PALAEONTOLOGICAL SPECIALIST STUDY

In terms of Section 38(8) of the NHRA for a

Proposed development of the Sendawo PV BESS and OHL near Vryburg in the North West Province

Prepared by

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And Dr Kimberley Chapelle

In Association with

WSP

October 2022

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EXECUTIVE SUMMARY

The proposed Sendawo BESS facility is located within the Vryburg Renewable Energy Development Zone (REDZ) 6, and the proposed 132 kV OHPL is located within the Northern Strategic Transmission Corridor. The proposed BESS facility will be located off the N18, on Portion 1 of the Farm Edinburgh No 735, approximately 5 km south of the of Vryburg in the North West Province. The Sendawo Battery Energy Storage System (BESS) project entails the construction and operation of an up to 153 MW/612MWh BESS facility and associated infrastructure, at the authorised Sendawo Solar Energy Facility (SEF) Substation near Vryburg in the North West Province.

Based on published literature and previous field assessments within the immediate area, it is considered that the impact of the development will be **HIGH**. This is based on the presence of dolomite in the Boomplaas and Clearwater dominated areas, and the research importance of that rock type and its proclivity for hosting caves. The quaternary calcrete deposits overlie the Archaean rocks in the central area of the proposed development to an unknown depth and are in themselves considered of high sensitivity due to their potential in preserving a wide range of vertebrate and invertebrate trace fossils and archaeological remains.

Large areas of the proposed development are located on highly sensitive rock types (Boomplaas, Clearwater and Quaternary deposits) that may preserve important palaeontological evidence. The abundance, preservation and exposure of the palaeontological material is as yet unknown, especially in areas that have a mixture of lithologies present (e.g., Clearwater Formation).

With regards to the planned 'alternative routes' for the 132 kV powerlines, both extend partially over Boomplaas dolomites there is no preferred alternative from a palaeontological perspective. The selected route should be subject to a walkdown of the final pylon footings to inspect sensitive geology for fossil material. The eastern end of the powerlines extends largely over Vryburg Formation andesitic lavas, which are of low sensitivity. Given the potential for mixed lithologies in this area, a protocol for fossil reporting by the ECO should be implemented. Should important fossil material be found during excavations, the attached Fossil Finds Procedure must be implemented (Appendix 1).

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1. INTRODUCTION

1.1 Background Information on Project

The proposed Sendawo BESS facility is located within the Vryburg Renewable Energy Development Zone (REDZ) 6, and the proposed 132 kV OHPL is located within the Northern Strategic Transmission Corridor. The proposed BESS facility will be located off the N18, on Portion 1 of the Farm Edinburgh No 735, approximately 5 km south of the of Vryburg in the North West Province. The project entails the construction and operation of the Sendawo 132kV overhead powerline and associated up to 153mW Battery Energy Storage System and substation, that will connect to the operational ESKOM Mookodi Substation

The proposed BESS comprises a number of DC Battery Enclosures, Converter Stations, associated auxiliary transformers and an HV substation. Each DC Battery Enclosure is approximately 10 x 2 x 4 m (l x b x h), and houses a number of liquid cooled Lithium-ion batteries. The enclosure is equipped with a fire detection system, and gas detection and prevention mechanism.

A typical up to 153 MW/612MWh BESS system comprises a number of DC Battery Enclosures at a capacity of 2.81 MW. The proposed system has a 4 hour discharge time, with a usable energy of 0.7 MW, hence for a 153 MW/612MWh BESS system, approximately 215 battery enclosures are required.

Each Converter Station comprises of 2 converters (~4200 kW,~1500VDC, - 690Vac) feeding into a single MV transformer (690V/(22kV-33kV)), with the dimensions of each converter measuring 3.0 x 2.0 x 2.2m. A single converter is fed from approximately 7 Battery Enclosures.

The BESS is supplied by a number of outdoor auxiliary transformers ((22kV-33kV)/(220-380V)) to provide auxiliary power to the plant. The MV transformers feed the HV substation which steps the voltage from 22kV to 66kV through one or more HV transformers, in the HV substation connecting to the Eskom grid. The proposed BESS comprises a number of DC Battery Enclosures, Converter Stations, associated auxiliary transformers and an HV substation. Each DC Battery Enclosure is approximately 10 x 2 x 4 m (l x b x h), and houses a number of Liquid cooled Lithium-ion batteries or Vanadium Redox Flow Batteries. The enclosure is equipped with a fire detection system, and gas detection and prevention mechanism.

The onsite HV substation will be constructed with a maximum footprint of approximately 56 800 m^2 and encloses the 22kV/66kV HV power transformer. A lightning mast with a maximum height of 24m, tower sections, earthing switches, circuit breakers, surge arrestors, busbars and other miscellaneous substation equipment, including a substation building containing MV switchgear, control and protection equipment will also form part of the onsite substation.

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The proposed OHPL is a 132 kV single or double steel structure with a kingbird conductor. The powerline will be supported by powerline towers which may be steel lattice (518 H and 518 C) or monopole structures, both options will have a maximum height of 28 m.

Please note that this assessment was conducted on the basis of the original layout where the lay down area wasn't separated from the BESS area. This has been amended in subsequent layouts, however this makes no difference to the outcome of this assessment. The maps drafted for this report are also based on an early project description that was intended for a 400kV powerline. However, please note that the assessment has been conducted based on the 132kV powerline information.

1.2 Description of Property and Affected Environment

The area proposed for development is dominated by Ghaap Plateau Vaalbosveld. The area is densely vegetated with various grass, plant, shrubs and tree species. *Some of the species observed appear to belong to Acacia, Olea europaea, and Boscia, among* others.

The study area consists of a gently undulating landscape and rocky outcrops are found throughout the site. The geology of the area consists of surface limestone of Tertiary to recent age, as well as dolomite and chert of the Campbell Group.

Several water sources can be found near the northernmost corridor. Dirt roads and farmlands bound the site (Edinburgh 735) to the north, south, east and west. The N18 is situated east of the corridor and substation (Waterloo 730 and Rosendal 673). Animal grazing and small animal burrows (several of which are found around BESS 2, and along the corridors), have disturbed certain areas due to overgrazing and watering holes. Human-made holes and a landfill dumping site are situated near the substation. Several wire-fenced livestock kraals are located throughout the area.

