

CTS HERITAGE

HERITAGE SCREENER

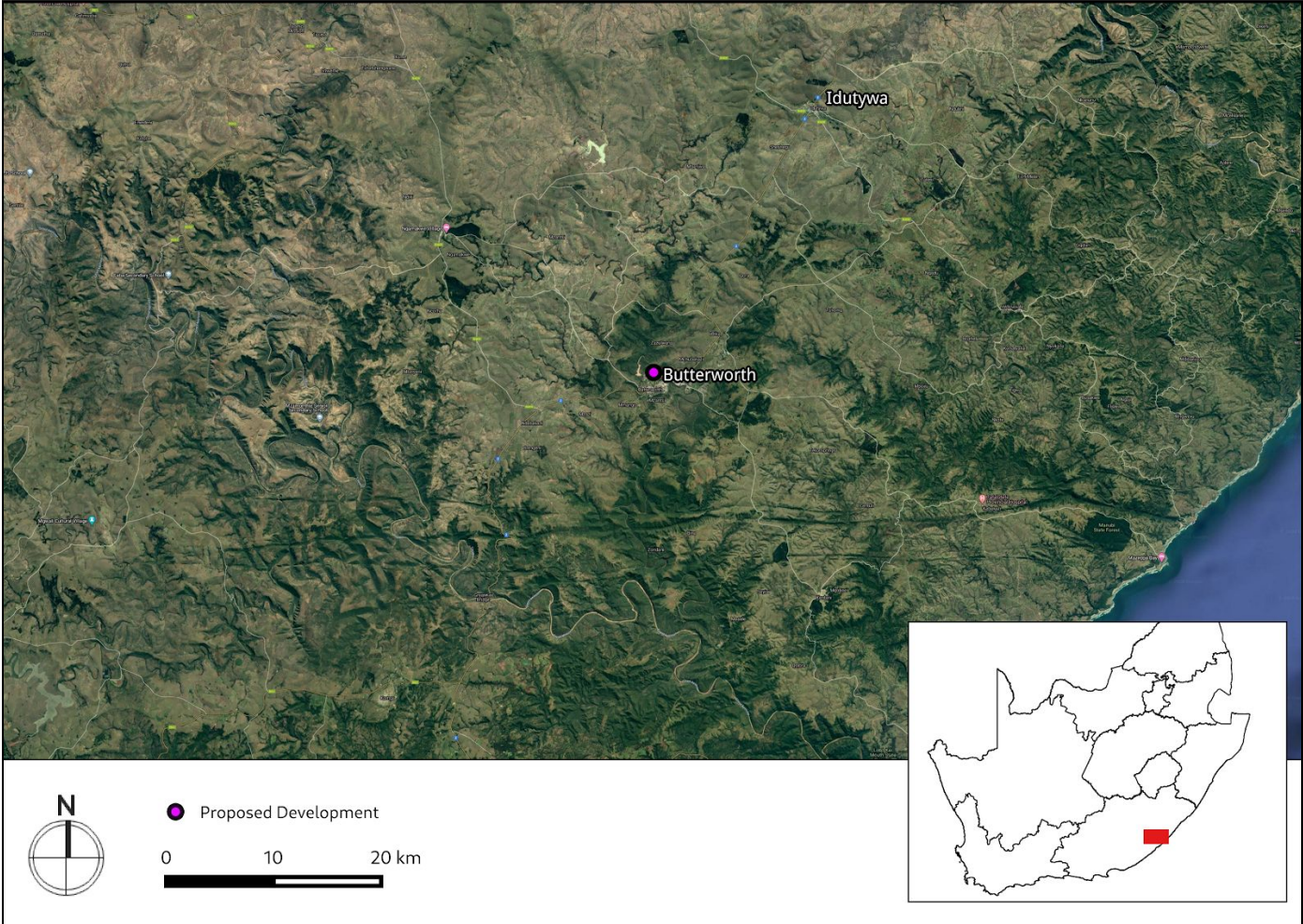
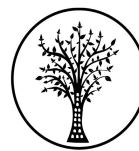
CTS Reference Number:	CTS20_071	
SAHRIS Ref:		
Client:	Terreco	
Date:	May 2020	
Title:	Proposed development of pipelines and powerlines within the grounds of the Butterworth Golf Club, Butterworth, in terms of section 38(1) of the NHRA	
Recommendation by CTS Heritage Specialists	RECOMMENDATION: Based on the information available, it is very unlikely that the proposed development will negatively impact on significant archaeological, palaeontological, built environment or cultural landscape heritage resources. As such, it is recommended that no further heritage studies are required in terms of section 38 of the NHRA.	

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

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1. Proposed Development Summary

The Amathole District Municipality is proposing to equip six (6) previously drilled boreholes within the property of the Butterworth Golf Club (Butterworth) in the Eastern Cape. This will supply additional water with the intention to augment the current supply to the Ibika Water Reservoirs which supply the town of Butterworth and surrounding areas. The population of the town of Butterworth and surrounds suffer regular water supply shortages. This issue has been exacerbated by the continued drought conditions in the general area in recent years. The town of Butterworth and surrounds is primarily supplied with water by the Ibika Water Supply Reservoirs which are positioned along the north-eastern boundary of the town of Butterworth. It is of vital importance, for humanitarian and hygienic reasons, that the supply of water to the Ibika Water Supply Reservoirs is augmented as far as possible. The equipping of the six (6) previously drilled boreholes within the grounds of the Butterworth Golf Club will serve this purpose and augment the currently limited supply to the reservoirs.

