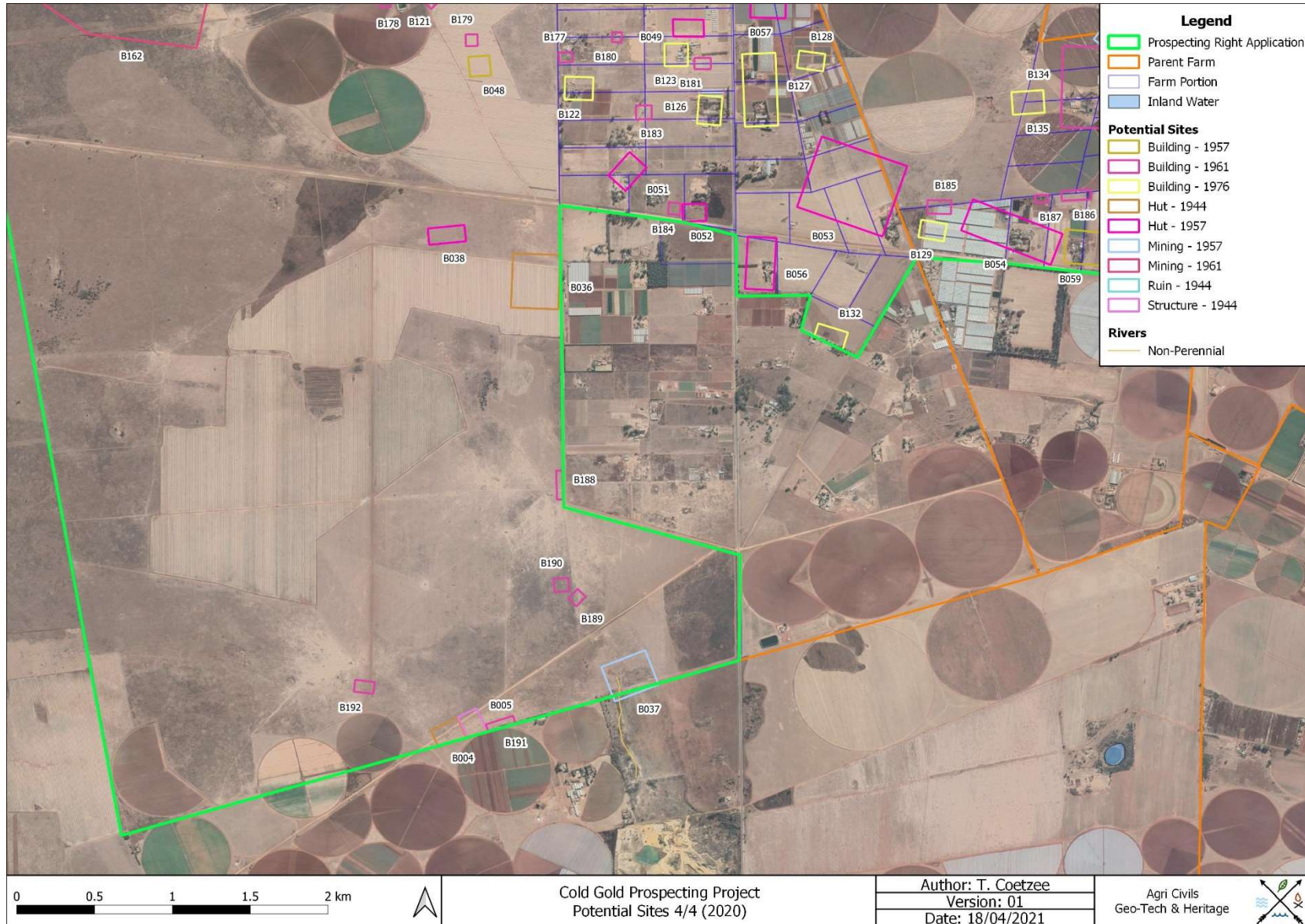


Figure 18: Potential Sites – 4/4.



