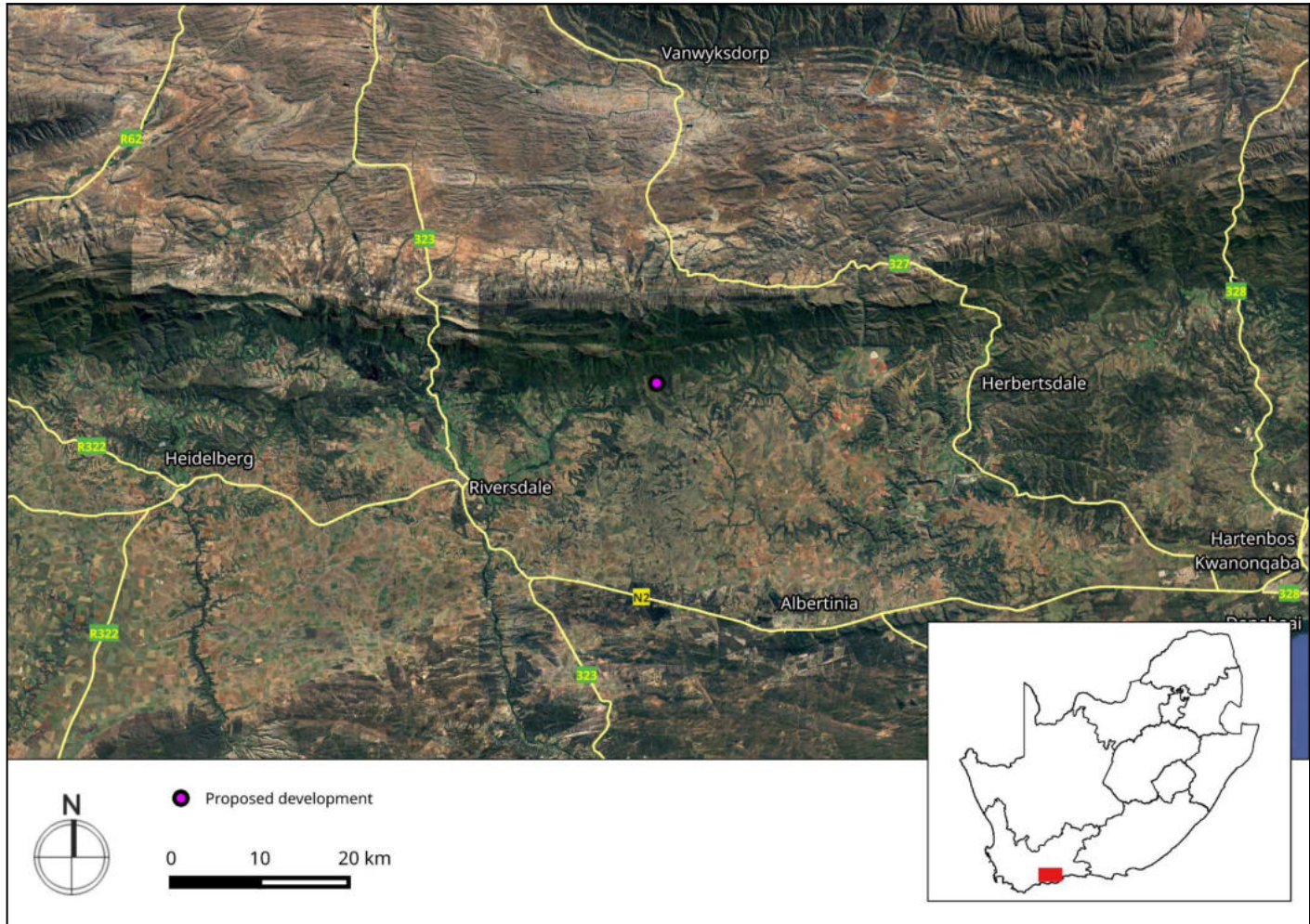


HERITAGE SCREENER

CTS Reference Number:	CTS24_391	 Figure A. Satellite map indicating the location of the proposed development in the Western Cape Province.
Client:	PHS	
Date:	October 2025	
Title:	Proposed agricultural development of Portion 3 of Farm Aan de Valsch Rivier 186 and Farm Horeb 149, 20 km northeast of Riversdale	
Recommendation by CTS Heritage Specialists	RECOMMENDATION Based on the available information, it is unlikely that the proposed development will impact on significant heritage resources and as such, it is recommended that no further heritage studies are required.	



1. Proposed Development Summary

The proposed agricultural development of Portion 3 of Farm Aan de Valsch Rivier 186 and Farm Horeb 149, 20 km northeast of Riversdale. The proposal involves the cultivation of virgin soil and the construction of a dam for agricultural purposes.

- *The proposed cultivation of ± 52.5 hectares:*
 - *Pocket 1: (± 7ha) – Grazing*
 - *Pocket 2: (± 8ha) – Grazing*
 - *Pocket 3: (± 11.5ha) - Avocado orchard*
 - *Pocket 4: (± 20 ha) - Mostly Avo Orchard and/ or other Fruit Trees / Cash Crops*
 - *Pocket 5: (± 6ha) - Cover / Cash Crops*
- *A new dam with a maximum 34 235m³ storage capacity will be constructed.*

Only one dam is proposed. The client is in the process of assessing the impacts of 3 Dam alternatives:

Dam Option 1: (Applicant & Engineers Preferred Option)

- This position was chosen as it was the most suitable sub soil with a very high clay content. No additional sealing is required
- Cost to build this dam estimated: R2 320 000
- Water holding capacity: 33 700m³; Wall height: 6.5m

Dam Option 2:

- This position has a high concentration of rock and stone. This dam must be sealed with a membrane.
- The cost of the: a) ground works will be: R2 797 180; b) membrane: R1 050 000
- Water holding capacity: 34 235m³; Wall height: 8m

Dam Option 3:

- This position has also got a high volume of rock and very little Clay. This dam will have to be sealed with a membrane
- The cost of the a) ground works will be: R2 500 000; b) membrane: R1 050 000.00
- Water holding Capacity: 29 500m³; Wall height: 8.5m

It must be made clear that this is an agricultural project on land zoned and utilised over the years for agriculture. The character of the site in essence is not changing.

2. Application References

Name of relevant heritage authority(s)	HWC
Name of decision making authority(s)	DEADP

3. Property Information

Latitude / Longitude	-34.006850, 21.449165,
Erf number / Farm number	Portion 3 of Farm Aan de Valsch Rivier 186 and Farm Horeb 149, 20 km northeast of Riversdale
Local Municipality	Hessequa Municipality
District Municipality	Garden Route District Municipality
Province	Western Cape
Current Use	Agricultural
Current Zoning	Agricultural

4. Nature of the Proposed Development

Total Surface Area of development	± 52.5 hectares (cultivation) + ±1.7ha (Dam) = 54.2ha
Depth of excavation (m)	Excavation only applies to Dam
Height of development (m)	Cultivation and Dam. (Wall height of Dam 6.5 -8.5m)
Anticipated value of the development	R2 320 000 – 3 500 000 (Dam construction value)

5. Category of Development

X	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):

6. Additional Infrastructure Required for this Development

None

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

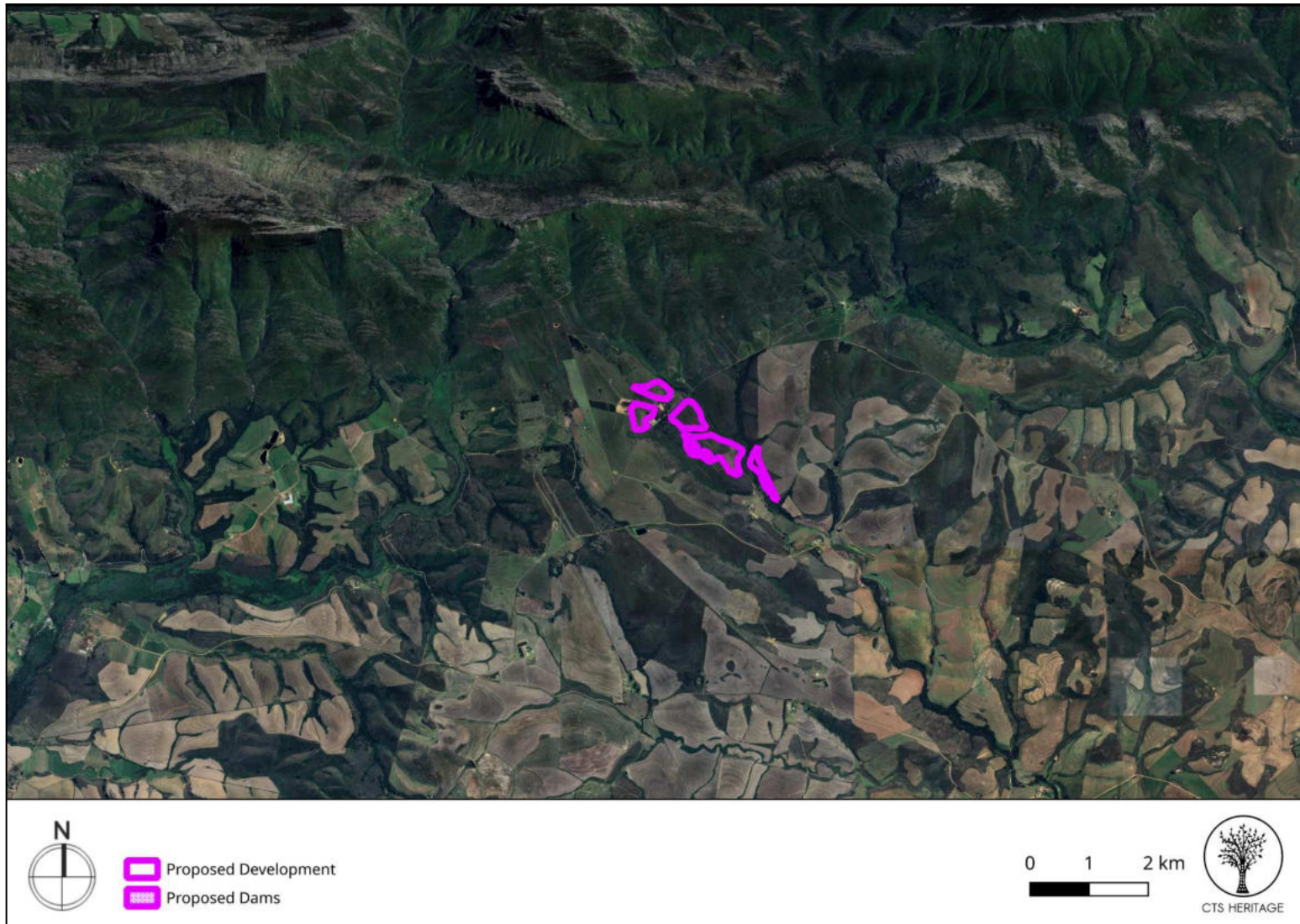


Figure 1.1 Overview Map. Satellite image (2025) indicating the proposed development area at closer range.