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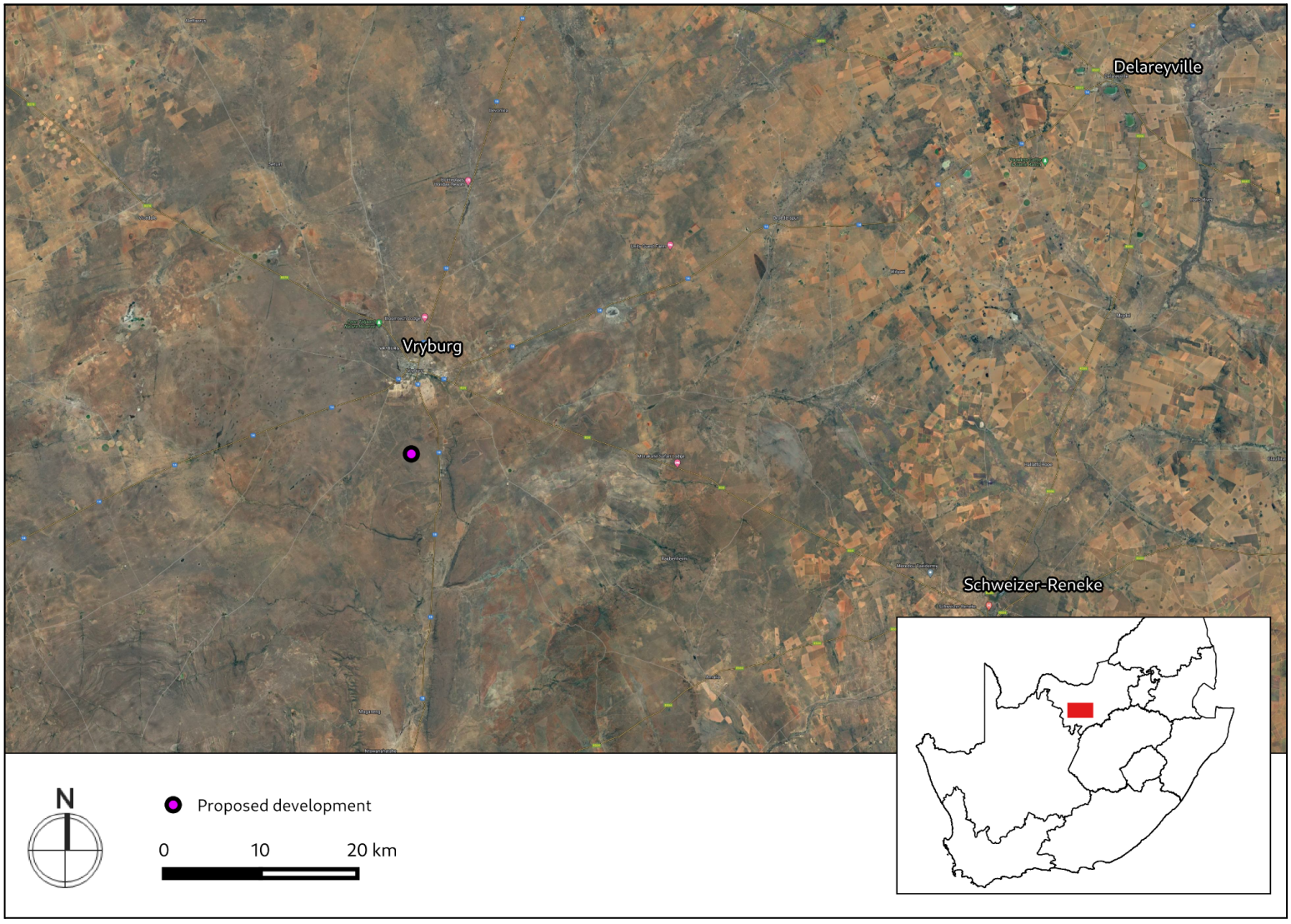

Figure 1.1: Close up satellite image indicating proposed location of study area

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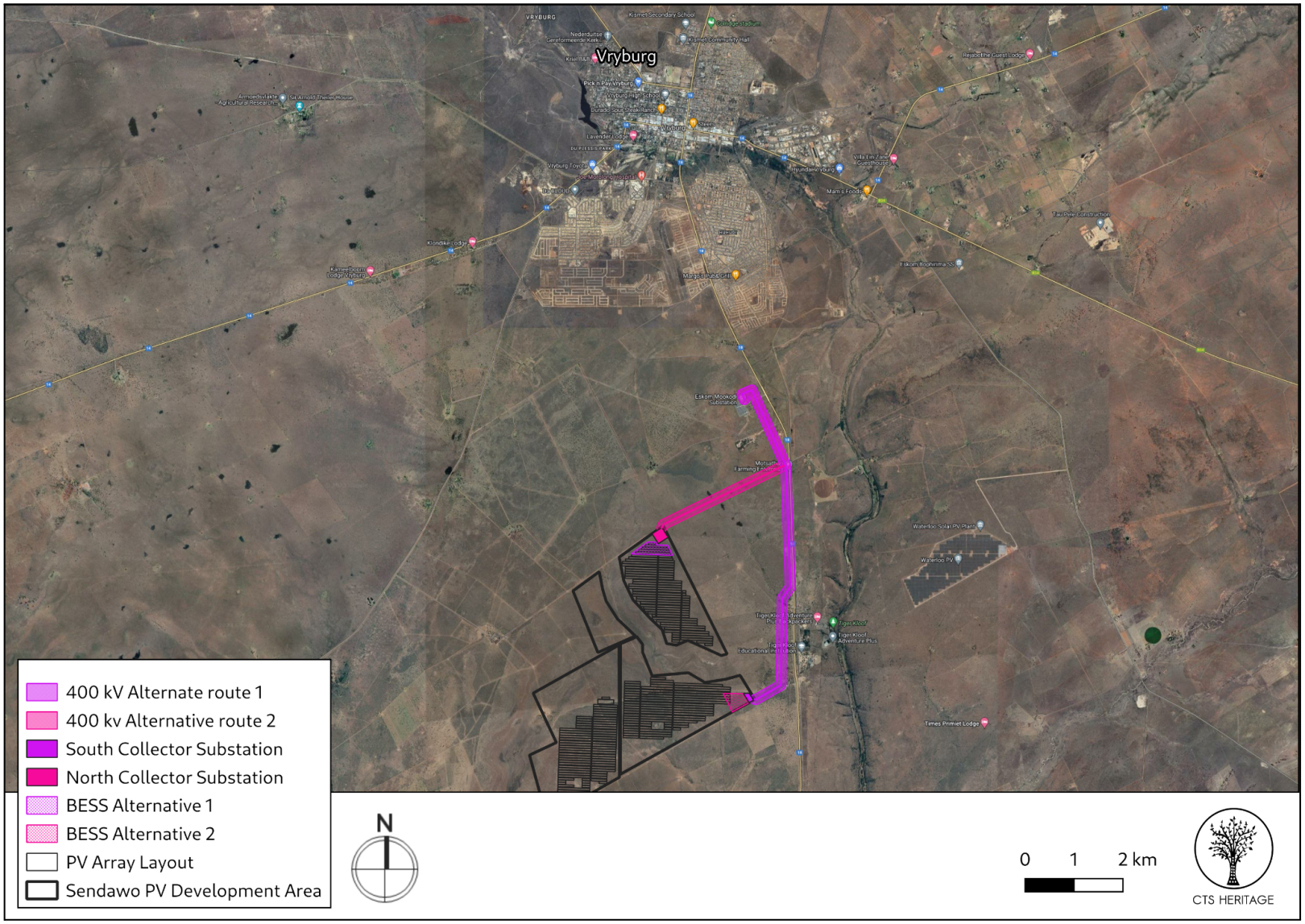