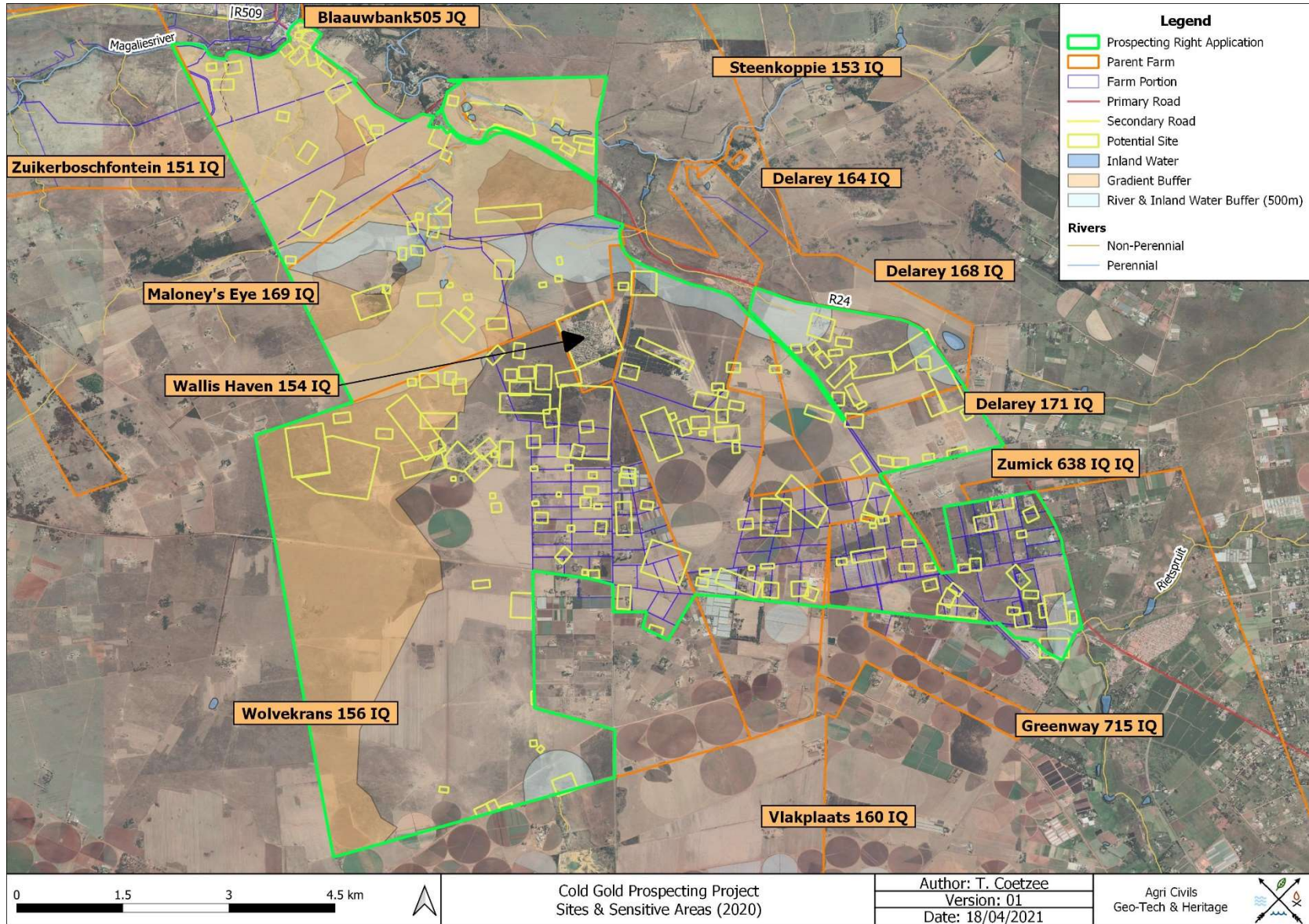


Figure 19: Sensitive Areas.

