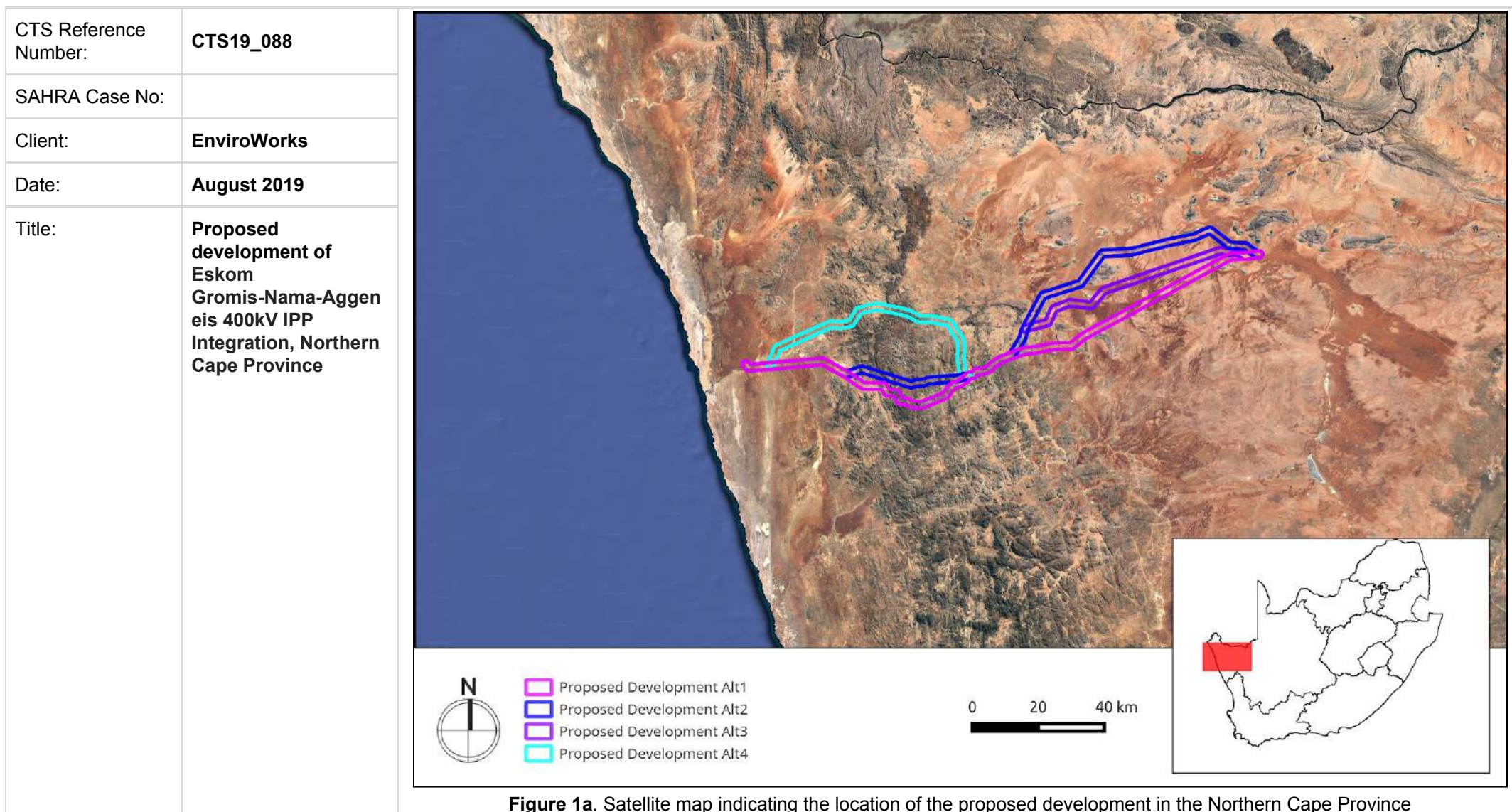




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1. Proposed Development Summary

In order to ensure that the Namaqualand network is complaint and there is sufficient line capacity to evacuate potential IPPs within the Namaqualand area, Eskom proposes the construction of a new Gromis-Nama-Aggeneis 400kV line and establishment of a 400/132 kV yard at Nama Substation. The proposed development includes:

- Expansion of the Gromis Substation. Install 2nd 400/220 kV 500 MVA transformers at Gromis Expansion of Nama MTS.
- Expansion of Nama MTS. Construct a Gromis – Nama 400 kV (approximately 76 km); and,
- Construct Nama – Aggeneis 400 kV (approximately 104 km)
- Establish Nama 400/132 kV at existing Nama MTS with associated switchgear and transformation to accommodate renewable evacuation

2. Application References

Name of relevant heritage authority(s)	SAHRA
Name of decision making authority(s)	DEA

3. Property Information

Latitude / Longitude	29°35'29.40"S 17°10'34.51"E (western most extent) 29°17'44.08"S 18°48'48.94"E (eastern most extent)
Erf number / Farm number	Various (see attached maps)
Local Municipality	Nama Khoi
District Municipality	Namakwa
Previous Magisterial District	Namakwaland
Province	Northern Cape
Current Use	Various Agriculture
Current Zoning	Various Agriculture
Total Extent of Property	Approximately 200km

4. Nature of the Proposed Development

Total Surface Area of development	TBA
Depth of excavation (m)	TBA
Height of development (m)	TBA

5. Category of Development

x	Triggers: Section 38(8) of the National Heritage Resources Act
	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

NA



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

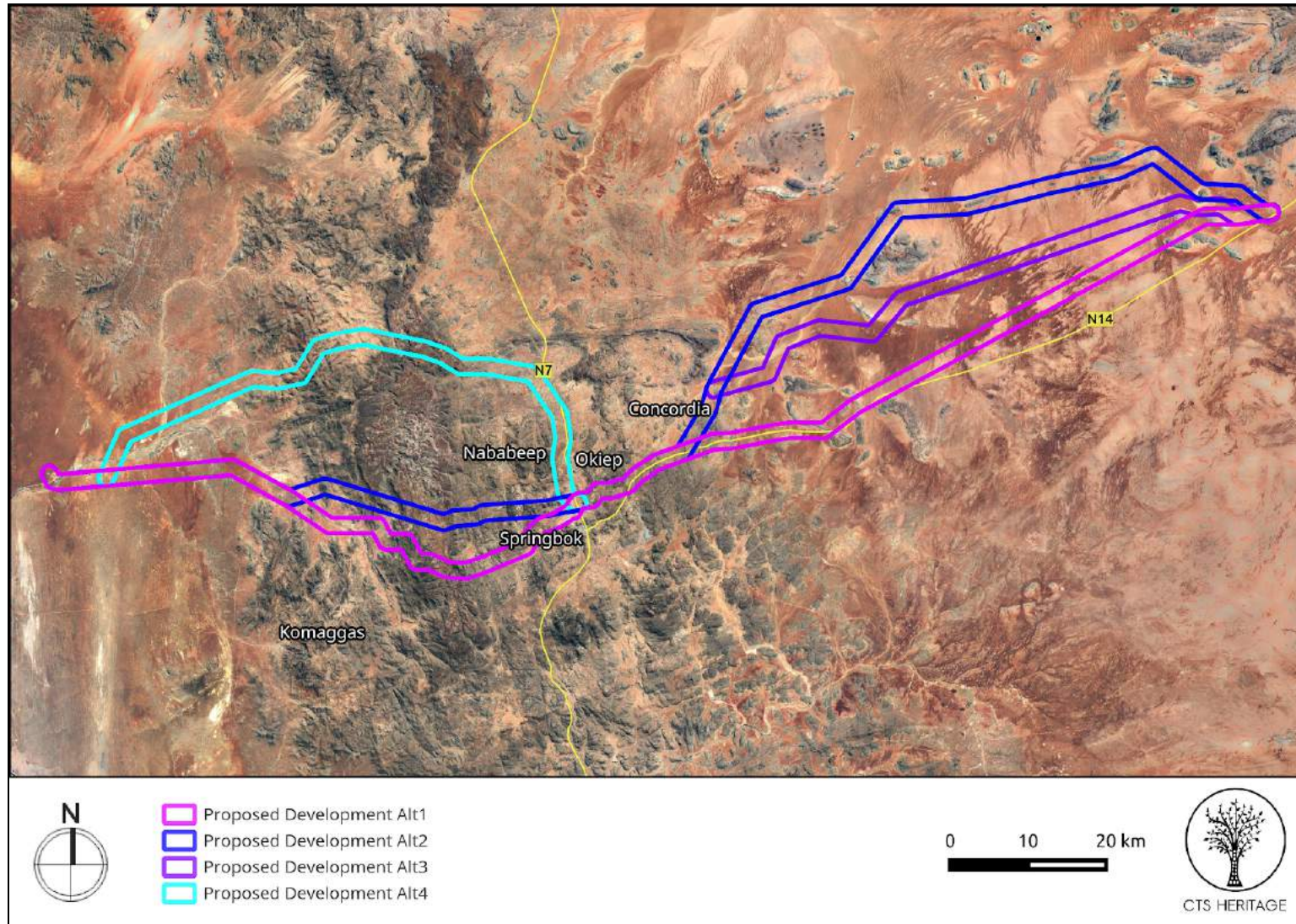


Figure 1b Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

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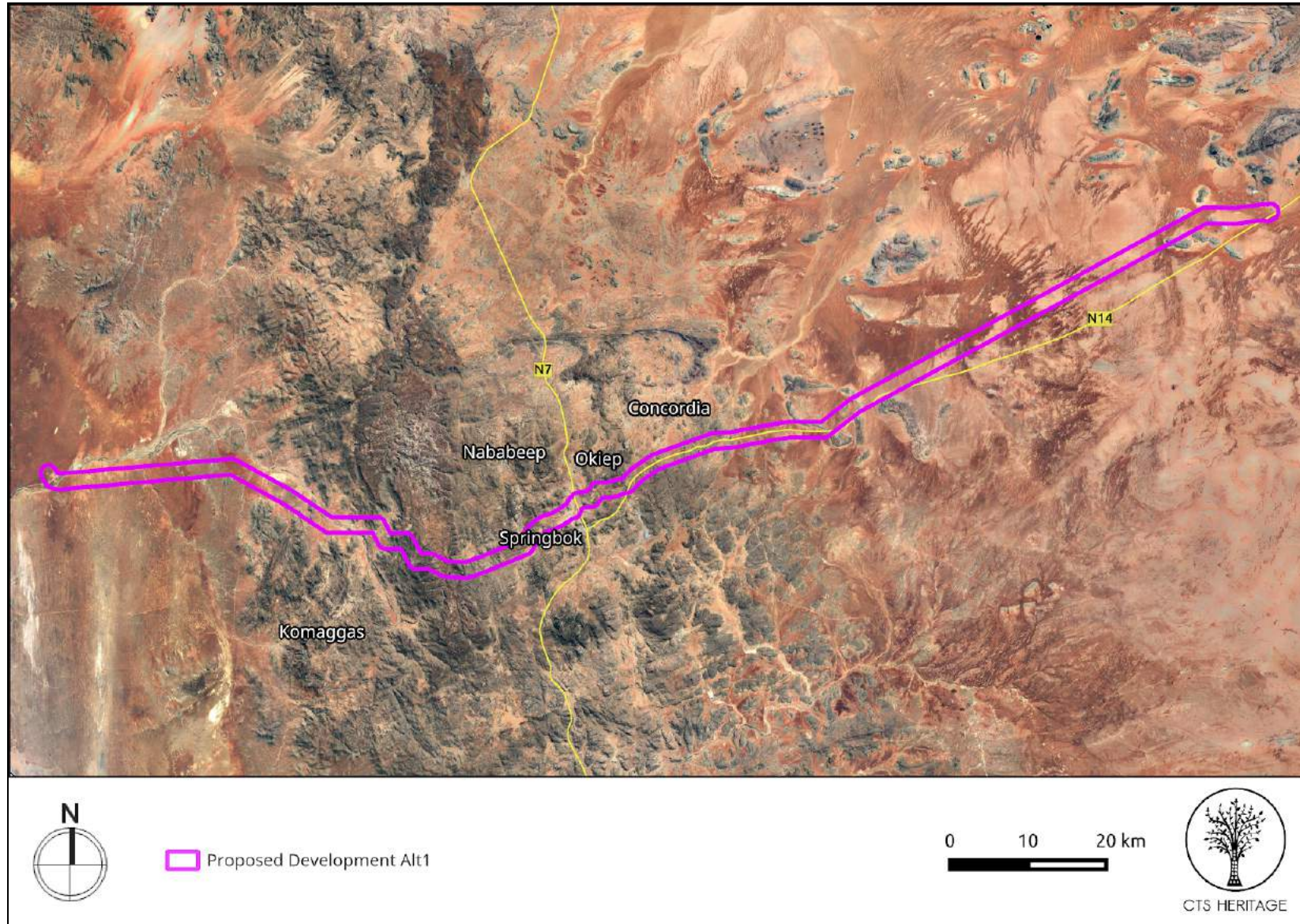


Figure 1c. Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

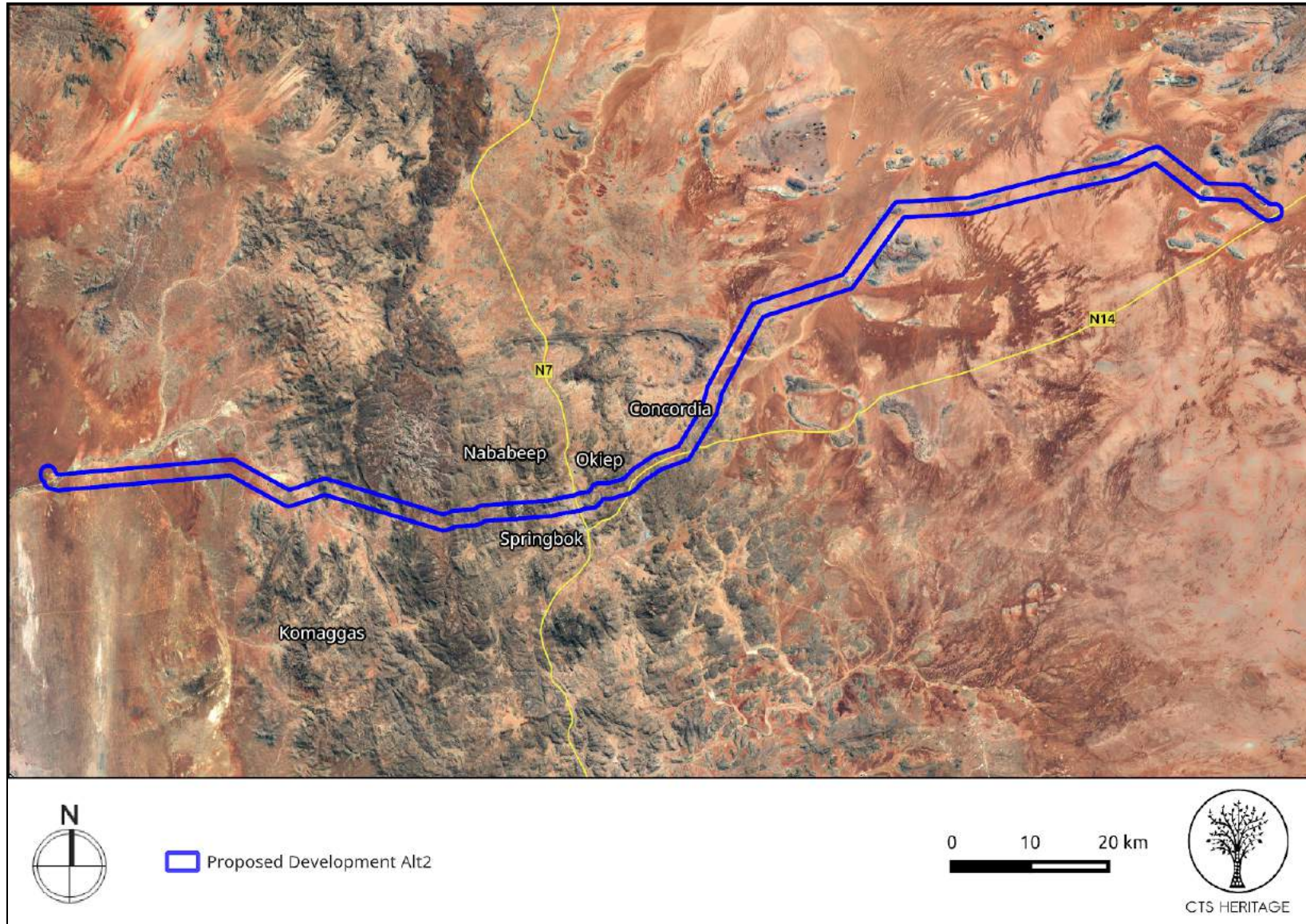


Figure 1d. Overview Map. Satellite image (2019) indicating the proposed development area at closer range

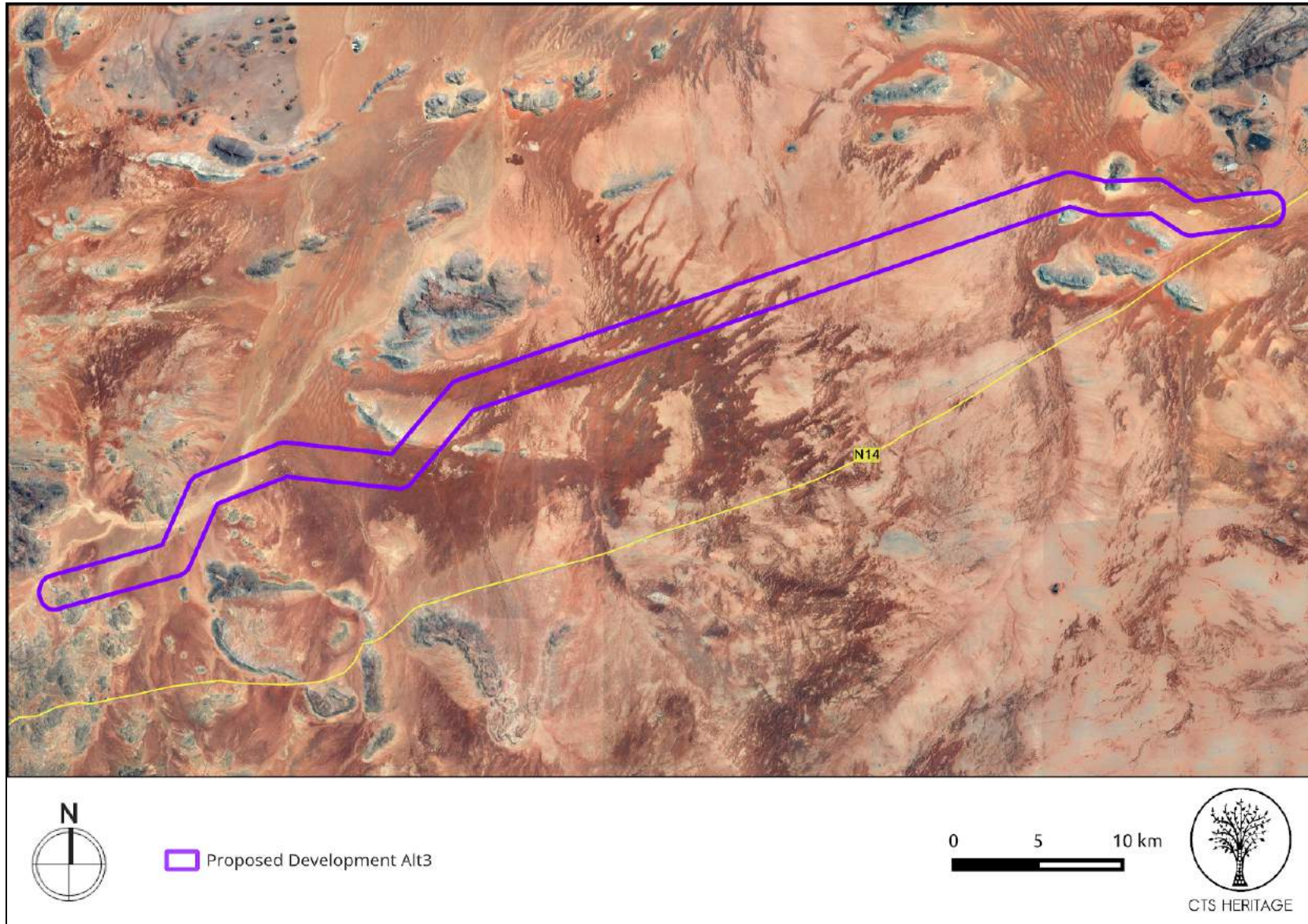


Figure 1e. Overview Map. Satellite image (2019) indicating the proposed development area at closer range

