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HERITAGE SCREENER

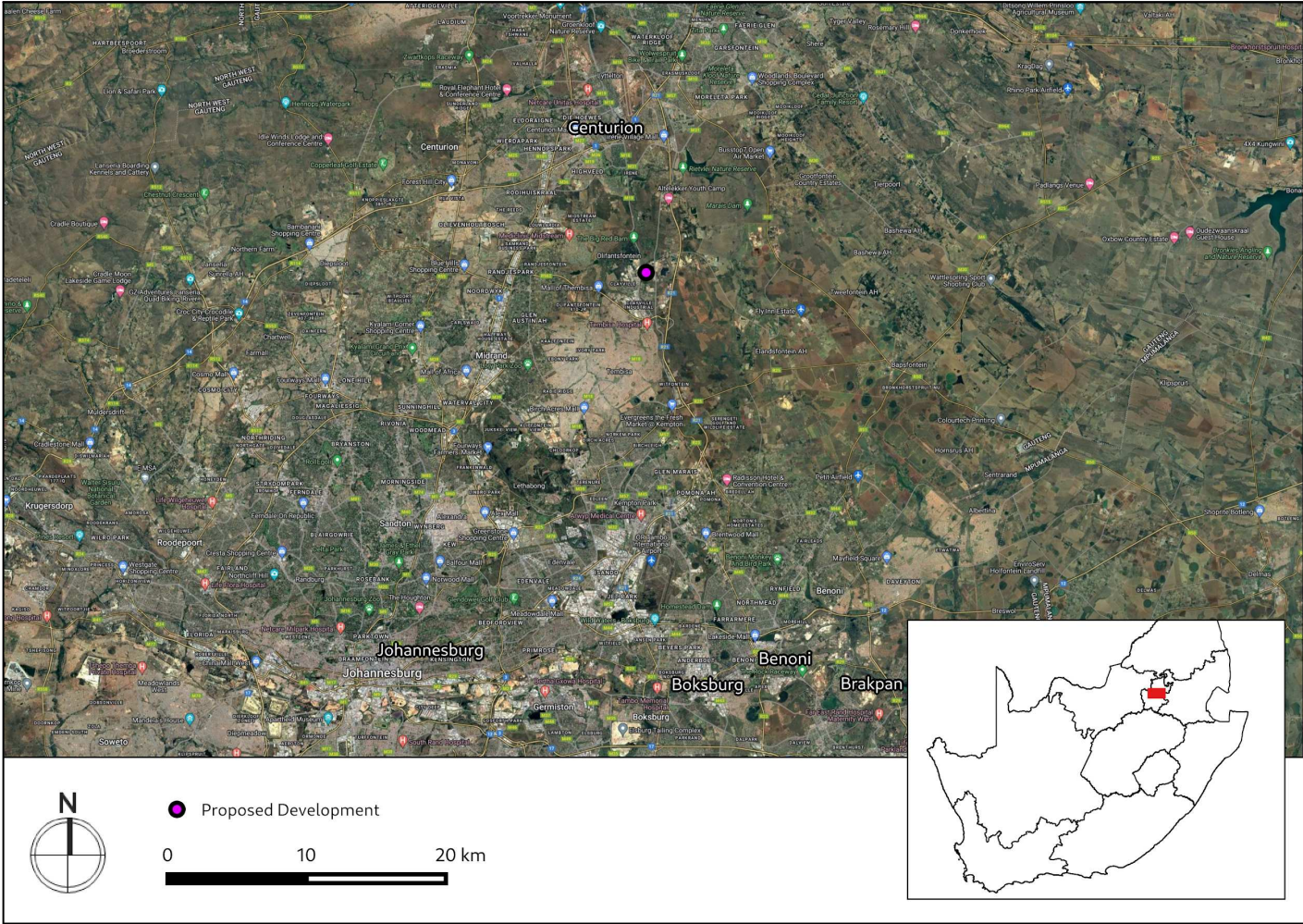
CTS Reference Number:	CTS22_114	
SAHRIS Ref:		
Client:	Savannah	
Date:	January 2023	
Author:	Jenna Lavin	
Title:	Proposed development of Claire PV 3 in Clayville, Gauteng	
Recommendation by CTS Heritage Specialists	RECOMMENDATION: As it is not likely that the proposed development will impact significant heritage resources, it is recommended that no further heritage studies are required for this proposed development.	

Figure 1a. Satellite map indicating the location of the proposed development in the Gauteng Province

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1. Proposed Development Summary

CLAIRE 03 power project constitutes a proposed Photovoltaic (PV) Power generation facility on two portions of land in the Olifantsfontein Area, Gauteng Province. The ~9 4709m² proposed development area is located on Portion 109 of the Olifantsfontein 402, registration division J.R, Province Gauteng (measuring 6,9708 Ha) and Portion 110 of the Olifantsfontein 402, registration division J.R, Province Gauteng (measuring 2,5001 Ha), located in Region B of the City of Ekurhuleni, Tembisa CCC.

CLAIRE 03 power project combined 2 sites will be sufficient to accommodate the forecast 15.00 MW PAC facility or 25,2 GWhr / year output;

The energy will be distributed to the Offtakers via, a 33 Kv indirect connection to an Eskom substation within the Clayville Industrial area, and wheeled through the Eskom network.

The Offtaker sites receiving the wheeled energy;

- Consol Glass – Wadville and,
- Consol Glass – Nigel

(Note Consol Glass is now known as Ardagh Glass Packaging South Africa Proprietary Limited).

The solar plant modules will be mounted on a fixed tilt facing east and west where the solar structure will be ground mounted, allowing for lower land rehabilitation costs; Other infrastructure on the site includes fencing, internal roads and gate, all other infrastructure will be accommodated on adjacent sites.

The energy to be delivered to the Eskom substation will be accommodated through CLAIRE 01 and CLAIRE 02. I.e the energy from CLAIRE 03, will be cabled to CLAIRE 02 which is the immediate adjacent site, and through the CLAIRE 02 onsite substation, the respective energy will be distributed to the Eskom Substation- to clarify there will be not direct connection via CLAIRE 03 to the Eskom substation. CTS Heritage previously completed a desktop assessment for these two other related and adjacent PV Facilities, CLAIRE 01 and CLAIRE 02 (SAHRIS Case IDs 18933 and 18934) for which SAHRA has issued Final Comment.