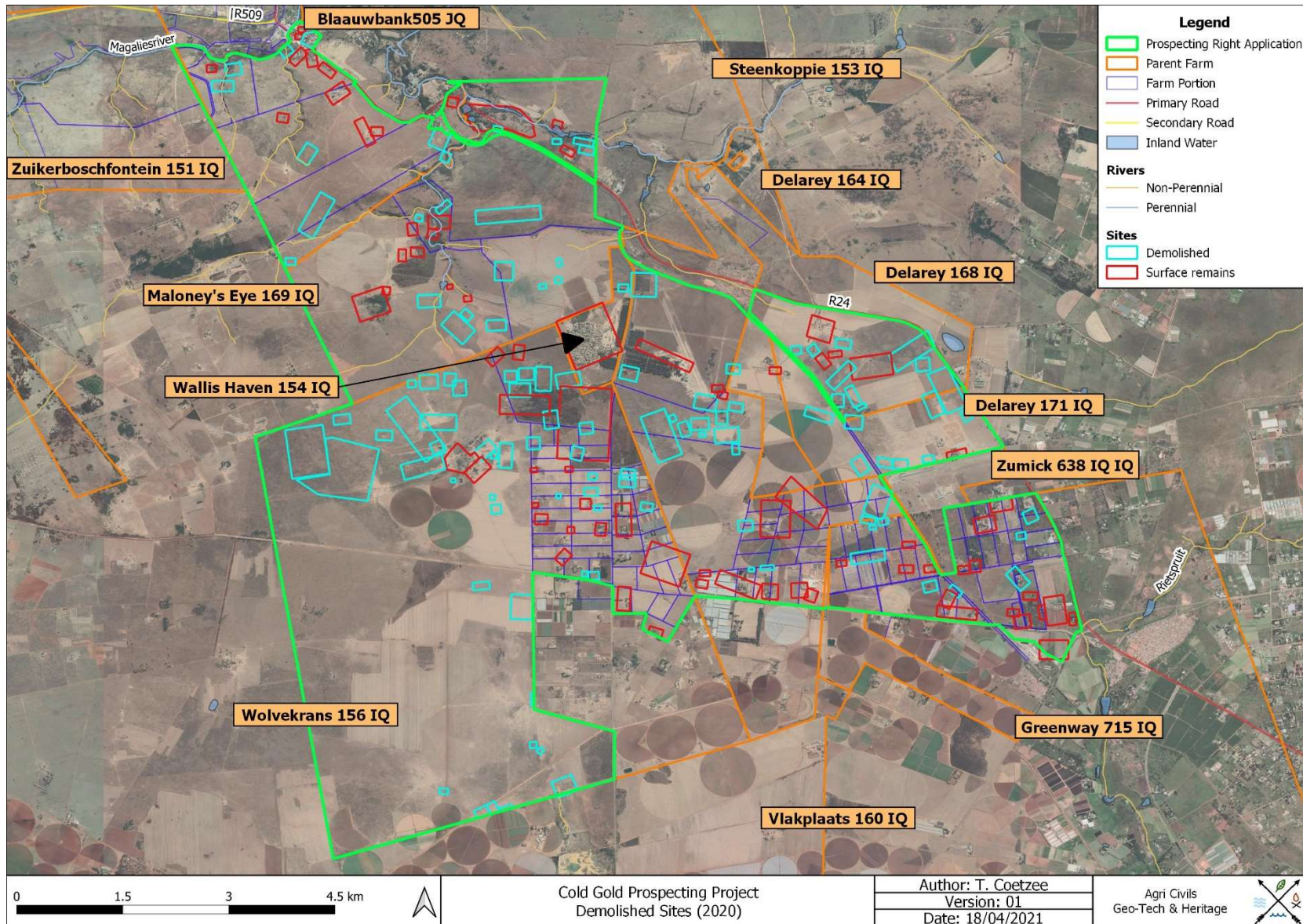


Figure 20: Demolished Sites.

## 5.2 Recommendations

The following recommendations are made in order to avoid the destruction of heritage remains within the area demarcated for prospecting:

- It is recommended that the areas associated with the identified sites be avoided by the proposed prospecting activities. Should this not be possible, a qualified archaeologist must be present on-site during prospecting in order to limit potential impact on heritage resources.
- The 500 m buffer zone surrounding perennial/non-perennial rivers and dams, as well as the indicated areas associated with hills (gradient buffer) are potentially sensitive from a heritage perspective. Care should be exercised when prospecting in these vicinities.
- It is advised that a qualified archaeologist be contacted whenever uncertainty regarding potential heritage remains are encountered.
- Prospecting should not take place in the vicinity of stone cairns, potential burial sites, stone-walling, building ruins or any other heritage material or structures.
- Should the prospecting outcome result in further development or construction, a full Phase 1 Archaeological Impact Assessment must be conducted on the affected area if triggered. Also, a full Phase 1 AIA must be done should the cumulative impact of the proposed prospecting exceed 0.5 ha.
- Because archaeological artefacts generally occur below surface, the possibility exists that culturally significant material may be exposed during the prospecting phase, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist. Also, should skeletal remains be exposed, all activities must be suspended and the relevant heritage resources authority contacted (See National Heritage Resources Act, 25 of 1999 section 36 (6)).
- From a heritage point of view, prospecting may proceed on the demarcated portions, subject to the abovementioned conditions and recommendations.