The project is to be limited to the following activities:

- 1875m of water supply pipeline (140mm diameter HDPE pipe);
- 1875m of overhead electrical power supply line;
- The maximum throughput capacity of the combined system will be 850kl per day;
- 4 small brick chambers to house borehole pump and fittings

All infrastructure is to be built on the BGC property and will be designed to avoid disturbing all indigenous vegetation or sensitive areas on site. It will not be necessary to build any storage reservoirs as the water will be pumped directly to the existing Ibika Reservoirs.

2. Application References

Name of relevant heritage authority(s)	ECPHRA
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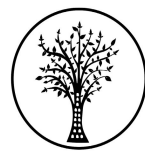
3. Property Information

Latitude / Longitude	32°19'3.44"S 28° 8'54.22"E
Erf number / Farm number	Erf 135
Local Municipality	Mnquma
District Municipality	Amathole
Province	Eastern Cape
Current Use	Golf Club
Current Zoning	Unknown. Possibly municipal land/commage.

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4. Nature of the Proposed Development

Total Surface Area of development	1875m in length
Depth of excavation (m)	<2m
Height of development (m)	Powerline pole height where the poles will be erected and four single storey brick structures.

5. Category of Development

	Triggers: Section 38(8) of the National Heritage Resources Act - No NEMA Triggers
	Triggers: Section 38(1) of the National Heritage Resources Act
x	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-
	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):

6. Additional Infrastructure Required for this Development

See project description

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

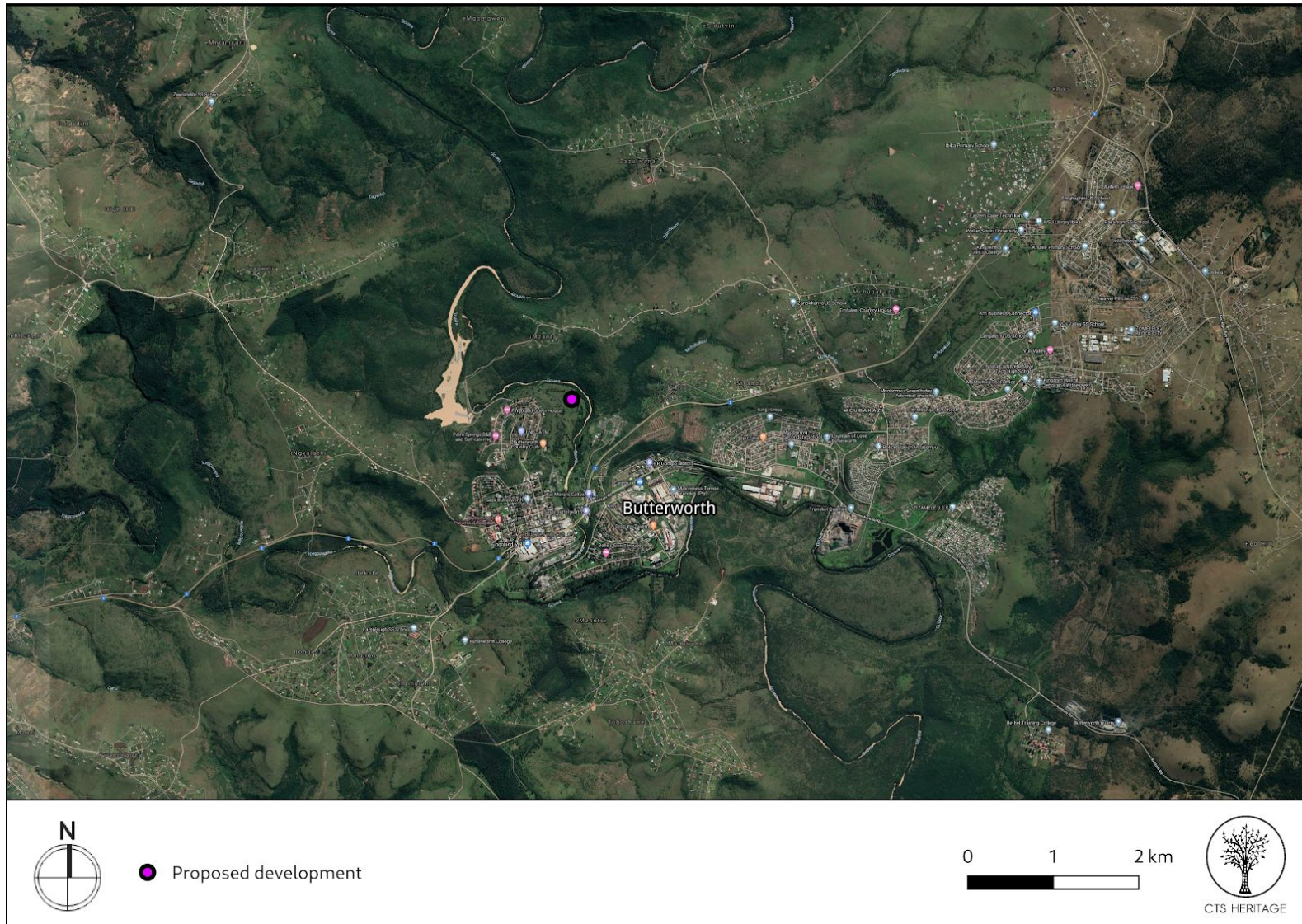


Figure 1b Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

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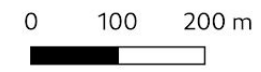
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● Boreholes
— Pipeline