Figure 1.2 Overview Map. Satellite image (2025) indicating the proposed development at closer range.

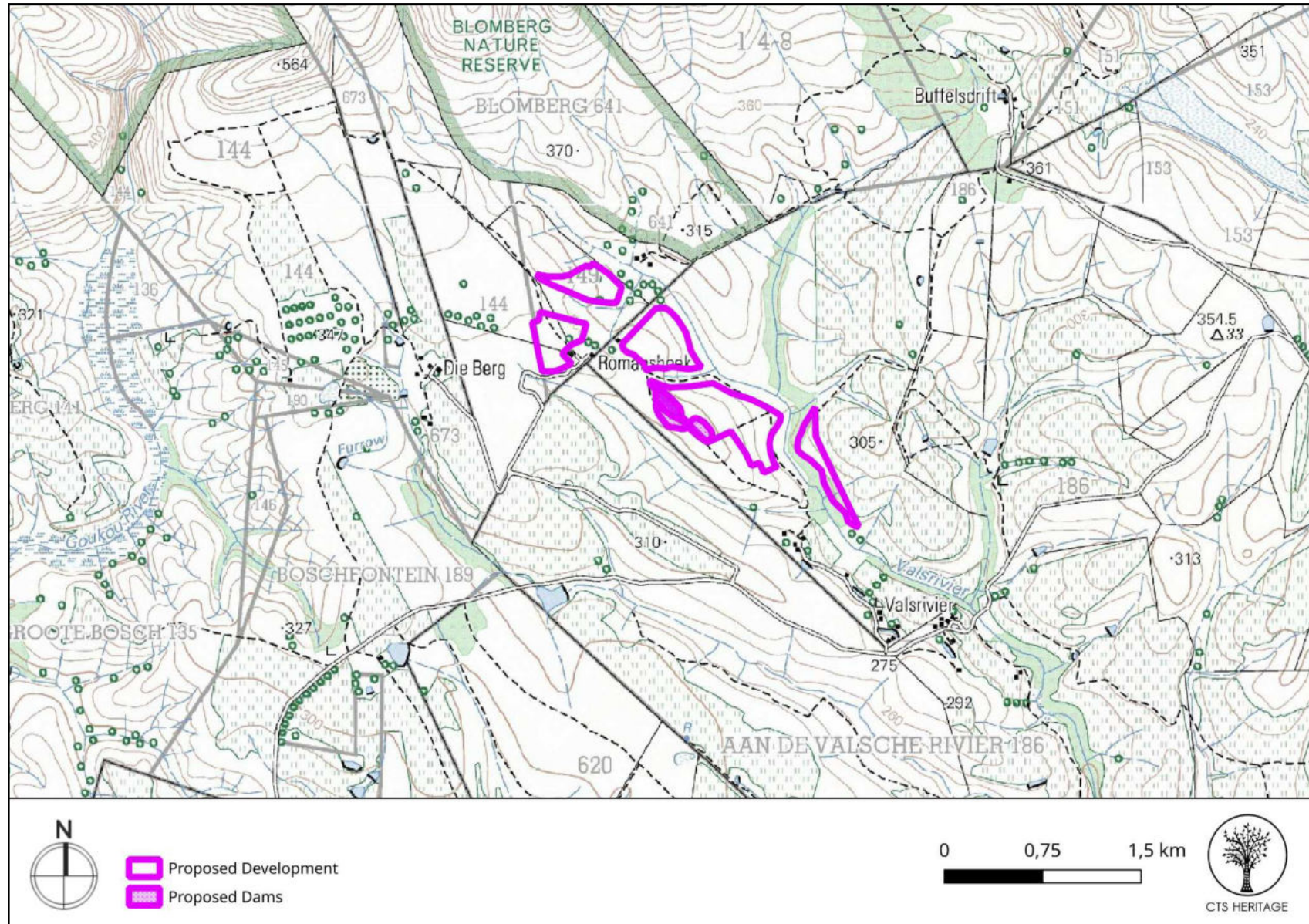


Figure 1.3 Overview Map. 1:50 000 Topo Map for the development area

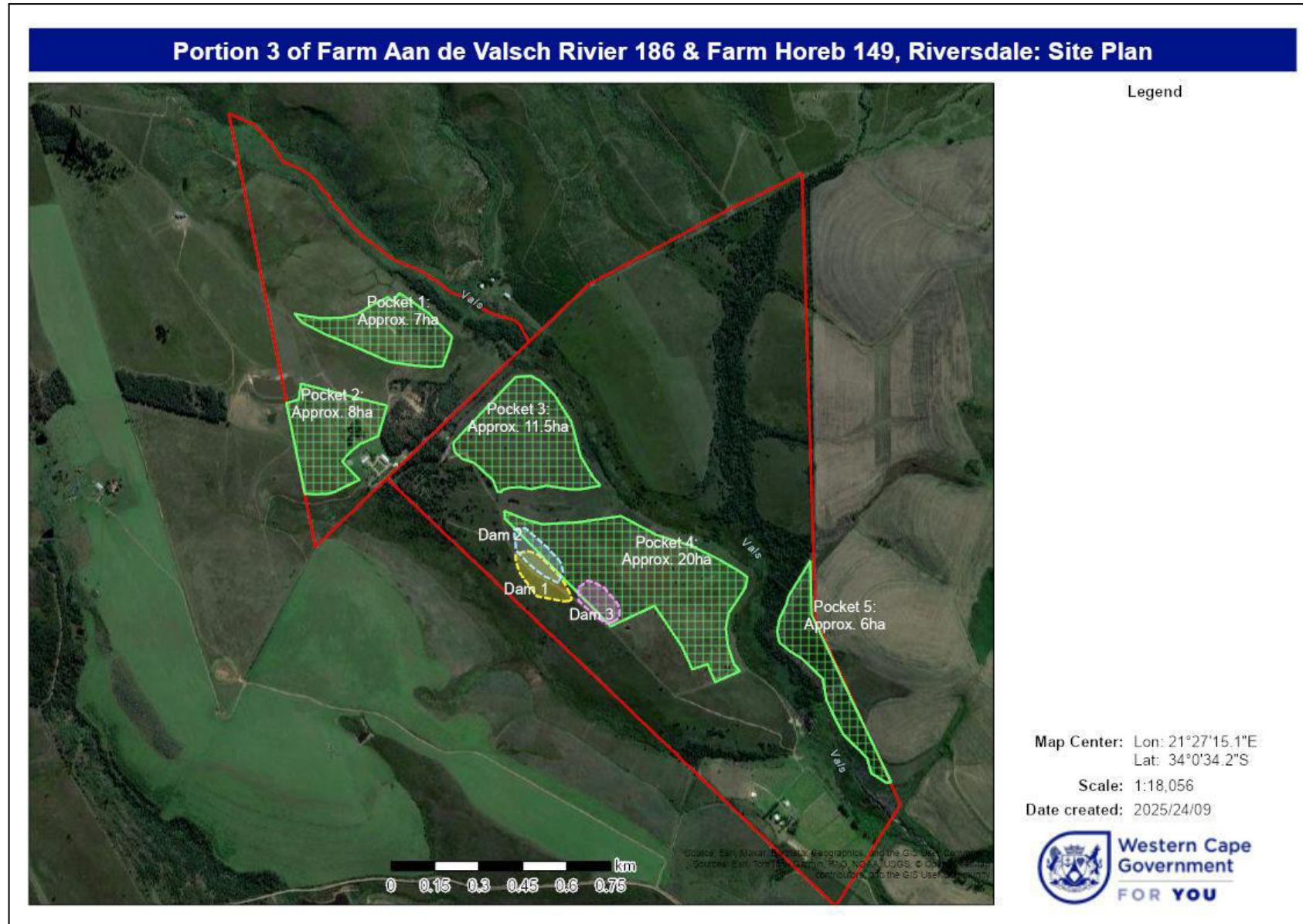


Figure 1.4 Constraints and Opportunities Map. The study area with potentially developable versus based on ground-truthing (provided by client)

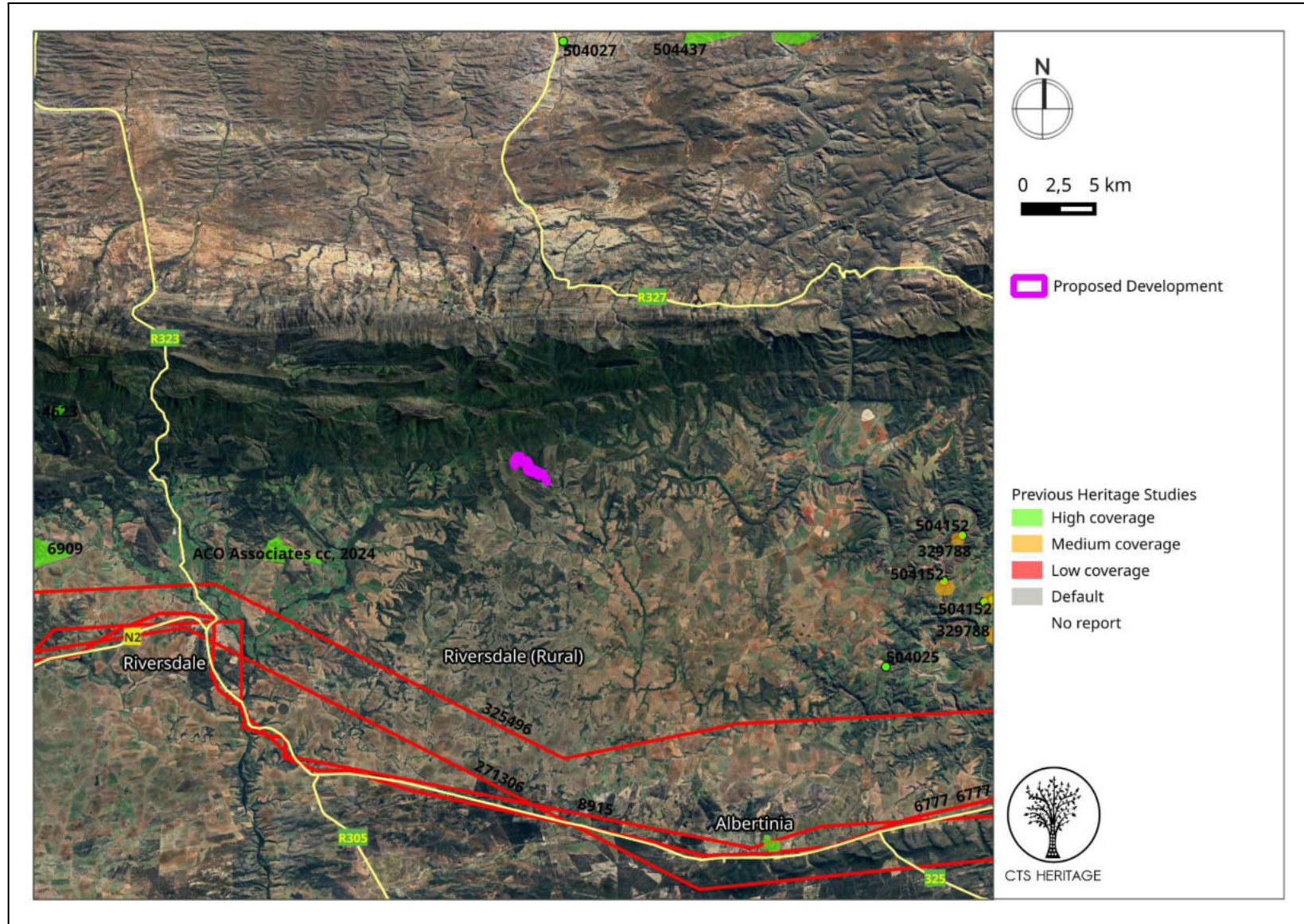


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area, with SAHRIS NIDS indicated. Please see Appendix 2 for a full reference list.