## 6. Addendum: Terminology

### **Archaeology:**

The study of the human past through its material remains.

### **Artefact:**

Any portable object used, modified, or made by humans; e.g. pottery and metal objects.

### **Assemblage:**

A group of artefacts occurring together at a particular time and place, and representing the sum of human activities.

### **Context:**

An artefact's context usually consist of its immediate *matrix* (the material surrounding it e.g. gravel, clay or sand), its *provenience* (horizontal and vertical position within the matrix), and its *association* with other artefacts (occurrence together with other archaeological remains, usually in the same matrix).

### **Cultural Resource Management (CRM):**

The safeguarding of the archaeological heritage through the protection of sites and through salvage archaeology (rescue archaeology), generally within the framework of legislation designed to safeguard the past.

### **Excavation:**

The principal method of data acquisition in archaeology, involving the systematic uncovering of archaeological remains through the removal of the deposits of soil and other material covering and accompanying it.

### **Feature:**

An irremovable artefact; e.g. hearths or architectural elements.

### **Ground Reconnaissance:**

A collective name for a wide variety of methods for identifying individual archaeological sites, including consultation of documentary sources, place-name evidence, local folklore, and legend, but primarily actual fieldwork.

### **Matrix:**

The physical material within which artefacts is embedded or supported, i.e. the material surrounding it e.g. gravel, clay or sand.

### **Phase 1 Assessments:**

Scoping surveys to establish the presence of and to evaluate heritage resources in a given area.

### **Phase 2 Assessments:**

In-depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.

### **Sensitive:**

Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

**Site:**

A distinct spatial clustering of artefacts, features, structures, and organic and environmental remains, as the residue of human activity.

**Surface survey:**

There are two kinds: (1) unsystematic and (2) systematic. The former involves field walking, i.e. scanning the ground along one's path and recording the location of artefacts and surface features. A systematic survey by comparison is less subjective and involves a grid system, such that the survey area is divided into sectors and these are walked ally, thus making the recording of finds more accurate.

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*Human Tissue Act No. 65 of 1983, Government Gazette, Cape Town*

*National Heritage Resource Act No.25 of 1999, Government Gazette, Cape Town*

*Removal of Graves and Dead Bodies Ordinance No. 7 of 1925, Government Gazette, Cape Town*