Figure 1.2: Study Area

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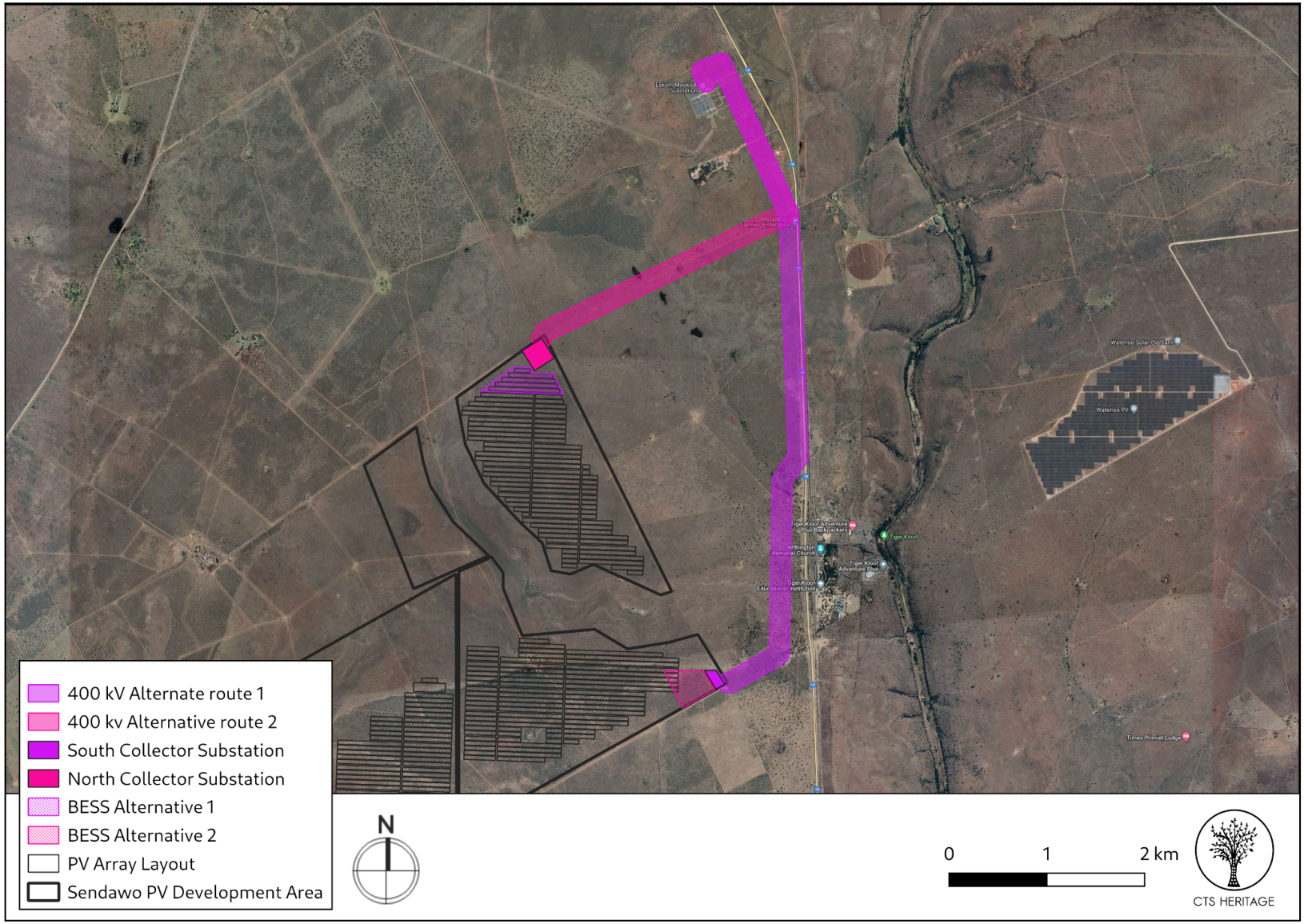