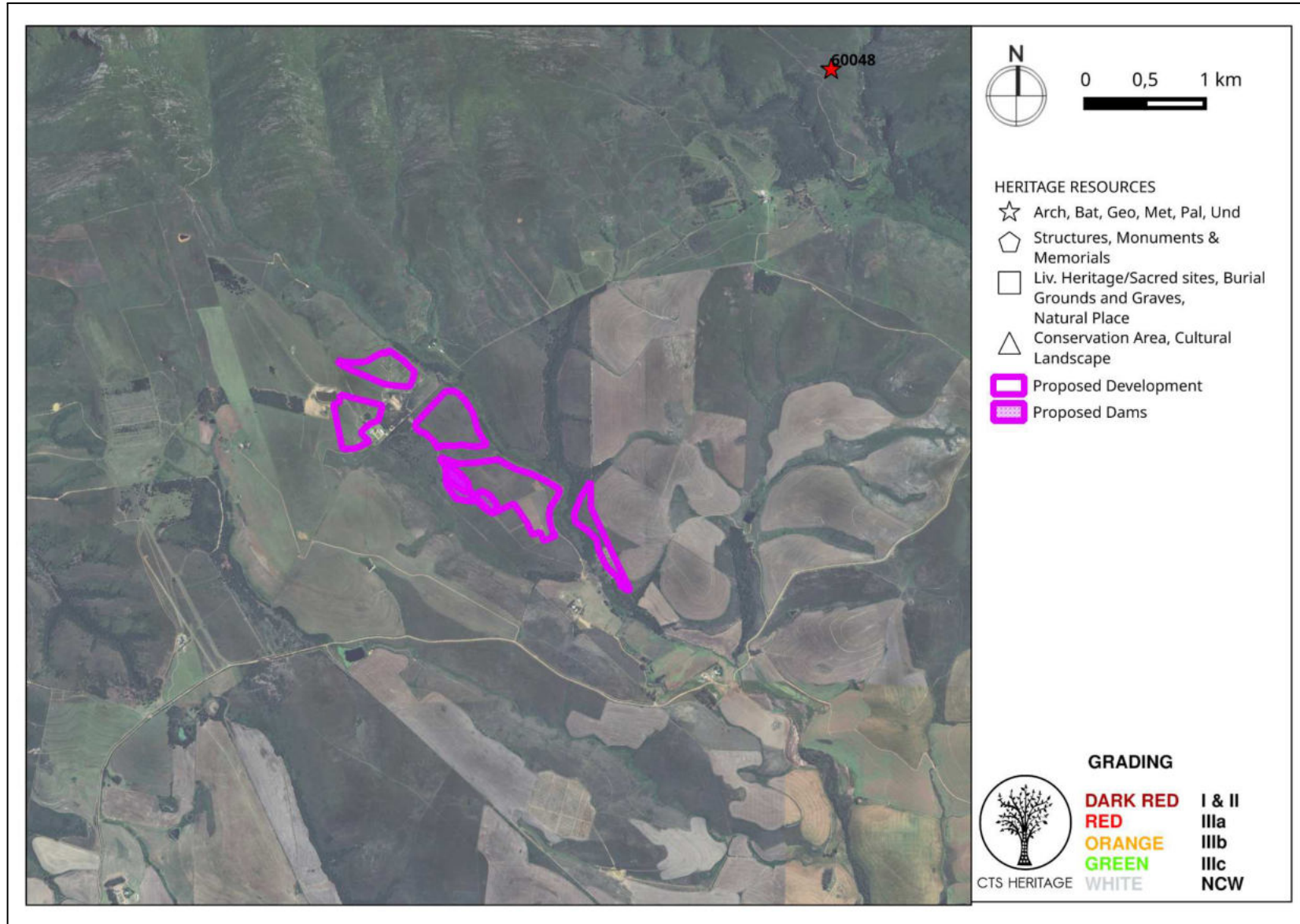


Figure 3.1 Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated. Please See Appendix 4 for a full description of heritage resource types.

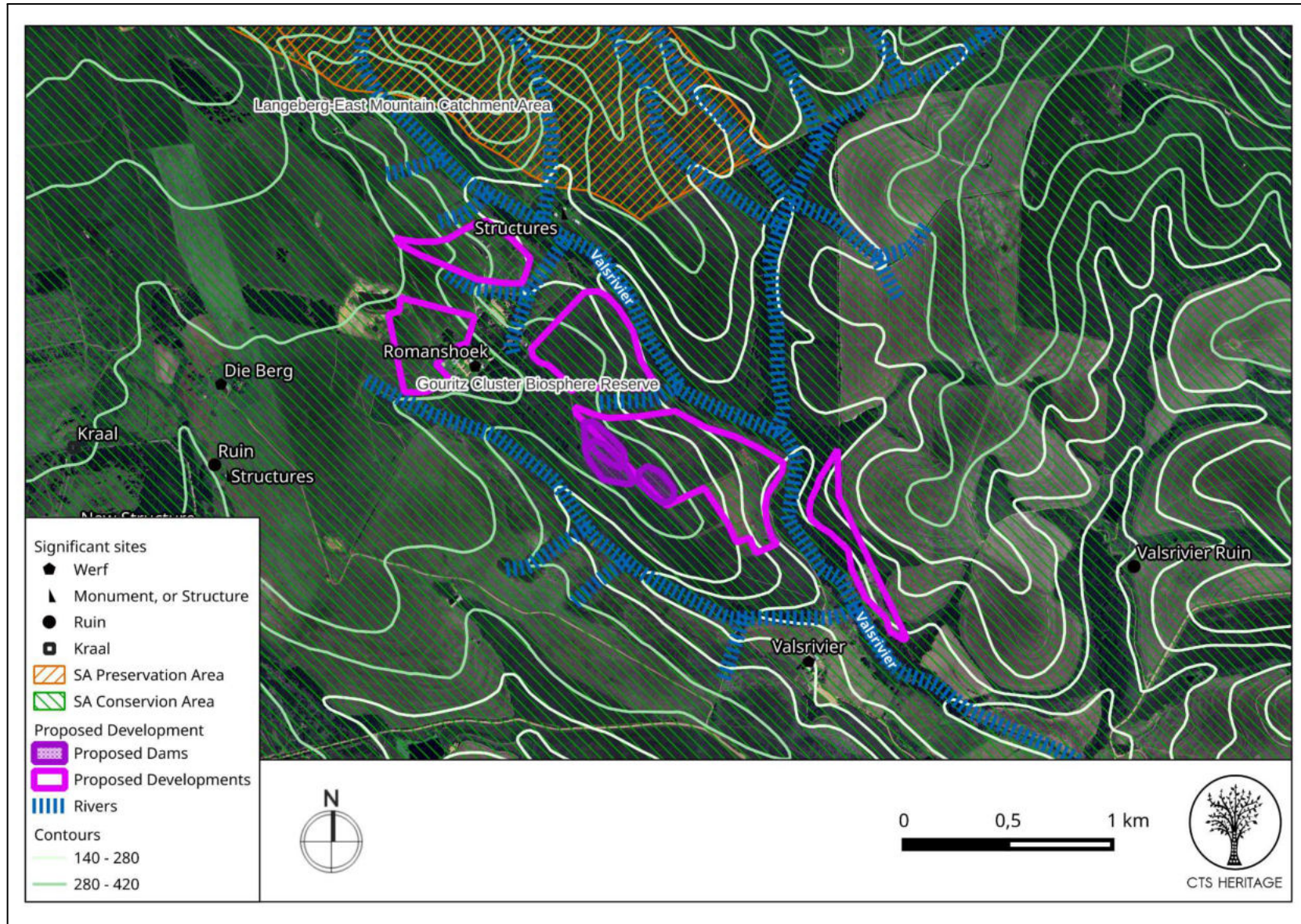


Figure 3.2 Cultural Landscape Map. Map indication sensitive receptors near the proposed development, extracted from the Topo 1:50 000 map.