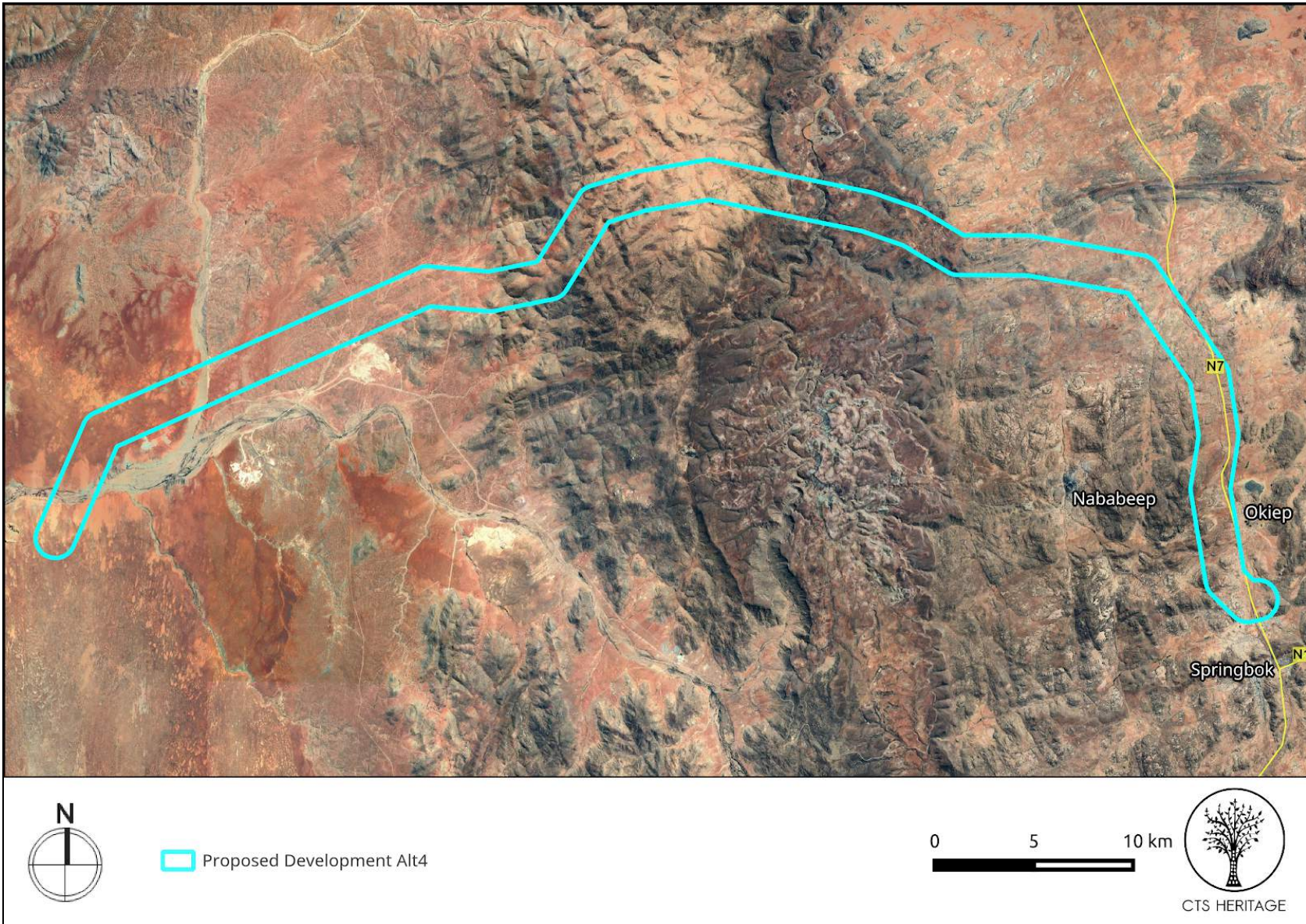


Figure 1f. Overview Map. Satellite image (2019) indicating the proposed development area at closer range

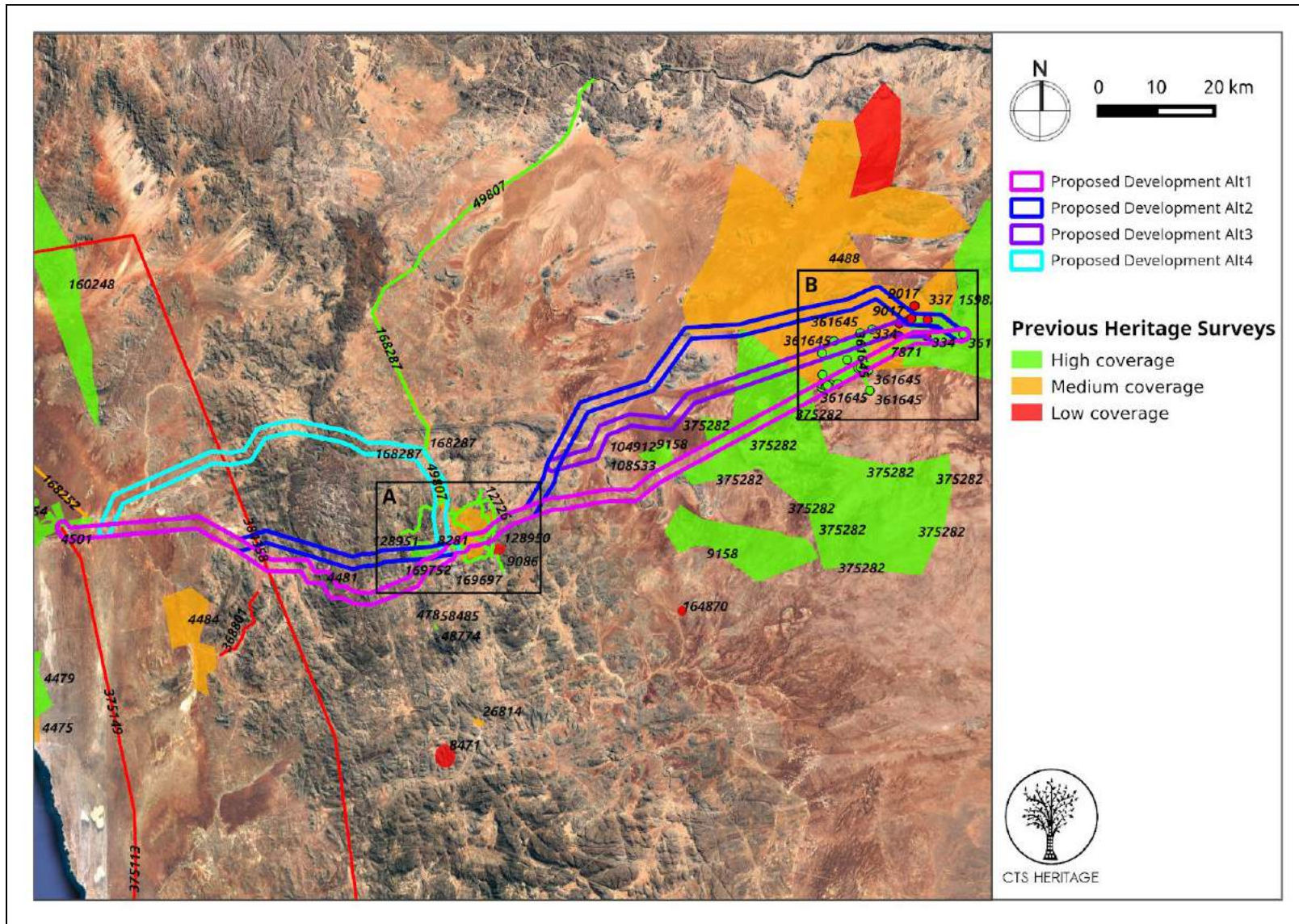


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development, with SAHRIS NIDS indicated. Please see Appendix 2 for full reference list.



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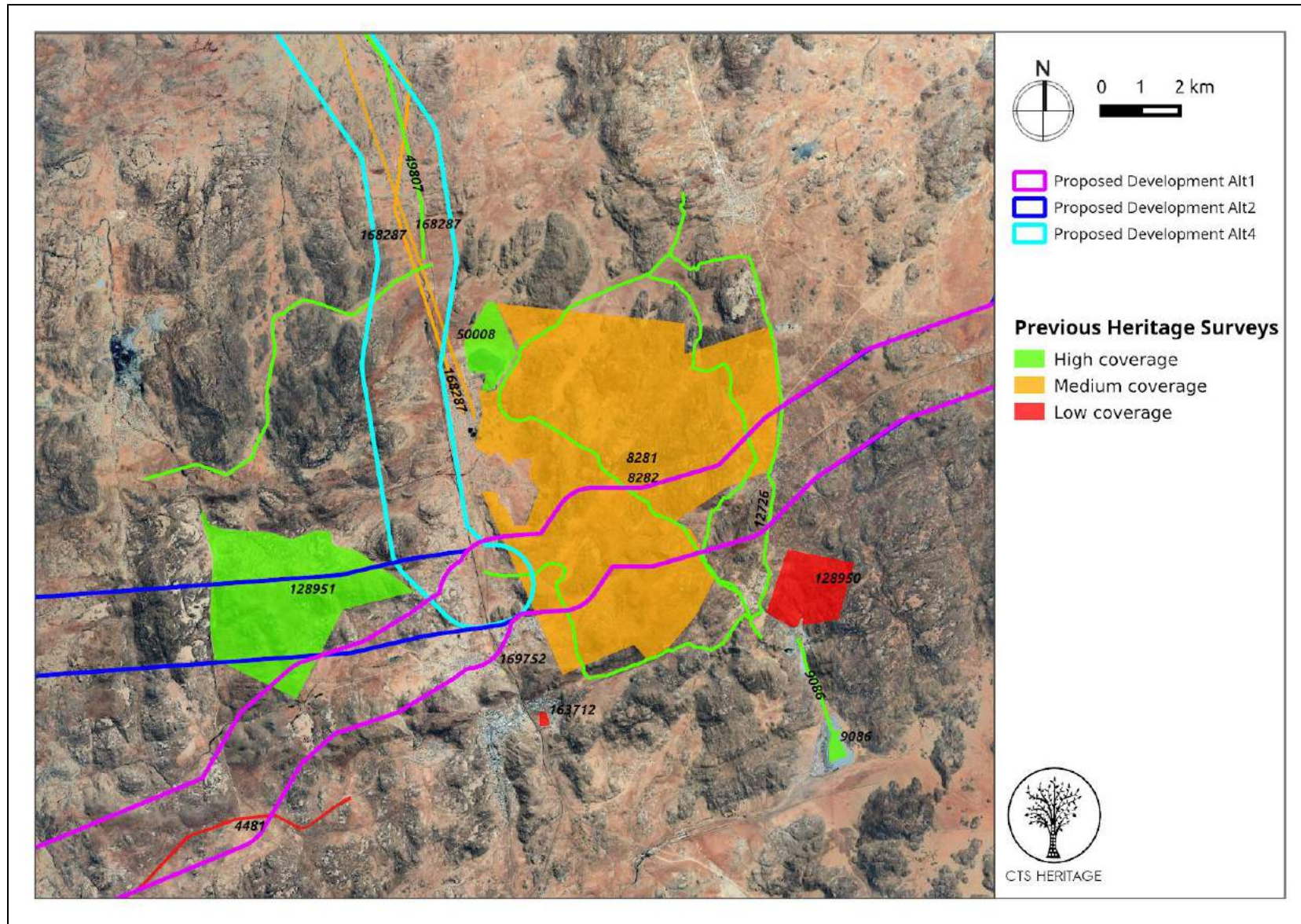


Figure 2a. Previous HIAs Map. Previous Heritage Impact Assessments within Inset A.

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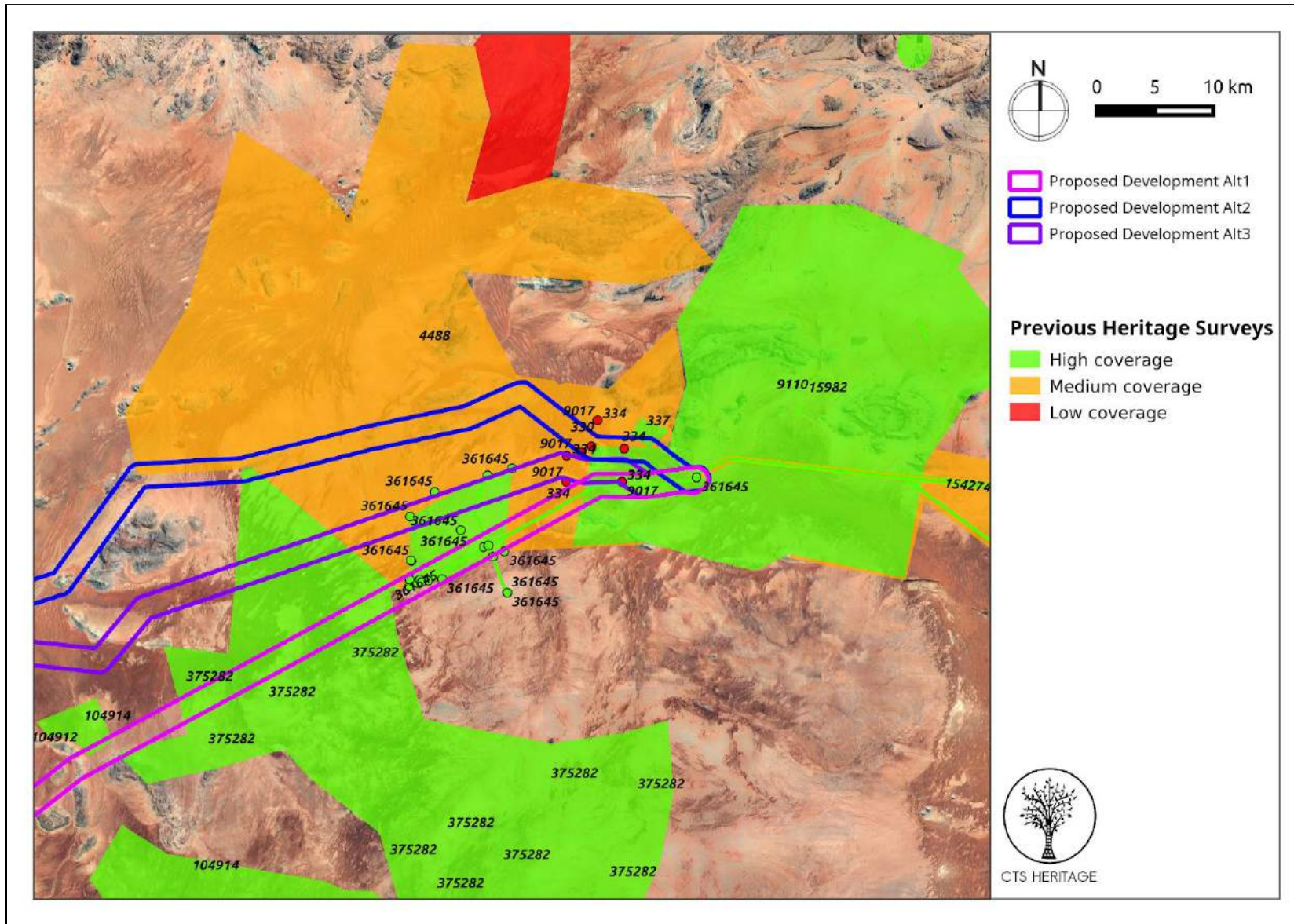


Figure 2b. Previous HIAs Map. Previous Heritage Impact Assessments within Inset B.



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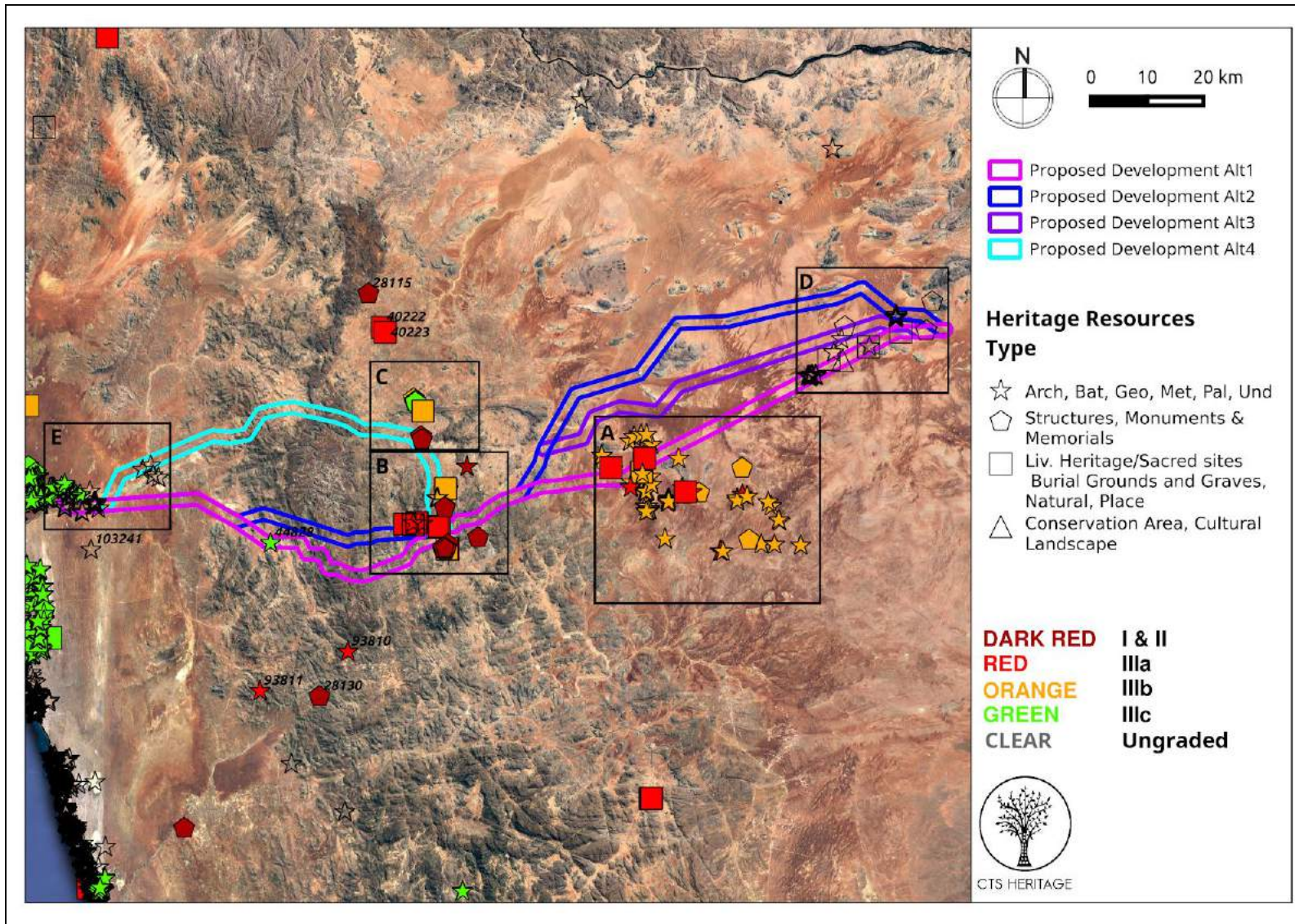


Figure 3a. Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated. Please See Appendix 4 for full description of heritage resource types.