2. Application References

Name of relevant heritage authority(s)	SAHRA
Name of decision making authority(s)	City of Ekurhuleni

3. Property Information

Latitude / Longitude	25°56'34.76"S 28°14'21.04"E
Erf number / Farm number	Portion 109 of the Olifantsfontein 402, registration division J.R, Province Gauteng (measuring 6,9708 Ha) and Portion 110 of the Olifantsfontein 402,



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	registration division J.R, Province Gauteng (measuring 2,5001 Ha)
Local Municipality	City of Ekurhuleni
District Municipality	City of Ekurhuleni
Province	Gauteng
Current Use	Open, zoned Agricultural
Total Extent	6,9708 Ha and 2,5001 Ha

4. Nature of the Proposed Development

Total Surface Area	8000 m2
Depth of excavation (m)	Pile foundations to max 3 m
Height of development (m)	Max height 5m

5. Category of Development

	Triggers: Section 38(8) of the National Heritage Resources Act
x	Triggers: Section 38(1) of the National Heritage Resources Act
	1. Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.
	2. Construction of a bridge or similar structure exceeding 50m in length.
	3. Any development or activity that will change the character of a site-
x	a) exceeding 5 000m ² in extent
	b) involving three or more existing erven or subdivisions thereof
	c) involving three or more erven or divisions thereof which have been consolidated within the past five years
	4. Rezoning of a site exceeding 10 000m ²
	5. Other (state):

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6. Additional Infrastructure Required for this Development

Other infrastructure on the site includes fencing, internal roads and gate, all other infrastructure will be accommodated on adjacent sites.

7. Mapping (please see Appendix 3 and 4 for a full description of our methodology and map legends)

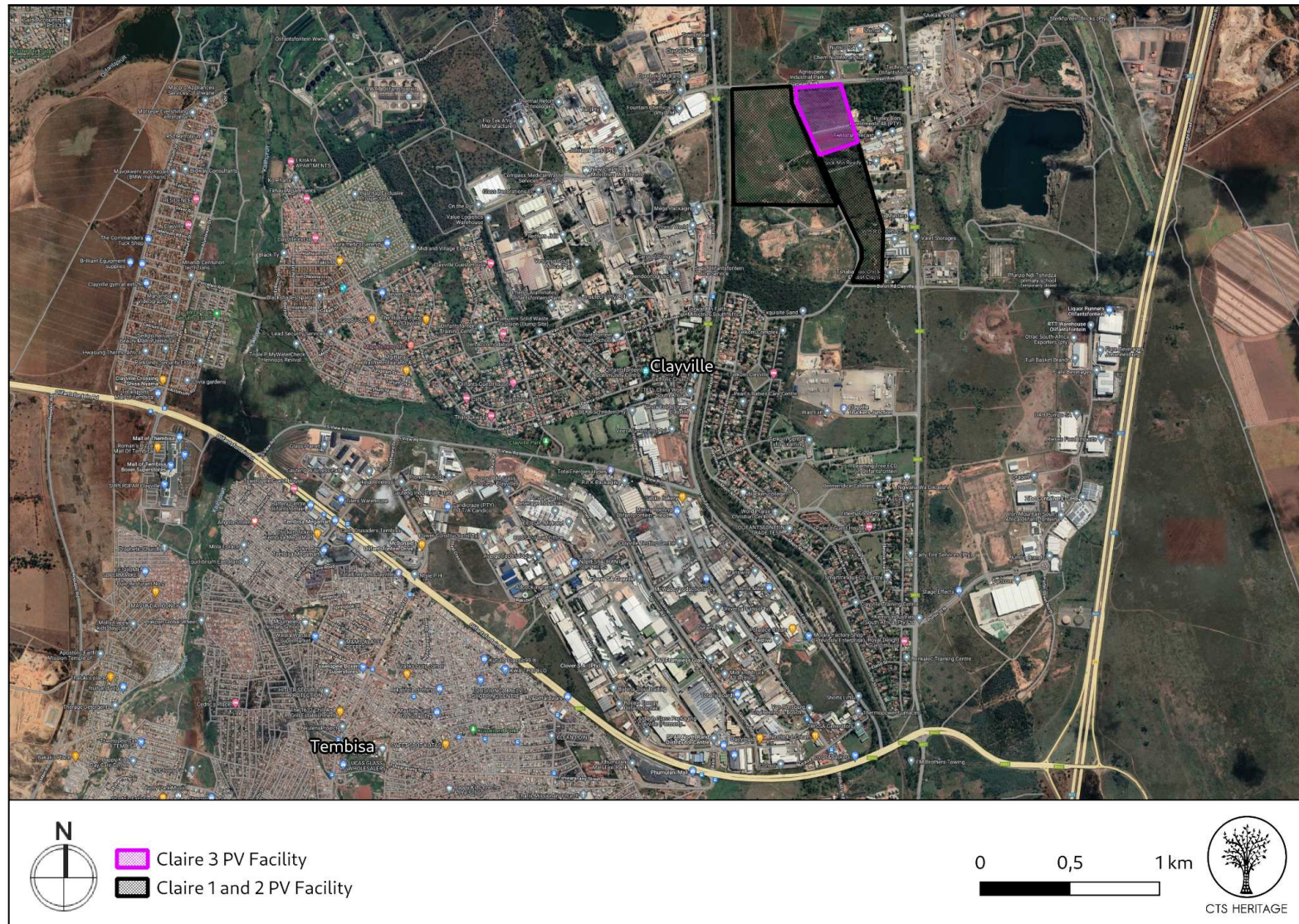


Figure 1b. Overview Map. Satellite image (2022) indicating the proposed development area at closer range.