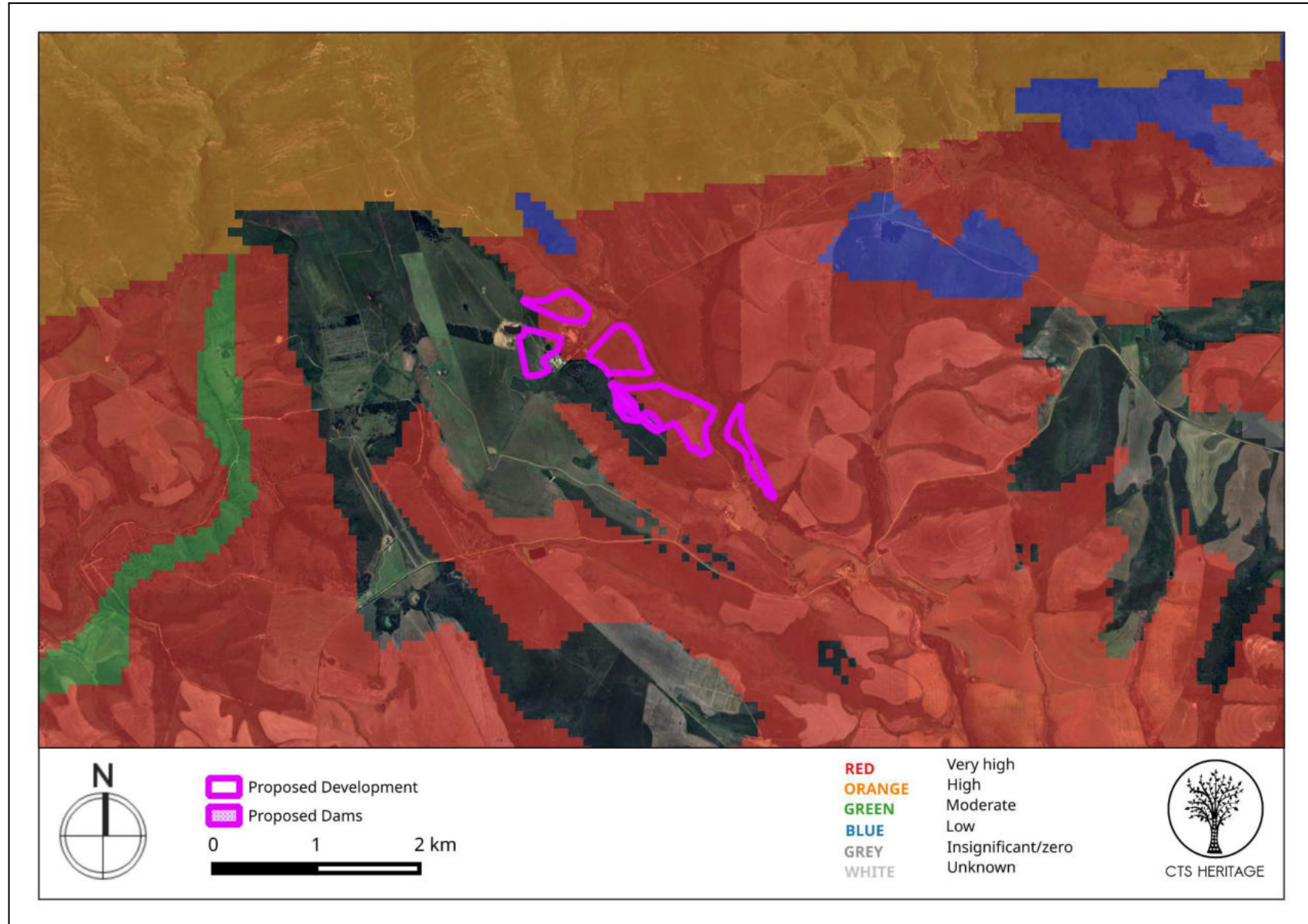


Figure 4.1 Palaeosensitivity Map. Indicating Low to Very High fossil sensitivity underlying the study area. Please see Appendix 3 for a full guide to the legend.

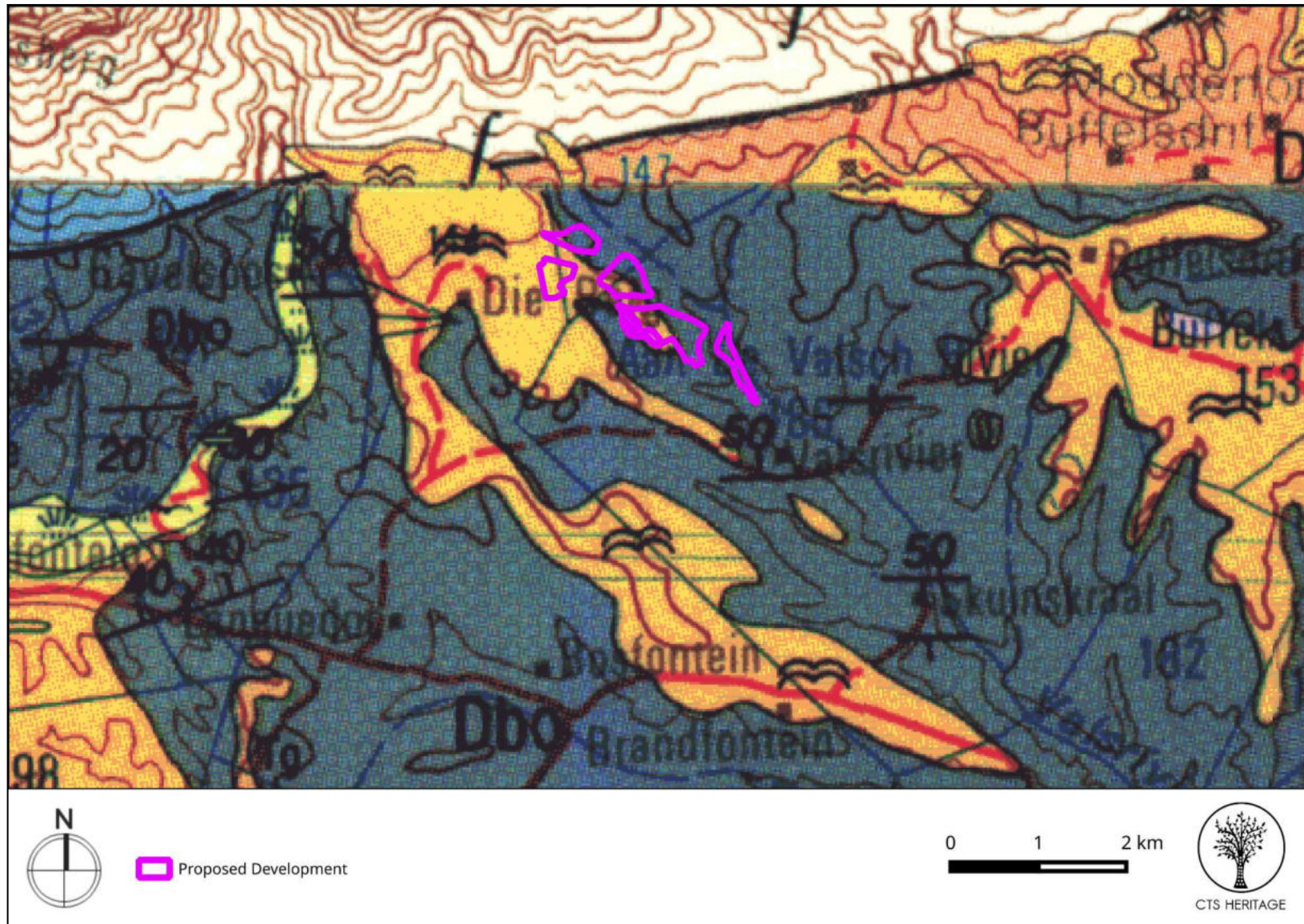


Figure 4.2 Geology Map. Extract from the CGS 3320 Lady Smith and 3420 Riversdale Geology Map indicating that the development area is underlain by Dbo: Bokkeveld Group (shale and siltstone with occasional thin sandstone beds), and : River-terrace gravel

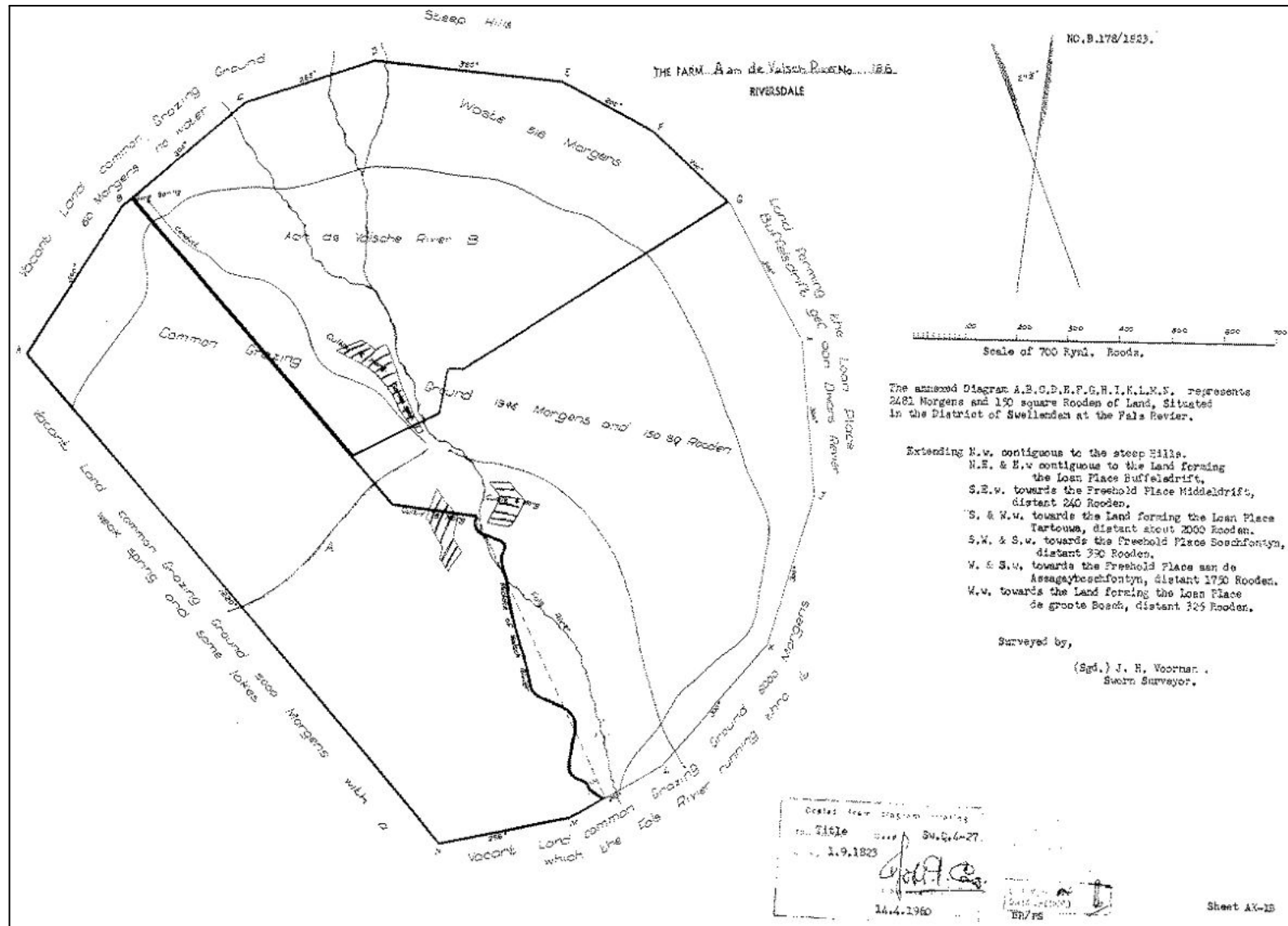


Figure 5.1 SG Diagram (1823)