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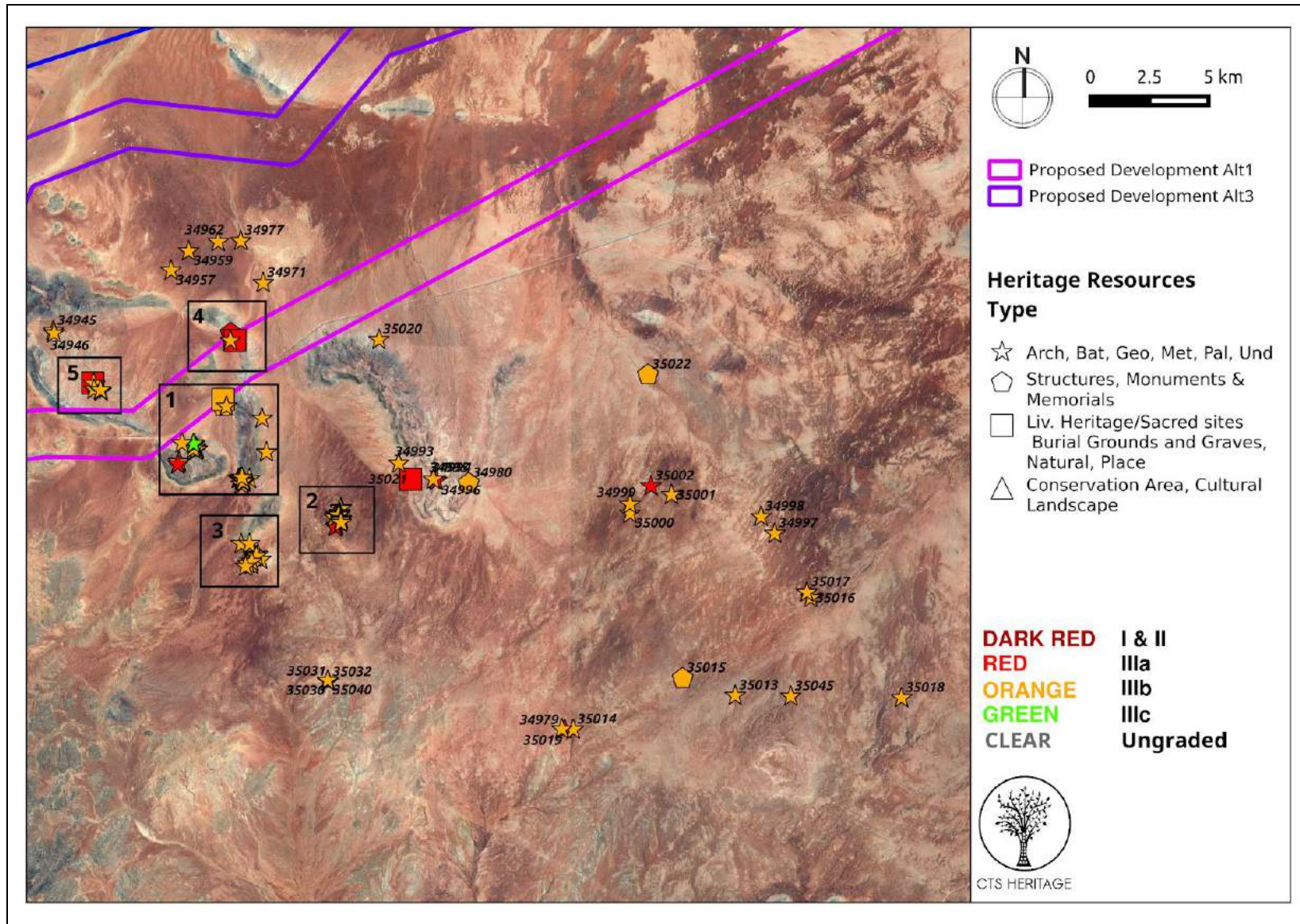


Figure 3b. Heritage Resources Map. Heritage Resources Inset A



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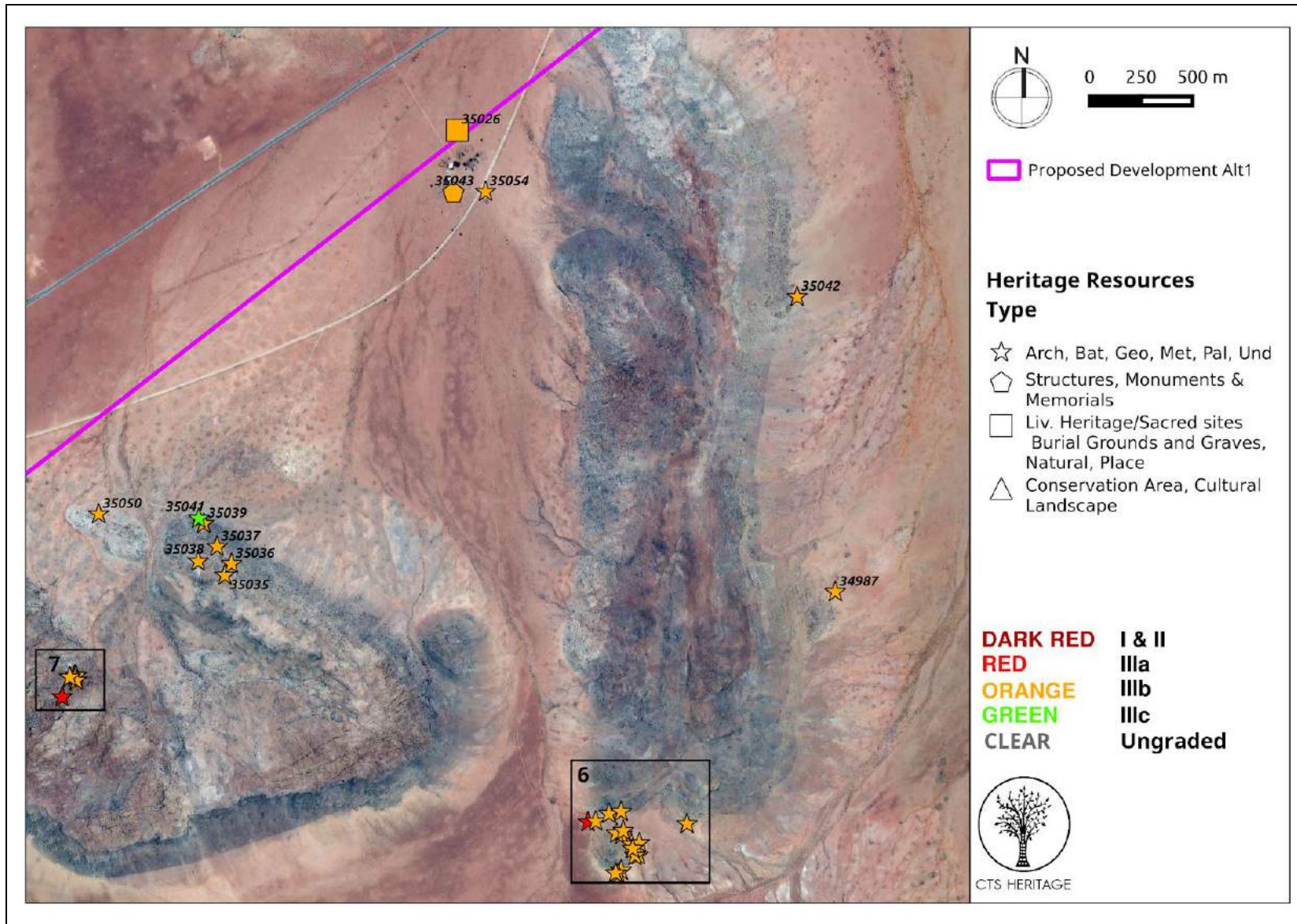


Figure 3b. Heritage Resources Map. Heritage Resources Inset A1

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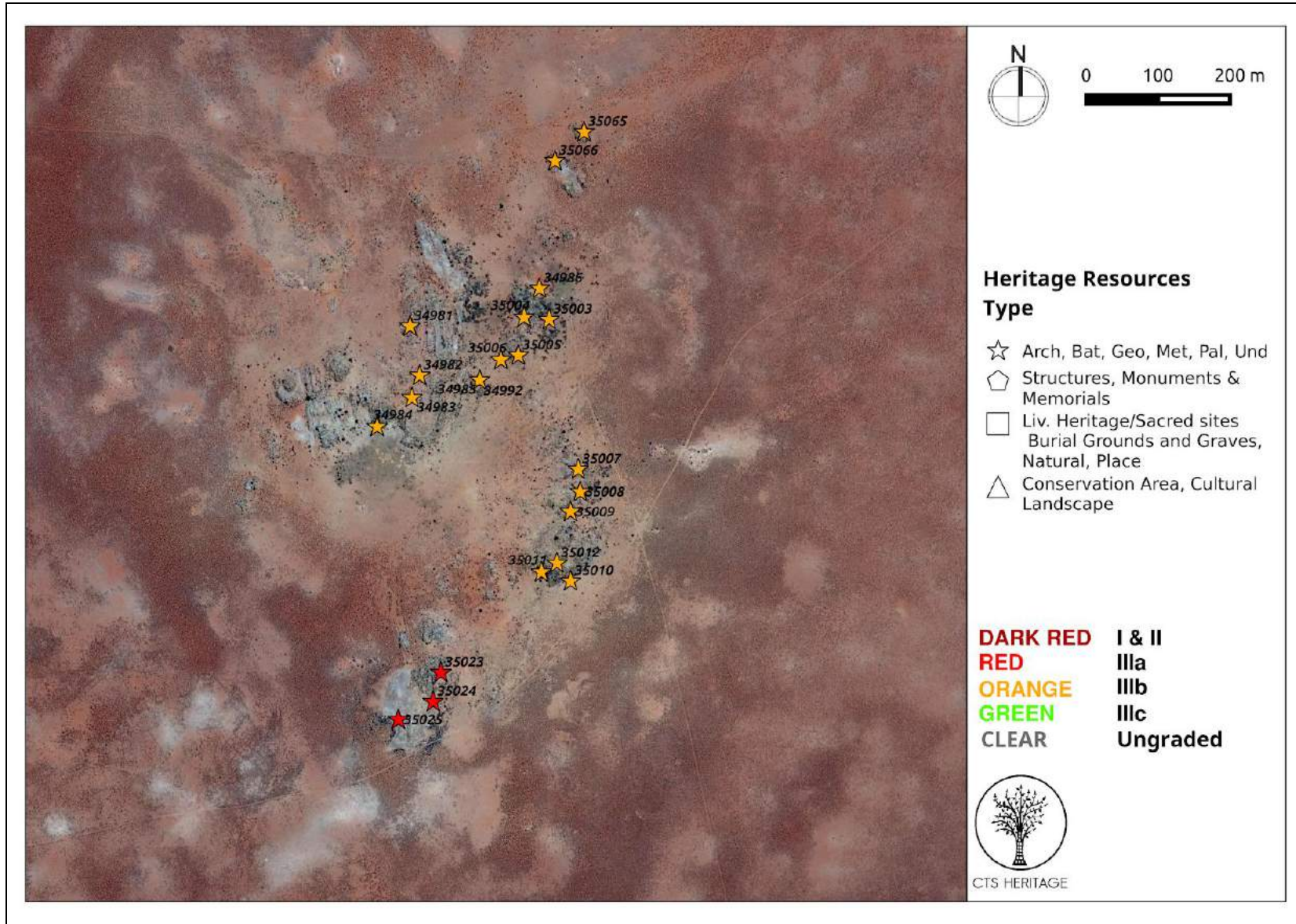


Figure 3c. Heritage Resources Map. Heritage Resources Inset A2



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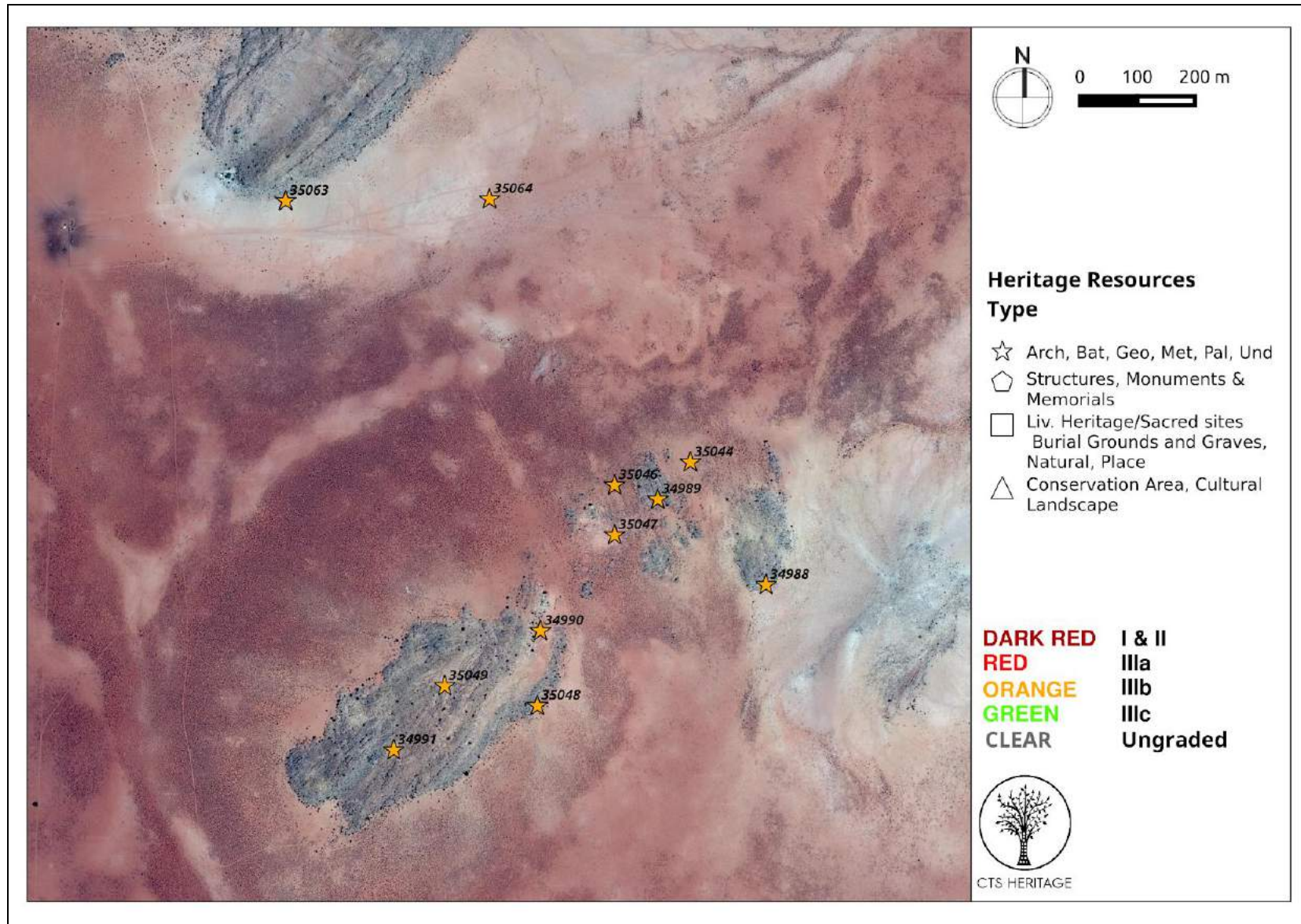


Figure 3d. Heritage Resources Map. Heritage Resources Inset A3

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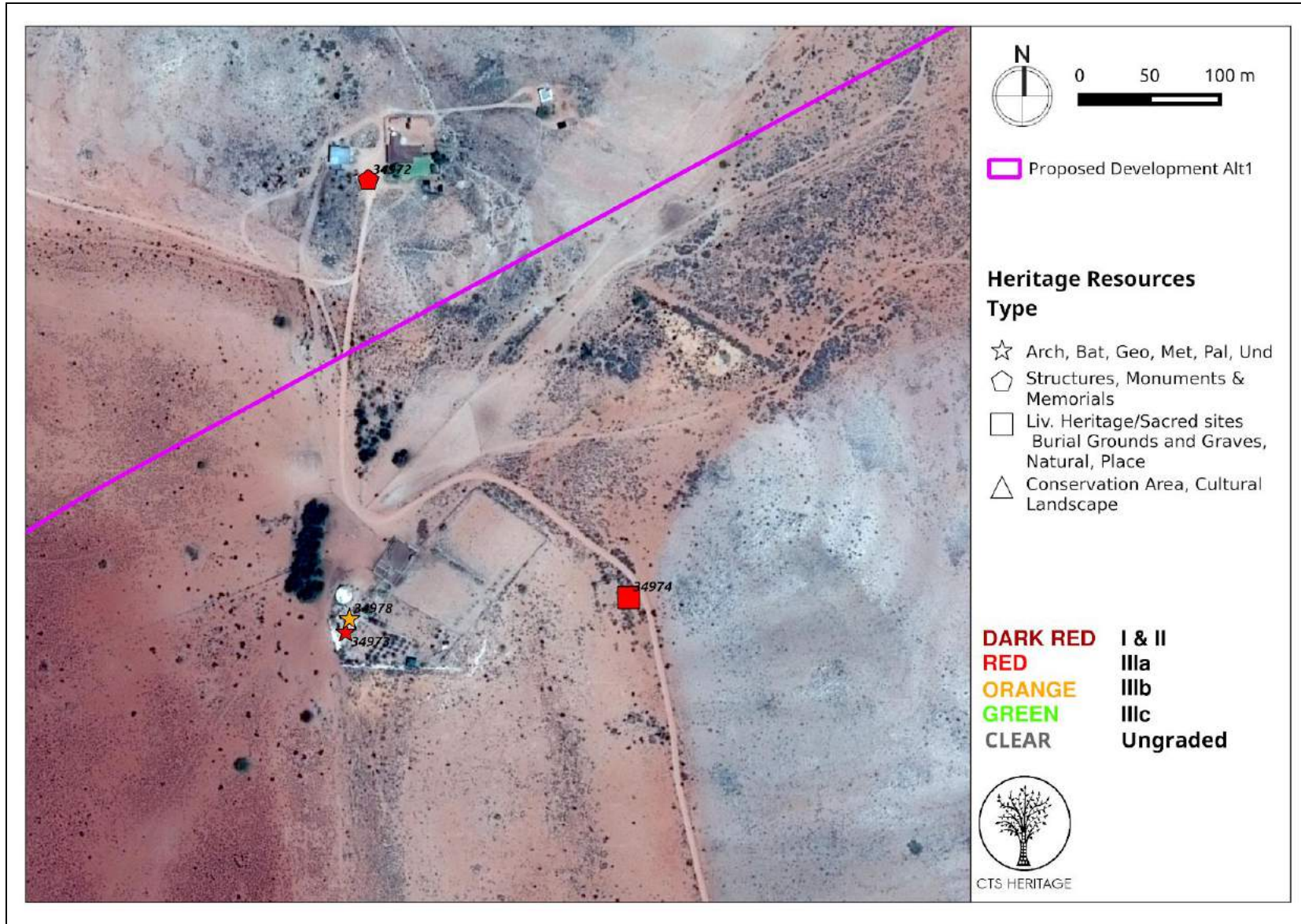