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Figure 1c. Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

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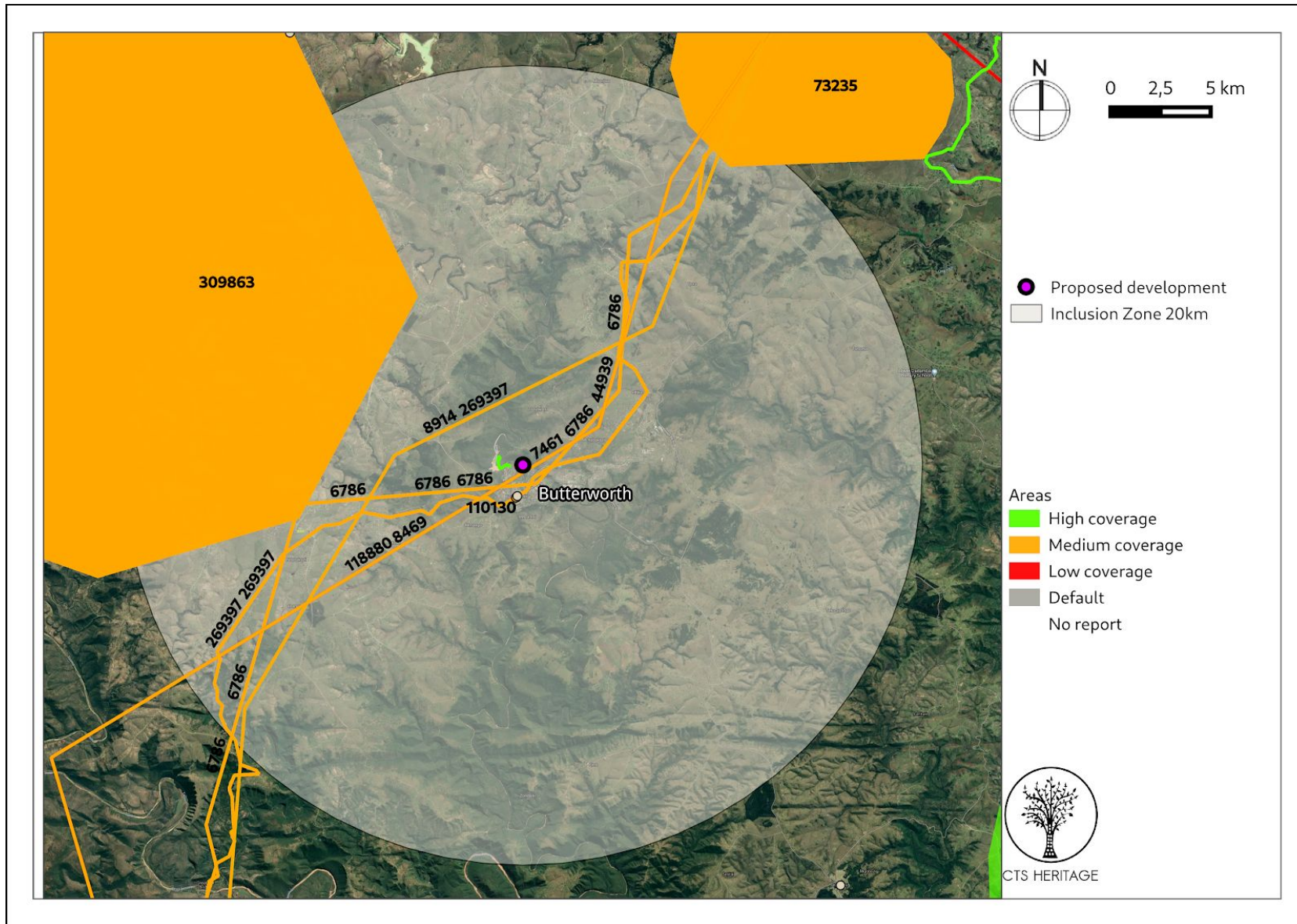


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area within 20km, with SAHRIS NIDS indicated. Please see Appendix 2 for full reference list.