## Appendix A: Historical Aerial Imagery & Topographical Maps

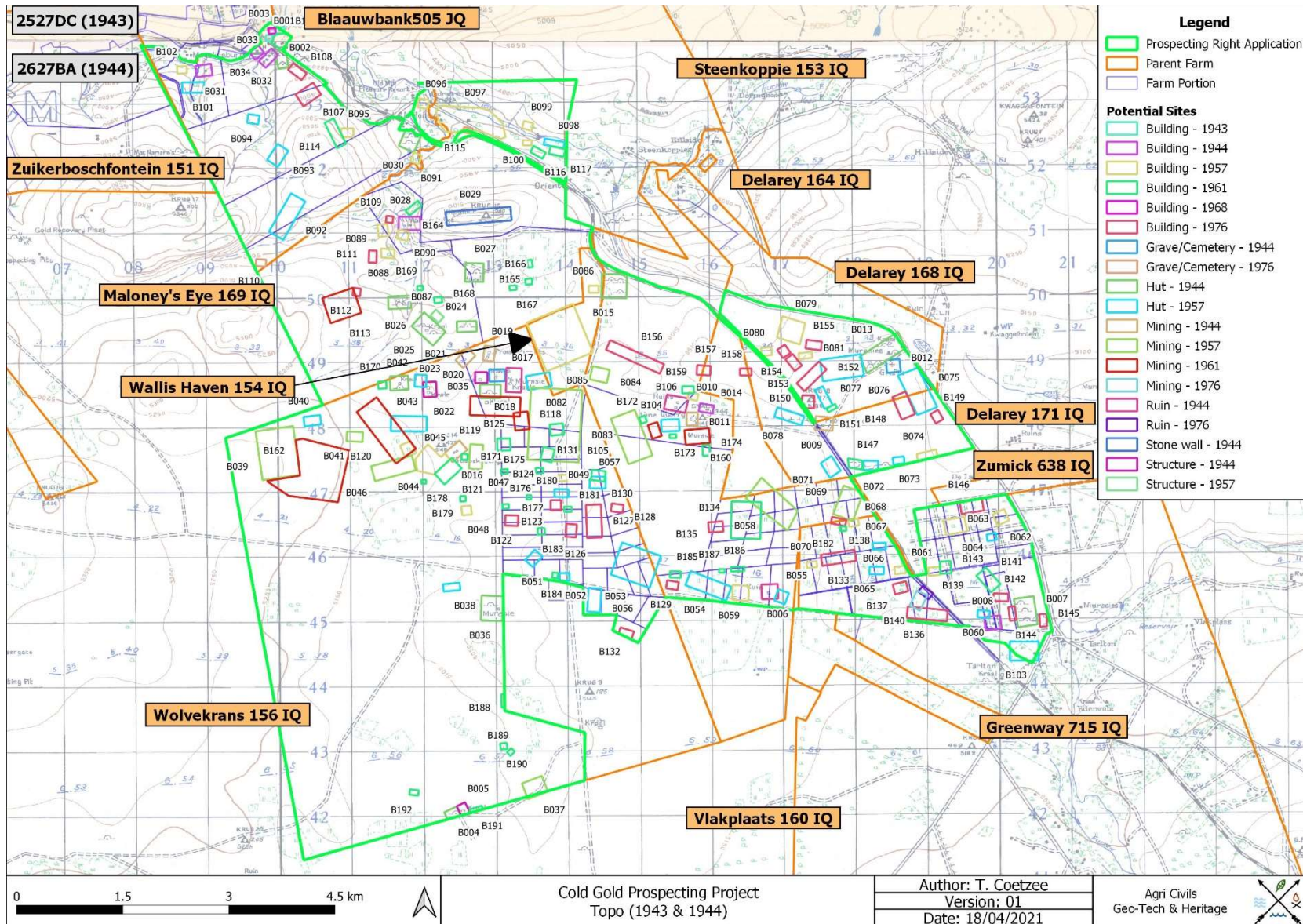


Figure 21: 1943 & 1944 topographical map of the study area.