Figure 3e. Heritage Resources Map. Heritage Resources Inset A4

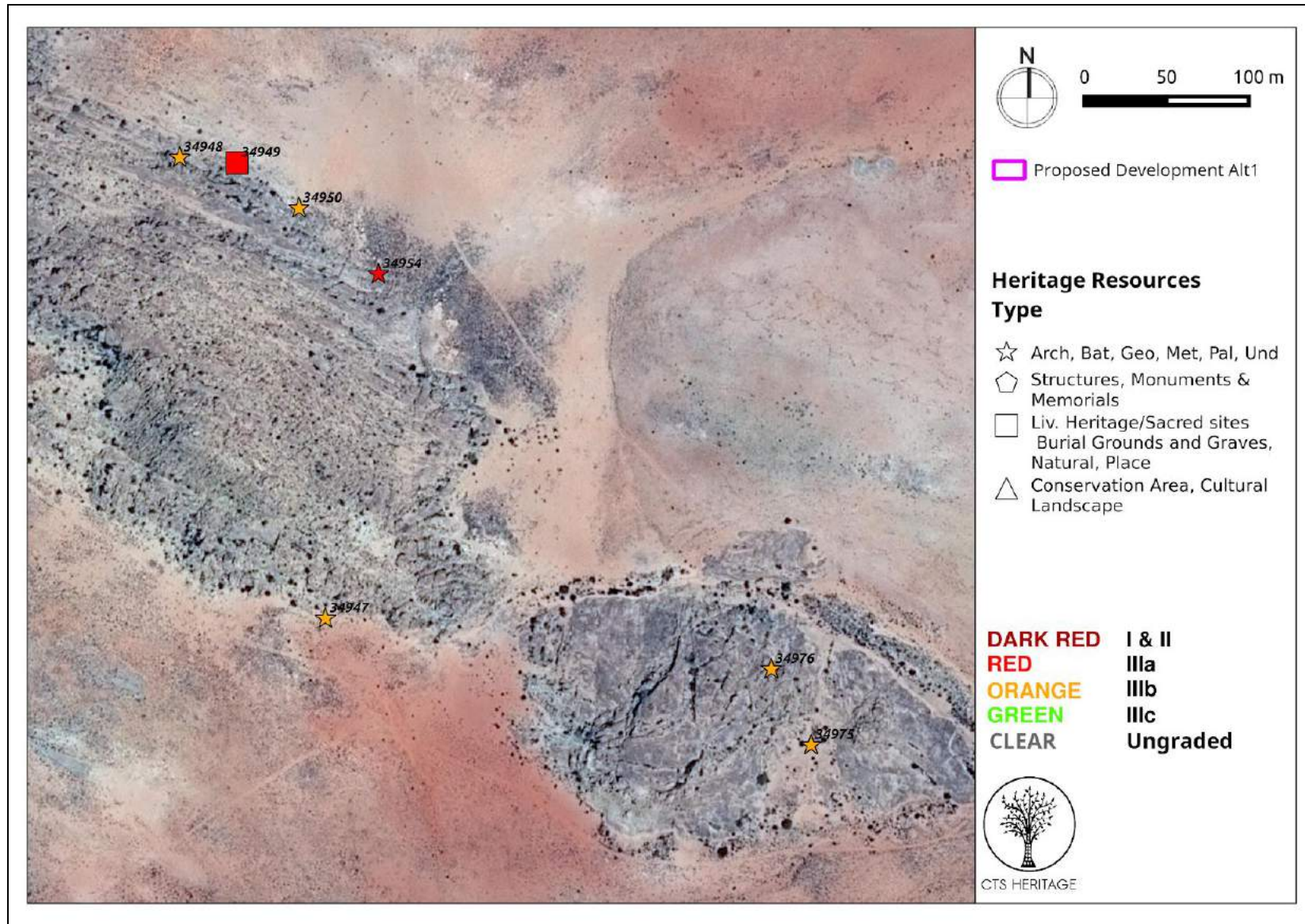


Figure 3f. Heritage Resources Map. Heritage Resources Inset A5

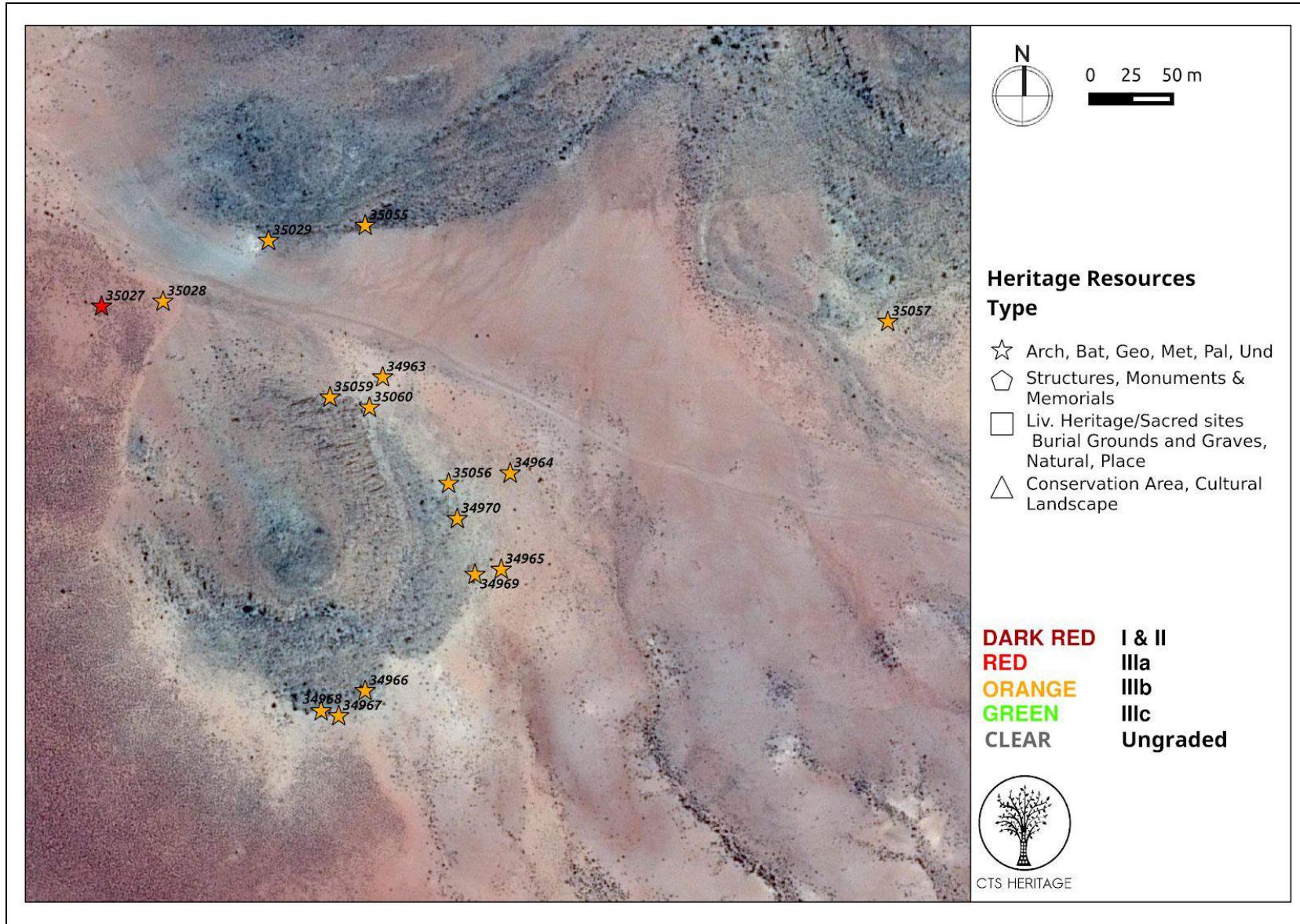


Figure 3g. Heritage Resources Map. Heritage Resources Inset A6

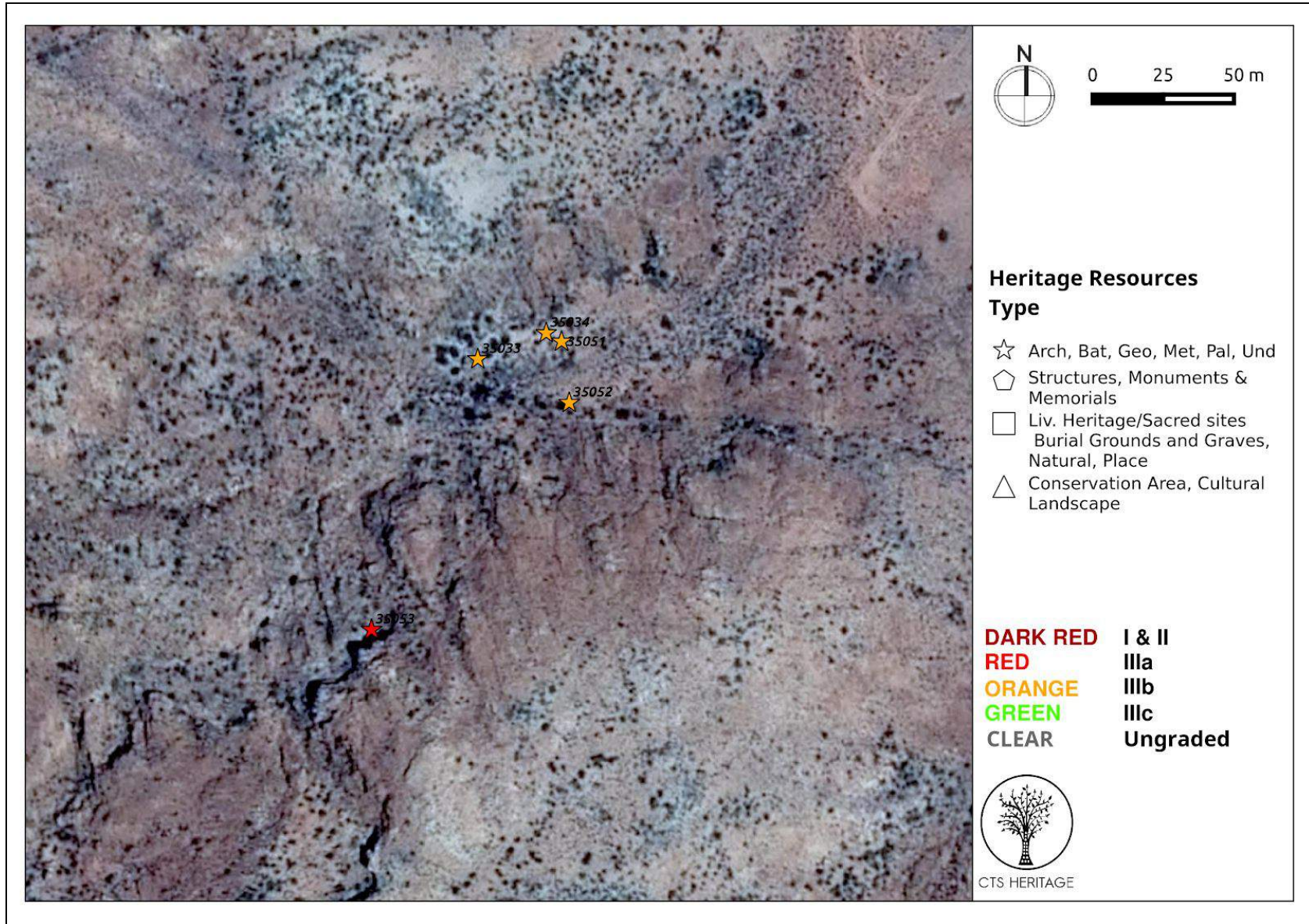


Figure 3h. Heritage Resources Map. Heritage Resources Inset A7

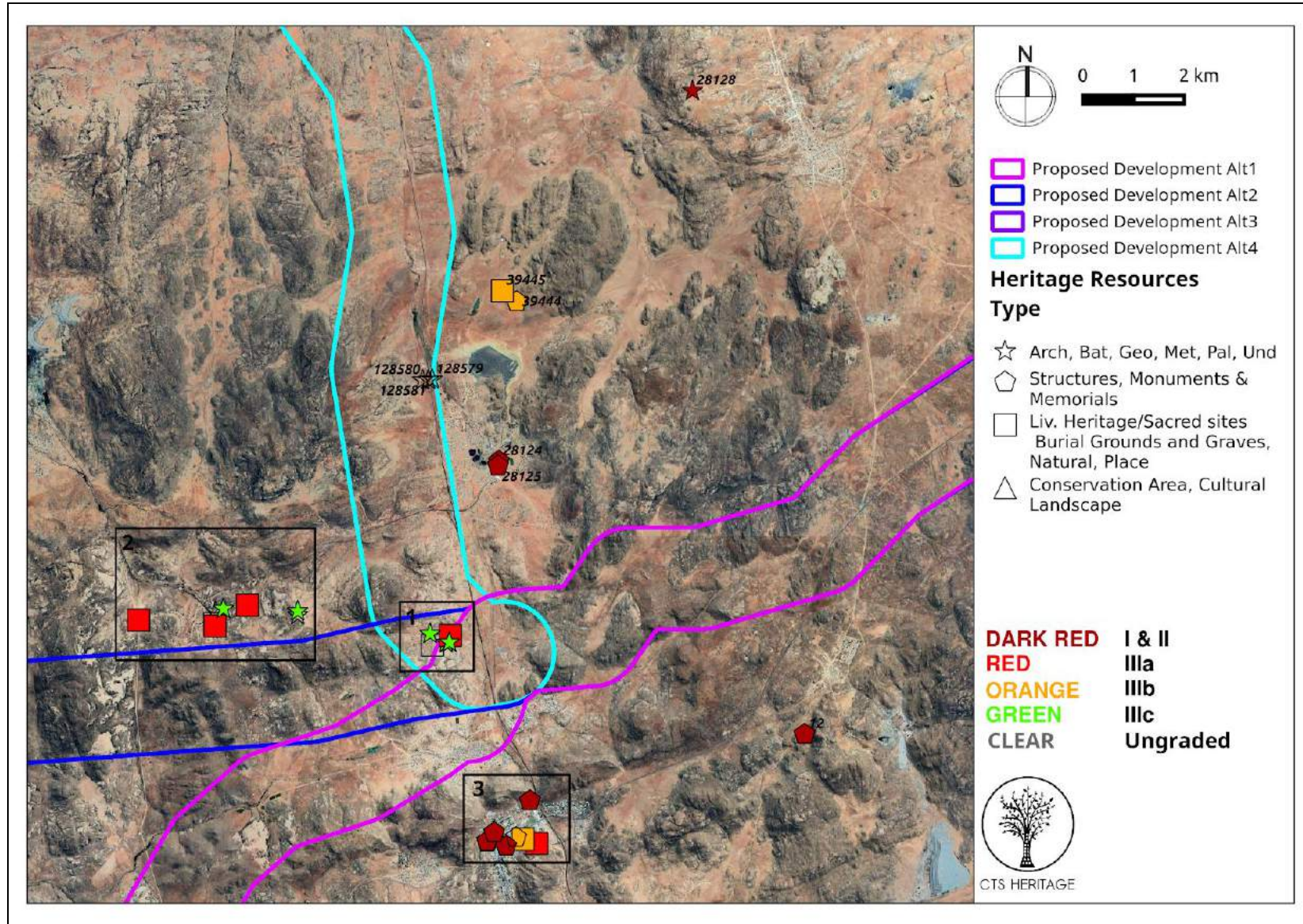


Figure 3i. Heritage Resources Map. Heritage Resources Inset B



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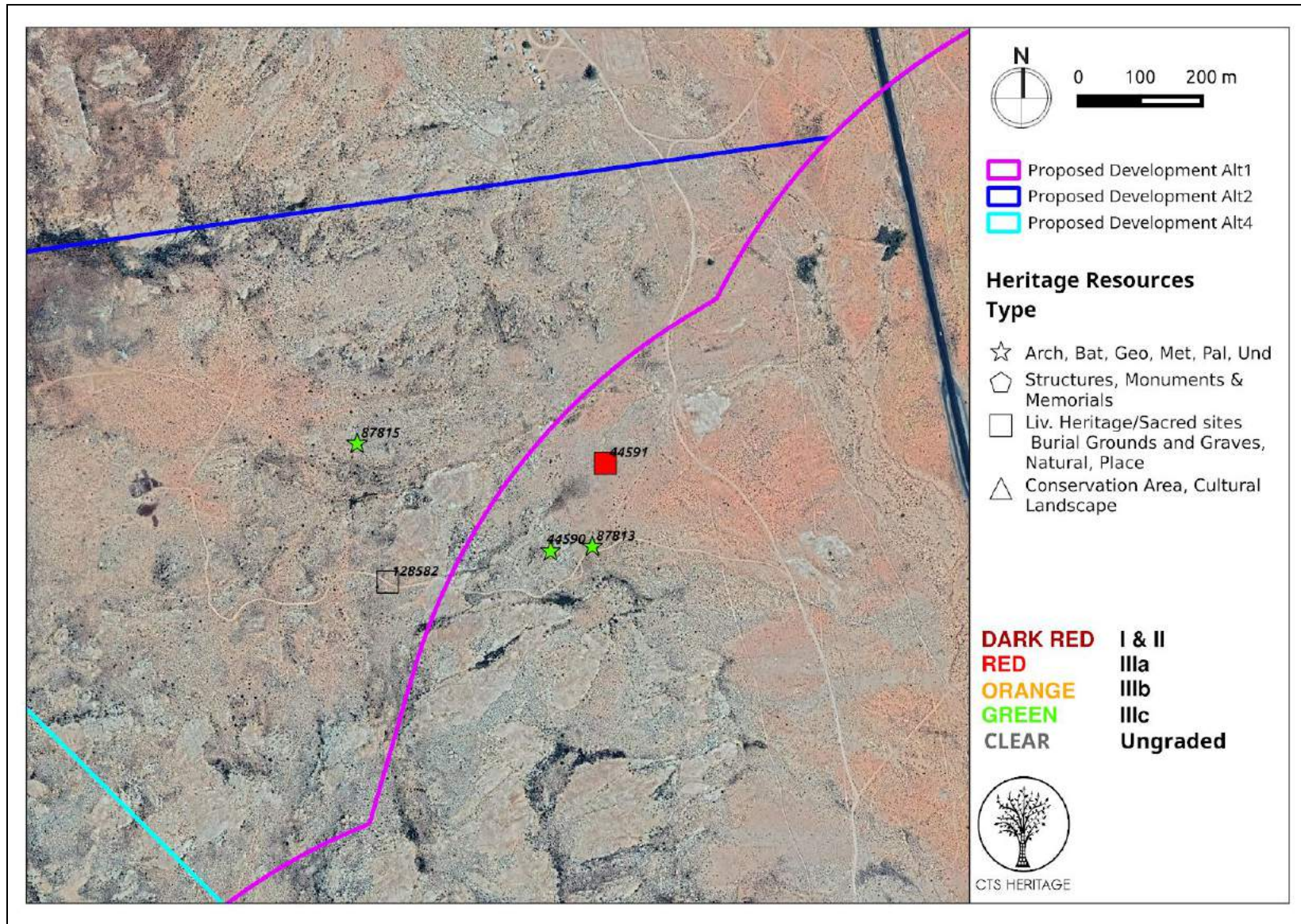


Figure 3j. Heritage Resources Map. Heritage Resources Inset B1

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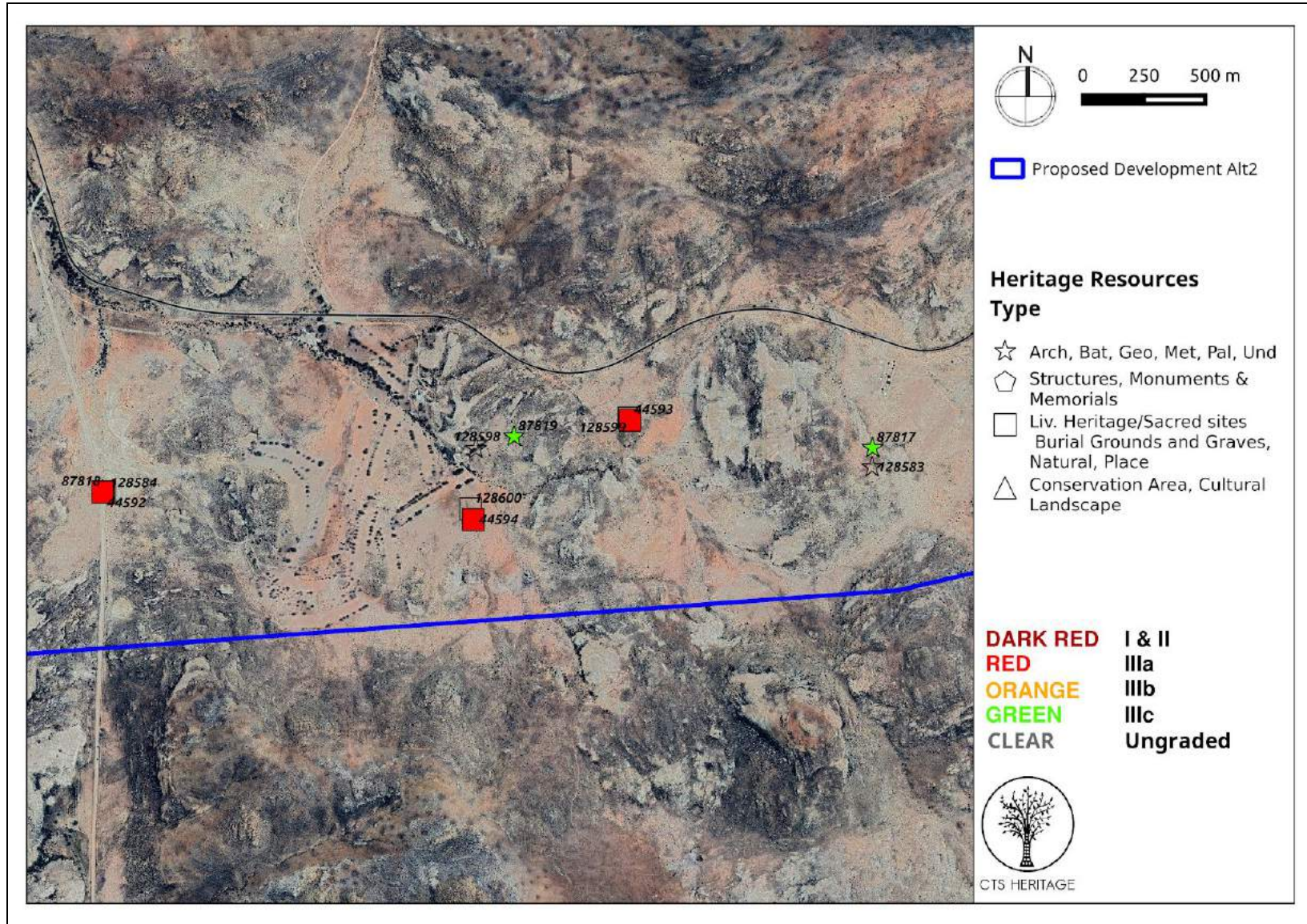