Figure 1.3: Study Area

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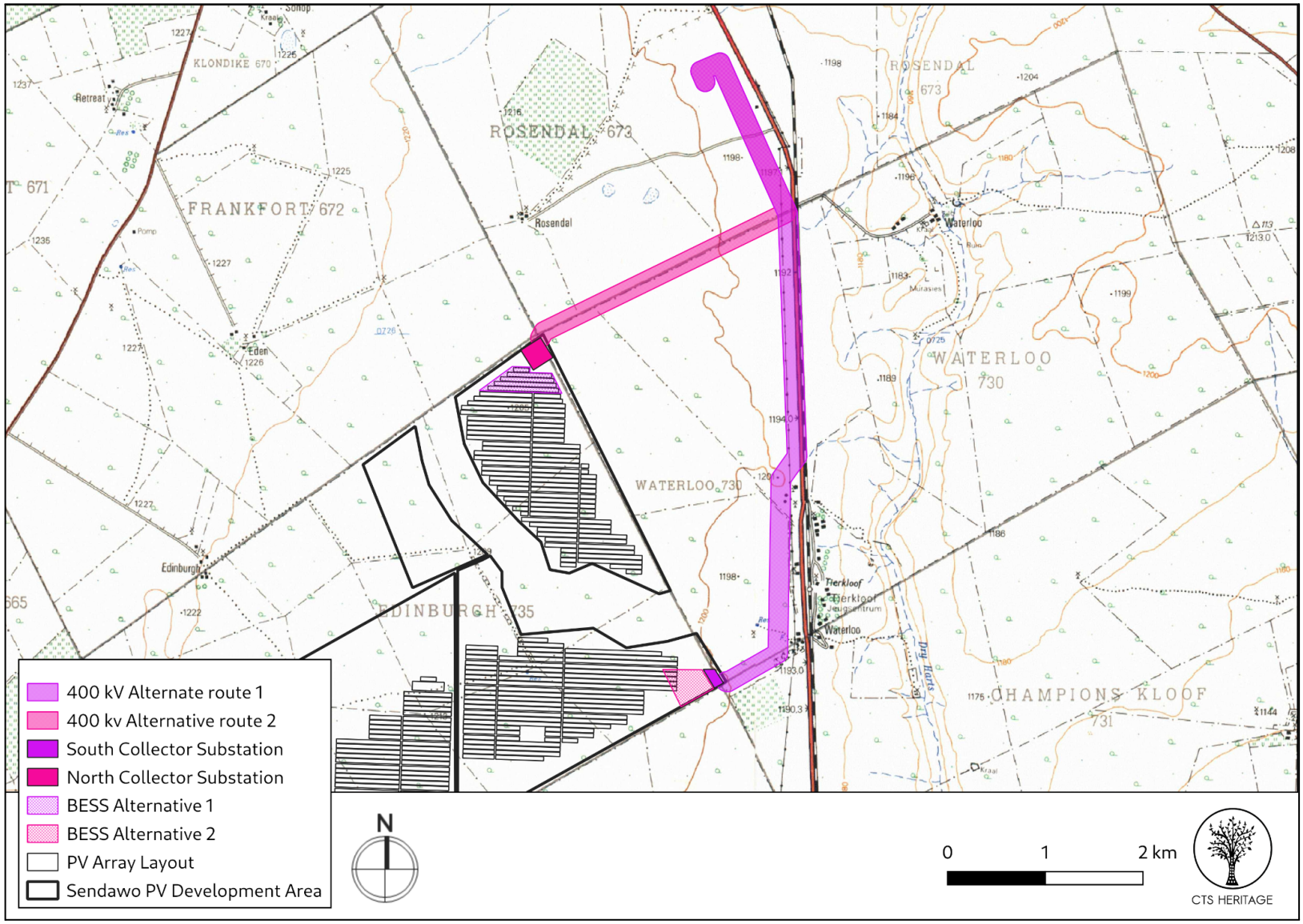

Figure 1.4: Study Area reflected on the 1:50 000 Topo Map

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2. METHODOLOGY

2.1 Purpose of Palaeontological Study

According to the SAHRIS Palaeosensitivity Map (Figure 4a), the area proposed for development is underlain by sediments of moderate and very high paleontological sensitivity. The purpose of this desktop palaeontological study is to satisfy the requirements of section 38(8), and therefore section 38(3) of the National Heritage Resources Act (Act 25 of 1999) in terms of impacts to archaeological resources.

2.2 Summary of steps followed

- Primary research literature was consulted for detailed accounts of the geology and palaeontological representation across the study area. References of these primary research articles are provided.
- Geological maps (provided at various scales by CTS heritage and the South African Council for Geosciences) were consulted to identify represented geological contexts within the study area.
- Where possible, other Palaeontological Impact Assessments were consulted to provide additional information on local geomorphological, geological and palaeontological contexts. These often provide valuable additional information to primary research publications and formal geological maps, which can lack resolution at a local scale and it is important that discussions regarding alternative stratigraphic attributions of exposed rocks are noted and considered.

Please note that this assessment was conducted on the basis of the original layout where the lay down area wasn't separated from the BESS area. This has been amended in subsequent layouts, however this makes no difference to the outcome of this assessment.