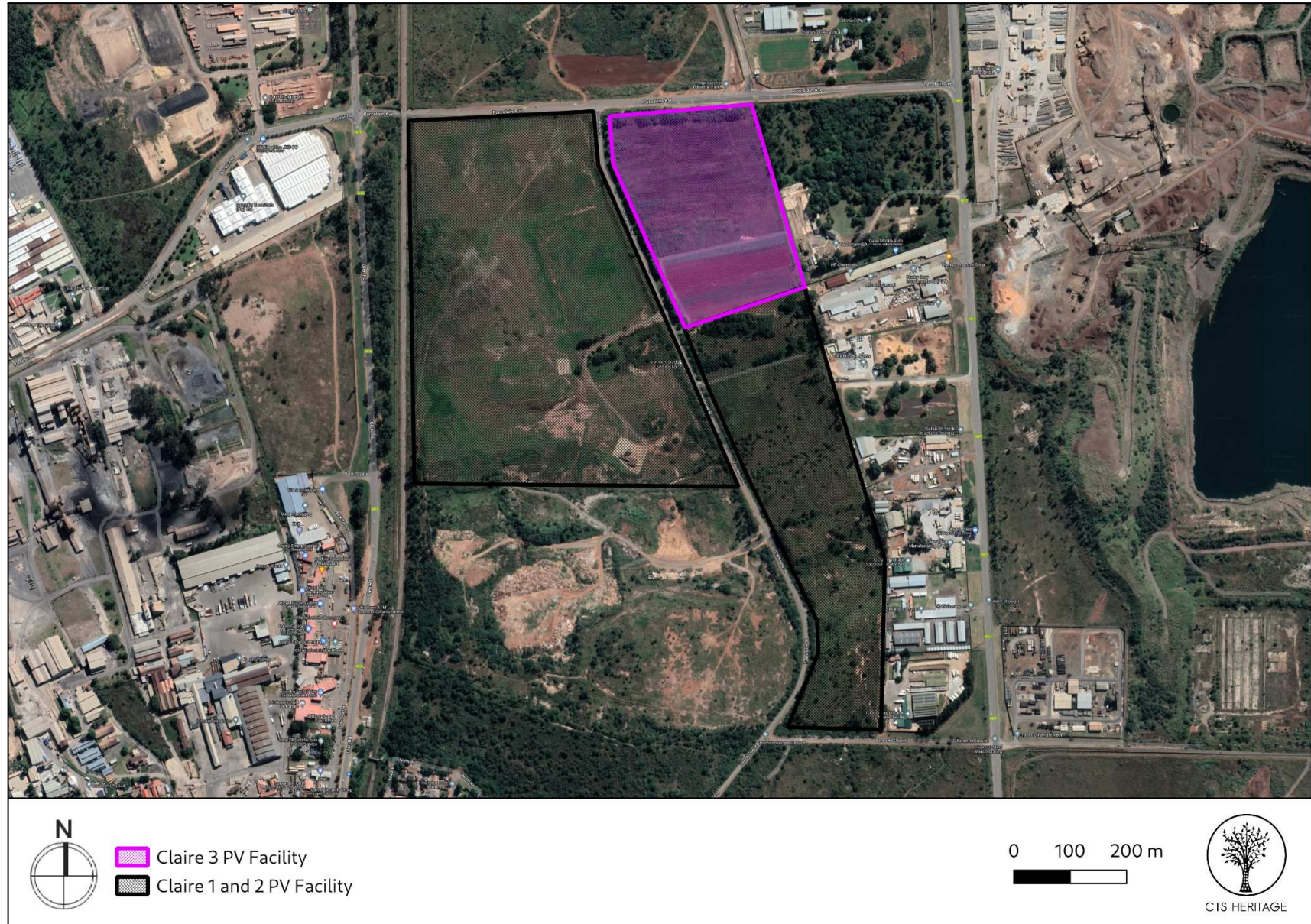


Figure 1c. Overview Map. Satellite image (2022) indicating the proposed development area at closer range.



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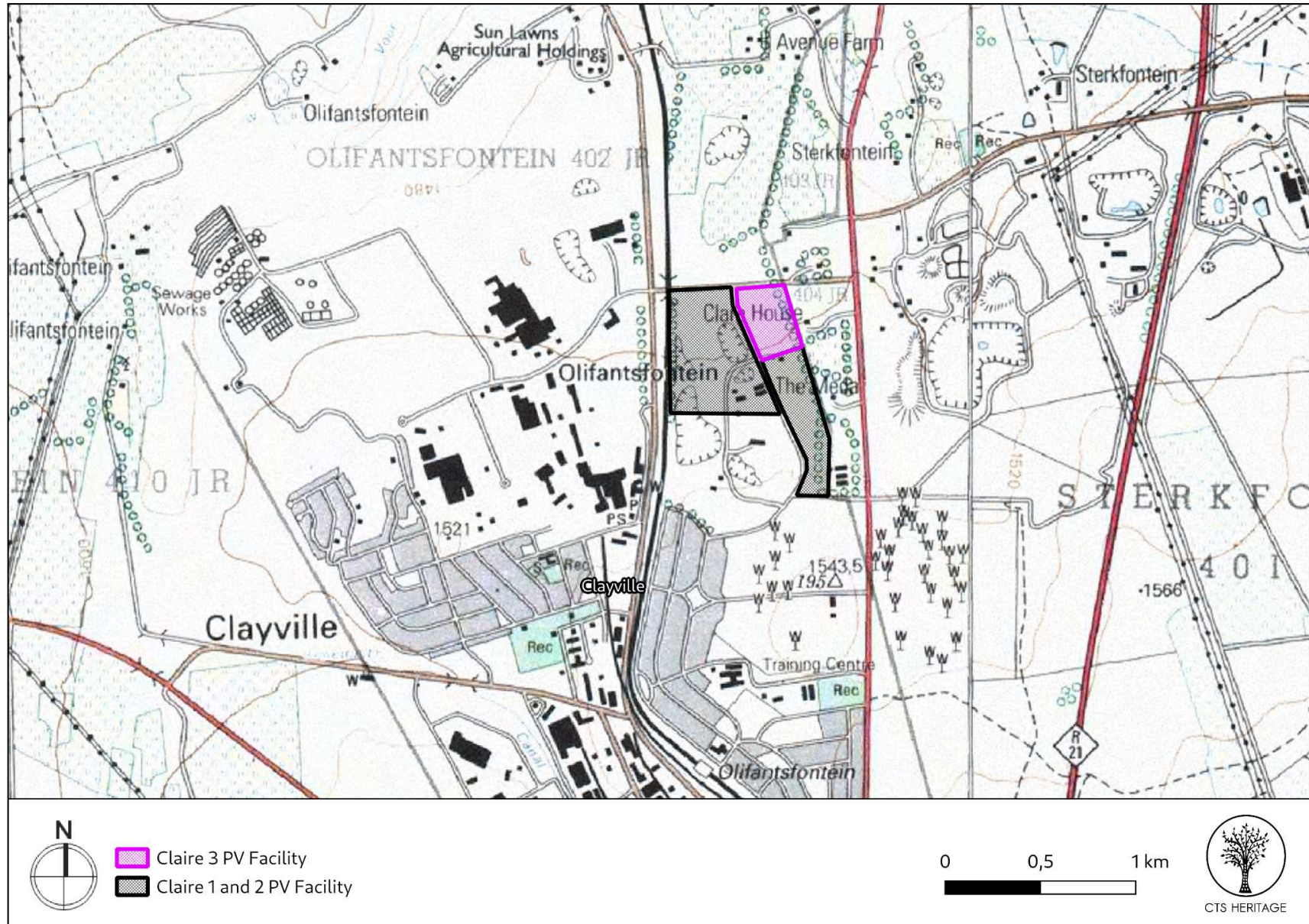


Figure 1d. Overview Map. Extract from the 1:50 000 Topo Map indicating the proposed development area at closer range