Figure 3k. Heritage Resources Map. Heritage Resources Inset B2

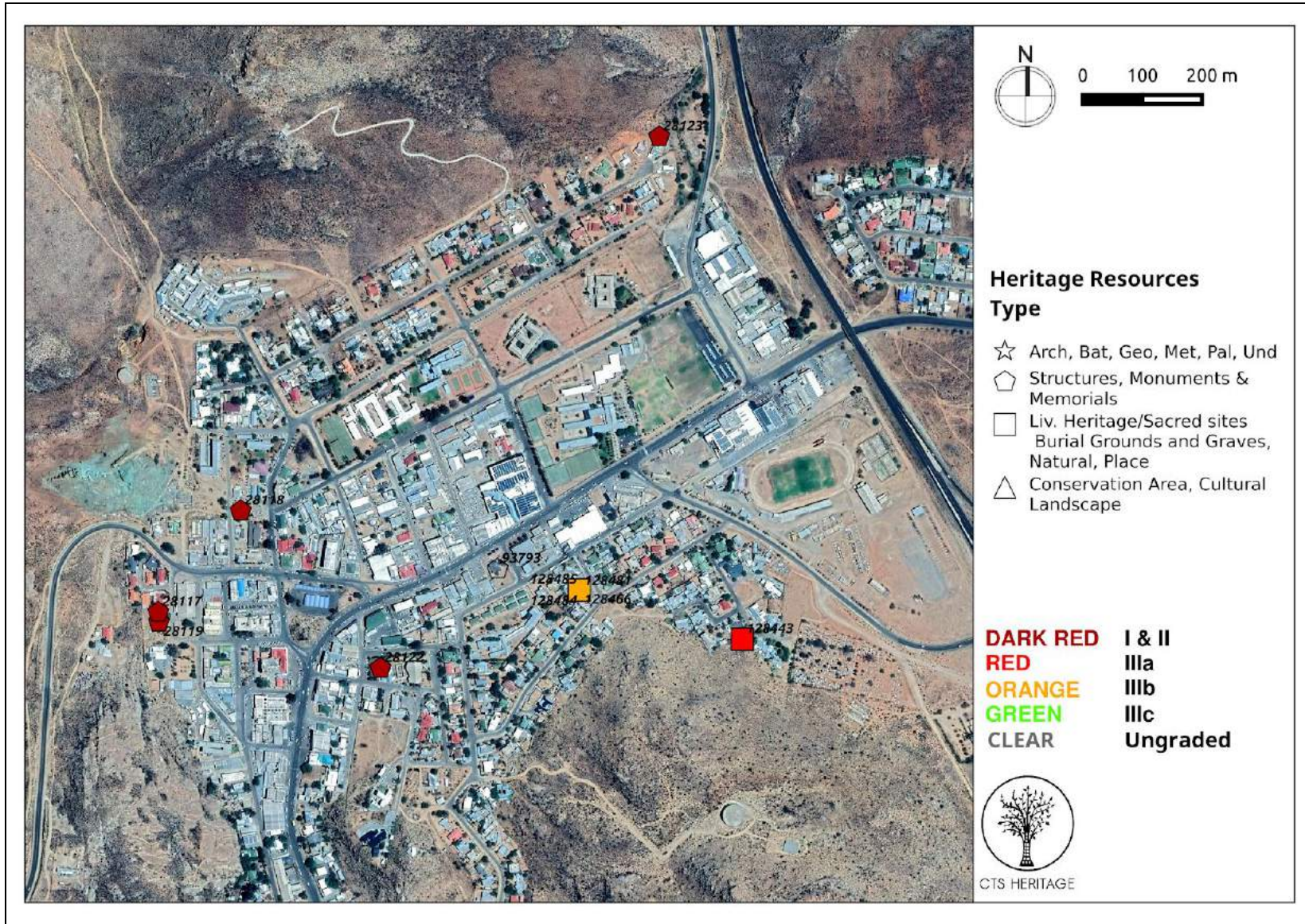


Figure 3I. Heritage Resources Map. Heritage Resources Inset B3

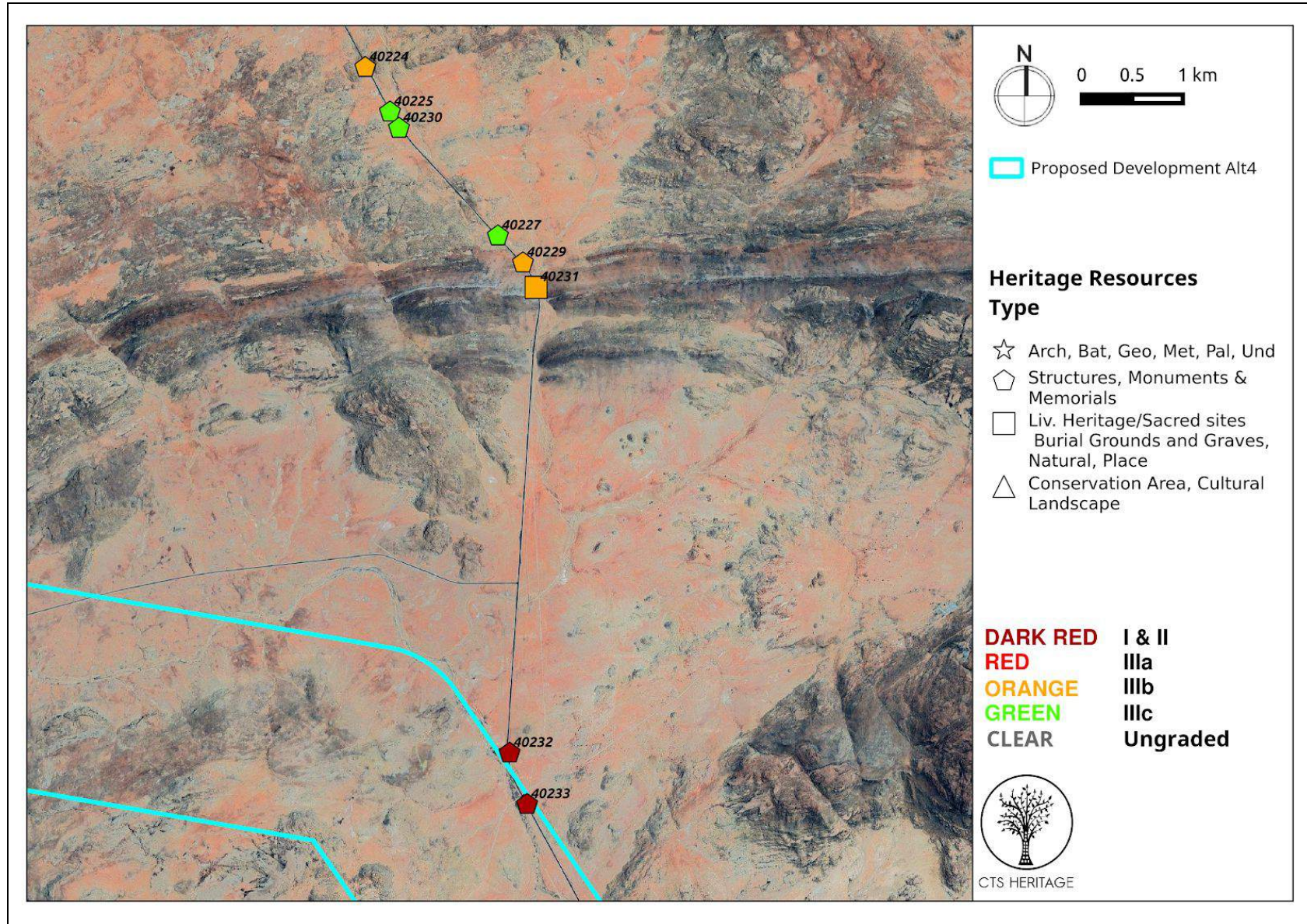


Figure 3m. Heritage Resources Map. Heritage Resources Inset C



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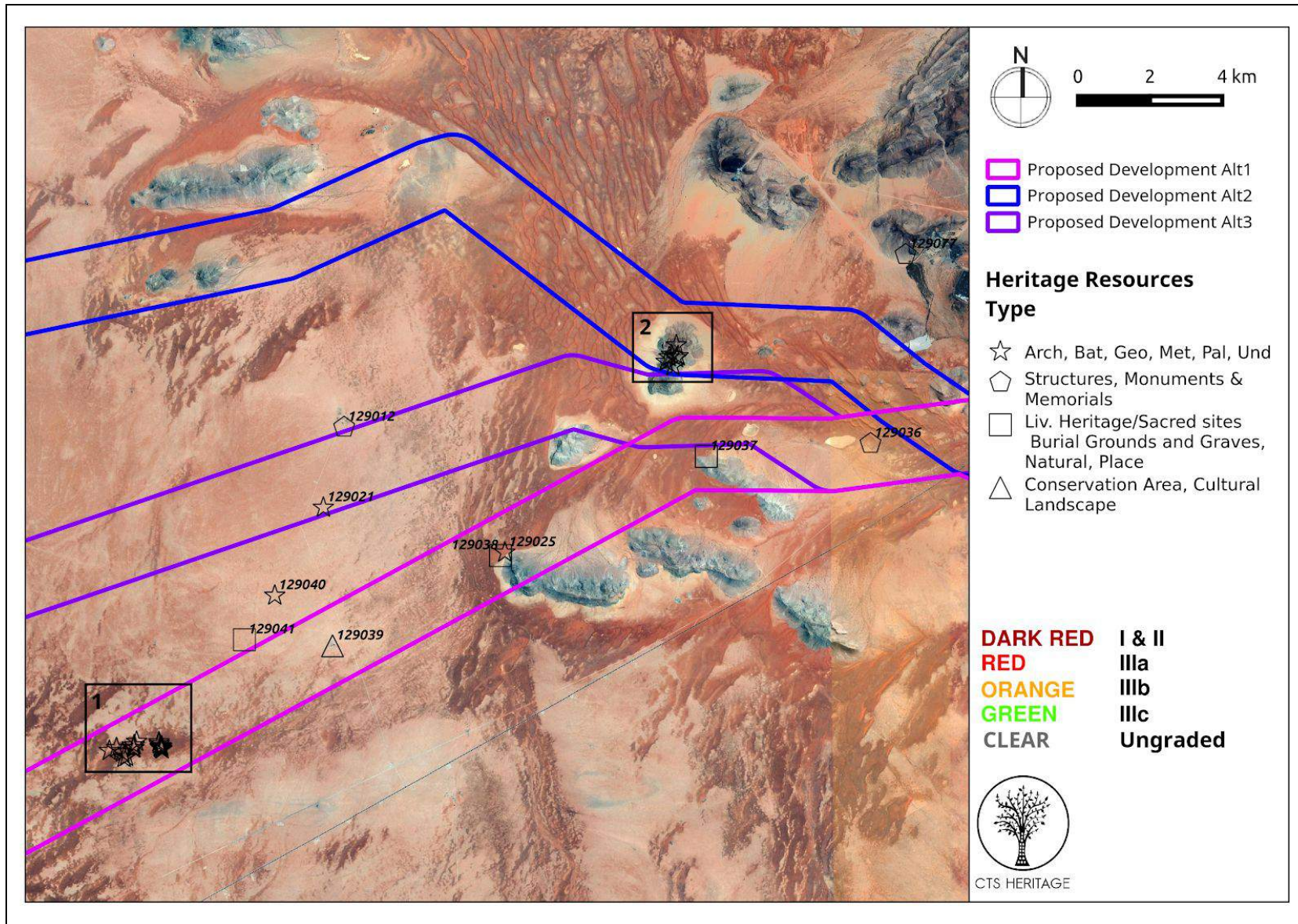


Figure 3n. Heritage Resources Map. Heritage Resources Inset D

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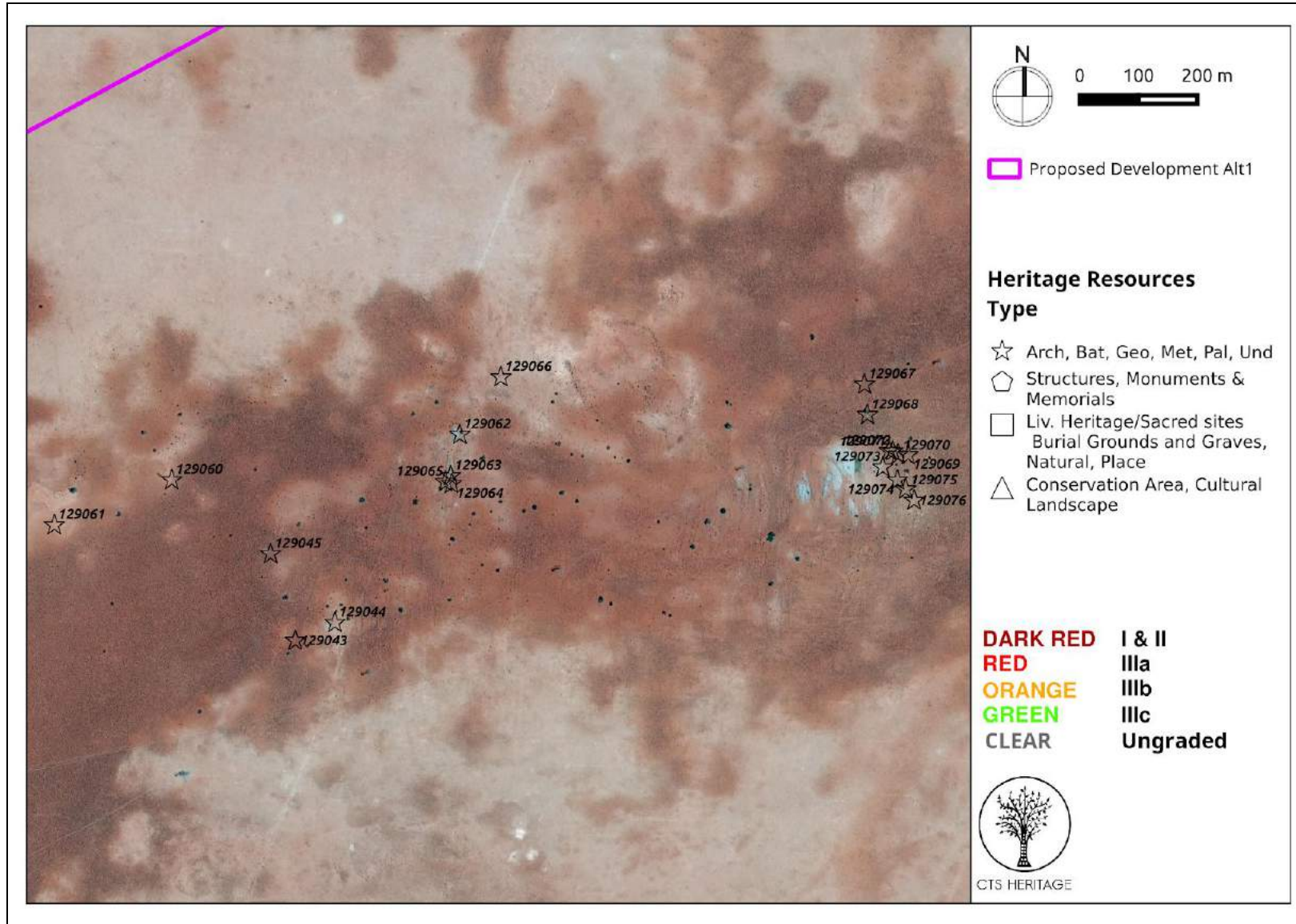


Figure 3o. Heritage Resources Map. Heritage Resources Inset D1

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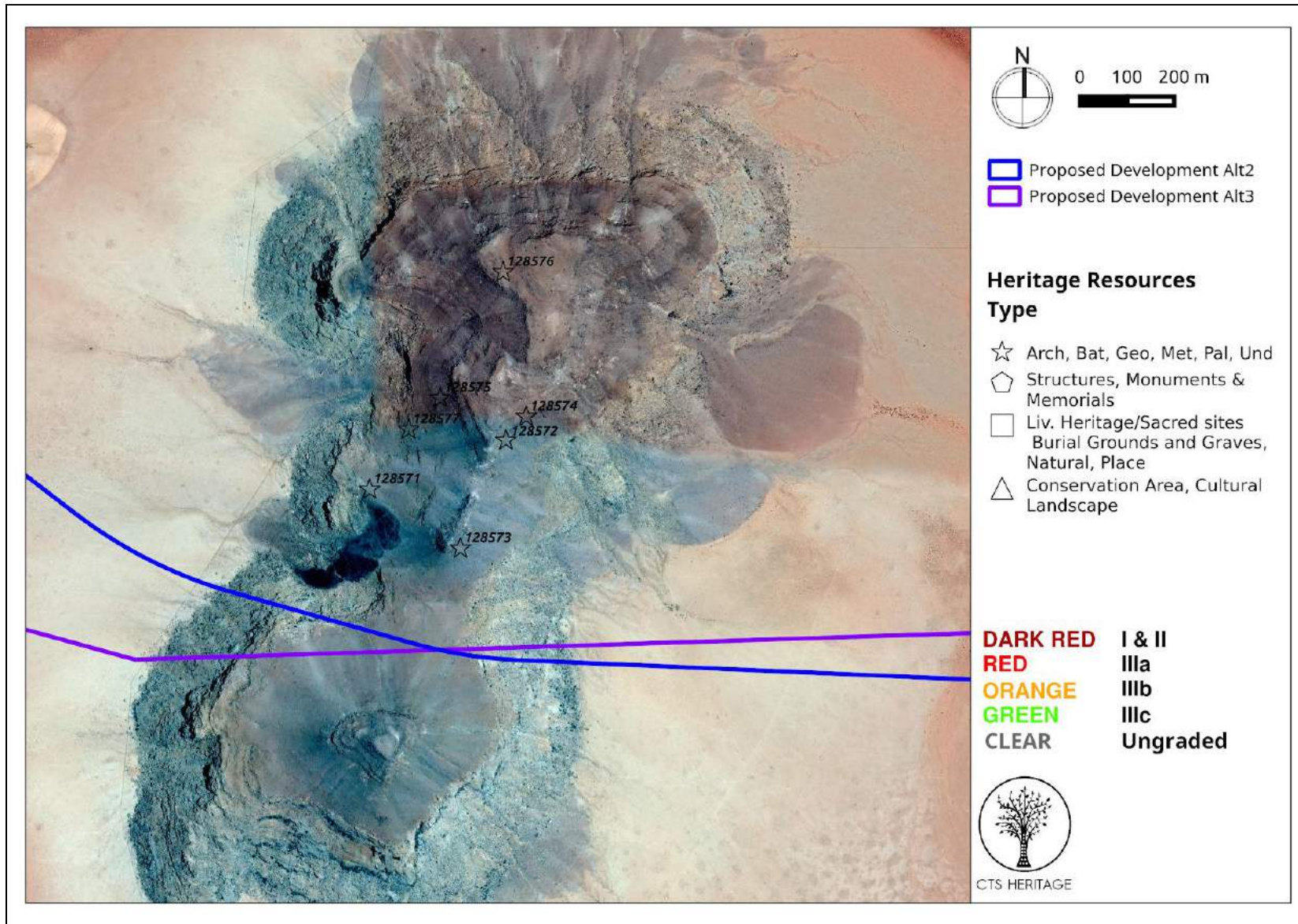


Figure 3p. Heritage Resources Map. Heritage Resources Inset D2

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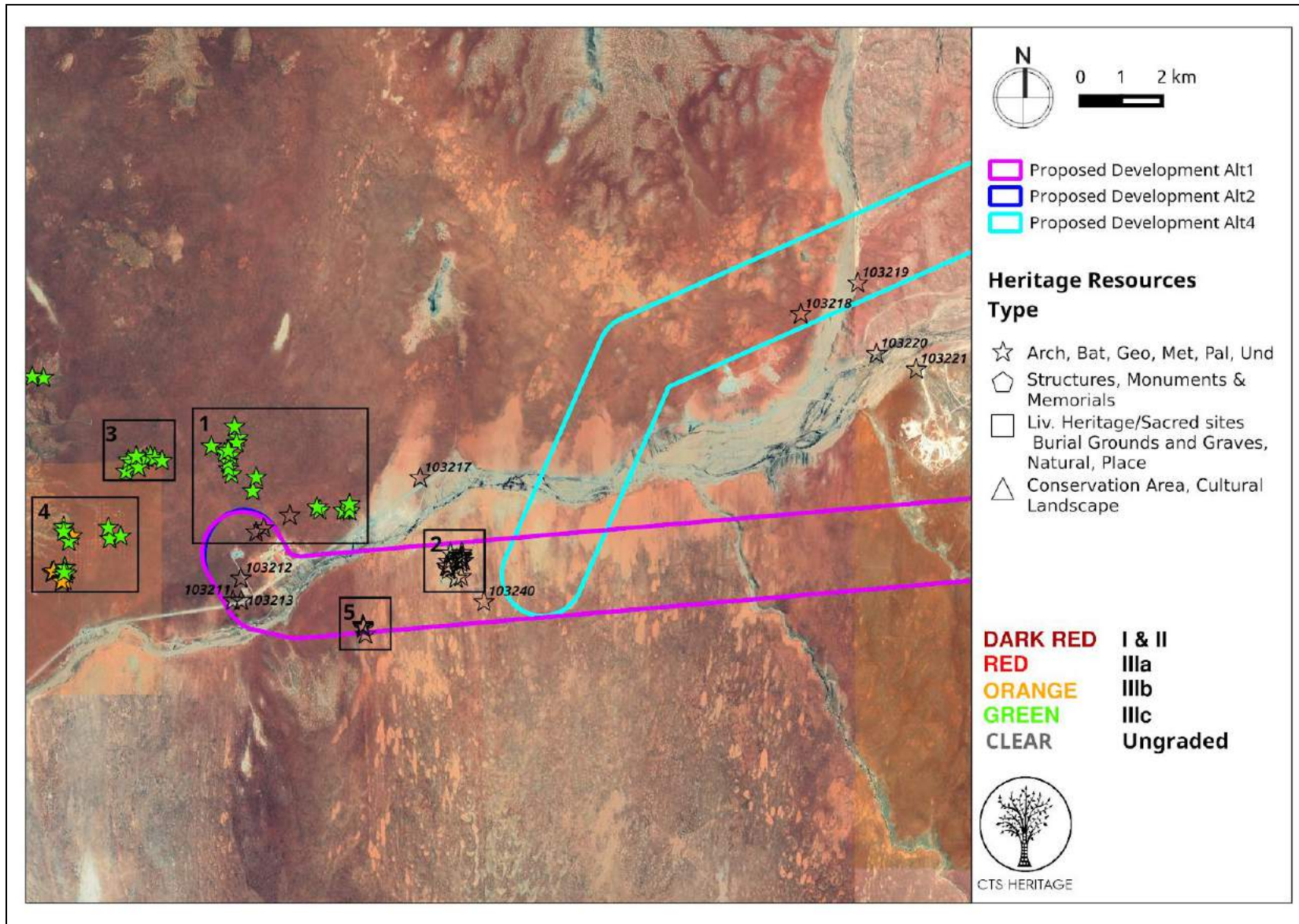