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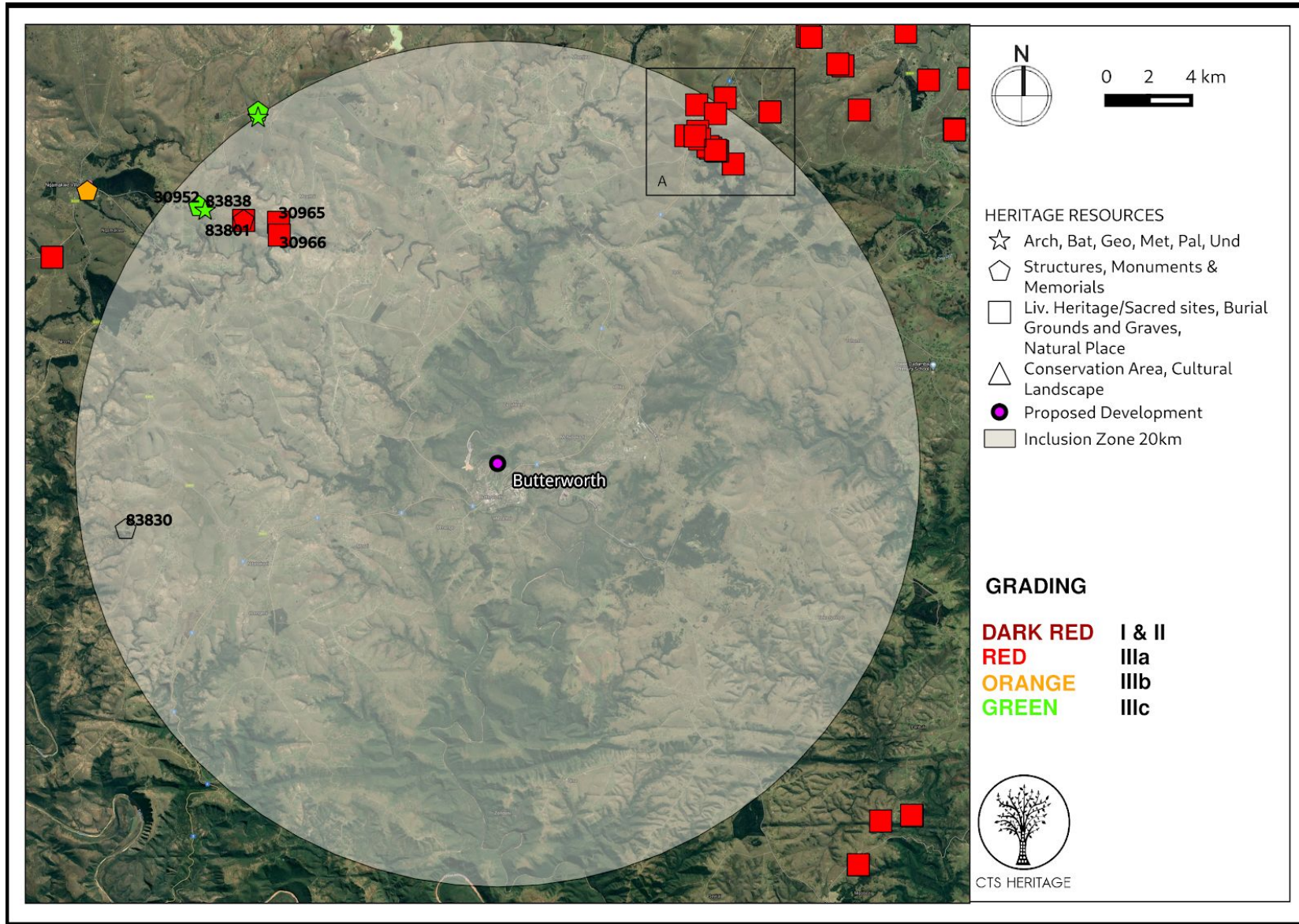


Figure 3. Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated. Please See Appendix 4 for full description of heritage resource types.