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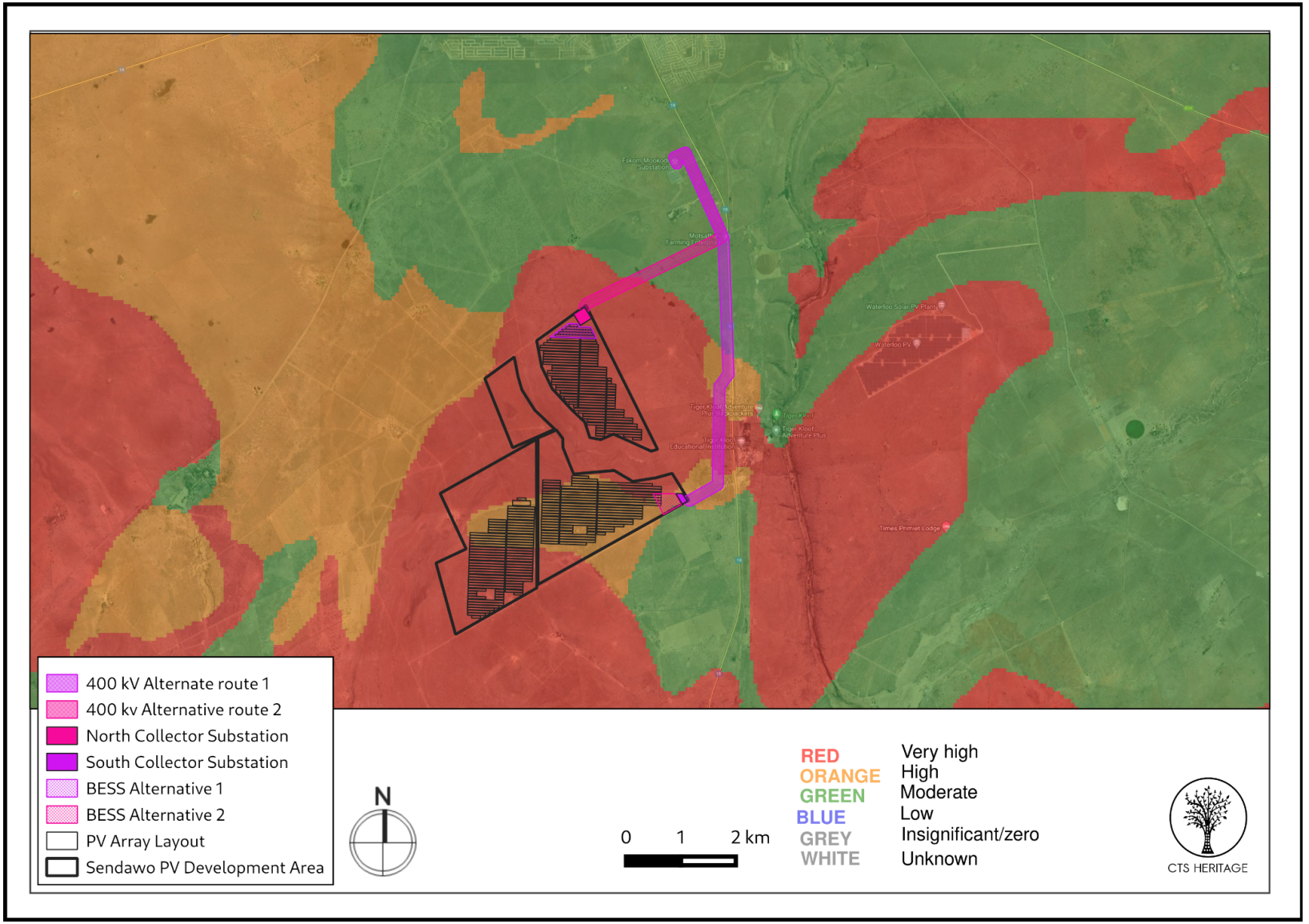

Figure 2: Palaeontological sensitivity of the development area from the SAHRIS PalaeoMap

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3. SITE SENSITIVITY

According to the SAHRIS Palaeosensitivity Map, the area proposed for the BESS development is underlain by sediments of high palaeontological sensitivity (Figure 4a). According to the extract from the CGS 2724 Christiana Ma, the development area for the Sendawo PV Facility as well as the development area for the BESS is underlain by Tertiary calcrete and Quaternary alluvium, sand and soils (T-Qc) (Figure 4b). The palaeontological impacts associated with the development of the Sendawo solar facilities was assessed by Groenewald (2016). According to Groenewald (2016), the area proposed for the BESS development is underlain by Stromatolitic carbonate rocks (limestones, dolomites) of Early Precambrian (Archaean) age in outcrops of the Ventersdorp Group (Kameeldorns, Rietgat and Bothaville Formations) as well as the lower part of the Transvaal Supergroup (Ghaap Group, Vryburg Formation & Schmidtsdrift Subgroup, including the Boomplaas Formation). In the Vryburg area and further south towards Taung these include some of the oldest (> 2.5 billion years) and best-preserved stromatolites (fossil microbial mounds) known from this period; Stromatolites are recorded from the dolomite layers. Highly fossiliferous Caenozoic cave breccias are also known to occur within the dolomite layers, but are not mapped individually. These fossiliferous deposits often contain more recent mammal and hominid fossils, e.g. in the Cradle of Humankind.

In his palaeontological assessment, Groenewald (2016) notes that “A small part of the study area is characterised by the presence of significant Stromatolites and that stromatolites are present in almost all the dolomite boulders on site. Some areas have possible remains of cave breccia but no in situ outcrops were recorded.” The significant palaeontological observations noted by Groenewald (2016) are all located towards the south of the Sendawo PV 3 area and are located well away from the proposed BESS locations. As such, although no palaeontological resources were identified within the area proposed for the BESS development during the field assessment, it remains likely that significant palaeontological heritage in the form of Tertiary-aged fossils or stromatolites may be impacted. As such, the attached Palaeontological Chance Finds Procedure must be implemented for the duration of excavations activities.