Figure 3q. Heritage Resources Map. Heritage Resources Inset E

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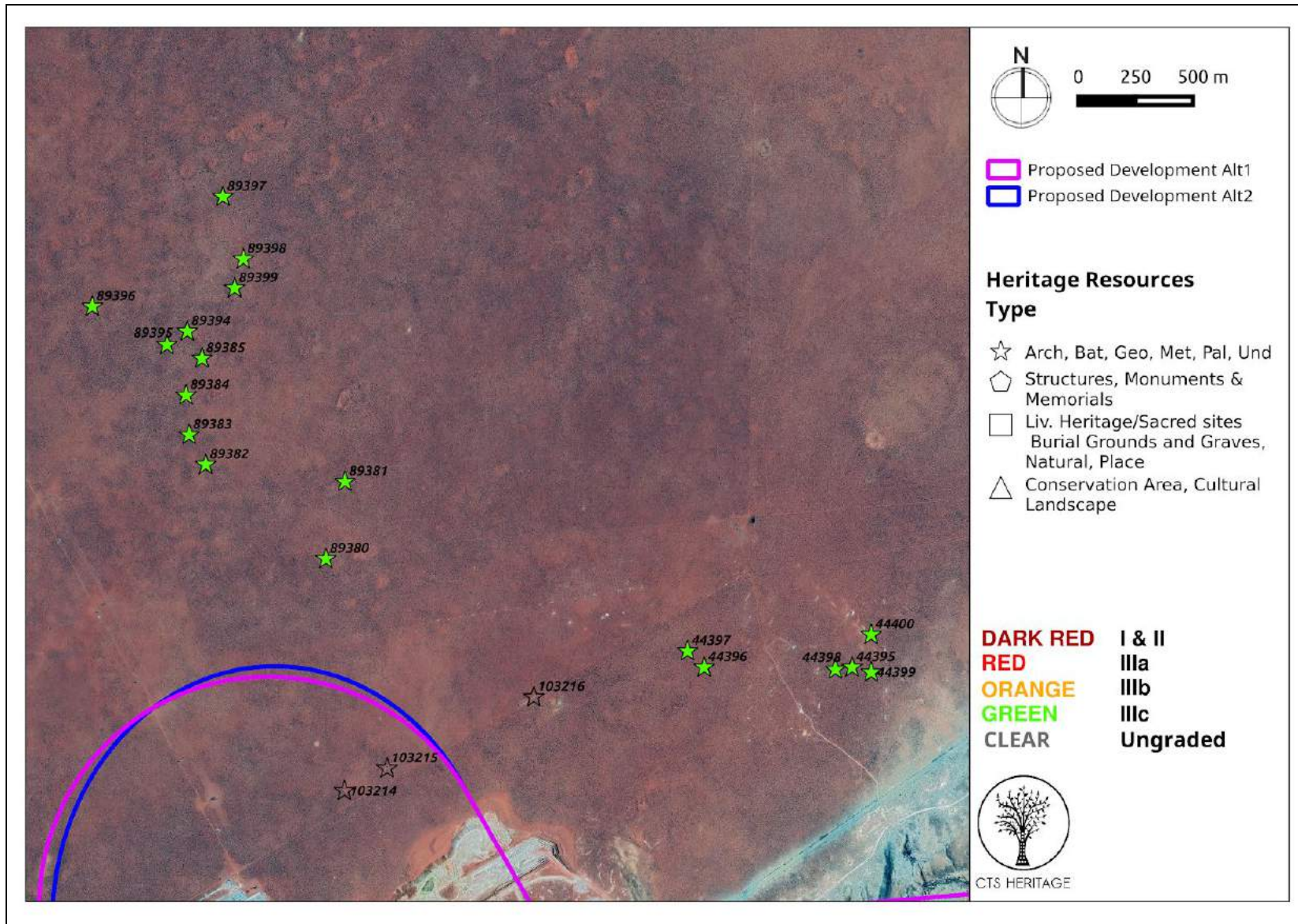


Figure 3r. Heritage Resources Map. Heritage Resources Inset E1

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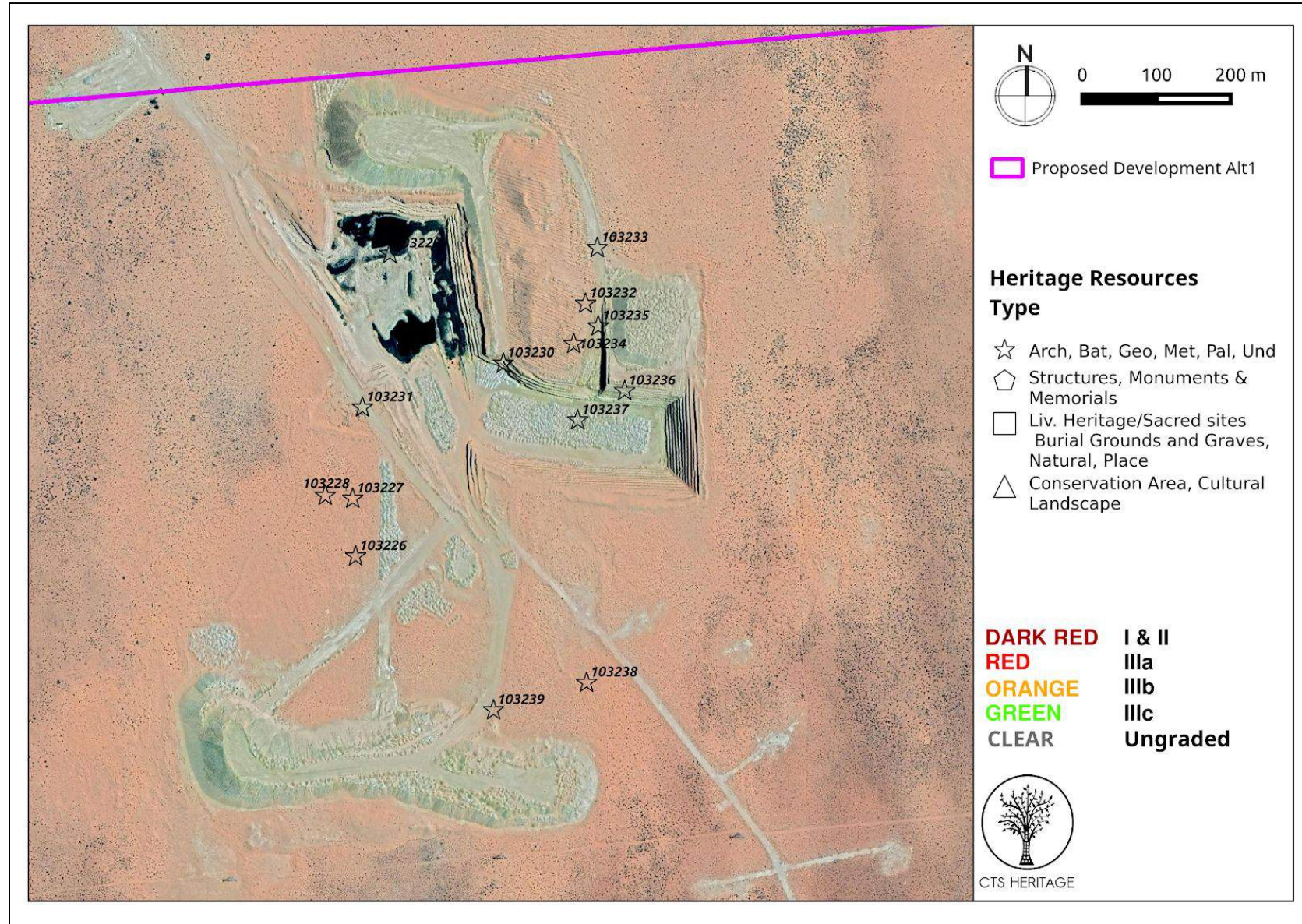


Figure 3s. Heritage Resources Map. Heritage Resources Inset E2



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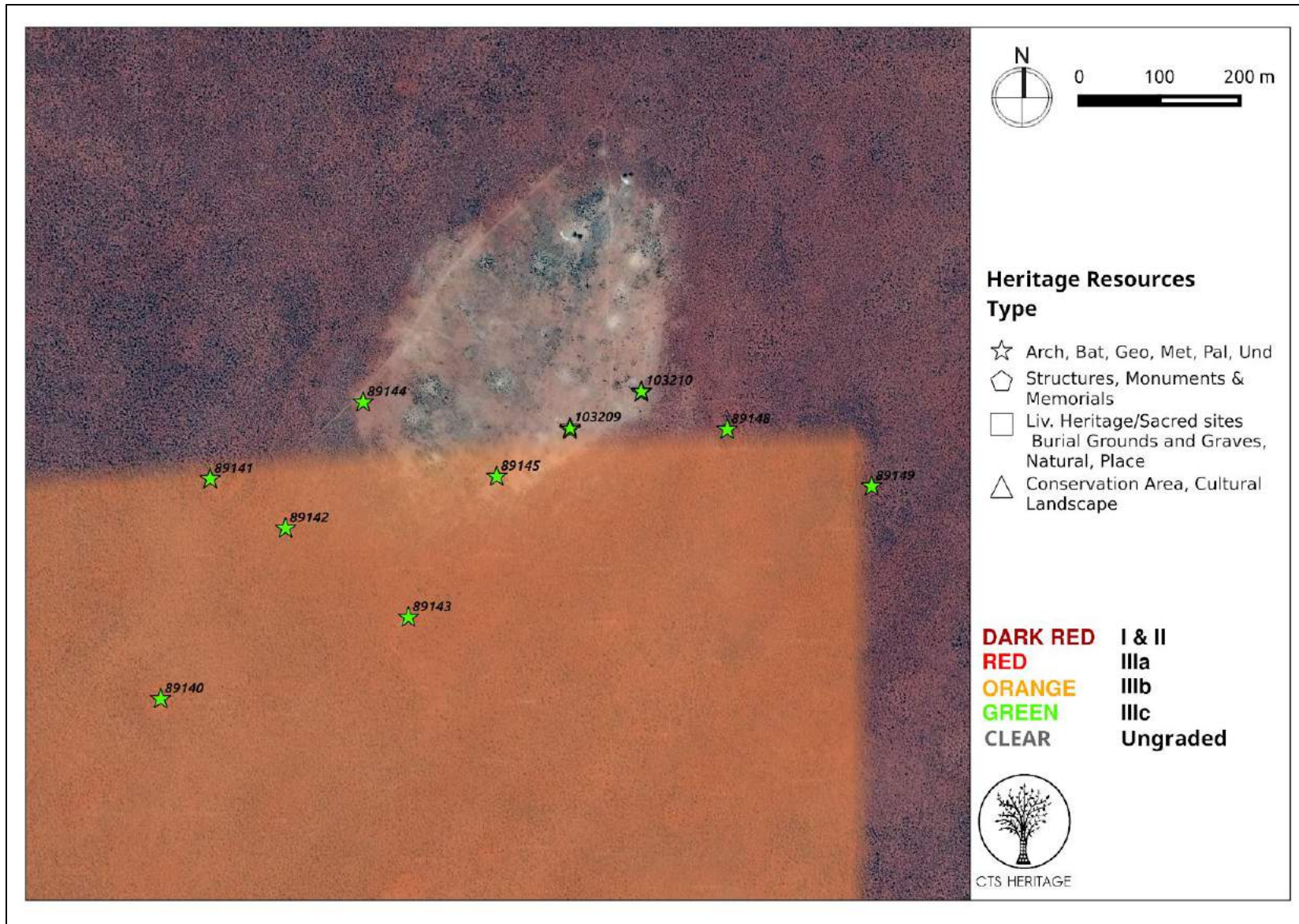


Figure 3t. Heritage Resources Map. Heritage Resources Inset E3

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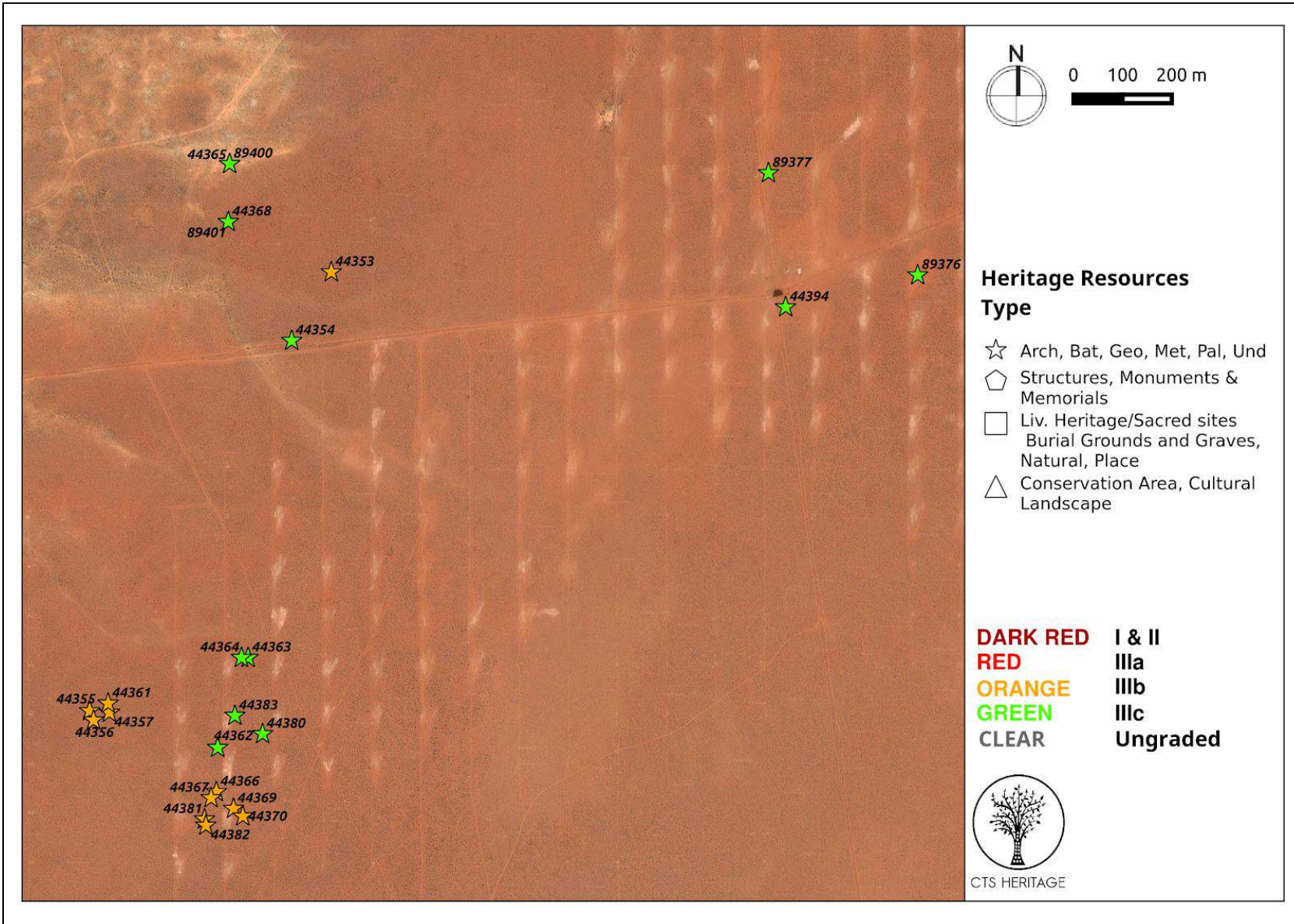