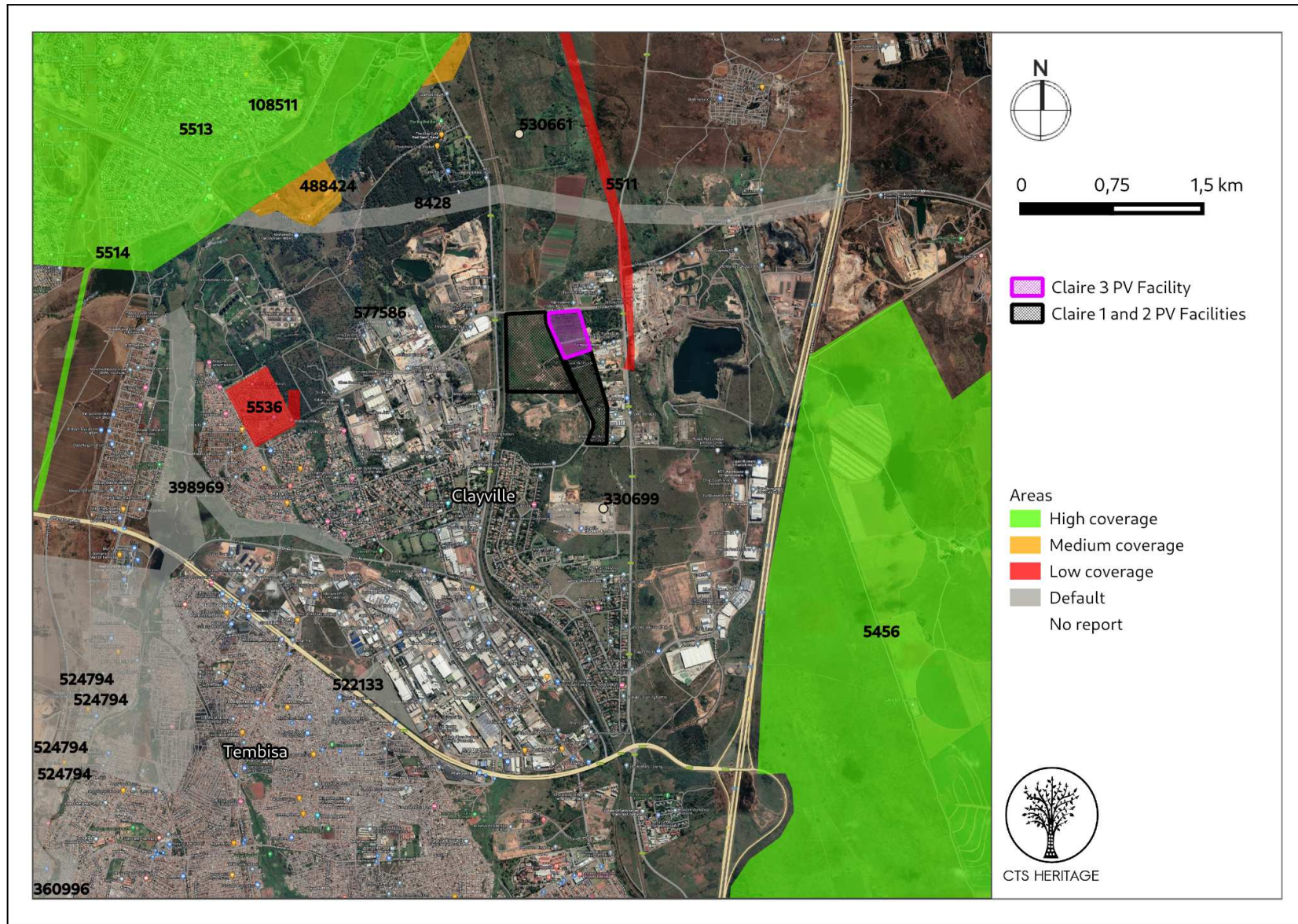


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area within 5km, with SAHRIS NIDS indicated. Please see Appendix 2 for a full reference list.

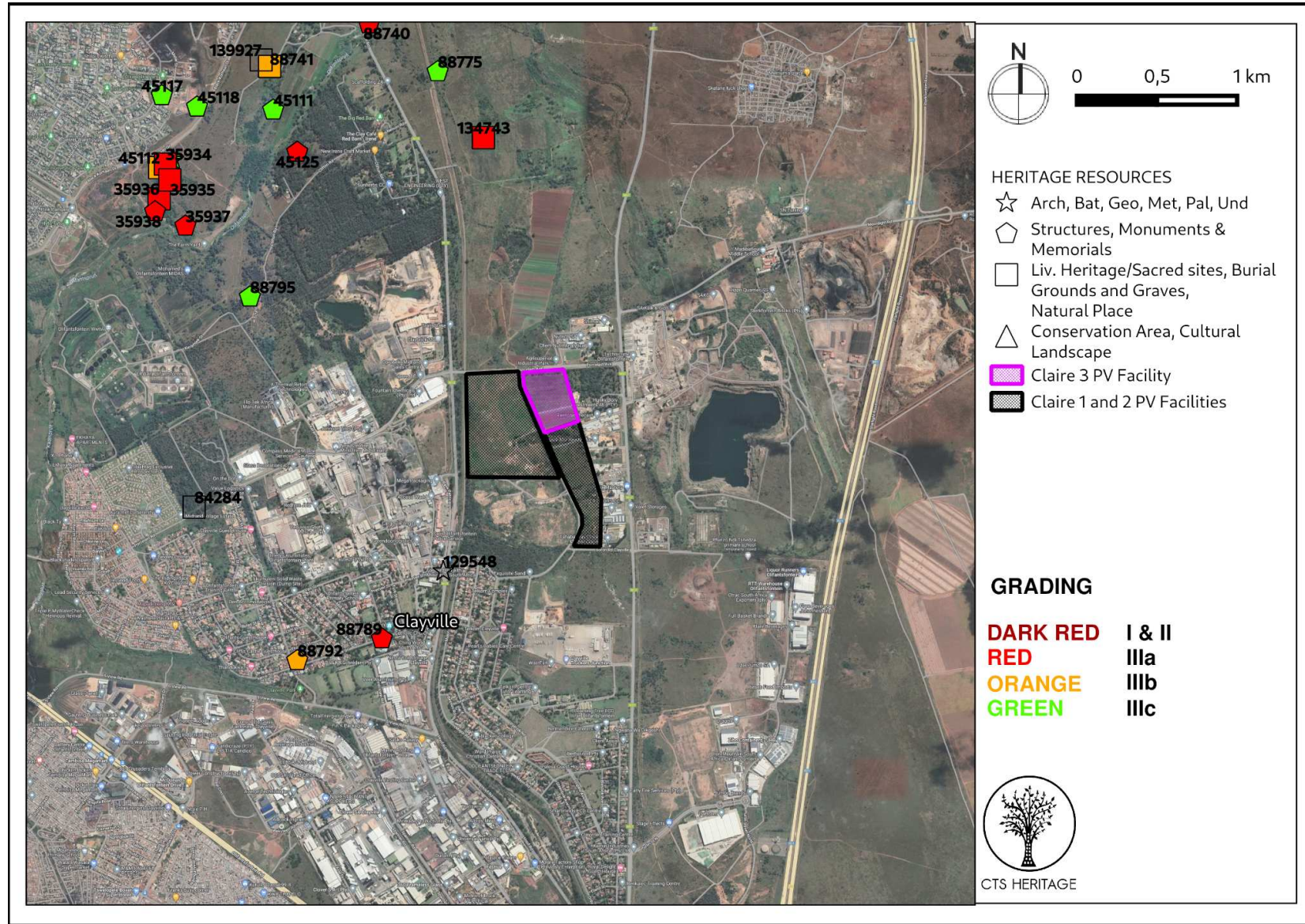


Figure 3. Heritage Resources Map. Heritage Resources previously identified in and near the study area with SAHRIS Site IDs indicated. Please See Appendix 4 for a full description of heritage resource types.