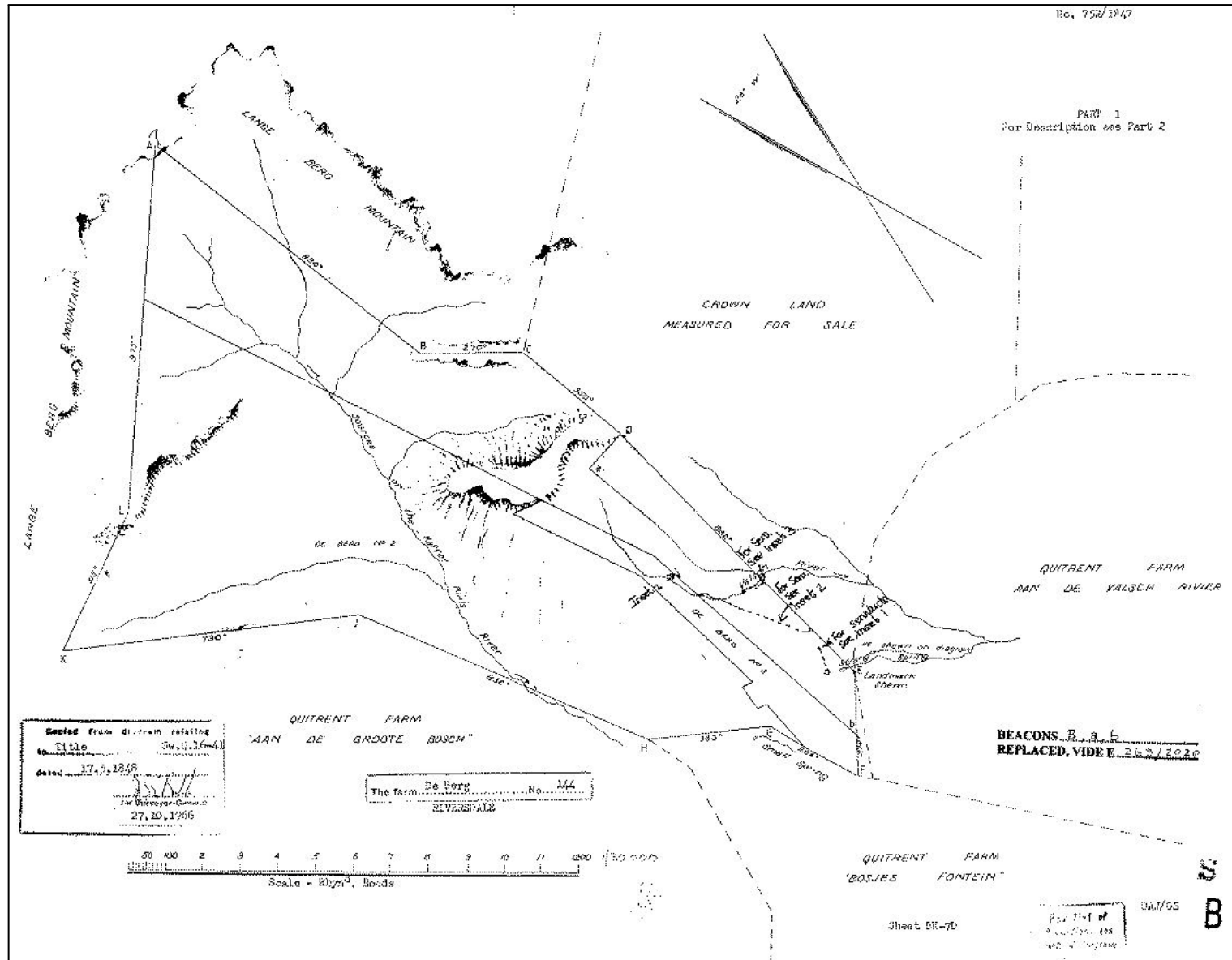


Figure 5.2 SG Diagram (1849)

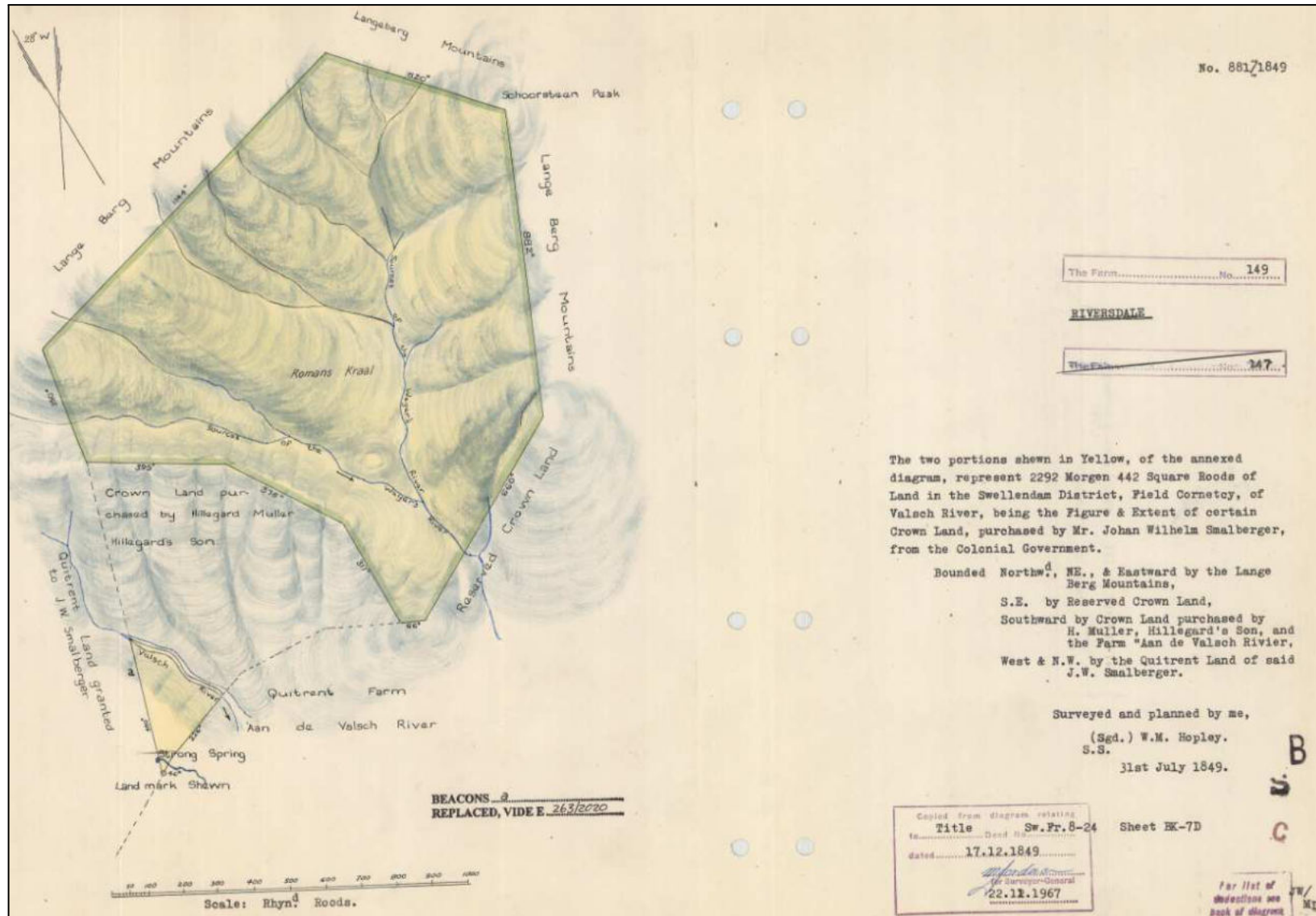


Figure 5.3 SG Diagram (1849)



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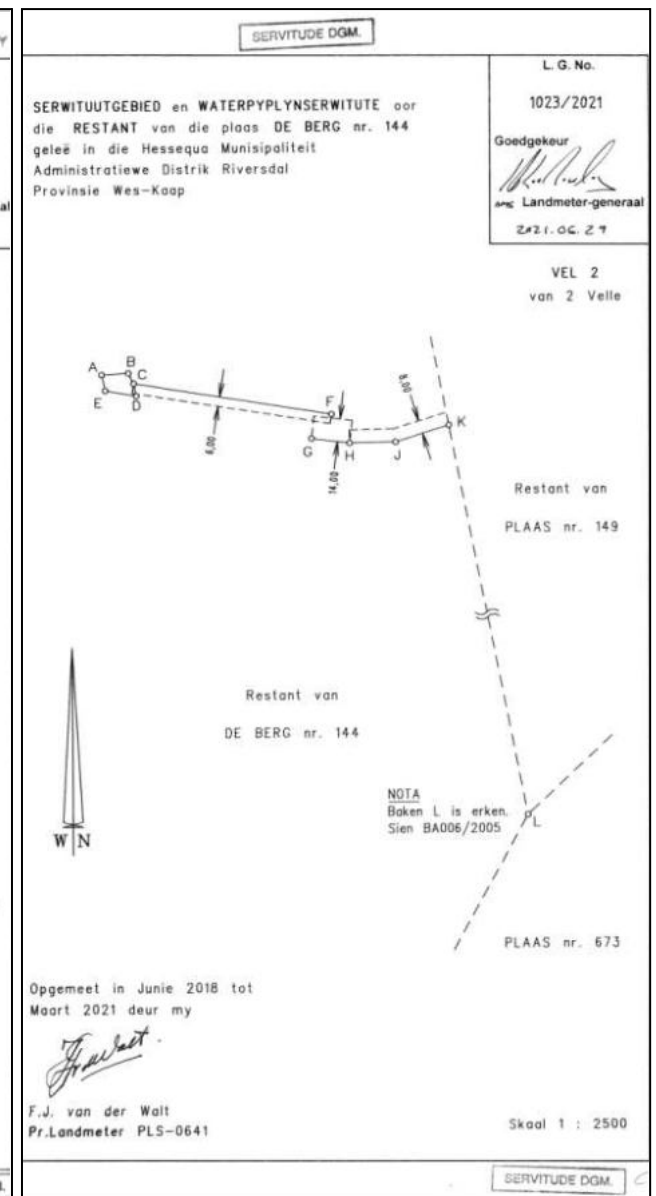
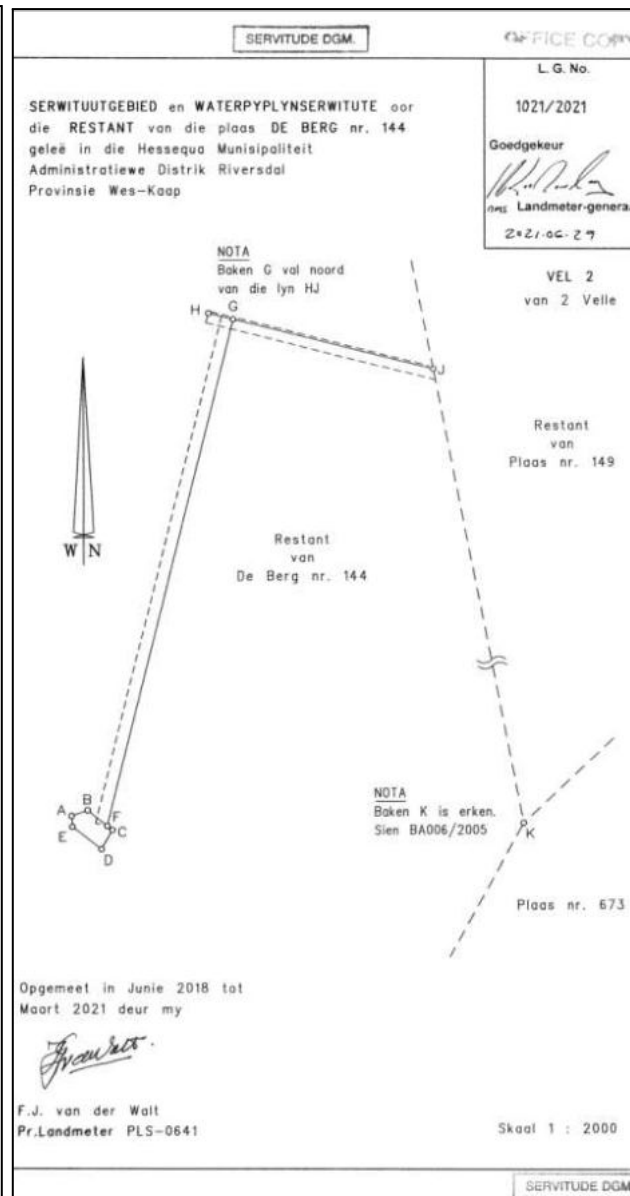
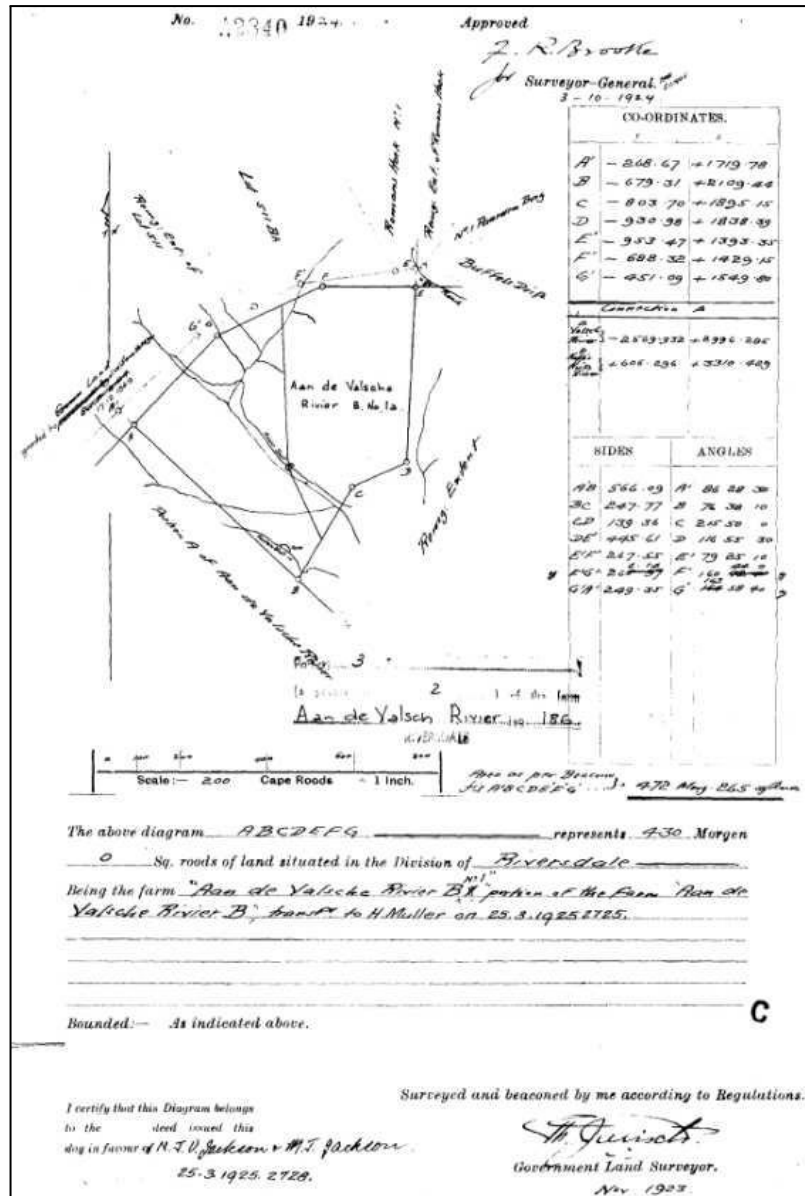