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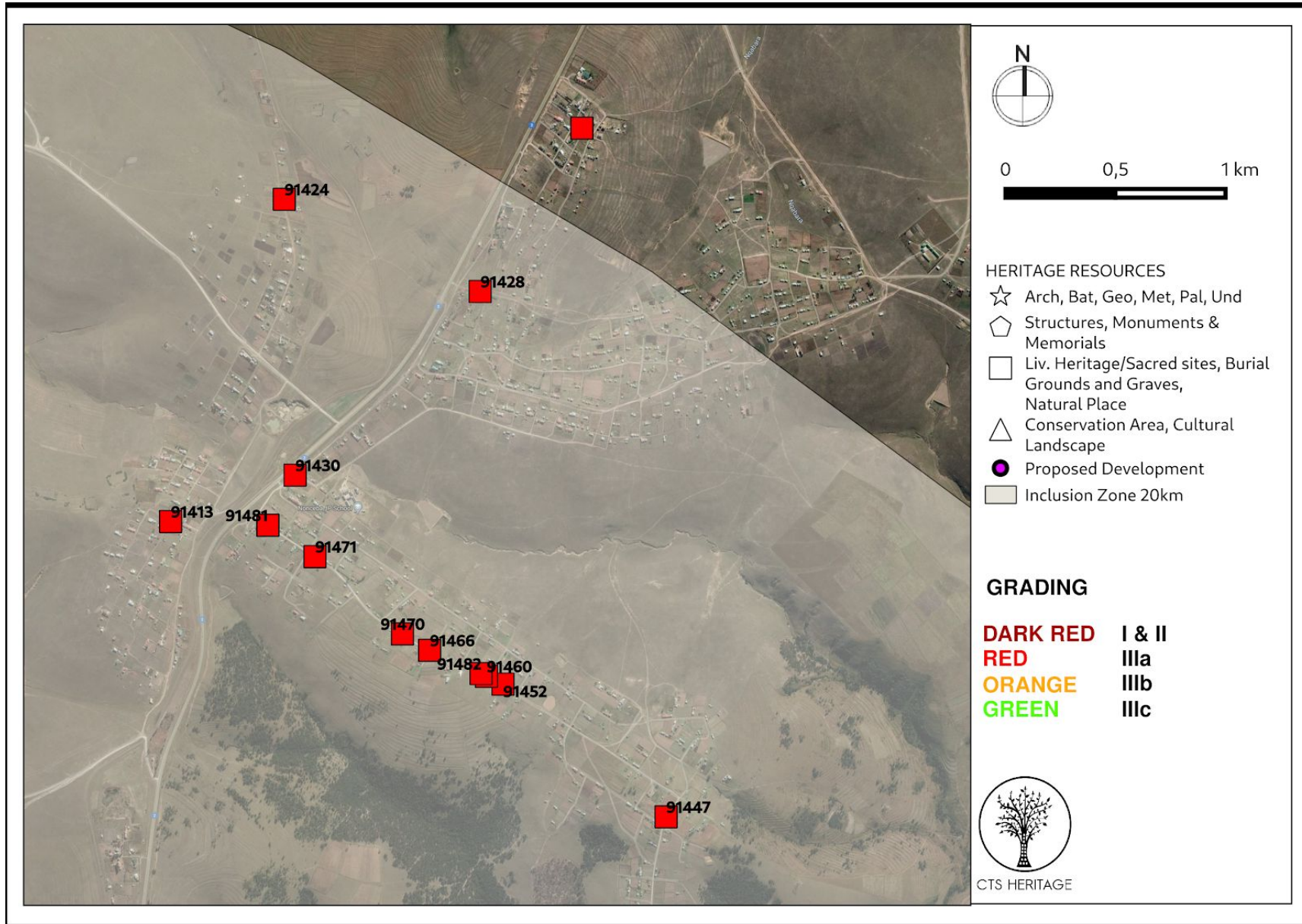


Figure 3a. Heritage Resources Map. Heritage Resources Inset A

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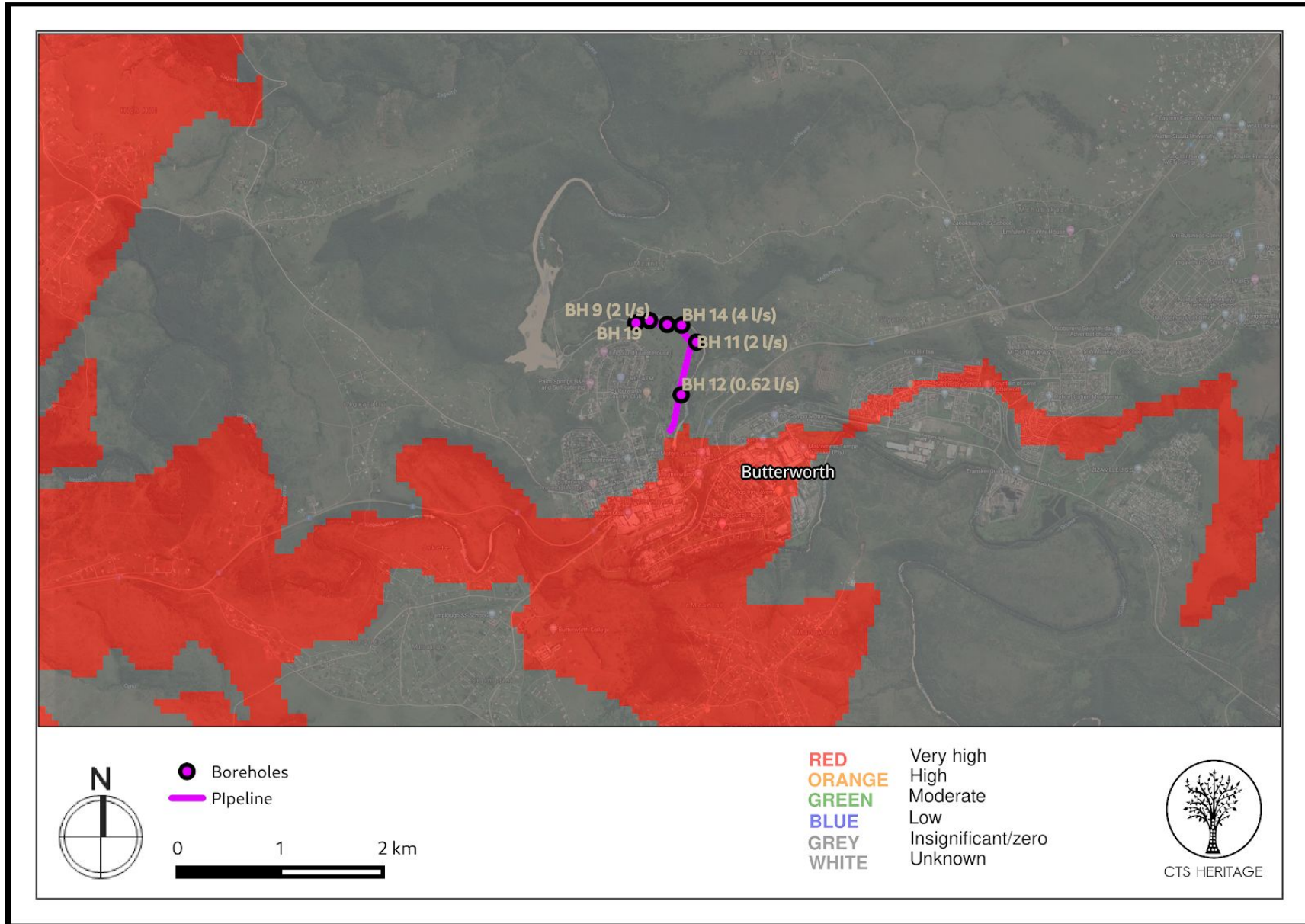