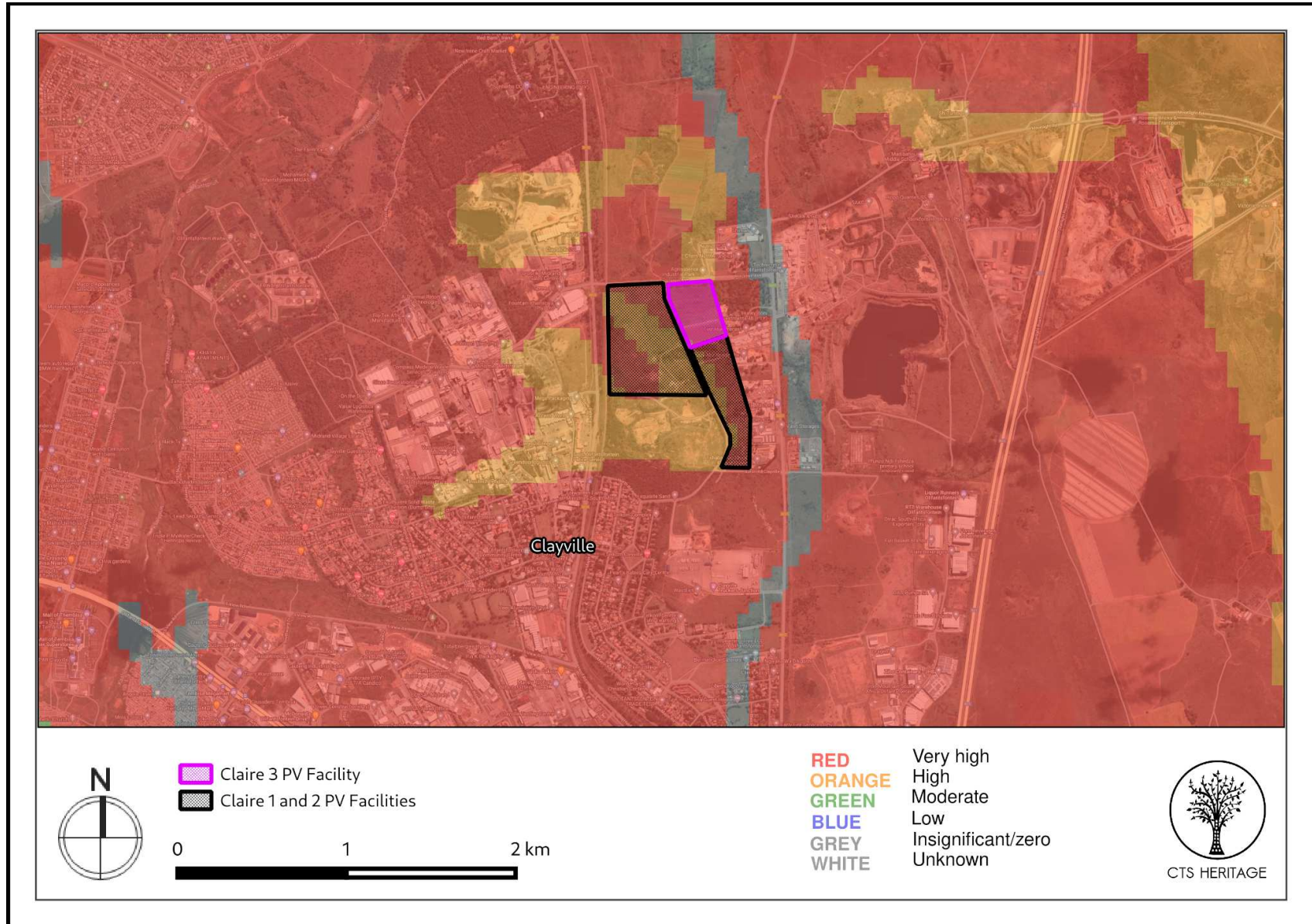


Figure 4a. SAHRIS Palaeosensitivity Map. Indicating moderate fossil sensitivity underlying the study area. Please See Appendix 3 for a full guide to the legend.

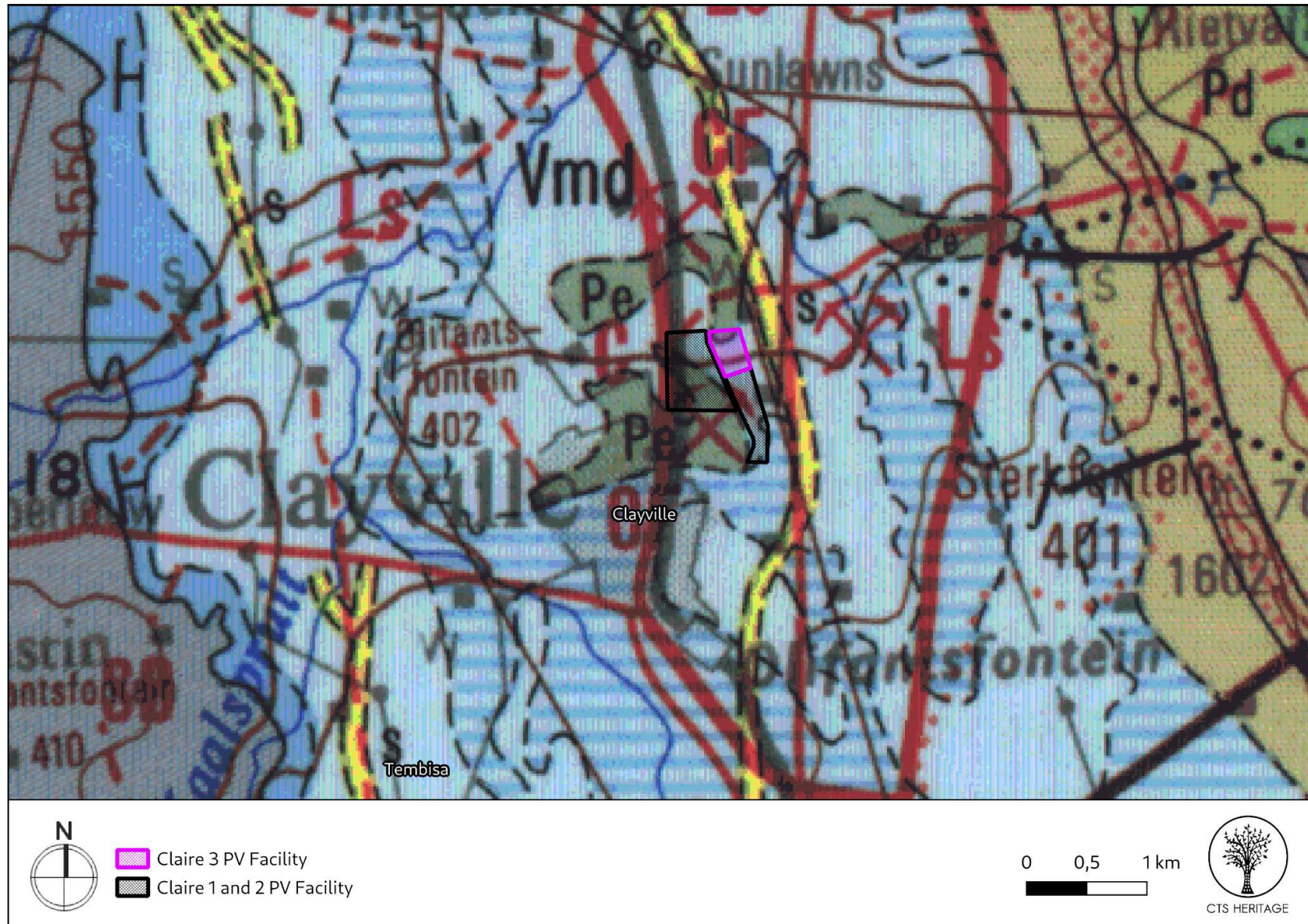


Figure 4b. Geology Map. Extract from the Council of GeoScience Map 2528 for Pretoria indicating that the area proposed for development is underlain by Vmd: Malmani Subgroup and Pe: Ecca Group sediments