Figure 5.4-6 SG Diagrams (1923, 2021 and 2021)

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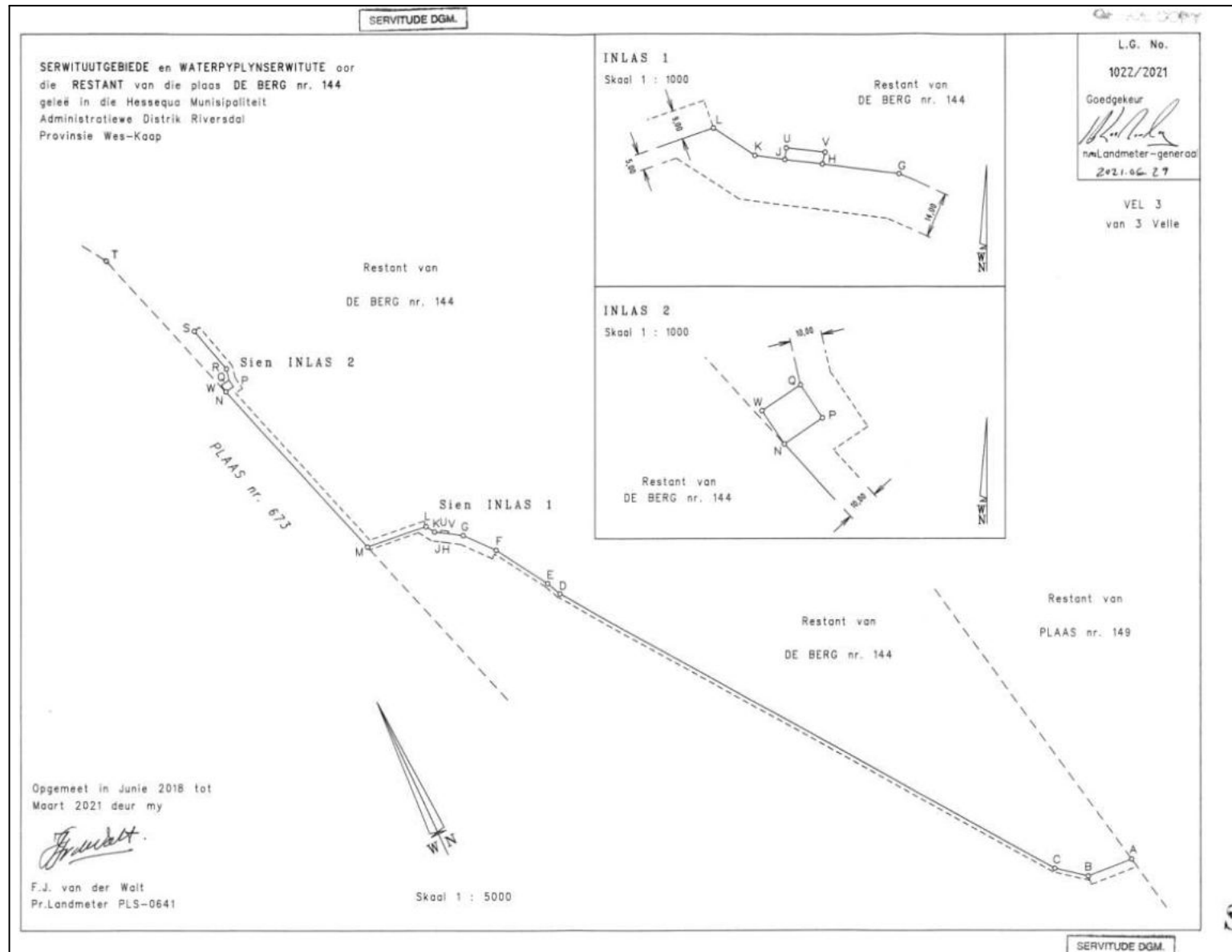


Figure 5.7 SG Diagram

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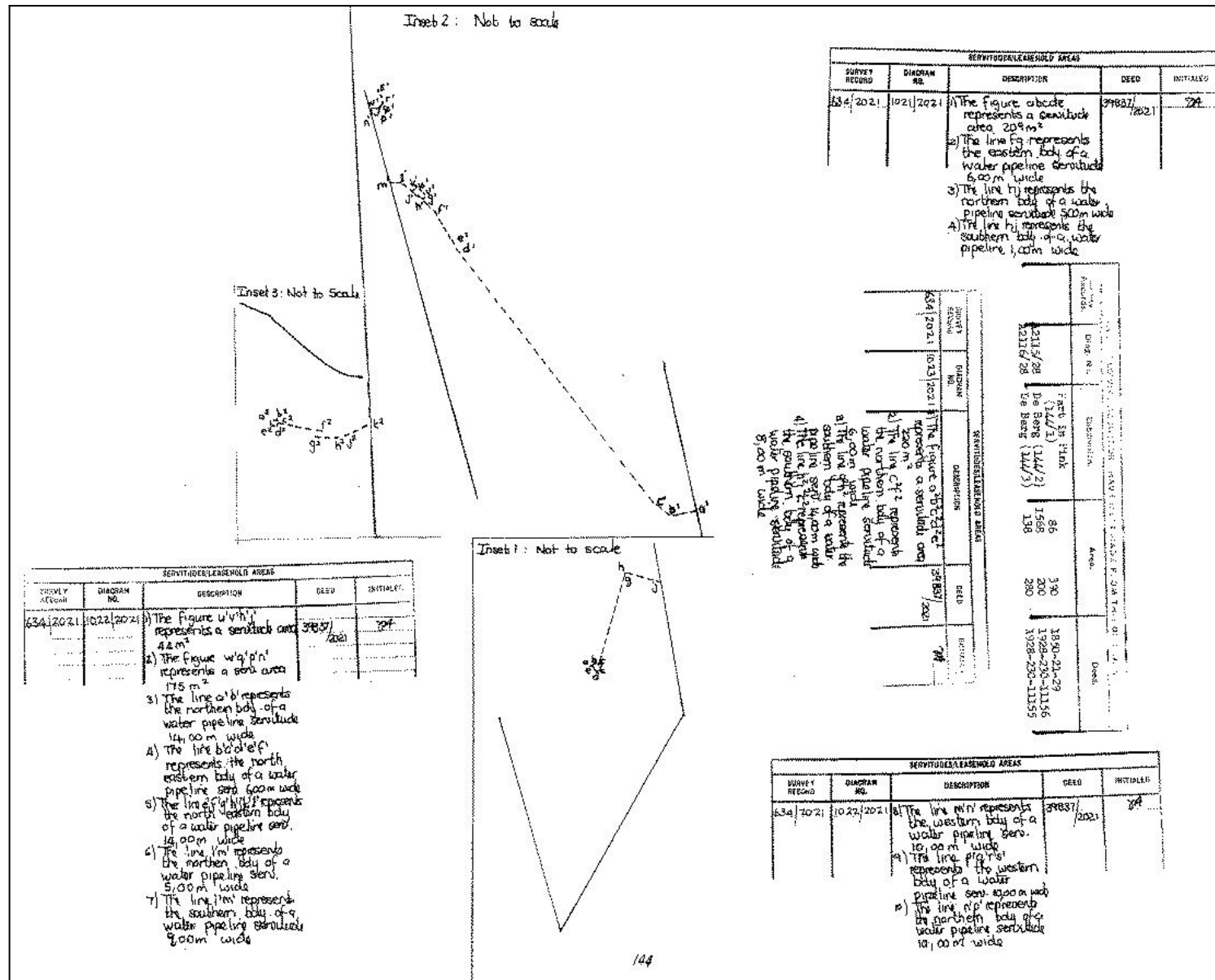