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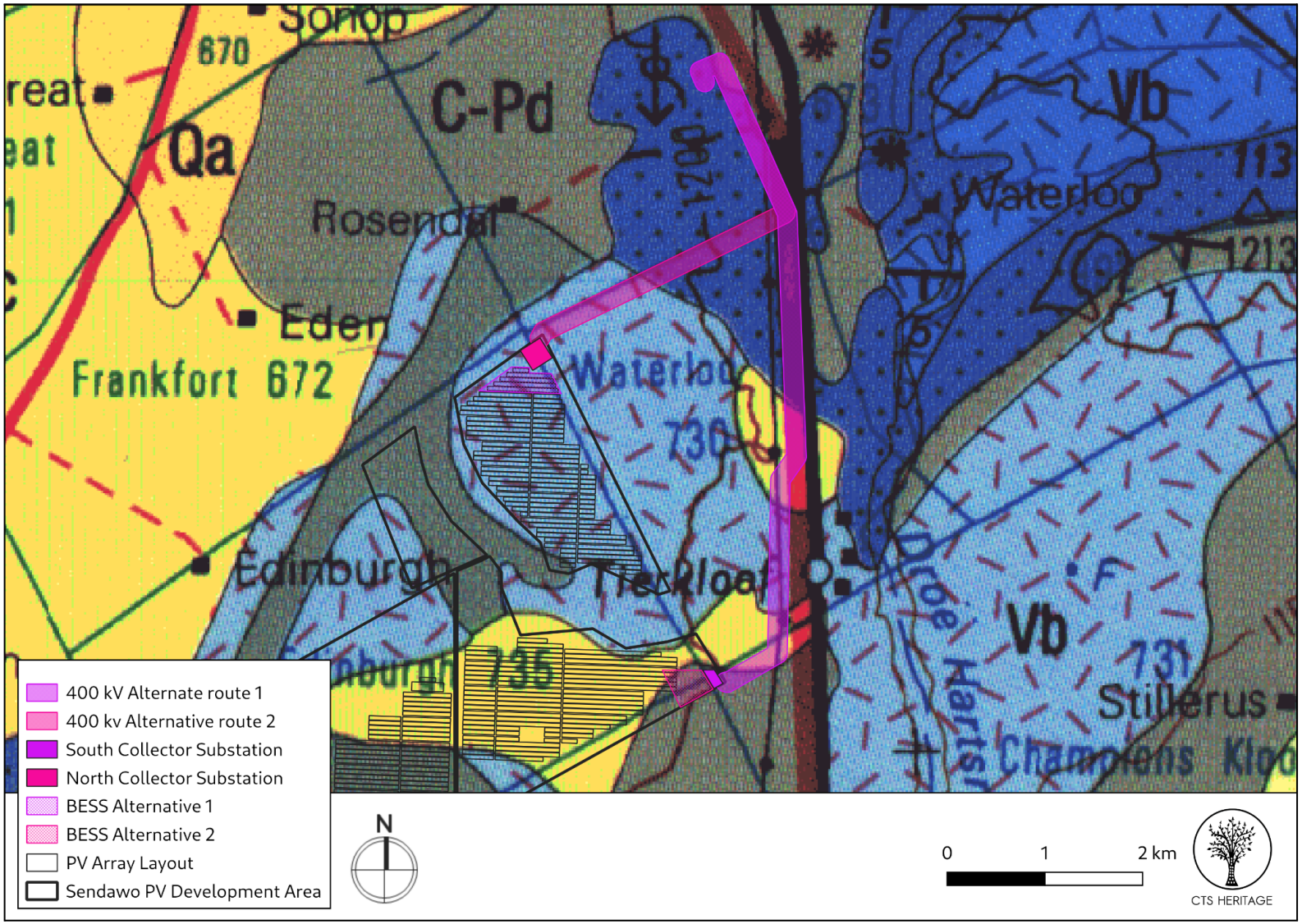

Figure 3. Geology Map. Extract from the CGS 2724 Christiana Map indicating that the development area for the BESS and OHL alternatives is underlain by Tertiary calcrete and Quaternary alluvium, sand and soils (T-Qc), Clearwater Formation (Vc), Boomplaas Formation (Vb) and Vryburg Formation (Vv) of the Ghaap Group

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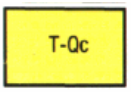
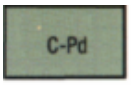
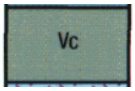
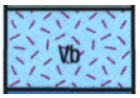
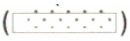
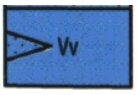
Table 1: Geological Summary Table

Geological unit	Age	Lithology	Symbol on figure 3	Fossil heritage	Palaeontological sensitivity	Recommended mitigation
Kalahari Group	Tertiary – Quaternary	Calcretised aeolian and fluvial sands and gravels and hardpans		Root casts and burrows, rare vertebrate fossils, diatom-richcalcretes, fresh water and terrestrial shells, ostracod and charophytes.	High	No action required, any fossil finds to be reported by developer
Dwyka Group	Late Carboniferous – Early Permian 320-290 Mya	Tillite, mudstone, shale, boulder shale and sandstone		Trace fossils, organic-walled microfossils, rare marine invertebrates (e.g., molluscs), fish, vascular plants.	Moderate	No action required, any fossil finds to be reported by developer
Clearwater Formation, Schmidtsdrif Subgroup, Ghaap Group, Griqualand West Supergroup	Vaalian – Late Archaean 2620 Mya	Shale, mudstone, siltstone with interbedded dolomite		Stromatolitic forms of various shapes and sizes (e.g. Almond, 2017)	Very High	Field study (cf. Almond, 2017)
Boomplaas Formation, Schmidtsdrif Subgroup, Ghaap Group, Griqualand West Supergroup	Vaalian – Late Archaean 2630 Mya	Oolitic and stromatolitic dolomite; interbedded quartzite, shale and flagstone		Stromatolitic forms of various shapes and sizes (e.g. Almond, 2017)	Very High	Field study (cf. Almond, 2017)
Vryburg Formation, Griqualand West Supergroup	Vaalian - Late Archaean 2640 Mya	Quartzite, flagstone, conglomerate, dolomite and shale; andesitic lava ()		None of note in the andesitic lavas. Dolomites comprise Stromatolitic forms of various shapes and sizes (e.g., Almond, 2017)	Low in andesitic lava exposures	If lavas are present no action required, any fossil finds to be reported by developer. Dolomite exposures should be avoided (cf. Almond, 2017)

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4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Underlying geology of development area