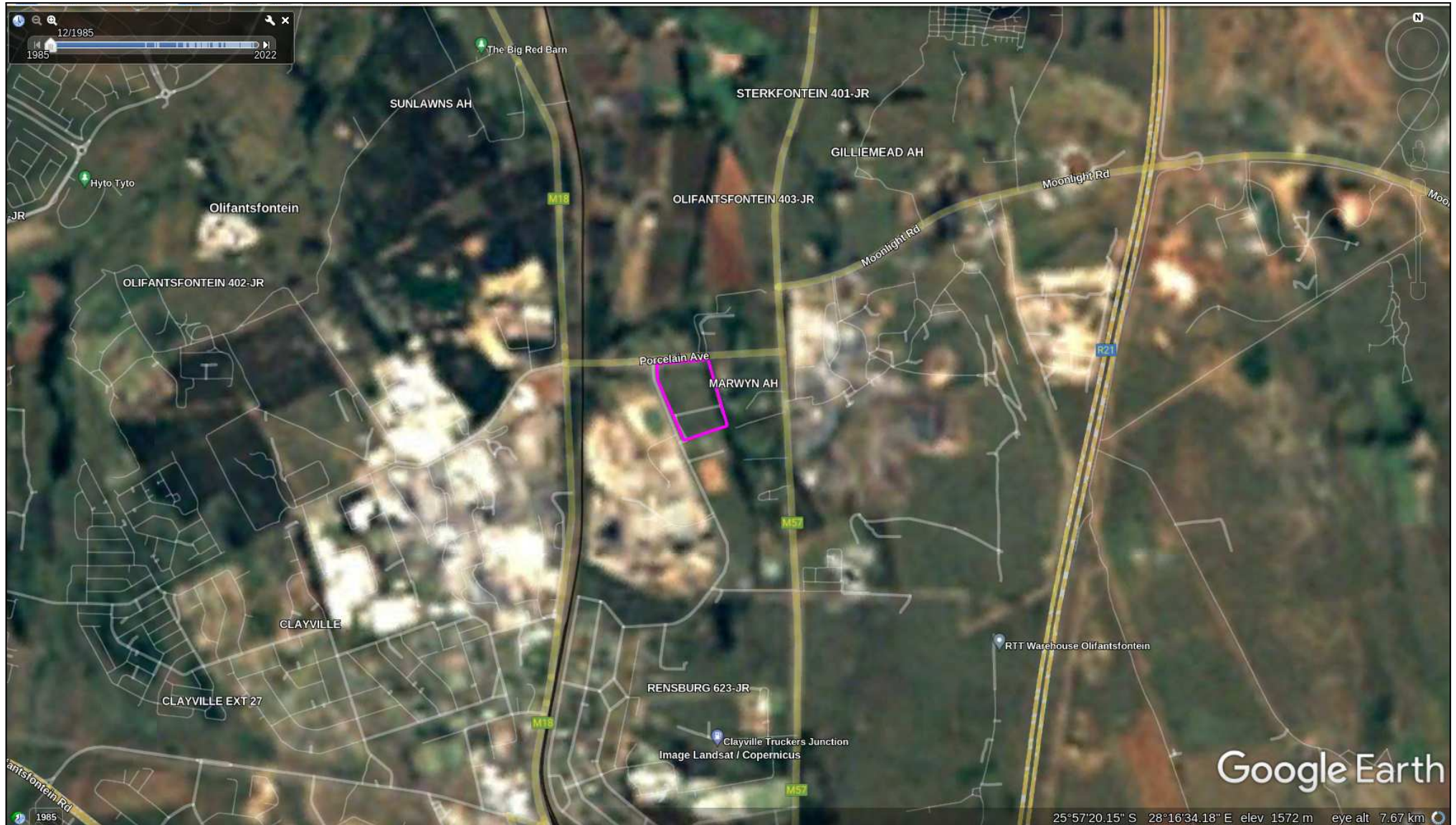


Figure 5a. GoogleEarth. Historic satellite imagery 1985



Figure 5b. GoogleEarth. Historic satellite imagery 2003



Figure 5c. GoogleEarth. Historic satellite imagery 2008



Figure 5d. GoogleEarth. Historic satellite imagery 2013



Figure 5e. GoogleEarth. Historic satellite imagery 2015



Figure 5f. GoogleEarth. Historic satellite imagery 2018



8. Heritage statement and character of the area

This application is for the proposed development of a PV facility on erven located in the Clayville Industrial Area. CTS Heritage previously completed a desktop assessment for two other related and adjacent PV Facilities (SAHRIS Case IDs 18933 and 18934) for which SAHRA has issued Final Comment. Clayville is also known as Olifantsfontein. While Olifantsfontein is currently part of the Ekurhuleni Metropolitan Municipality, it has close historical ties with Midrand in the neighbouring City of Johannesburg Metropolitan Municipality. In their Phase 2 assessment for a nearby property, Kusel et al (2017) completed a detailed history of the area which is summarised below.

The area proposed for development is located in a portion of the Highveld that has been impacted by the actions of the Kaalspruit, Olifantspruit, Jukskei River, Modderfonteinspruit and numerous smaller watercourses. Evidence of Early, Middle and Later Stone Age people is located across the broader Highveld indicating early occupation of the area. Precolonial farming communities moved into the area between AD350 and AD600 as is evidenced by Iron Age stone-walled settlements across the area. Colonial farmers moved into the area in the mid-19th Century.

Olifantsfontein was established in the early 1840s by Frederik Andries Strydom as farmland. It was only given the name *Clayville* in 1940. It was believed that the railway between Pretoria in the north and the Witwatersrand in the south was going to pass through Halfway House (Midrand) but when it was built, it passed through Olifantsfontein instead of Midrand and when the Olifantsfontein Railway Station was opened in 1892, it was also treated as a station serving Midrand. When the Johannesburg-Pretoria railway line was surveyed in the early 1890s, extensive limestone and fire clay deposits were discovered east of the Strydom farmstead on Olifantsfontein. After the war Cullinan (of the Diamonds) started a pottery factory in Olifantsfontein. It was not very successful and it closed down in 1914. In 1926 the business was revived when the Ceramic Studio was established, which became especially famous for the production of tile murals for decorating many government buildings erected in the 1930s, including the Halfway House post-office. The growth of Conrand and the Ceramic Studio led to residential and commercial developments in Olifantsfontein. Housing facilities for the brick-making and pottery companies were provided around 1930. Some of the original single quarters for unmarried men were later used as office space. Whereas most of the original houses were demolished in the 1980s, a few cottages, built from locally-made brick were still extant in 1998 (Van Schalkwyk 2016). The development subsequently became known as Clayville. The rich clay deposits in the area are evidenced by the various brick-making facilities surrounding the development area including Corobrick, Technicrete, Johnson Tiles, Sterkfontein Bricks and Rosema Bricks.