Figure 3u. Heritage Resources Map. Heritage Resources Inset E4

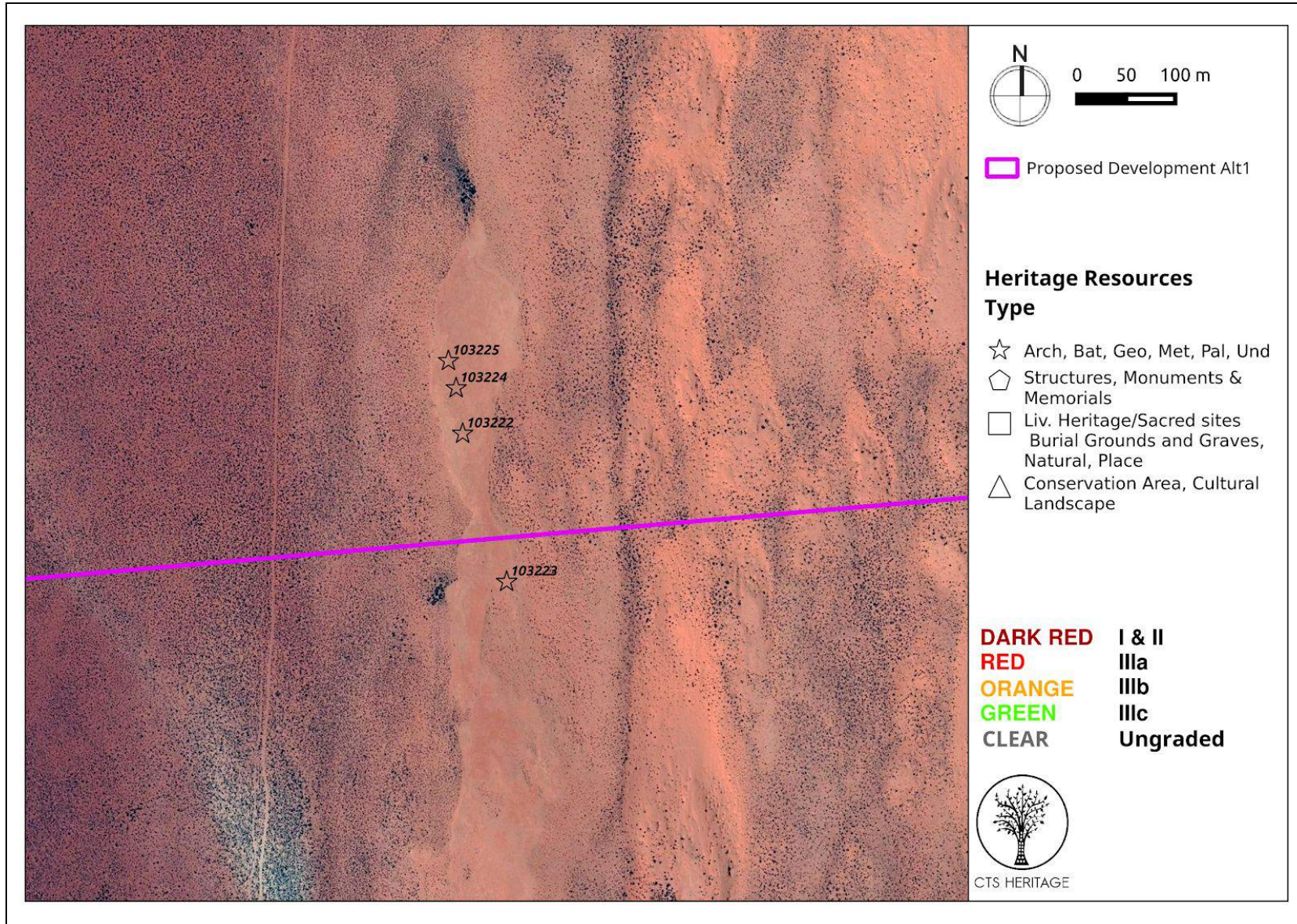


Figure 3v. Heritage Resources Map. Heritage Resources Inset E5



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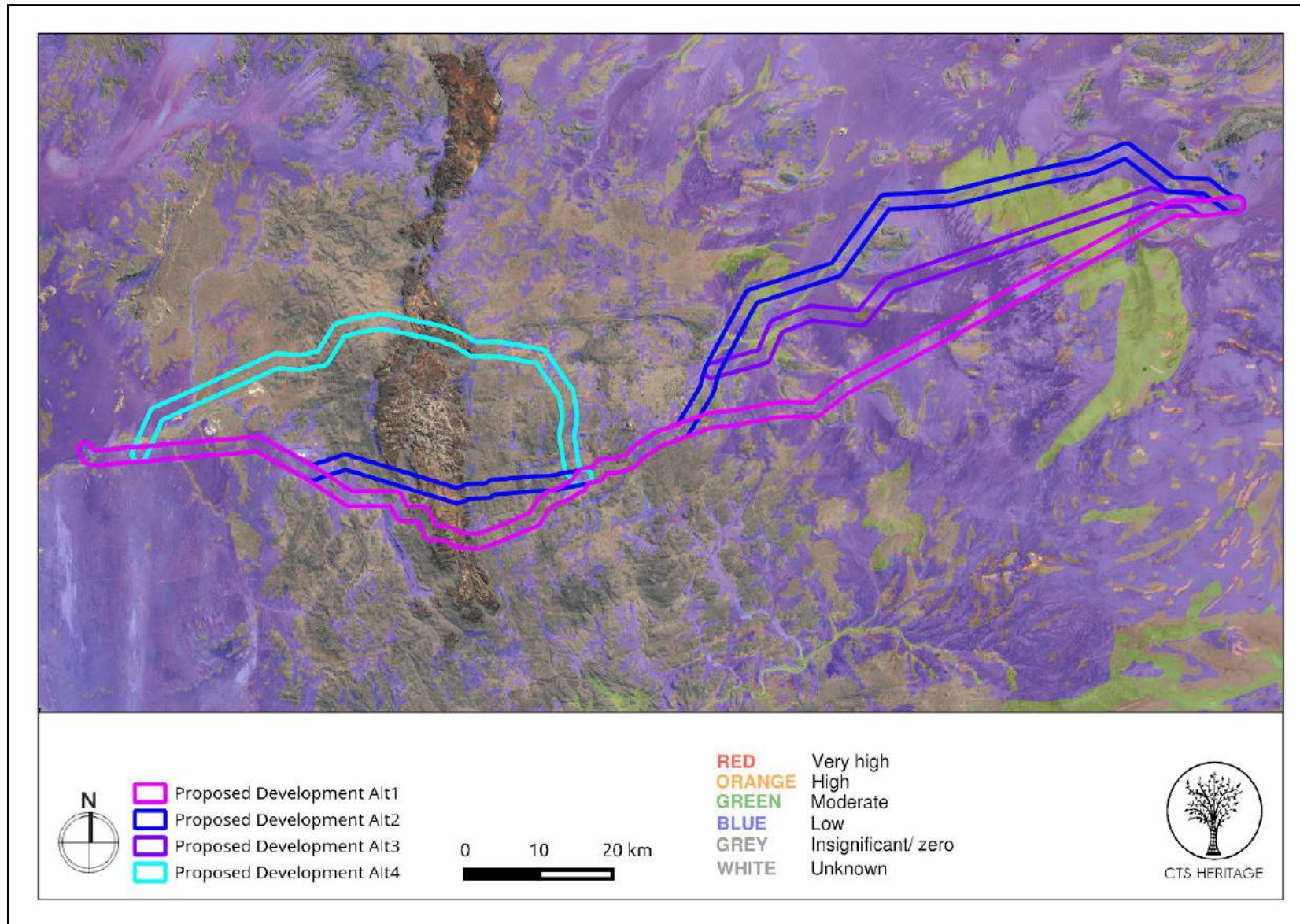


Figure 4. Palaeosensitivity Map. Indicating Low to Moderate fossil sensitivity underlying the study area. Please See Appendix 3 for full guide to the legend.

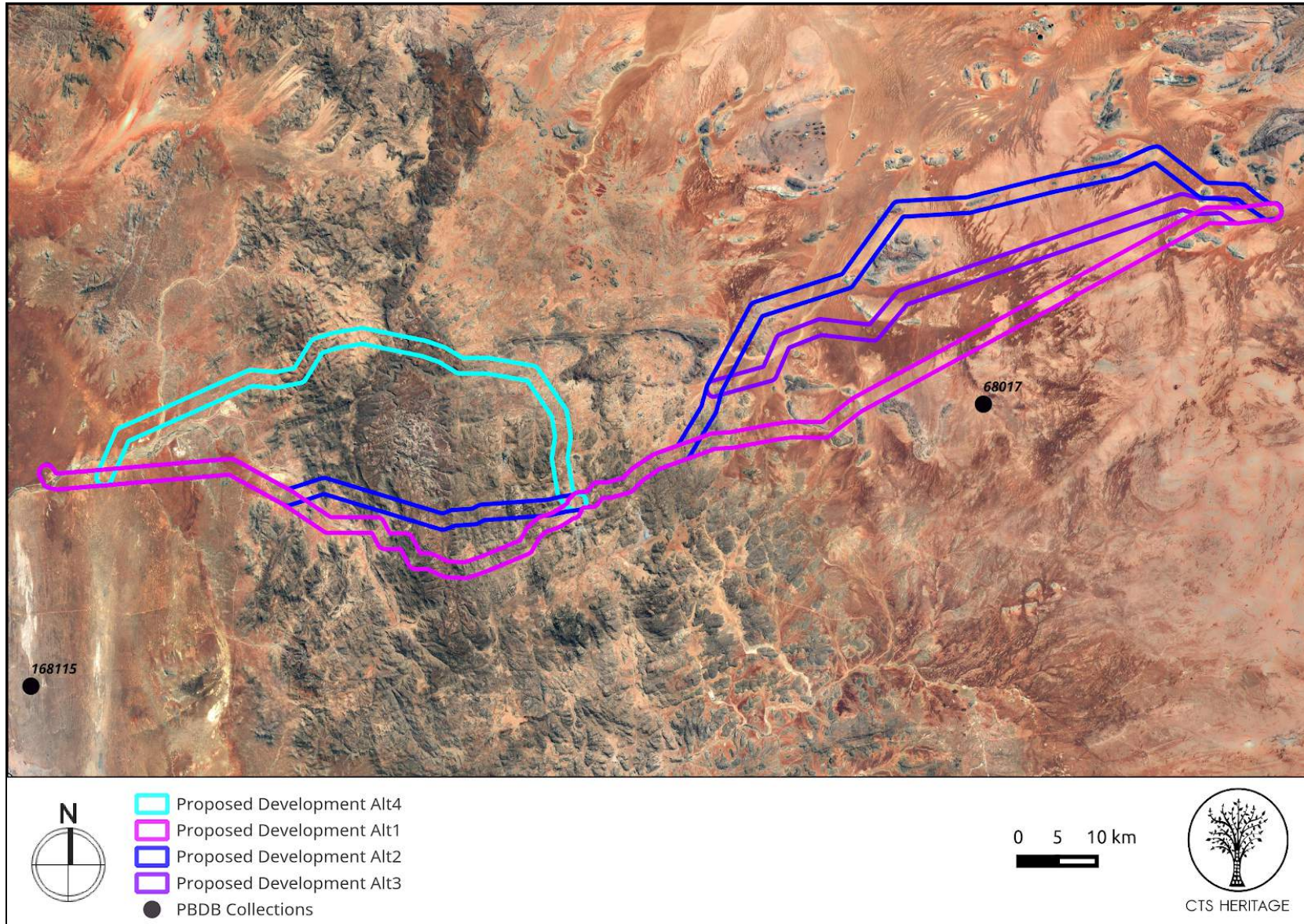


Figure 5. Map of known Palaeontological Sites. Extracted from the PalaeoBiology Database (PBDB - <https://paleobiodb.org/#/>) More detail in Appendix 1

8. Heritage statement and character of the area

Eskom proposes to develop a 400kV powerline and associated expansion of various substations from Kleinsee in the west to Aggeneys in the east, approximately along the N7, N14 and R355, through Springbok in the Northern Cape. These two national and one regional route are considered main thoroughfares through the Northern Cape and have a particular scenic quality. The N7 forms part of the Cape to Namibia route that is used as a tourist route through the Northern Cape. There are a number of historically significant towns that may be negatively impacted by the proposed development in terms of scenic impacts or impacts to sense of place. These include Springbok, Nababeep, O'Kiep, Carolusberg and Concordia.

Prior to 1652, the indigenous peoples (the Khoisan or Nama) of the area extracted raw or "native copper" from the gneiss and granite hills that make up the surrounding Namaqualand Copper belt. This copper was beaten into decorative items, worn as bangles and neck adornments. Early settlers in the Cape Colony heard rumours of mountains in the north-west that were fabulously rich in copper. Governor Simon van der Stel was inclined to believe these tales when, in 1681, a group of Namas visited the Castle in Cape Town and brought along some pure copper. Van der Stel himself led a major expedition in 1685 and reached the fabled mountains on 21 October. Three shafts were sunk and revealed a rich lode of copper ore - the shafts exist to this day. For almost 200 years nothing was done about the discovery, largely because of its remote location. The explorer James Alexander was the first to follow up on van der Stel's discovery. In 1852 he examined the old shafts, discovered some other copper outcrops and started mining operations. Prospectors, miners and speculators rushed to the area, but many companies collapsed when the logistical difficulties became apparent. The first miners were Cornish, and brought with them the expertise of centuries of tin-mining in Cornwall. The ruins of the buildings they constructed as well as the stonework of the bridges and culverts of the railway built to transport the ore to Port Nolloth, can still be seen. The Namaqualand Railway started operating in 1876 and lasted for 68 years, carrying ore to Port Nolloth and returning with equipment and provisions. The carriages were initially pulled by mules and horses, which were later replaced by steam locomotives - the last of these, the *Clara*, stands at Nababeep. Nowadays road transport is used to convey the ore to the railhead at Bitterfontein. The other principal mines of the area are at Carolusberg and Nababeep.

Springbok (was Springbokfontein until 1911) is located in a valley that lies between the high granite domes of the *Klein Koperberge* (Small Copper Mountains). Copper was first discovered in the area by Simon van der Stel in 1685 at "Blue Mine" - this event is said to mark the beginnings of the mining industry in South Africa. In 1852, the farm on which the town is located was purchased with the intention of establishing a copper mine. The town layout dates to 1862. During the Second Boer War, the mountains around Springbok were used by the Boer forces. The "klipkoppie" was used for a fort under General Manie Maritz as it provided an excellent vantage point across the valley. Remains of stone walls inside the koppie remain from this time. Monument Koppie, a small hill situated in the centre of town, remains a historical site and landmark. While most of this area was destroyed by dynamite planted by a commando led by General Jan Smuts, some of the remains still stand today. Okiep's mine saw action on 4 April 1902 during the Anglo-Boer war when some 700 officers and men of the 3rd Battalion Queen's Royal Regiment, 5th Royal Warwickshire Regiment, Namaqualand Border Scouts, the Town Guard and the Cape Garrison Artillery, withstood a 30-day siege by Jan Smuts' forces. The village of Concordia with a garrison of 100 men, surrendered a day after the siege started. On 4 May 1902 a British relief column arrived from Port Nolloth and ended the siege. A ruined blockhouse is still visible on a hill north-east of the town.

The proposed development covers an extensive area (approximately 165km x 33km). Many Heritage Assessments have been conducted within this general area (approximately 60 - Appendix 2) which have identified a number of significant heritage resources (271 - Appendix 1), the majority of which are of archaeological significance. According to Van Ryneveld (2017), "The extremely arid landscape, characterized by flat drainage plains, or peneplains of red Hutton sands, aeolian sands dating back to the Quaternary, are intersected by granite inselbergs protruding above the peneplains and including amongst others the Aggeneys, Black and Gamsberg Mountains. This landscape is reasonably inferred to represent a basic Holocene landscape (Beaumont et. al. 1995), with much wetter conditions having had prevailed throughout the Plio- and Pleistocene, or during Earlier (ESA) and Middle Stone Age (MSA) times." The general area proposed for development has been occupied since the Early Stone Age as evidenced by Early Stone Age artefacts found throughout the Karoo, fairly consistently until modern times. Beaumont et al. (1995) has described the widespread but low density stone artefact scatter of Early and Middle Stone Age material across areas of Bushmanland. In addition, the Heritage Impact Assessments conducted in the area have identified a number of Middle Stone Age sites. Further, according to Morris (2011a) Later



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Stone Age (LSA) sites are the predominant archaeological trace noted in surveys in the Aggeneys-Pofadder region. The Later Stone Age traces include ceramics, ostrich egg shell as well as “boat-shaped grinding grooves in the outcropping bedrock”. According to Webley and Halkett (2012), “These sites probably represent transient settlement by transhumant hunter-gatherers or herders, moving through the area.” Further, Webley and Halkett (2012) note that “LSA sites (consisting mainly of quartz flakes) were concentrated at the base of small koppies. This information is supported by Morris (2011a, b & c) and Pelser (2011).” Additional heritage resources that are likely to be found within the development area include marked and unmarked burial grounds and graves, as well as rock art in the form of rock engravings on the outcrops.

Webley and Halkett (2012) note that appreciation has started emerging regarding the “genocide against the Bushmen in this area, with certain mountainous areas (like Gamsberg near Aggeneys) being likely massacre sites”. This has resulted in moves to include the Gamsberg in a potential /Xam and Khomani Heartland World Heritage Site.

The area proposed for development is underlain by sediments of zero (granites), low and moderate palaeontological sensitivity according to the SAHRIS Palaeosensitivity Map (Figure 4). The sediments of low palaeontological sensitivity consist of aeolian dune sands while the sediments of moderate palaeontological sensitivity consist of Gneiss and calcrete. Importantly, the aeolian sands marked as having low palaeontological sensitivity in Figure 4 are continuous with the Koekenaap and Graauw Duinen Formations further south which are part of the West Coast Group and are determined to have very high palaeontological sensitivity. In the marine deposits that are part of the West Coast Group, fossil molluscan seashells, brachiopods, crustaceans (barnacles, crabs, prawns, ostracods), echinoids, polychaete worm tubes, corals, bryozoans and foraminifera have been found. Shark teeth are common, and other fish teeth occur as well. Bones of whales, dolphins, seals and seabirds have also been found. Trace fossils made by prawns, worms, echinoids, anemones, bivalves, fish *etc*, are pervasive. The bones of land mammals appear in estuarine and lagoonal deposits. Remnants of land snails, tortoises, moles, ostrich bones and egg shells and insect traces occur on the aeolianites. Larger animal bones are sparsely scattered on palaeosurfaces (such as from bovids, zebra, rhino, elephant, pigs *etc*). The deposits associated with vleis, pans and springs are very rich, especially for the fossils of birds and micromammals. It is in these aeolianites (of low palaeontological sensitivity) that the type site for an Early Cretaceous dinosaur called *Kangnasaurus* was located in 1915 (Figure 5 and Appendix 2).

The area proposed for development therefore constitutes a very sensitive landscape in terms of impacts to historical, archaeological and palaeontological heritage resources.

In summary, the proposed development may negatively impact on:

- Historic townscapes and sense of place of historic cores of Springbok, Nababeep, O’Kiep, Carolusberg and Concordia
- Corbelled houses and other historic structures and farm werfs
- Archaeological heritage resources specifically heritage associated with
 - Copper Mining
 - South African War
 - ESA, MSA and LSA (including OES, grinding grooves and ceramics) sites (tend to be associated with granite outcrops and pans)
 - Engraved rock art
 - Marked and unmarked burial grounds
- Heritage associated with Korana wars and the massacre of Khoe and San peoples
- Palaeontological heritage consisting of trace fossils, mammal bone fossils, sharks teeth, mollusc fossils

These impacts will need to be assessed during the site visit through the collection of data pertaining to the location of archaeological sites, and sites of heritage significance relative to the proposed development footprint.

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APPENDIX 1

List of heritage resources within surrounding areas of the proposed developments from SAHRIS

Site ID	Site no	Full Site Name	Site Type	Grading
12	15/K/Spr/2	Van der Stel's Copper Mine, Carolusberg, Namaqualand District	Building	Grade II
28115	9/2/066/0024-002	Old Church, Rhenish Mission Complex, Steinkopf	Building	Grade II
28117	9/2/066/0021-002	First Dutch Reformed Church, Synagogue Street, Springbok	Building	Grade II
28118	9/2/066/0022	Old All Saints Church, Springbok	Building	Grade II
28119	9/2/066/0021	Old Synagogue and First Dutch Reformed Church, Synagogue Street, Springbok	Building	Grade II
28122	9/2/066/0019	Dutch Reformed Church, Pieter Malan Street, Springbok	Building	Grade II
28123	9/2/066/0020	Copper smelting chimney, Springbok	Building	Grade II
28124	9/2/066/0016	Old smoke stack, Okiep, Namaqualand District	Building	Grade II
28125	9/2/066/0017	Cornish pump building, Okiep, Namaqualand District	Building	Grade II
28128	9/2/066/0010	Orbicule Koppie, Concordia, Namaqualand District	Geological	Grade II
34945	KANG001	Kangnas 001	Stone walling	Grade IIIb
34946	KANG002	Kangnas 002	Artefacts	Grade IIIb
34947	KANG003	Kangnas 003	Artefacts	Grade IIIb
34948	KANG004	Kangnas 004	Rock Art, Artefacts	Grade IIIb
34949	KANG005	Kangnas 005	Burial Grounds & Graves	Grade IIIa
34950	KANG006	Kangnas 006	Stone walling	Grade IIIb
34954	KANG007	Kangnas 007	Stone walling, Artefacts	Grade IIIa
34957	KANG008	Kangnas 008	Artefacts	Grade IIIb
34959	KANG009	Kangnas 009	Artefacts	Grade IIIb
34962	KANG010	Kangnas 009	Artefacts	Grade IIIb

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34963	KANG092	Kangnas 092	Artefacts	Grade IIIb
34964	KANG093	Kangnas 093	Artefacts	Grade IIIb
34965	KANG094	Kangnas 094	Artefacts	Grade IIIb
34966	KANG095	Kangnas 095	Rock Art	Grade IIIb
34967	KANG096	Kangnas 096	Rock Art	Grade IIIb
34968	KANG097	Kangnas 097	Rock Art	Grade IIIb
34969	KANG098	Kangnas 098	Rock Art	Grade IIIb
34970	KANG099	Kangnas 099	Rock Art	Grade IIIb
34971	KANG011	Kangnas 011	Artefacts	Grade IIIb
34972	KANG012	Kangnas 012	Building	Grade IIIa
34973	KANG013	Kangnas 013	Stone walling	Grade IIIa
34974	KANG014	Kangnas 014	Burial Grounds & Graves	Grade IIIa
34975	KANG015	Kangnas 015	Artefacts	Grade IIIb
34976	KANG016	Kangnas 016	Stone walling	Grade IIIb
34977	KANG017	Kangnas 017	Artefacts	Grade IIIb
34978	KANG018	Kangnas 018	Stone walling	Grade IIIb
34979	KANG019	Kangnas 019	Artefacts	Grade IIIb
34980	KANG020	Kangnas 020	Building	Grade IIIb
34981	KANG100	Kangnas 100	Artefacts	Grade IIIb
34982	KANG101	Kangnas 101	Artefacts	Grade IIIb
34983	KANG102	Kangnas 102	Artefacts	Grade IIIb
34984	KANG103	Kangnas 103	Stone walling	Grade IIIb
34985	KANG104	Kangnas 104	Artefacts	Grade IIIb
34986	KANG105	Kangnas 105	Artefacts	Grade IIIb