- The oldest rocks exposed in the proposed development area are attributed to the Vaalian (Late Archaean) aged Vryburg Formation, which comprises complex protobasinal interbeds of dolomite, quartzite and andesitic lavas (Eriksson et al., 1995) and is correlated with the Black Reef Formation in the Transvsaal Basin succession. Only andesitic lavas are represented in the planned development area according to the provided geological map. The Vryburg lavas have been described as locally vesicular or blocky and associated with veins and lenses of cherts. The lavas generally represent subaerial flows and are associated with rift-related geological contexts (Eriksson and Reczko, 1995).
- Boomplaas Formation carbonates gradationally overlie the clastic beds of the Vryburg Formation and formed about 2630 mya. Regionally stratigraphically correlated to the lower units of the Malmani dolomites (Oaktree Formation specifically) in the Transvaal Basin (Eriksson et al., 1995), the stromatolitic carbonates formed in an epieric sea that occupied the Griqualand West Basin. These carbonates have been the subject of extensive study in the Transvaal Basin (e.g., Eriksson and Truswell, 1974; Eriksson & Altermann, 1998; Sumner & Grotzinger, 2004) but the Griqualand West correlates have been the subject of less attention but preserve some excellent stromatolitic forms (e.g., Groenwald, 2016; Almond, 2017) that warrant dedicated description and analysis. Boomplaas Formation exposure are thus considered of very high sensitivity. Significant areas of the planned development overlie Boomplaas Formation rocks. Groenewald (2015) associates the very high palaeontological sensitivity to the possible occurrence of caves and fossil-bearing breccias akin to those found in the Cradle of Humankind (specifically Sterkfontein, which is formed within the stratigraphically correlated Oaktree Formation). Groenewald (2015) states that "the *very high fossiliferous potential of the Boomplaas Formation, warrants an allocation of a Very High palaeontological sensitivity to the areas underlain by the rocks of this formation. All the areas underlain by Dolomite have a very high potential of containing cave breccias with highly sensitive fossil remains including remains of Hominin fossils*".
- Overlying the Boomplaas carbonates are the interbedded clastic and carbonate rocks of the Clearwater Formation, deposited about 2620 mya. Correlated stratigraphically in the Ghaap Plateau Sub-Basin but not in the Transvaal Basin (Eriksson *et al.*, 2006), the interbedded dolomites also preserve stromatolitic forms requiring dedicated study. A large area of the proposed development extends over Clearwater Formation rocks and it is recommended that field study should document the area prior to construction to assess its sensitivity in light of the relatively low resolution geological map provided.
- Unconformably overlying the late Archaean rocks are Late Carboniferous to Early Permian Dwyka Group deposits. Underlying only a small portion of the proposed area of impact of the 132kV Alternative Route 2, Dwyka Group deposits are less sensitive owing to their generally glacial origin. Characterised by a suite of glacial till and fluvial facies, the sediments rarely preserve vertebrate fossil remains. Thin interbeds of mudstone and sandstones are attributed to interglacial periods and within these some trace fossils, occasional invertebrate and fish fossils, and plant fossils can be found (e.g., Almond 2017).

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- Unconformably overlying all previous rocks in the area are Tertiary to Quaternary sediments of the Kalahari Group. In the area of proposed development calcretes dominate the area and are characterised by hard pan pedogenic carbonates that form as evaporates and cement a range of aeolian, alluvial (generally pan sediments) and colluvial sandstones and fine gravels (Almond & Pether, 2009). The initial sedimentation process preserves few vertebrate fossils but during calcrete formation trace fossils, fragments of fauna, including shells, and freshwater fossils can be preserved. Frequently included in calcretes of the interior of southern Africa are stone tools from Earlier and Middle Stone Age periods (e.g., Canteen Koppie; Walker et al., 2014) and a thorough Archaeological Impact Assessment is encouraged.

4.2 Palaeontological Sensitivity of the Development Area

- Large areas of the proposed development of the Sendawo PV and PV Array Layout overlie geology of significant palaeontological sensitivity. In particular, areas planned that overlie the Late Archaean Boomplaas dolomites and Clearwater Formation are sensitive for two reasons: (1) stromatolite forms are well preserved and poorly described in the academic literature but of significant importance for understanding Archaean palaeoenvrionments; and (2) the occurrence of dolomites in both formations may be associated with the formation of karst caves, which in the stratigraphically correlated Oaktree Formation of the Malmani Dolomites in the Transvaal Basin host Plio-Pleistocene hominin- and stone tool-bearing breccias.
- A central area of the proposed development also overlies Kalahari Group pedogenic carbonates (calcretised sediments) that are considered highly sensitive due to their capacity to preserve not only pedogenic trace fossils but also archaeological material.
- The proposed locations for the BESS stations lie on either Boomplaas dolomite or Clearwater Formation rocks, which are considered highly sensitive.
- Proposed routes for the 132kV powerlines overlie both Boomplaas dolomites and andesitic lavas of the Vryburg Group. Lavas of the Vryburg group are low in sensitivity.
- However, it must be noted that the geological maps provided are generally of low resolution and several of the geological units documents comprise mixed lithologies of differing sensitivity making generalisations about sensitivity in particular areas challenging. It is recommended that field assessment is performed to clarify the exact nature of the geology in the proposed development areas.

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5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of impact to Palaeontological Resources

Based on published literature and previous field assessments within the immediate area, it is considered that the impact of the development will be **HIGH**. This is based on the presence of dolomite in the Boomplaas and Clearwater dominated areas, and the research importance of that rock type and its proclivity for hosting caves. The quaternary calcrete deposits overlie the Archaean rocks in the central area of the proposed development to an unknown depth and are in themselves considered of high sensitivity due to their potential in preserving a wide range of vertebrate and invertebrate trace fossils and archaeological remains.

6. CONCLUSION AND RECOMMENDATIONS

Large areas of the proposed development are located on highly sensitive rock types (Boomplaas, Clearwater and Quaternary deposits) that may preserve important palaeontological evidence. The abundance, preservation and exposure of the palaeontological material is as yet unknown, especially in areas that have a mixture of lithologies present (e.g., Clearwater Formation).

With regards to the planned 'alternative routes' for the 132kV powerlines, both extend partially over Boomplaas dolomites there is no preferred alternative from a palaeontological perspective. The selected route should be subject to a walkdown of the final pylon footings to inspect sensitive geology for fossil material. The eastern end of the powerlines extends largely over Vryburg Formation andesitic lavas, which are of low sensitivity. Given the potential for mixed lithologies in this area, a protocol for fossil reporting by the ECO should be implemented. Should important fossil material be found during excavations, the attached Fossil Finds Procedure must be implemented (Appendix 1).

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7. REFERENCES

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Walker, S.J., Lukich, V. and Chazan, M., 2014. Kathu Townlands: a high density Earlier Stone Age locality in the interior of South Africa. *PLoS One*, *9*(7), p.e103436.