A number of heritage impact assessments have been completed in the Clayville/Olifantsfontein area (Figure 2). In his assessment completed approximately 2km south west of the area proposed for development, Van der Walt (SAHRIS NID 523270, 2017) identified no archaeological resources but did note the possibility of unmarked burials in the area. In an assessment completed by Van Schalkwyk in 2008 (SAHRIS NID 8428), he noted that “A number of sites dating to the historic period are known to exist in the larger region. These range from Anglo Boer War sites to farmsteads and cemeteries. However, none of these are located close to the route of the proposed road. Furthermore, no sites, features or objects of cultural significance were identified in the study area during the survey.”

As is evident from the GoogleEarth historic satellite imagery (Figures 5a to h), the areas proposed for development have, until recently, been extensively disturbed through agricultural activity. Despite the known heritage resources in proximity to the development area, due to the extensive disturbance of the properties it is very unlikely that any in situ, significant archaeological resources or human remains are located within the areas proposed for development.

The area proposed for development is underlain by sediments of very high and high palaeontological sensitivity according to the SAHRIS Palaeosensitivity Map (Figure 4). According to the extract from the Council of GeoScience Map 2528 for Pretoria, these sediments belong to the Malmani Subgroup and the Eccia Group. Butler (2020 SAHRIS NID 539504) notes that “Groenewald and Groenewald 2014 allocated a high Sensitivity to the Malmani Subgroup. He noted that additionally to the stromatolites, potentially fossiliferous Late Caenozoic Cave breccias within the “Transvaal dolomite” outcrop area could be present. These breccias are not individually mapped on geological maps.” Site specific assessment completed by Butler (2020) identified no fossils. Based on the highly disturbed nature of the development area as a result of previous agricultural activities, it is unlikely that the proposed



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development, with maximum excavations of 2m, will negatively impact on significant palaeontological heritage which is likely to have been previously excavated. However, as it remains possible (although improbable) that fossils will be impacted, it is recommended that the attached Chance Fossil Finds Procedure is implemented during excavation activities.

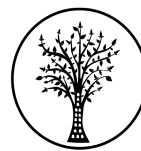
RECOMMENDATION:

As it is not likely that the proposed development will impact significant heritage resources, it is recommended that no further heritage studies are required for this proposed development. It is recommended that the Chance Fossil Finds Procedure is implemented during excavation activities.

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APPENDIX 1

List of heritage resources within the 10km Inclusion Zone from SAHRIS

Site ID	Site no	Full Site Name	Site Type	Grading
88777	MIDR024	Midrand 024	Archaeological	Grade IIIc
88789	MIDR036	Midrand 036	Building	Grade IIIa
88775	MIDR023	Midrand 023	Structures	Grade IIIc
88792	MIDR039	Midrand 039	Building	Grade IIIb
88790	MIDR037	Midrand 037	Building	Grade IIIa
88740	MIDR006	Midrand 006	Transport infrastructure	Grade IIIa
88741	MIDR007	Midrand 007	Burial Grounds & Graves	Grade IIIb
88743	MIDR009	Midrand 009	Structures	Grade IIIb
88744	MIDR010	Midrand 010	Burial Grounds & Graves	Grade IIIb
88745	MIDR011	Midrand 011	Building	Grade IIIc
88746	MIDR012	Midrand 012	Burial Grounds & Graves	Grade IIIb
88747	MIDR013	Midrand 013	Burial Grounds & Graves	Grade IIIb
35936	MDSR001	Midstream Ridge 001	Place	Grade IIIa
35937	MDSR007	Midstream Ridge 007	Building	Grade IIIa
35938	MDSR002	Midstream Ridge 002	Structures	Grade IIIa
35939	MDSR008	Midstream Ridge 008	Structures	Grade IIIa

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45109	OFFNT01	Olifantsfontein 01	Transport infrastructure	Grade IIIa
45110	OFFNT02	Olifantsfontein 02	Burial Grounds & Graves	Grade IIIa
45111	OFFNT03	Olifantsfontein 03	Structures	Grade IIIc
45112	OFFNT05	Olifantsfontein 05	Burial Grounds & Graves	Grade IIIa
45113	OFFNT06	Olifantsfontein 06	Structures	Grade IIIa
45114	OFFNT07	Olifantsfontein 07	Burial Grounds & Graves	Grade IIIa
45115	OFFNT08	Olifantsfontein 08	Burial Grounds & Graves	Grade IIIa
45117	OFFNT010	Olifantsfontein 010	Structures	Grade IIIc
45118	OFFNT011	Olifantsfontein 011	Structures	Grade IIIc
45125	OFFNT09	Olifantsfontein 09	Structures	Grade IIIb
35934	MDSR005	Midstream Ridge 005	Burial Grounds & Graves	Grade IIIa
35935	MDSR006	Midstream Ridge 006	Burial Grounds & Graves	Grade IIIa
105245	NZASM_SL_021	IMR Bridge	Bridge	
129645	Strawberry Farm Graves	Strawberry Farm Graves Exhumation & Relocation	Burial Grounds & Graves	Grade IIIa
129548	Sunlawns Homestead	Sunlawns Homestead	Settlement	
134743	Strawberry Farm	Strawberry Farm Development Grave Site	Burial Grounds & Graves	
84284	Olifantsfontein	Olifantsfontein Black Concentration Camp possible graveyard location	Burial Grounds & Graves	
139731	SFN-001	Sterkfontein 401JR	Structures	Grade IIIb

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139732	SFN-002	Sterkfontein 401JR	Stone walling	Grade IIIb
139927	Botha Farm Graves	Botha Farm Graves on Portion 40 & the Remainder of Portion 9 of Olifantsfontein 410JR	Burial Grounds & Graves	
88795	2528CC100	Themeda House	Building	Grade IIIc