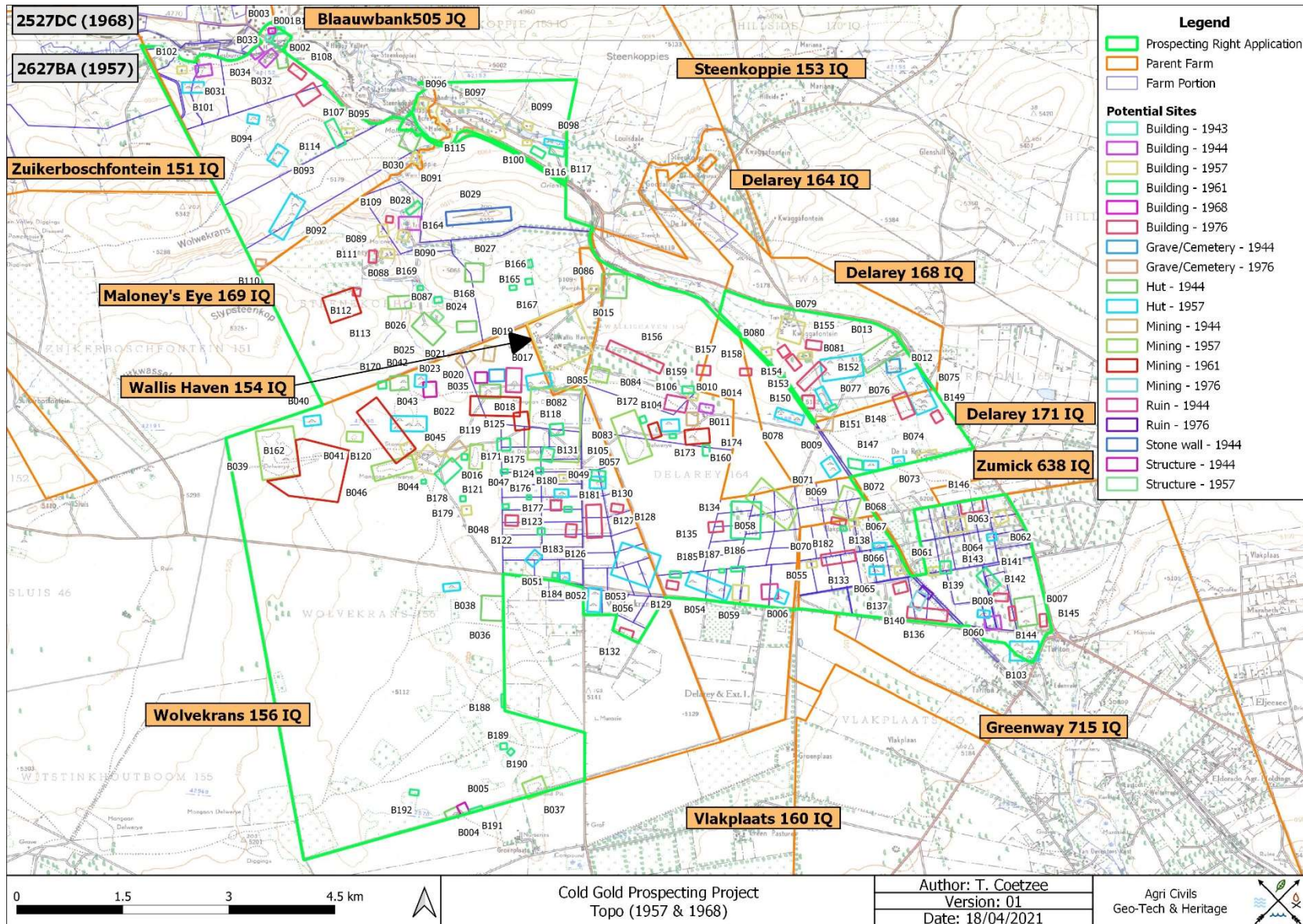


Figure 22: 1957 & 1968 topographical map of the study area.