Figure 4. Palaeosensitivity Map. Indicating Zero and Very High fossil sensitivity underlying the study area. Please See Appendix 3 for full guide to the legend.

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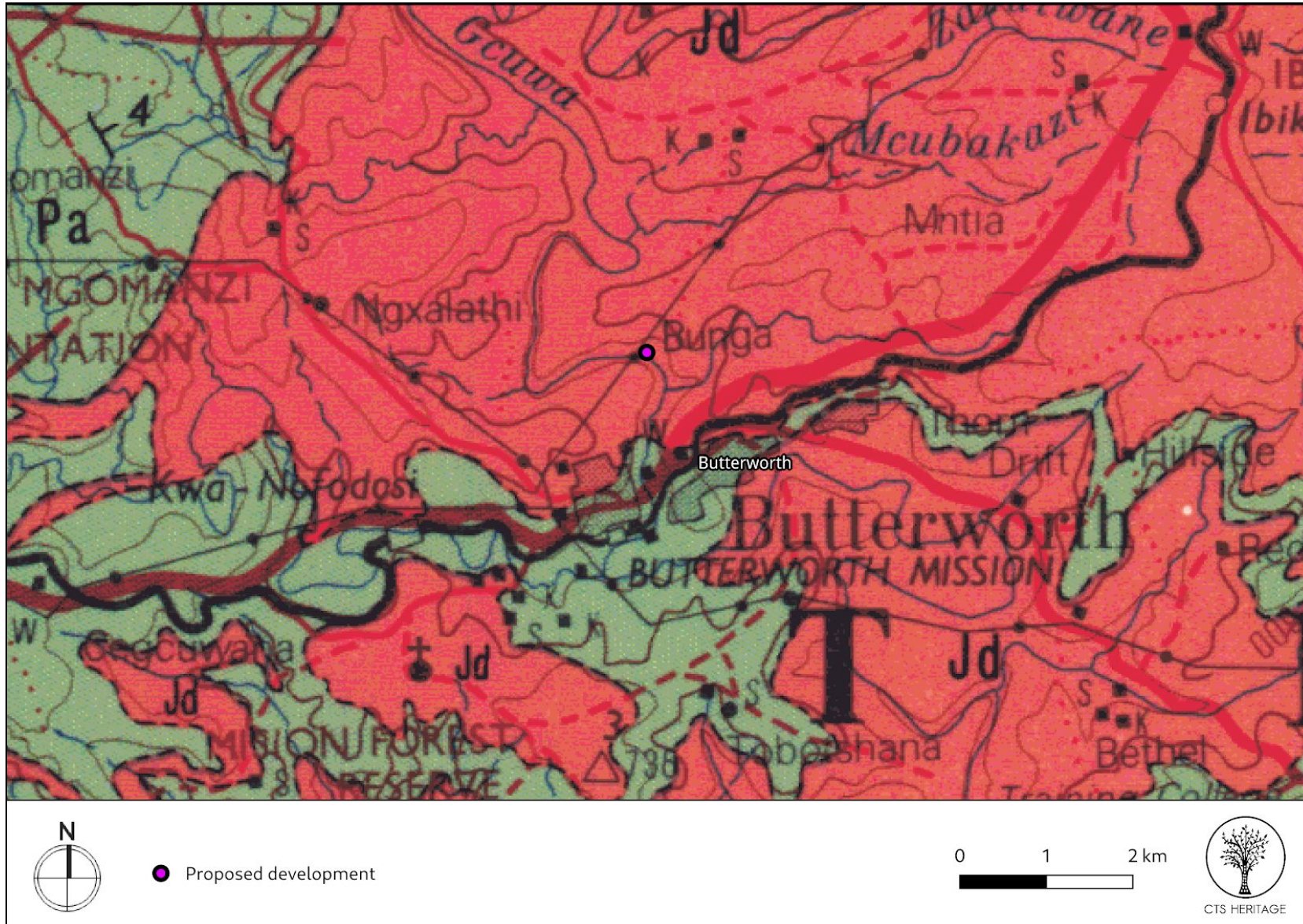