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Reference List

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
108511	AIA Phase 1	Udo Kusel	03/04/2012	Cultural Heritage Resources Impact Assessment of the proposed extension of Midrand Estate Portions 35, 39, a Portion of Portion 48 and Portion 128, remainder of Portion 34 and the remainder of the farm Olifantsfontein 410 JR, Ekurhuleni Gauteng
5456	AIA Phase 1	Johnny Van Schalkwyk	07/02/2007	Heritage Impact Assessment for the Planned Sterkfontein (Junction 21) Development, Pretoria Municipal District, Gauteng Province
5511	AIA Phase 1	Julius CC Pistorius	01/05/2000	The Archaeological Potential of the Proposed Trajectory of the K105 Rd Scoping Report: A Portion of Approximately 8.4 km of Route K105 Between the N1-21 Ands Clayville
5513	AIA Phase 1	Johnny Van Schalkwyk	01/04/2002	A Survey of Cultural Resources on the Farm Olifantsfontein, Midrand Municipality Area, Gauteng
5514	AIA Phase 1	Johnny Van Schalkwyk	01/01/2003	Heritage Assessment Scoping for the Proposed K111 Road Route Centurion (N1) to Olifantsfontein Road (K27)
5536	AIA Phase 1	Johnny Van Schalkwyk	05/05/2007	Heritage Impact Assessment: Clayville
8428	HIA Phase 1	Johnny Van Schalkwyk	01/05/2008	Heritage Survey Report for the Development of Road K220 in the Clayville/Olifantsfontein Area Gauteng
488424	AIA Phase 2	Udo Kusel	25/01/2018	PHASE TWO ARCHAEOLOGICAL ASSESSMENT: THE REMAINDER OF PORTION 46 OF THE FARM OLIFANTSFONTEIN 410 JR CENTURION GAUTENG PROVINCE
524749	HIA Phase 1	Jaco van der Walt	01/05/2017	Heritage report for the proposed Clayville bulk services and mixed use development

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APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DARD	Department of Agriculture and Rural Development (KwaZulu-Natal)
DEA	Department of Environmental Affairs (National)
DEADP	Department of Environmental Affairs and Development Planning (Western Cape)
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism (Eastern Cape)
DEDECT	Department of Economic Development, Environment, Conservation and Tourism (North West)
DEDT	Department of Economic Development and Tourism (Mpumalanga)
DEDTEA	Department of economic Development, Tourism and Environmental Affairs (Free State)
DENC	Department of Environment and Nature Conservation (Northern Cape)
DMR	Department of Mineral Resources (National)
GDARD	Gauteng Department of Agriculture and Rural Development (Gauteng)
HIA	Heritage Impact Assessment
LEDET	Department of Economic Development, Environment and Tourism (Limpopo)
MPRDA	Mineral and Petroleum Resources Development Act, no 28 of 2002
NEMA	National Environmental Management Act, no 107 of 1998
NHRA	National Heritage Resources Act, no 25 of 1999
PIA	Palaeontological Impact Assessment
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
VIA	Visual Impact Assessment

Full guide to Palaeosensitivity Map legend

RED:	VERY HIGH - field assessment and protocol for finds is required
ORANGE/YELLOW:	HIGH - desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN:	MODERATE - desktop study is required
BLUE/PURPLE:	LOW - no palaeontological studies are required however a protocol for chance finds is required
GREY:	INSIGNIFICANT/ZERO - no palaeontological studies are required
WHITE/CLEAR:	UNKNOWN - these areas will require a minimum of a desktop study.

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APPENDIX 4 - Methodology

The Heritage Screener summarises the heritage impact assessments and studies previously undertaken within the area of the proposed development and its surroundings. Heritage resources identified in these reports are assessed by our team during the screening process.

The heritage resources will be described both in terms of **type**:

- Group 1: Archaeological, Underwater, Palaeontological and Geological sites, Meteorites, and Battlefields
- Group 2: Structures, Monuments and Memorials
- Group 3: Burial Grounds and Graves, Living Heritage, Sacred and Natural sites
- Group 4: Cultural Landscapes, Conservation Areas and Scenic routes

and **significance** (Grade I, II, IIIa, b or c, ungraded), as determined by the author of the original heritage impact assessment report or by formal grading and/or protection by the heritage authorities.

Sites identified and mapped during research projects will also be considered.

DETERMINATION OF THE EXTENT OF THE INCLUSION ZONE TO BE TAKEN INTO CONSIDERATION

The extent of the inclusion zone to be considered for the Heritage Screener will be determined by CTS based on:

- the size of the development,
- the number and outcome of previous surveys existing in the area
- the potential cumulative impact of the application.

The inclusion zone will be considered as the region within a maximum distance of 50 km from the boundary of the proposed development.

DETERMINATION OF THE PALAEONTOLOGICAL SENSITIVITY

The possible impact of the proposed development on palaeontological resources is gauged by:

- reviewing the fossil sensitivity maps available on the South African Heritage Resources Information System (SAHRIS)
- considering the nature of the proposed development
- when available, taking information provided by the applicant related to the geological background of the area into account

DETERMINATION OF THE COVERAGE RATING ASCRIBED TO A REPORT POLYGON

Each report assessed for the compilation of the Heritage Screener is colour-coded according to the level of coverage accomplished. The extent of the surveyed coverage is labeled in three categories, namely low, medium and high. In most instances the extent of the map corresponds to the extent of the development for which the specific report was undertaken.

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Low coverage will be used for:

- desktop studies where no field assessment of the area was undertaken;
- reports where the sites are listed and described but no GPS coordinates were provided.
- older reports with GPS coordinates with low accuracy ratings;
- reports where the entire property was mapped, but only a small/limited area was surveyed.
- uploads on the National Inventory which are not properly mapped.

Medium coverage will be used for

- reports for which a field survey was undertaken but the area was not extensively covered. This may apply to instances where some impediments did not allow for full coverage such as thick vegetation, etc.
- reports for which the entire property was mapped, but only a specific area was surveyed thoroughly. This is differentiated from low ratings listed above when these surveys cover up to around 50% of the property.

High coverage will be used for

- reports where the area highlighted in the map was extensively surveyed as shown by the GPS track coordinates. This category will also apply to permit reports.

RECOMMENDATION GUIDE

The Heritage Screener includes a set of recommendations to the applicant based on whether an impact on heritage resources is anticipated. One of three possible recommendations is formulated:

(1) The heritage resources in the area proposed for development are sufficiently recorded - The surveys undertaken in the area adequately captured the heritage resources. There are no known sites which require mitigation or management plans. No further heritage work is recommended for the proposed development.

This recommendation is made when:

- enough work has been undertaken in the area
- it is the professional opinion of CTS that the area has already been assessed adequately from a heritage perspective for the type of development proposed

(2) The heritage resources and the area proposed for development are only partially recorded - The surveys undertaken in the area have not adequately captured the heritage resources and/or there are sites which require mitigation or management plans. Further specific heritage work is recommended for the proposed development.

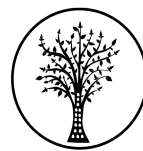
This recommendation is made in instances in which there are already some studies undertaken in the area and/or in the adjacent area for the proposed development. Further studies in a limited HIA may include:

- improvement on some components of the heritage assessments already undertaken, for instance with a renewed field survey and/or with a specific specialist for the type of heritage resources expected in the area
- compilation of a report for a component of a heritage impact assessment not already undertaken in the area

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- undertaking mitigation measures requested in previous assessments/records of decision.

(3) The heritage resources within the area proposed for the development have not been adequately surveyed yet - Few or no surveys have been undertaken in the area proposed for development. A full Heritage Impact Assessment with a detailed field component is recommended for the proposed development.

Note:

The responsibility for generating a response detailing the requirements for the development lies with the heritage authority. However, since the methodology utilised for the compilation of the Heritage Screeners is thorough and consistent, contradictory outcomes to the recommendations made by CTS should rarely occur. Should a discrepancy arise, CTS will immediately take up the matter with the heritage authority to clarify the dispute.

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