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Heritage Impact Assessments				
Nid	**Report Type**	**Author/s**	**Date**	**Title**
359	PIA Phase 1	John E Almond	01/01/2013	PALAEONTOLOGICAL HERITAGE ASSESSMENT: COMBINED DESKTOP & FIELD-BASED STUDY Proposed PV Solar Facility on a portion of the farm Waterloo 992 near Vryburg, Naledi Local Municipality, North-West Province
382	PIA Desktop	John E Almond	01/01/2013	PALAEONTOLOGICAL HERITAGE ASSESSMENT: DESKTOP STUDY Proposed PV Solar Facility on a portion of the farm Rosendal 673 near Vryburg, Naledi Local Municipality, North-West Province
4265	HIA Phase 1	David Morris	01/04/2014	Appendix D3 Vryburg WWTW Heritage Specialist Report
4826	Palaeontological Specialist Reports	John E Almond	30/11/2013	Proposed Tiger Skloof Photovoltaic Solar Energy Facility near Vryburg, Naledi Local Municipality, North-West Province
6471	HIA Phase 1	Johnny Van Schalkwyk	31/08/2014	BASIC HERITAGE ASSESSMENT FOR THE PROPOSED MOOKODI 132KV PHASE 2 POWER LINES DEVELOPMENT, NORTH WEST PROVINCE
9049	Palaeontological Specialist Reports	John Edward Almond		Palaentological Heritage Assessment: Combined Desktop & Field- Based Study Proposed Sonbesie Solar Plant on the Remaining Extent of the Farm Retreat 671, near Vryburg, Naledi local municipality, North-West Province
9051	HIA Phase 1	Johnny Van Schalkwyk		Cultural heritage Impact assessment for the Development of the Proposed Khubu Solar Power Plant in the Portion 5 of the Farm CHampions Kloof 731, Vryburg Region, North West Province
9055	HIA Phase 1		31/01/2016	Cultural heritage impact assessment for THE DEVELOPMENT OF THE PROPOSED PROTEA SOLAR POWER PLANT ON A PORTION OF THE FARM HARTSBOOM 734, VRYBURG REGION, NORTH WEST PROVINCE
9708	**HIA Phase 1**	**Wouter Fourie**	**26/05/2016**	**75MW SOLAR PHOTOVOLTAIC (PV) ENERGY FACILITY SENDAWO SOLAR 1 Heritage Impact Assessment**
9720	**HIA Phase 1**	**Wouter Fourie**	**26/05/2016**	**75MW SOLAR PHOTOVOLTAIC (PV) ENERGY FACILITY SENDAWO SOLAR 2 Heritage Impact Assessment**
9721	**HIA Phase 1**	**Wouter Fourie**	**26/05/2016**	**75MW SOLAR PHOTOVOLTAIC (PV) ENERGY FACILITY SENDAWO SOLAR 3 Heritage Impact Assessment**
9722	**HIA Phase 1**	**Wouter Fourie**	**19/05/2016**	**SENDAWO POWERLINE ALTERNATIVES SENDAWO PROJECTS Heritage Impact Assessment**
9730	PIA Phase 1	John Almond	07/01/2013	Palaeontological Heritage Assessment: Combined Desktop & Field-based Study Proposed PV Solar Facility on a portion of the farm Waterloo 992 near Vryburg, Naldi Local Municipality, North West Province

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9755	AIA Phase 1	Lloyd Rossouw	04/11/2016	Phase 1 Archaeological Impact Assessment of two borrow pit areas on Farm 506IN near Vryburg, Northwest Province.
10095	HIA Phase 1	Stefan de Kock	15/09/2016	PROPOSED DEVELOPMENT OF THE AMDA DELTA PV (SOLAR ENERGY FACILITY) ON REMAINING EXTENT OF THE FARM KLONDIKE NO 670, AND OVERHEAD POWER LINE GRID CONNECTION TO THE MOOKODI MTS SUB-STATION ACROSS THE REMAINDER OF ERF 506 AND REMAINDER OF THE FARM ROSENDAL 6
10096	HIA Phase 1	Stefan de Kock	15/09/2016	PROPOSED DEVELOPMENT OF THE AMDA ECHO PV (SOLAR ENERGY FACILITY) ON REMAINING EXTENT OF THE FARM KLONDIKE NO 670, AND OVERHEAD POWER LINE GRID CONNECTION TO THE MOOKODI MTS SUB-STATION ACROSS THE REMAINDER OF ERF 506 AND REMAINDER OF THE FARM ROSENDAL 67
10098	HIA Phase 1	Stefan de Kock	15/09/2016	PROPOSED DEVELOPMENT OF THE AMDA FOXTROT PV (SOLAR ENERGY FACILITY) ON REMAINING EXTENT OF THE FARM KLONDIKE NO 670, AND OVERHEAD POWER LINE GRID CONNECTION TO THE MOOKODI MTS SUB-STATION ACROSS THE REMAINDER OF ERF 506 AND REMAINDER OF THE FARM ROSENDAL
1714	HIA Phase 1	Johnny Van Schalkwyk	06/03/2013	Mookodi Integration Project Phase 2 - Heritage Report - Basic Assessment
9053	Palaeontological Specialist Reports	John E Almond		Palaeontological Heritage Assessment: Combined Desktop & Field-Based Study Proposed Alpha Solar Power Plant on Portion 3 of Farm Middel Pan 605 near Vryburg, Naledi Local Municipality, North West Province
9054	HIA Phase 1	Johnny Van Schalkwyk		Cultural heritage Impact assessment for The Development of the proposed Meerkat Solar Power Plant on a portion of the farm Vyflings Pan 598IN, Vryburg Region, North West Province
1714	HIA Phase 1	Johnny Van Schalkwyk	06/03/2013	Mookodi Integration Project Phase 2 - Heritage Report - Basic Assessment
9755	AIA Phase 1	Lloyd Rossouw	04/11/2016	Phase 1 Archaeological Impact Assessment of two borrow pit areas on Farm 506IN near Vryburg, Northwest Province.
7952	AIA Phase 1B	Neels Kruger	23/09/2015	ADDITIONAL ARCHAEOLOGICAL IMPACT STUDY FOR THE PROPOSED CAROCRAFT SOLAR PARK, NALEDI LOCAL MUNICIPALITY, BOPHIRIMA DISTRICT MUNICIPALITY, NORTH WEST PROVINCE
9050		Johnny Van Schalkwyk	29/01/2016	Cultural heritage impact assessment for THE DEVELOPMENT OF THE PROPOSED GAMMA SOLAR POWER PLANT ON PORTION 4 OF THE FARM CHAMPIONS KLOOF 731, VRYBURG REGION, NORTH WEST PROVINCE
1714	HIA Phase 1	Johnny Van Schalkwyk	06/03/2013	Mookodi Integration Project Phase 2 - Heritage Report - Basic Assessment

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