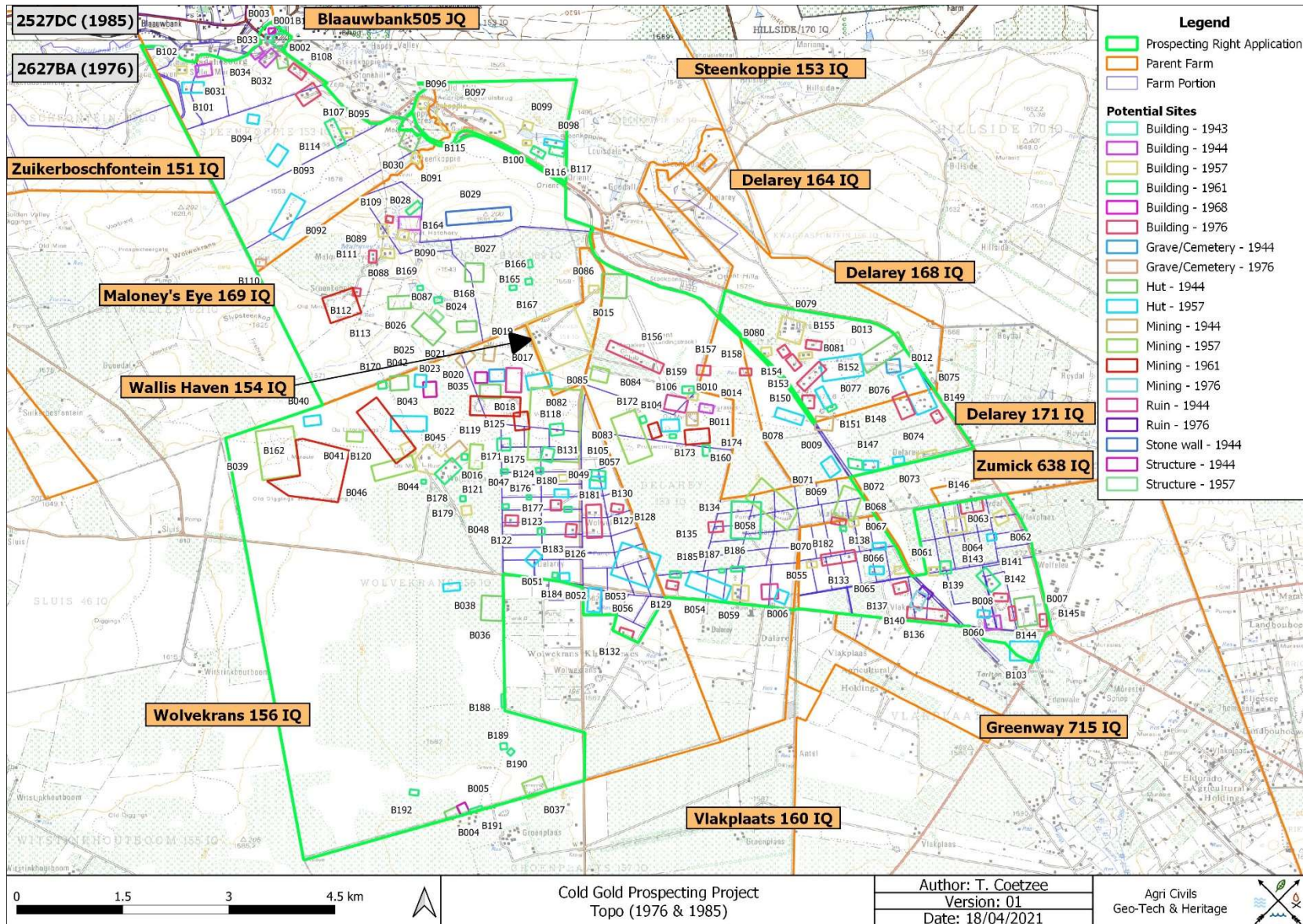


Figure 23: 1976 & 1985 topographical map of the study area.

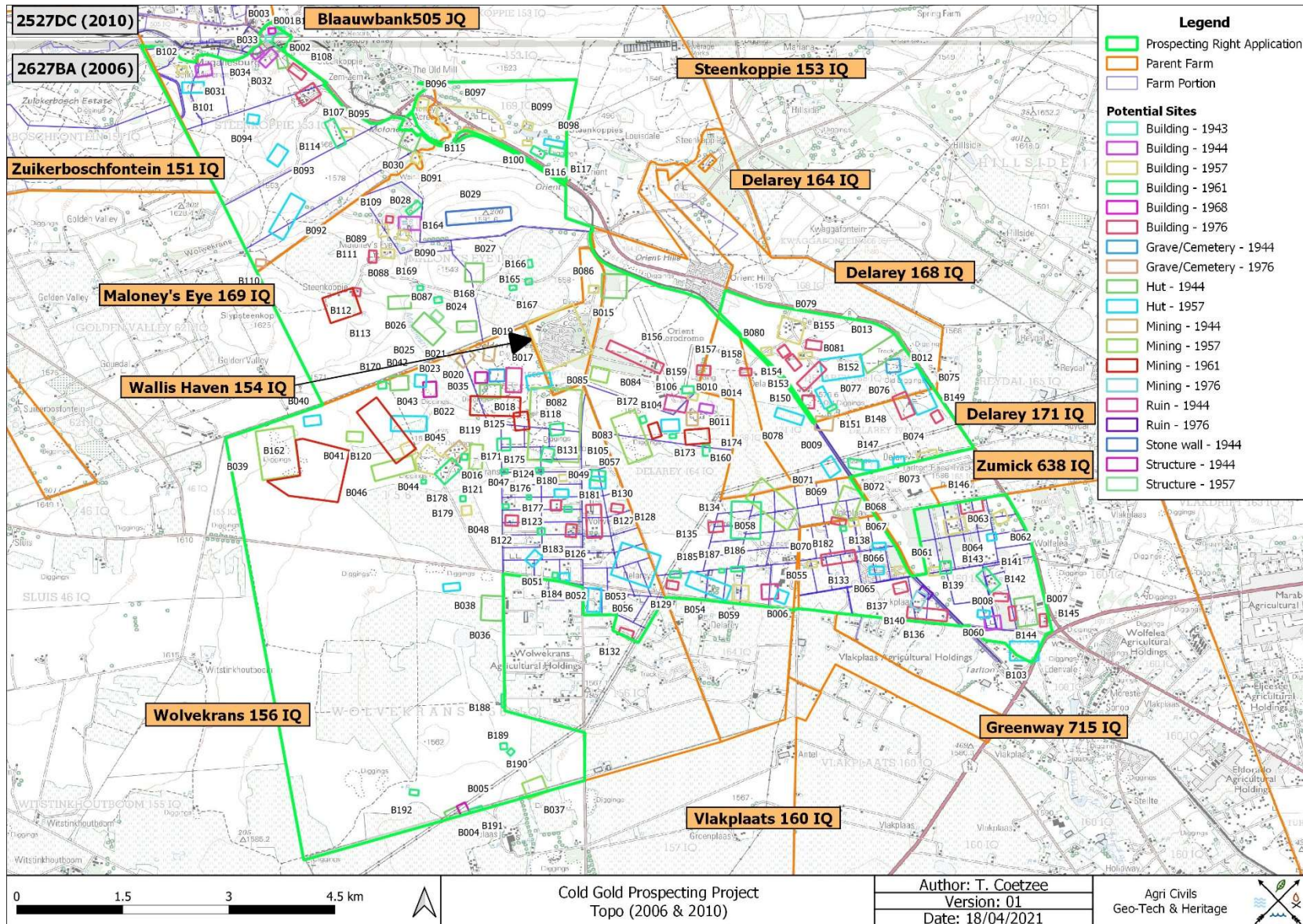


Figure 24: 2006 & 2010 topographical map of the study area.