Figure 5.8 SG Diagram

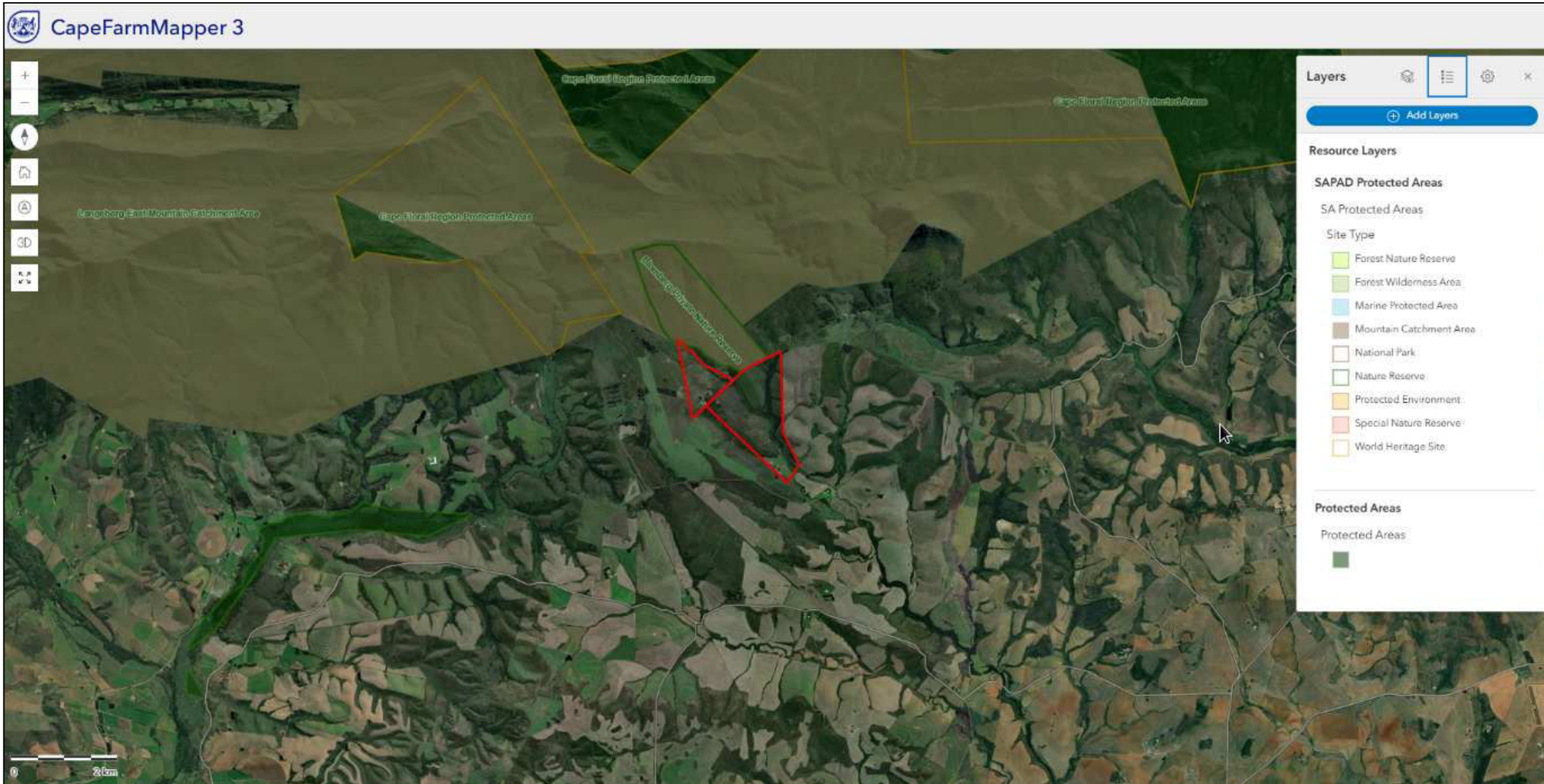


Figure 6 Protected Areas Map from Cape Farm Mapper



8. Heritage statement and character of the area

Background

This application is for the proposed agricultural development of Portion 3 of Farm Aan de Valsch Rivier 186 and Farm Horeb 149, 20 km northeast of Riversdale. According to Raper et al (1987), Riversdal “was founded on the farm Doornkraal in August 1838 and attained municipal status in June 1849. Named after Harry Rivers (1785-1861), Commissioner and Resident Magistrate of Swellendam from 1834 to 1841.”

Cultural Landscape

The proposed agricultural development falls on the foot of the Langeberg mountain series, within existing agricultural lands. The landscape is dotted with farm werfs and associated structures, with the Valsriver bordering and transecting sections of the study area. Most of these werfs (Die Berg, Romanshoek and Valsrivier, Figure 3.2-3.3) are most likely older than 60 years, as they appear on the first Edition Topo map. None of the werfs fall within the proposed development areas.

In 2024, Halkett conducted an HIA located approximately 15km southwest of the proposed development.¹ As the proposed development falls in the same landscape, their description is applicable. “The area is predominantly used for farming, which has been expanding since the first maps and aerial photographs were produced. The earliest aerial photographs of the area date to 1954. While some areas where the mining will be located were under cultivation at that time, by comparison, the 2024 Google Earth image shows that the entire mining area is now cultivated. The topographic maps largely bear out what is seen in the aerial photos and relevant sections of both the 1962 and 2016 maps are included to indicate the expansion of agriculture.”

Furthermore Halkett (2024) notes that “Winter and Oberholzer (2014) have broadly assessed the area and have not identified any significant cultural landscape in the immediate area. The Langeberg Mountains are considered to be a natural landscape of which a section is shown to the north of the mining sites, while the R323 and Garcia Pass are considered to be scenic routes. They describe Riversdale as “A church town founded c1837. Long Street was particularly noteworthy in terms of concentration of 19th century fabric (cottages and double storey flat roofed dwellings).”

As the proposed development is located more than 20km from the historic core of Riversdale, impact to this historic town is unlikely. As the nature of the proposed development is agricultural and it falls within an agricultural landscape, the development does not detract from the cultural value of the broader landscape.

Although the proposed development also falls within the Gouritz Cluster Biosphere Reserve, it does not fall within a Protected Area as such as the team can ascertain (Figure 6). According to the Gouritz Cluster Biosphere Reserve website, “The GCBR is located in the southern part of South Africa, across parts of the Western, Southern and Eastern Cape. It is an incredibly unique place in that it is the only area in the world where three global biodiversity hotspots converge: the Fynbos, Succulent Karoo and Maputoland-Tongoland-Albany hotspots. On the 9th June 2015 UNESCO (United Nations Education, Scientific and Cultural Organisation) approved the designation of the Gouritz Cluster Biosphere Reserve (GCBR) as South Africa’s 7th, and largest biosphere reserve – at 3 187 893 hectares!

Furthermore, UNESCO approved the serial extension of the Cape Floral Region Protected Areas (CFRPA) World Heritage Site within the domain, which added to formally protected areas as part of the CFRPA World Heritage Site. The GCBR is characterised by high endemism of plant species, which means they occur nowhere else on earth. At least 670 of the approximately 5,000 plant species present are endemic to the Biosphere Reserve. Even the arid inland portion of the region is rich in endemic species, with at least 400 of the 3,200 plant species restricted to the Biosphere Reserve. They are, in other words, irreplaceable: if we lose them they are gone, forever. It is simply impossible to overestimate the importance of our region’s biodiversity – for us and for the rest of the world. It is one of the key reasons why UNESCO has declared this area as an

¹ ACO Associates cc: Halkett, D. (2024) Heritage Impact Assessment: Proposed Bentonite & Zeolite Mining On Zeekoekruis 651 Near Riversdale, Western Cape, https://www.enviro-eap.co.za/wp-content/uploads/2024/04/13.AppendixE6_Integrated_Heritage_Impact_Assessment.pdf



international Biosphere Reserve.²

As noted above, the area proposed for this agricultural development lies adjacent to the Cape Floral Region Protected Areas (CFRPA) World Heritage Site. This WHS is protected and managed in terms of the National Environmental Management Protected Areas Act (NEMPAA) (Figure 6). The primary Outstanding Universal Value (OUV) of the Cape Floral Region Protected Areas (CFRPA) World Heritage Site pertains to its ecological significance. As such, impacts to this OUV will be addressed in the specialist ecological studies completed for this project.

Archaeology

Archaeological sites spanning the Earlier, Middle and Later Stone Age have been found in the region despite the extensive agricultural transformation of the area. In an AIA by Webley and Orton (2009, SAHRIS NID 6909), they note that *“Very little archaeological work has been undertaken in this part of the southern Cape. However, Macfarlane made the following observation as early as 1949: “I have examined the high-level gravels at Napier, Swellendam and Riversdale and every deposit examined by me contains stone implements of a well-developed Pre-Stellenbosch culture of principally a Cromerian facies” and “There is also both a Clacton and faceted-butt technique present, which indications of a block-on-block technique are fairly common” (Macfarlane 1949:95-6).*

Macfarlane then goes on to say “Handaxes are not common; they are usually flaked on one surface, the dorsal plane being left intact” (Macfarlane 1949: 96). The Clactonian is a name given to an industry of European tool manufacture characterised by striking thick, irregular flakes from a core, the core subsequently being used as a chopper. There is some disagreement as to whether this industry pre-dates the Acheulian or is contemporary with it. It has been proposed that “differences between the Acheulian and core and flake industries thus probably reflect “cultural differences” between groups and regions of H. erectus and Homo populations” (Lieberman & Bar-Yosef 2005:286).”

The survey (Webley and Orton, 2009, SAHRIS NID 6909) recorded widespread Early Stone Age stone artefacts, mostly quartzite flakes, cores, and chunks resembling the Clactonian industry, though lacking Acheulian handaxes or cleavers; their fresh condition suggests they were brought to the surface by ploughing rather than being *in situ*. Webley and Orton (2009) posited that a few pieces may belong to the Middle Stone Age. A single retouched flake, possibly a scraper, represents the Later Stone Age. Despite careful inspection, no pottery linked to Khoekhoen pastoralists was found. Limited historic material, including 20th-century ceramics, glass, and a possible retouched glass flake, was also recovered but is of little significance. Overall, the abundance and disturbed context of the artefacts across fields from Napier to Riversdale reduce their archaeological value, though morphological analysis could still contribute to broader comparative studies of the Early Stone Age in South Africa. During the field survey for their nearby AIA, Halket (2024) identified no conservation-worthy artefacts that had been disturbed by the extensive farming practices.