Figure 5. Geology Map. Indicating the underlying geology across the study area through overlaying the geology maps from the CGS series 3228 Kei Mouth (Jd: Burgersdorp (Dolerite), Pa: Adelaide (Grey and Brownish-red mudstone, sandstone))

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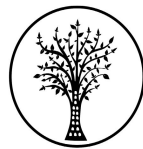


Figure 6a, b and c. Contextual Photographs of site. Bluegums on site

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Figure 6d and e. Contextual Photographs of site. Bluegums on site



Figure 6f and g. Contextual Photographs of site. Bluegums on site

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8. Heritage statement and character of the area

The application is for the proposed development of water supply pipelines and associated powerlines and pumphouses. The proposed development area is located within the Butterworth Golf Course, located just outside the historic core of Butterworth in the Eastern Cape. Butterworth was first established as a Wesleyan mission station in 1827 north of the Great Kei River in British Kaffraria. It was named after Joseph Butterworth. During the Frontier Wars, the town was close to the seat of Hintska ka Khawuta, the King of the Xhosa people and as such, it was of great strategic importance. At the end of the Frontier Wars in 1878, traders began to settle here and the town has grown to become a small industrial centre. Butterworth became a municipality of the Cape Colony in 1904. The town was incorporated into the former Transkei bantustan during the apartheid years. The proposed excavation for the pipeline will not exceed a depth of 2m, after which it will be covered up. Furthermore, the large bluegums on site will not be impacted by the proposed development (Figure 6a to g). As such, the proposed development is unlikely to negatively impact on the sense of place of Butterworth, nor will it impact on the cultural landscape of the Transkei.

In terms of impacts to archaeology, prior to the establishment of the Wesleyan Mission at Butterworth, the area was occupied by Khoer herders and San hunter-gatherers, as well as Xhosa farmers. According to Kruger (2018, SAHRIS NID: 520056), a few archaeological and historical studies have been conducted in this section of the Eastern Cape most of which infer a varied and rich heritage landscape. The literature shows traces of coastal Herder sites during the later Stone Ages with evidence of pastoralism, rock art as well as Iron Age farmer presence and a Colonial frontier denoting European farmer expansion. The vast landscape that encompasses this area seems to have been inhabited continuously for centuries in prehistoric and historical times, the remnants of which are visible in transformed agriculture and rural settlement areas. Despite this high level of heritage sensitivity, very few archaeological heritage resources are known from this area (Figure 3a), the vast majority of which are known are burial grounds and/or graves (Appendix 1). The Archaeological Impact Assessment by Kruger (2018) located in Butterworth identified heritage resources including burial grounds and graves, and historical structures, whereas Archaeological Impact Assessments located in close proximity to Butterworth, and immediately adjacent to this proposed development area by Van Ryneveld (2016 SAHRIS NID: 367829) did not identify any heritage resources of significance. In addition, the area proposed for the establishment of the proposed pipeline has been previously disturbed through the development of the Golf Course. As such, it is unlikely that the proposed development will impact on significant heritage resources.

The area proposed for development is underlain by geological sediments that have no palaeontological sensitivity (Jurassic Dolerites of the Burgersdorp Formation) as well as sediments that have very high palaeontological sensitivity (sediments of the Adelaide Formation). According to the SAHRIS Fossil Heritage Browser, the Adelaide Formation is known to record a very rich palaeontological heritage including fish, amphibians, reptiles, therapsids and vertebrate burrows. In addition, the Adelaide Formation falls within the Dicynodon and Lystrosaurus assemblage zones. Diverse terrestrial and freshwater tetrapods are known from this formation including amphibians, true reptiles, synapsids – especially therapsids, palaeoniscoid fish, freshwater bivalves, trace fossils (including tetrapod trackways), sparse to rich assemblages of vascular plants (*Glossopteris* Flora, including spectacular petrified logs) as well as insects. This formation is known to record key evidence for the evolution of mammalian characteristics among therapsids and conserves a continental record of Late Permian Mass Extinction Events. The scientific significance of this palaeontologically rich formation cannot be overstated. That being said, the excavations anticipated for the proposed development will not impact the Adelaide Formation and will only impact the non-fossiliferous Jurassic dolerite sediments. In addition, the boreholes proposed for this project have already been excavated and as such, it is unlikely that the excavations required for the pipeline will impact on significant palaeontological resources.

RECOMMENDATION:

Based on the information available, it is very unlikely that the proposed development will negatively impact on significant archaeological, palaeontological, built environment or cultural landscape heritage resources. As such, it is recommended that no further heritage studies are required in terms of section 38 of the NHRA.