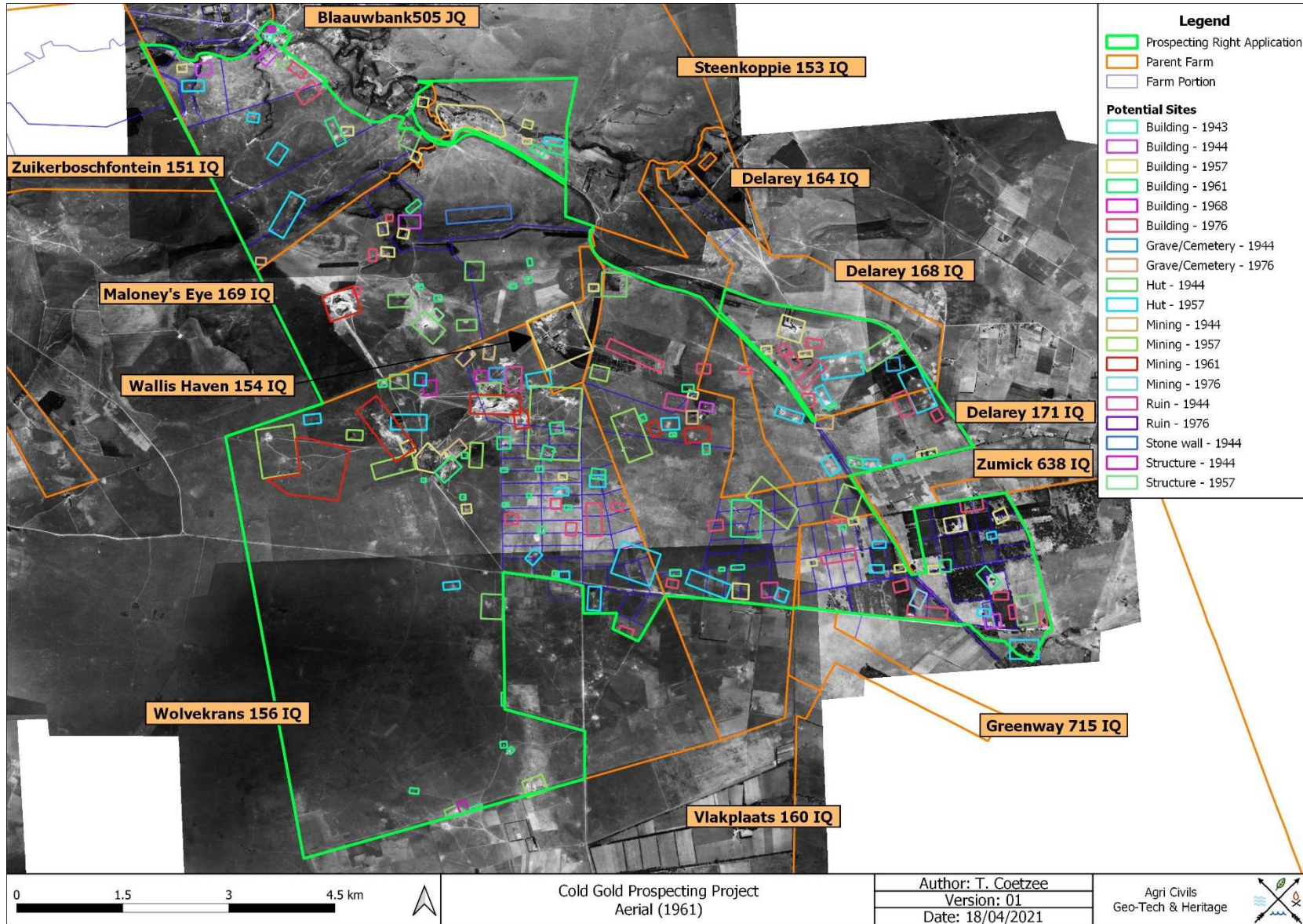


Figure 25: 1961 Aerial image of the study area.