All of the nearby sites recorded on SAHRIS are rock art sites located in the nearby kloofs. According to the National Khoe and San Heritage Route: Main Report (Department of Arts and Culture, 2013), *“Between Stilbaai and Plettenberg Bay, where the Hessequa, Attaqua, and Gouriqua Khoekhoe tribes lived in the 17th century, there are numerous caves and rock shelters that preserve the long history of the San people of the region, and that of the Khoekhoen in more recent times. In the 1660s, roughly in the direction of the present-day N2, were a number of Khoekhoe tribes, starting in the west near Cape Town with the Chainouqua. Their neighbours to the east between Stormsvlei and Riversdale were the Hessequa and the Municipality is now known by that name, Hessekwa. To the east of them were the Gouriqua in the area of the Gouritz River. The Attaqua were further inland between George and Plettenberg Bay. On 1 November 1809, Governor Caledon issued a proclamation to remove the power of all Khoekhoe chieftainships and restrict their followers’ movements by insisting that everyone had to have a permanent place of residence, be registered at the local landdros and carry a pass. In order to escape these restrictions, some Khoekhoe groups trekked away from the Colony toward the Orange River.”*

Key sites in this area mentioned by the Heritage Route Report (Department of Arts and Culture, 2013) include Blombos, approximately 60km south of the proposed development, Cape St Blaize Cave and Pinnacle Point, approximately 80km southeast. *“Blombos Cave west of Still Bay counts among the most important of sites with the*

² About the Gouritz Cluster Biosphere Reserve, <https://gouritz.com/about-gouritz-cluster-biosphere-reserve/#maps>



earliest engraved patterns on stone at 75,000 years ago; shell beads strung onto necklaces; the earliest ochre processing kit at about 100,000 years and evidence for eating of shellfish and fish at least 100,000 years ago....Cape St Blaize Cave at Mossel Bay, where San ancestors lived over a period of about 100,000 years, has information boards on San and Khoekhoe inhabitants of the area. The boards are in need of repair and should be upgraded by the Municipality. This and the nearby site of Pinnacle Point are important for correlating hunter-gatherer lifestyles with changing climates over the past 170,000 years."

Other nearby sites include several rock art sites identified by the Hessequa Society for Archaeology (2010), which also appear on SAHRIS. The four sites are located on the foothills of the Langberg on a similar contour line.³ These sites are all located in either caves or slight rock overhangs, which are absent within the proposed development area based on satellite imagery. Due to the extensive transformation of the landscape resulting from agricultural practices, it is unlikely that significant *in situ* archaeological heritage will be disturbed by the proposed development.

Palaeontology

The area proposed for development is underlain by geological units of very high palaeontological sensitivity as per the SAHRIS Palaeosensitivity Map (Figure 4.1). According to the extract from the Council of Geoscience Map for 3320 Ladysmith and 3420 Riversdale (Figure 4.2), the underlying geology forms part of the Dbo: Bokkeveld Group (shale and siltstone with occasional thin sandstone beds), and : River-terrace gravel

In a PIA located approximately 20km southwest of the proposed development, Almond (2011, SAHRIS NID 8915) noted the following regarding the Bokkeveld Group in the area: *"Although in many cases these Devonian marine and near-coastal rocks were originally highly fossiliferous, there are very few fossil sites recorded within them in the Riversdale region. A number of recent palaeontological impact studies by the author show that deep chemical (lateritic) weathering, folding and pervasive cleavage, especially of the finer-grained mudrocks, has destroyed most near-surface fossils here. Low diversity trace fossil assemblages such as Spirophyton communities are among the few exceptions. In practice, the Bokkeveld Group outcrop area is therefore generally of low palaeontological sensitivity in this sheet area."*

Almond (2012) completed a PIA located 30km to the south for the proposed Lunskip Wind Farm to be established on several properties situated near Still Bay in the Western Cape. He states the following regarding the Bokkeveld Group in the area *"The lower part of the Ceres Subgroup in the Western Cape is known for its rich fossil assemblages of shallow marine invertebrates of the Malvinokaffric Faunal Province of Gondwana (Cooper 1982, Oosthuizen 1984, Hiller & Theron 1988, Theron & Johnson 1991, MacRae 1999, Almond in De Beer et. al. 2002, Thamm & Johnson 2006, Almond 2008). Key fossil groups here include trilobites, brachiopods, various subgroups of molluscs (bivalves, gastropods, nautiloids etc), and echinoderms (starfish, brittle stars, crinoids, carpoids etc), with several minor taxa including corals, conulariids, tentaculitids and rare fish remains, among others. These shelly fossil assemblages – generally preserved as impressions or moulds – are especially abundant within the finer-grained, mudrock-dominated units such as the Gydo and Voorstehoek Formations in their more distal (offshore) outcrop areas. Remarkably diverse and well-preserved assemblages of marine trace fossils (burrows, trackways etc) occur in heterolithic (i.e. interbedded sandstone and mudrock) facies of the northern, more proximal outcrop area of the Bokkeveld Group (Swart 1950, Theron 1972, Oosthuizen 1984, Almond 1998a, 1998b, De Beer et al. 2002, Almond 2008). However, these have not been extensively recorded from the more distal, southern outcrop area. Apart from sparse shelly fossil remains (e.g. crinoid stem moulds), bioturbation and occasional transported fragments of land plants, very few fossils have been recorded from the Lower Bokkeveld Group in the Riversdale sheet area (Malan et al. 1994).*

He further states that during a recent palaeontological field study by the author of Ceres Subgroup rocks exposed close to the coast in the Gouritz River valley, some 35 km to the east of the Still Bay study area, no shelly invertebrate, vascular plant or fish fossils at all were observed. There are no fossil records from these rocks mentioned in the geological sheet explanations by Haughton et al. (1937), Malan et al. (1994) and Viljoen and Malan (1993). The striking rarity of Bokkeveld fossil records here may be attributed

³ Hessequa Society For Archaeology: Research and documentation by Dr. Renée Rust Compiled by Brian C Mathiesen (2010) Rock Art Of Hessequa, https://community21.org/downloads/10656999735697d36b279947_64886662_rock_art_of_hessequa.pdf



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to several factors, notably: deep chemical weathering of sediments beneath the “African Surface” which has obliterated fossil moulds; intensive Cape age (Permo-Triassic) tectonic deformation of the Bokkeveld succession, with pervasive cleavage formation within the normally fossiliferous mudrocks (N.B. Most fossils are preserved and seen on bedding planes, which are rarely exposed here, rather than secondary cleavage planes which cut across fossil-rich layers); the extensive mantle of superficial deposits (including lag gravels, soil and pedocretes) covering the Bokkeveld bedrock. For the same reasons the palaeontological sensitivity of the Lower Bokkeveld Group sediments near Still Bay is probably low, but this needs to be confirmed by fieldwork since isolated pockets of well-preserved fossil remains may persist here and would be of considerable scientific interest. “

Based on the available literature, the nature of the proposed development, and the already highly altered condition of the landscape, the likelihood of uncovering well-preserved and scientifically significant fossils is considered low. As a result, no further palaeontological studies are recommended.

RECOMMENDATION

Based on the available information, it is unlikely that the proposed development will impact on significant heritage resources and as such, it is recommended that no further heritage studies are required.

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APPENDIX 1

List of heritage resources within close proximity to the development area from SAHRIS

Site ID	Site no	Full Site Name	Site Type	Grading
60048	HSQ23	Hessequas 23 (Ann's Site)	Rock Art	Grade IIIa

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APPENDIX 2

Reference List from SAHRIS

NID	Author(s)	Date	Type	Title
4623	Peter Nilssen	01/04/2005	AIA Phase 1	Proposed Road in Compartment C 19B of the Garcia Plantation, MTO Forestry (Pty) LTD, Riversdale, Western Cape Province. Archaeological Impact Assessment Based on Foot Survey: Final Report
4627	Peter Nilssen, Royden Yates	01/10/2007	AIA Phase 1	Archaeological Heritage Survey Buffelsfontein 435, Parts of Portions 2, 17 and 23, Albertinia, Hessequa Municipality, Western Cape Province
6777	Harriet Clift, Lita Webley	08/03/2011	AIA Desktop	Heritage Scoping report with preliminary impact assessments Fibre optic data cable: Graaff-Reinet to Yzerfontein
6909	Lita Webley, Jayson Orton	01/03/2009	AIA Phase 1	An Archaeological Impact Assessment for Proposed Bentonite Mining on the Farms Vette Rivier 240 Re, Hooikraal 304 Re & Re Portion 1, Erf 1247 Re Heidelberg and Uitspanskraal 585 Re, Heidelberg Municipality, Western Cape
8915	John E Almond	08/04/2011	PIA Phase 1	FibreCO Data Cable Project: Route 3 from Graaff-Reinet via George and Cape Town to Yzerfontein, Western and Eastern Cape Provinces
271306	Celeste Booth	20/05/2015	Archaeological Specialist Reports	FibreCo Telecommunications Ltd (FibreCo) was given environmental authorisation (EA) by the Department of Environmental Affairs in 2011 to construct and operate a fibre optic data cable along the national road between Cape Town and Durban (divided into three routes for assessment and authorisation purposes – routes 3, 4 and 5). An agreement reached between FibreCo and other telecommunication companies regarding the construction of the Cape-Durban route has resulted in changes to Route 3 (this project). Routes 4 and 5 have been assessed and discussed in a separate report.
325496	Dr J de Jongh	08/03/2015	Heritage Impact Assessment Specialist Reports	SPECIALIST STUDY: HERITAGE IMPACT ASSESSMENT FOR THE INSTALLATION OF THE SIRIUS FIBRE OPTIC CABLE BETWEEN JOHANNESBURG AND YZERFONTEIN, GAUTENG, FREE STATE, EASTERN AND WESTERN CAPE PROVINCES
329788	Jayson Orton	12/03/2010	Heritage Statement	HERITAGE STATEMENT FOR THE PROPOSED OUTENIKUAS DRIFT ON THE GOURITZ RIVER, RIVERSDALE AND MOSSEL BAY MAGISTERIAL DISTRICTS, WESTERN CAPE

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Additional References

Department of Arts and Culture (February 2013) National Khoe and San Heritage Route: Main Report

Almond, J.E. (2012) PIA for Proposed Lunsklip Wind Farm on farms Melkoutefontein 480 (Portion 135), Holvlei 630 (Remainders 2 and 3), Luinsklip 472 (Remainder portions 7, 2, 25) and Luinsklip 626, Still Bay, Western Cape

ACO Associates cc: Halkett, D. (2024) Heritage Impact Assessment: Proposed Bentonite & Zeolite Mining On Zeekoekruis 651 Near Riversdale, Western Cape

Hessequa Society For Archaeology: Research and documentation by Dr. Renée Rust, compiled by Brian C Mathiesen (2010) Rock Art Of Hessequa

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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.

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.

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