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APPENDIX 1

List of heritage resources within the 20km Inclusion Zone from SAHRIS

Site ID	Site no	Full Site Name	Site Type	Grading
91424	MGS053	Mgwali South Water 053	Burial Grounds & Graves	Grade IIIa
91413	MGS054	Mgwali South Water 054	Burial Grounds & Graves	Grade IIIa
91470	MGS044	Mgwali South Water 044	Burial Grounds & Graves	Grade IIIa
91460	MGS047	Mgwali South Water 047	Burial Grounds & Graves	Grade IIIa
91452	MGS048	Mgwali South Water 048	Burial Grounds & Graves	Grade IIIa
91447	MGS049	Mgwali South Water 049	Burial Grounds & Graves	Grade IIIa
30952	UMLANDO-NGQ023B		Building	Grade IIIc
83838	UMLANDO-NGQ023A	Ngqamakwe 023	Archaeological	Grade IIIc
83830	UMLANDO-NGQ015	Ngqamakwe 015	Building	Ungraded
83801	UMLANDO-NGQ08	Ngqamakwe 08	Structures	Grade IIIa
91472	MSG042	Mgwali South Water 042	Burial Grounds & Graves	Grade IIIa
30966	UMLANDO-NGQ08C		Stone walling, Burial Grounds & Graves	Grade IIIa
30965	UMLANDO-NGQ08B		Stone walling, Burial Grounds & Graves	Grade IIIa
30964	UMLANDO-NGQ08A		Stone walling, Burial Grounds & Graves	Grade IIIa
91482	MGS046	Mgwali South Water 046	Burial Grounds & Graves	Grade IIIa
91481	MGS042	Mgwali South Water 042	Burial Grounds & Graves	Grade IIIa
91471	MGS043		Burial Grounds & Graves	Grade IIIa
91466	MGS045	Mgwali South Water 045	Burial Grounds & Graves	Grade IIIa
91430	MGS050	Mgwali South Water 050	Burial Grounds & Graves	Grade IIIa
91428	MGS051	Mgwali South Water 051	Burial Grounds & Graves	Grade IIIa

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Reference List from SAHRIS

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
6786	AIA Phase 1	Robert de Jong	06/02/2011	HERITAGE IMPACT ASSESSMENT REPORT: INSTALLATION OF LONG-HAUL DARK FIBRE DUCTING INFRASTRUCTURE ALONG THE N 2 BETWEEN DURBAN AND EAST LONDON, KWA-ZULU NATAL AND EASTERN CAPE PROVINCES
7002	AIA Phase 1	Len van Schalkwyk	19/01/2009	Heritage Impact Assessment of Junction 14 Quarry Extension, Butterworth, Eastern Cape Province, South Africa
7461	AIA Phase 1	Johan Binneman	01/01/2002	N2 Wild Coast Toll Road Project, Chapter 6 Archaeological Heritage Sensitivity Survey
8469	HIA Phase 1	Len van Schalkwyk	08/04/2008	Heritage Impact Assessment of the Proposed N2 Wild Coast Toll Highway
8914	PIA Phase 1	Robert Gess	30/03/2011	Palaeontological heritage component of FibreCo Telecommunications, basic assessment for the proposed fibre optic data cable project: Route 5: PE to Durban
44939	PIA Phase 1	Robert Gess	01/05/2012	
73235	HIA Phase 1	Wouter Fourie, Gideon Groenewald	27/07/2012	Heritage Impact Assessment - Proposed Mgwali South Water Supply, iDutywa, Mbhashe Municipality, Amatole District Municipality Eastern Cape Province
110130	AIA Phase 1	Karen Van Ryneveld	28/01/2013	PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT: WILLOWVALE-DWESA BORROW PITS PROJECT, AMATHOLE DISTRICT MUNICIPALITY, EASTERN CAPE, SOUTH AFRICA
110131	PIA Phase 1	Lloyd Rossouw	28/01/2013	Phase 1 Palaeontological Impact Assessment of 2 Quarries and 6 Borrow Pits, between Willowvale and Dwesa, EC Province.
118880	AIA Phase 1B	Andrie Meyer	07/03/2013	N2 Wild Coast Toll Highway. Supplementary Archaeological Survey. Field Survey Conducted from 24 to 28 October 2011. Final Report December 2012.
152164	PIA Desktop	Robert Gess	18/12/2013	Desktop Palaeontological Impact Assessment for the Ngcizele Water Project
152166	AIA Phase 1	Karen Van Ryneveld	18/12/2013	Phase 1 Archaeological Impact Assessment - Ngcizele Phase 2 Village Water Supply, near Centane, Eastern Cape, South Africa
269397	AIA Phase 1	Celeste Booth	02/03/2015	FibreCo Repeater Sites Routes 3 and 4_Heritage_2015 AIA report
367829	AIA Phase 1	Karen Van Ryneveld	21/07/2016	Phase 1 Archaeological and Cultural Heritage Impact Assessment - Conference and Accommodation Facility near

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				Gcuwa Dam, Butterworth, Mnquma Local Municipality, Eastern Cape
520056	AIA Phase 1	Neels Kruger	10/12/2018	ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED NDABAKAZI INTERCHANGE UPGRADE PROJECT IN THE BUTTERWORTH AREA OF THE AMATHOLE DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE

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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 PALAEOLOGICAL 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

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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.

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:

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- 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
- 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.

The compilation of the Heritage Screener will not include any field assessment. The Heritage Screener will be submitted to the applicant within 24 hours from receipt of full payment. **If the 24-hour deadline is not met by CTS, the applicant will be refunded in full.**

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