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34987	KANG106	Kangnas 106	Stone walling	Grade IIIb
34988	KANG107	Kangnas 107	Stone walling	Grade IIIb
34989	KANG108	Kangnas 108	Artefacts	Grade IIIb
34990	KANG109	Kangnas 109	Artefacts	Grade IIIb
34991	KANG110	Kangnas 110	Artefacts	Grade IIIb
34992	KANG111	Kangnas 111	Artefacts	Grade IIIb
34993	KANG021	Kangnas 021	Artefacts	Grade IIIb
34994	KANG022	Kangnas 022	Rock Art	Grade IIIa
34995	KANG023	Kangnas 023	Stone walling	Grade IIIb
34996	KANG024	Kangnas 024	Rock Art	Grade IIIa
34997	KANG025	Kangnas 025	Artefacts	Grade IIIb
34998	KANG026	Kangnas 026	Artefacts	Grade IIIb
34999	KANG027	Kangnas 027	Artefacts	Grade IIIb
35000	KANG028	Kangnas 028	Artefacts	Grade IIIb
35001	KANG029	Kangnas 029	Artefacts	Grade IIIb
35002	KANG030	Kangnas 030	Artefacts	Grade IIIa
35003	KANG060	Kangnas 060	Artefacts	Grade IIIb
35004	KANG061	Kangnas 061	Artefacts	Grade IIIb
35005	KANG062	Kangnas 062	Artefacts	Grade IIIb
35006	KANG063	Kangnas 063	Artefacts	Grade IIIb
35007	KANG064	Kangnas 064	Artefacts	Grade IIIb
35008	KANG065	Kangnas 065	Artefacts	Grade IIIb
35009	KANG066	Kangnas 066	Artefacts	Grade IIIb
35010	KANG067	Kangnas 067	Artefacts	Grade IIIb

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35011	KANG068	Kangnas 068	Artefacts	Grade IIIb
35012	KANG069	Kangnas 069	Artefacts	Grade IIIb
35013	KANG040	Kangnas 040	Artefacts	Grade IIIb
35014	KANG039	Kangnas 039	Artefacts	Grade IIIb
35015	KANG038	Kangnas 038	Building	Grade IIIb
35016	KANG037	Kangnas 037	Stone walling	Grade IIIb
35017	KANG036	Kangnas 036	Artefacts	Grade IIIb
35018	KANG035	Kangnas 035	Artefacts	Grade IIIb
35019	KANG034	Kangnas 034	Artefacts	Grade IIIa
35020	KANG033	Kangnas 033	Stone walling	Grade IIIb
35021	KANG032	Kangnas 032	Burial Grounds & Graves	Grade IIIa
35022	KANG031	Kangnas 031	Building	Grade IIIb
35023	KANG070	Kangnas 070	Artefacts	Grade IIIa
35024	KANG071	Kangnas 071	Artefacts	Grade IIIa
35025	KANG072	Kangnas 072	Artefacts	Grade IIIa
35026	KANG073	Kangnas 073	Burial Grounds & Graves	Grade IIIb
35027	KANG074	Kangnas 074	Artefacts	Grade IIIa
35028	KANG075	Kangnas 075	Artefacts	Grade IIIb
35029	KANG076	Kangnas 076	Stone walling	Grade IIIb
35030	KANG077	Kangnas 077	Artefacts	Grade IIIb
35031	KANG078	Kangnas 078	Artefacts	Grade IIIb
35032	KANG079	Kangnas 079	Artefacts	Grade IIIb
35033	KANG050	Kangnas 050	Artefacts	Grade IIIb
35034	KANG049	Kangnas 049	Stone walling	Grade IIIb

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35035	KANG048	Kangnas 048	Stone walling	Grade IIIb
35036	KANG047	Kangnas 047	Stone walling	Grade IIIb
35037	KANG046	Kangnas 046	Stone walling	Grade IIIb
35038	KANG045	Kangnas 045	Stone walling	Grade IIIb
35039	KANG044	Kangnas 044	Stone walling	Grade IIIb
35040	KANG080	Kangnas 080	Artefacts	Grade IIIb
35041	KANG043	Kangnas 043	Stone walling	Grade IIIc
35042	KANG081	Kangnas 081	Artefacts	Grade IIIb
35043	KANG042	Kangnas 042	Building	Grade IIIb
35044	KANG082	Kangnas 082	Artefacts	Grade IIIb
35045	KANG041	Kangnas 041	Artefacts	Grade IIIb
35046	KANG083	Kangnas 083	Artefacts	Grade IIIb
35047	KANG084	Kangnas 084	Artefacts	Grade IIIb
35048	KANG085	Kangnas 085	Stone walling	Grade IIIb
35049	KANG086	Kangnas 086	Artefacts	Grade IIIb
35050	KANG087	Kangnas 087	Artefacts	Grade IIIb
35051	KANG088	Kangnas 088	Artefacts	Grade IIIb
35052	KANG089	Kangnas 089	Artefacts	Grade IIIb
35053	KANG051	Kangnas 051	Rock Art	Grade IIIa
35054	KANG052	Kangnas 052	Stone walling	Grade IIIb
35055	KANG053	Kangnas 053	Stone walling	Grade IIIb
35056	KANG054	Kangnas 054	Artefacts	Grade IIIb
35057	KANG055	Kangnas 055	Artefacts	Grade IIIb
35059	KANG090	Kangnas 090	Artefacts	Grade IIIb

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35060	KANG091	Kangnas 091	Artefacts	Grade IIIb
35063	KANG056	Kangnas 056	Stone walling	Grade IIIb
35064	KANG057	Kangnas 057	Artefacts	Grade IIIb
35065	KANG058	Kangnas 058	Stone walling	Grade IIIb
35066	KANG059	Kangnas 059	Stone walling	Grade IIIb
39444	OKIEP001	Okiep 001	Structures	Grade IIIb
39445	OKIEP002	Okiep 002	Living Heritage/Sacred sites	Grade IIIb
40222	OKIEP003	Okiep 003	Burial Grounds & Graves	Grade IIIa
40223	OKIEP004	Okiep 004	Burial Grounds & Graves	Grade IIIa
40224	OKIEP005	Okiep 005	Transport infrastructure	Grade IIIb
40225	OKIEP006	Okiep 006	Transport infrastructure	Grade IIIc
40227	OKIEP008	Okiep 008	Transport infrastructure	Grade IIIc
40229	OKIEP009	Okiep 009	Building	Grade IIIb
40230	OKIEP007	Okiep 007	Structures	Grade IIIc
40231	OKIEP010	Okiep 010	Living Heritage/Sacred sites	Grade IIIb
40232	OKIEP011	Okiep 011	Transport infrastructure	Grade II
40233	OKIEP012	Okiep 012	Structures	Grade II
44394	NAM24	Namakwaland 24	Shell Midden, Artefacts	Grade IIIc
44395	NAM25	Namakwaland 25	Artefacts	Grade IIIc
44396	NAM26	Namakwaland 26	Artefacts	Grade IIIc
44397	NAM27	Namakwaland 27	Artefacts	Grade IIIc
44398	NAM28	Namakwaland 28	Artefacts	Grade IIIc
44399	NAM29	Namakwaland 29	Artefacts	Grade IIIc
44400	NAM30	Namakwaland 30	Artefacts	Grade IIIc

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44590	KDM01	Klipdam 01	Stone walling	Grade IIIc
44591	KDM02	Klipdam 02	Burial Grounds & Graves	Grade IIIa
44592	KDM03	Klipdam 03	Burial Grounds & Graves	Grade IIIa
44593	KDM04	Klipdam 04	Burial Grounds & Graves	Grade IIIa
44594	KDM05	Klipdam 05	Burial Grounds & Graves	Grade IIIa
44828	DR2955/SPRING-KOM 01	Road DR2955 between Springbok & Komaggas 01	Artefacts	Grade IIIc
87813	KLP001	Klipdam 001	Artefacts	Grade IIIc
87815	KLP003	Klipdam 003	Artefacts	Grade IIIc
87817	KLP005	Klipdam 005	Artefacts	Grade IIIc
87818	KLP006	Klipdam 006	Burial Grounds & Graves	Grade IIIa
87819	KLP007	Klipdam 007	Stone walling	Grade IIIc
89140	PBS061	Project Blue Solar 061	Artefacts	Grade IIIc
89141	PBS062	Project Blue Solar 062	Artefacts	Grade IIIc
89142	PBS063	Project Blue Solar 063	Artefacts	Grade IIIc
89143	PBS064	Project Blue Solar 064	Artefacts	Grade IIIc
89144	PBS065	Project Blue Solar 065	Artefacts	Grade IIIc
89145	PBS066	Project Blue Solar 066	Artefacts	Grade IIIc
89146	PBS067	Project Blue Solar 067	Ruin > 100 years	Grade IIIc
89147	PBS068	Project Blue Solar 068	Ruin >100 years	Grade IIIc
89148	PBS069	Project Blue Solar 069	Artefacts	Grade IIIc
89149	PBS070	Project Blue Solar 070	Artefacts	Grade IIIc
89376	PBS0194	Project Blue Solar 194	Artefacts	Grade IIIc
89377	PBS0195	Project Blue Solar 195	Artefacts	Grade IIIc
89380	PBS0198	Project Blue Solar 198	Artefacts	Grade IIIc

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89381	PBS0199	Project Blue Solar 199	Artefacts	Grade IIIc
89382	PBS0200	Project Blue Solar 200	Artefacts	Grade IIIc
89383	PBS0201	Project Blue Solar 201	Artefacts	Grade IIIc
89384	PBS0202	Project Blue Solar 202	Artefacts	Grade IIIc
89385	PBS0203	Project Blue Solar 203	Artefacts	Grade IIIc
89394	PBS0204	Project Blue Solar 204	Artefacts	Grade IIIc
89395	PBS0205	Project Blue Solar 205	Artefacts	Grade IIIc
89396	PBS0206	Project Blue Solar 206	Artefacts	Grade IIIc
89397	PBS0207	Project Blue Solar 207	Artefacts	Grade IIIc
89398	PBS0208	Project Blue Solar 208	Artefacts	Grade IIIc
89399	PBS0209	Project Blue Solar 209	Artefacts	Grade IIIc
93793	Erf 214, Springbok	Erf 214, Springbok	Building	
93810	Klipfontein	Klipfontein Rock Art Site	Rock Art	Grade IIIa
103209	PV2012/036	Predikant Vlei	Archaeological	
103210	PV2012/037	Predikant Vlei	Archaeological	
103211	DKG2004/001	Dikgat	Archaeological	
103212	DKG2004/001b	Dikgat	Archaeological	
103213	DKG2004/001f	Dikgat	Archaeological	
103214	DKG2004/002	Dikgat	Archaeological	
103215	DKG2004/003	Dikgat	Archaeological	
103216	DKG2004/004	Dikgat	Archaeological	
103217	DKG2004/005	Dikgat	Archaeological	
103218	STR2004/001	Stryd Rivier	Archaeological	
103219	STR2004/002	Stryd Rivier	Archaeological	

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103220	STR2004/003	Stryd Rivier	Archaeological	
103221	STR2004/004	Stryd Rivier	Archaeological	
103222	MV2004/001a	Mannel's Vley	Archaeological	
103223	MV2004/001b	Mannel's Vley	Archaeological	
103224	MV2004/001c	Mannel's Vley	Archaeological	
103225	MV2004/001d	Mannel's Vley	Archaeological	
103226	MV2007/001	Mannel's Vley	Archaeological	
103227	MV2007/002	Mannel's Vley	Archaeological	
103228	MV2007/003	Mannel's Vley	Archaeological	
103229	MV2007/004	Mannel's Vley	Archaeological	
103230	MV2007/005	Mannel's Vley	Archaeological	
103231	MV2007/006	Mannel's Vley	Archaeological	
103232	MV2007/007	Mannel's Vley	Archaeological	
103233	MV2007/008	Mannel's Vley	Archaeological	
103234	MV2007/009west	Mannel's Vley	Archaeological	
103235	MV2007/009east	Mannel's Vley	Archaeological	
103236	MV2007/010	Mannel's Vley	Archaeological	
103237	MV2007/011	Mannel's Vley	Archaeological	
103238	MV2007/012	Mannel's Vley	Archaeological	
103239	MV2007/013	Mannel's Vley	Archaeological	
103240	MV2007/014	Mannel's Vley	Archaeological	
103241	MV2007/015	Mannel's Vley	Archaeological	
128442	2917DB/NRWSS/2016/339	Namaqualand Regional Water Supply Scheme- site 339	Structures	Grade IIIa
128443	2917DB/NRWSS/2016/340	Namaqualand Regional Water Supply Scheme- site 340	Burial Grounds & Graves	Grade IIIa

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128451	2917DB/NRWSS/2016/341	Namaqualand Regional Water Supply Scheme-Site 341	Artefacts	Grade IIIb
128457	2917DB/NRWSS/2016/640	Namaqualand Regional Water Supply Scheme- Site 640	Building	Grade IIIc
128462	2917DB/NRWSS/2016/641	Namaqualand Regional Water Supply Scheme- Site 641	Structures	Grade IIIc
128466	2917DB/NRWSS/2016/654	Namaqualand Regional Water Supply Scheme- Site 654	Artefacts	Grade IIIc
128469	2917DB/NRWSS/2016/655	Namaqualand Regional Water Supply Scheme- Site 655	Archaeological	Grade IIIc
128478	2917DB/NRWSS/2016/661	Namaqualand Regional Water Supply Scheme- Site 661	Artefacts	Grade IIIb
128481	2917DB/NRWSS/2016/342	Namaqualand Regional Water Supply Scheme- Site 342	Burial Grounds & Graves	Grade IIIa
128482	2917DB/NRWSS/2016/343	Namaqualand Regional Water Supply Scheme- Site 343	Artefacts	Grade IIIc
128483	2917DB/NRWSS/2016/344	Namaqualand Regional Water Supply Scheme- Site 344	Structures	Grade IIIa
128484	2917DB/NRWSS/2016/345	Namaqualand Regional Water Supply Scheme- Site 345	Settlement	Grade IIIc
128485	2917DB/NRWSS/2016/646	Namaqualand Regional Water Supply Scheme- Site 646	Burial Grounds & Graves	Grade IIIb
128486	2917DB/NRWSS/2016/647	Namaqualand Regional Water Supply Scheme- Site 647	Building	Grade IIIc
128552	2917DB/NRWSS/2016/648	Namaqualand Regional Water Supply Scheme- Site 648	Burial Grounds & Graves	Grade IIIb
128571	2918BC/FZ62/2012/122	Farm Zuurwater 62	Artefacts	Ungraded
128572	2918BC/FZ62/2012/123	Farm Zuurwater 62- site 123	Artefacts	Ungraded
128573	2918BC/FZ62/2012/124	Farm Zuurwater 62- site 124	Artefacts	Ungraded
128574	2918BC/FZ62/2012/125	Farm Zuurwater 62- site 125	Artefacts	Ungraded
128575	2918BC/FZ62/2012/126	Farm Zuurwater 62- site 126	Artefacts	Ungraded
128576	2918BC/FZ62/2012/131	Farm Zuurwater 62- site 131	Artefacts	Ungraded
128577	2918BC/FZ62/2012/130	Farm Zuurwater 62- site 130	Artefacts	Ungraded
128579	2917DB/SPVKF134/12/2013/054	Solar PV Klipdam Farm 134/17-site 054	Artefacts	Ungraded
128580	2917DB/SPVKF134/12/2013/055	Solar PV Klipdam Farm 134/17-site 055	Stone walling	Ungraded
128581	2917DB/SPVKF134/12/2013/056	Solar PV Klipdam Farm 134/17-site 056	Artefacts	Ungraded
128582	2917DB/SPVKF134/12/2013/057	Solar PV Klipdam Farm 134/17-site 057	Burial Grounds & Graves	Ungraded

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128583	2917DB/SPVKF134/12/2013/060	Solar PV Klipdam Farm 134/17-site 060	Artefacts	Ungraded
128584	2917DB/SPVKF134/12/2013/061	Solar PV Klipdam Farm 134/17-site 061	Burial Grounds & Graves	Ungraded
128598	2917DB/SPVKF134/12/2013/065	Solar PV Klipdam Farm 134/17-site 065	Artefacts	Ungraded
128599	2917DB/SPVKF134/12/2013/066	Solar PV Klipdam Farm 134/17-site 066	Burial Grounds & Graves	Ungraded
128600	2917DB/SPVKF134/12/2013/068	Solar PV Klipdam Farm 134/17-site 068	Burial Grounds & Graves	Ungraded
129012	2918BC/SI3PF/2016/005	Sol Invictus 3 Pv Facility- Site 005	Structures	Ungraded
129021	2918BC/SI3PF/2016/006	Sol Invictus 3 Pv Facility- Site 006	Artefacts	Ungraded
129025	2918BC/SI3PF/2016/007	Sol Invictus 3 Pv Facility- Site 007	Artefacts	Ungraded
129036	2918BC/SI3PF/2016/008	Sol Invictus 3 Pv Facility- Site 008	Structures	Ungraded
129037	2918BC/SI3PF/2016/009	Sol Invictus 3 Pv Facility- Site 009	Burial Grounds & Graves	Ungraded
129038	2918BC/SI3PF/2016/010	Sol Invictus 3 Pv Facility- Site 010	Burial Grounds & Graves	Ungraded
129039	2918BC/SI3PF/2016/011	Sol Invictus 3 Pv Facility- Site 011	Cultural Landscape	Ungraded
129040	2918BC/SI3PF/2016/012	Sol Invictus 3 Pv Facility- Site 012	Artefacts	Ungraded
129041	2918BC/SI3PF/2016/013	Sol Invictus 3 Pv Facility- Site 013	Burial Grounds & Graves	Ungraded
129043	2918BC/SI3PF/2016/015	Sol Invictus 3 Pv Facility- Site 015	Artefacts	Ungraded
129044	2918BC/SI3PF/2016/016	Sol Invictus 3 Pv Facility- Site 016	Artefacts	Ungraded
129045	2918BC/SI3PF/2016/017	Sol Invictus 3 Pv Facility- Site 017	Artefacts	Ungraded
129060	2918BC/SI3PF/2016/018	Sol Invictus 3 Pv Facility- Site 018	Artefacts	Ungraded
129061	2918BC/SI3PF/2016/019	Sol Invictus 3 Pv Facility- Site 019	Artefacts	Ungraded
129062	2918BC/SI3PF/2016/020	Sol Invictus 3 Pv Facility- Site 020	Artefacts	Ungraded
129063	2918BC/SI3PF/2016/021	Sol Invictus 3 Pv Facility- Site 0121	Artefacts	Ungraded
129064	2918BC/SI3PF/2016/022	Sol Invictus 3 Pv Facility- Site 0122	Artefacts	Ungraded
129065	2918BC/SI3PF/2016/023	Sol Invictus 3 Pv Facility- Site 023	Artefacts	Ungraded
129066	2918BC/SI3PF/2016/024	Sol Invictus 3 Pv Facility- Site 024	Artefacts	Ungraded

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129067	2918BC/SI3PF/2016/025	Sol Invictus 3 Pv Facility- Site 025	Artefacts	Ungraded
129068	2918BC/SI3PF/2016/026	Sol Invictus 3 Pv Facility- Site 026	Artefacts	Ungraded
129069	2918BC/SI3PF/2016/027	Sol Invictus 3 Pv Facility- Site 027	Artefacts	Ungraded
129070	2918BC/SI3PF/2016/028	Sol Invictus 3 Pv Facility- Site 028	Artefacts	Ungraded
129071	2918BC/SI3PF/2016/029	Sol Invictus 3 Pv Facility- Site 029	Artefacts	Ungraded
129072	2918BC/SI3PF/2016/030	Sol Invictus 3 Pv Facility- Site 030	Artefacts	Ungraded
129073	2918BC/SI3PF/2016/031	Sol Invictus 3 Pv Facility- Site 031	Artefacts	Ungraded
129074	2918BC/SI3PF/2016/032	Sol Invictus 3 Pv Facility- Site 032	Artefacts	Ungraded
129075	2918BC/SI3PF/2016/033	Sol Invictus 3 Pv Facility- Site 033	Artefacts	Ungraded
129076	2918BC/SI3PF/2016/034	Sol Invictus 3 Pv Facility- Site 034	Artefacts	Ungraded
129077	Portion 4, Farm Zuurwater No 62	Portion 4, Farm Zuurwater No 62	Transport infrastructure	

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APPENDIX 2

Reference List from SAHRIS

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
330		Stefan de Kock	01/04/2012	DRAFT PHASE ONE INTEGRATED HERITAGE IMPACT ASSESSMENT COMPILED IN TERMS OF SECTION 38(8) OF THE NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT 25 OF 1999) PROPOSED BOESMANLAND SOLAR FARM (75MW): PORTION (300HA) OF THE FARM ZUURWATER 62/6, NAMAQUALAND DISTRICT
334	AIA Phase 1	Andrew B Smith	01/03/2012	ARCHAEOLOGICAL REPORT Proposed 75MW Solar Facility on Farm 62 Zuurwater, Aggeneys, Northern Cape Province
337	PIA Phase 1	John E Almond	01/03/2012	RECOMMENDED EXEMPTION FROM FURTHER SPECIALIST PALAEOLOGICAL STUDIES OR MITIGATION: PROPOSED 75 MW SOLAR FACILITY ON FARM ZUURWATER 62 (PORTIONS 2 & 3) NEAR AGGENEYS, NORTHERN CAPE PROVINCE
478	HIA Phase 1	Stephan Gaigher	01/05/2012	HERITAGE IMPACT ASSESSMENT REPORT BASIC ASSESSMENT Proposed establishment of the BQR Energy South Africa Photovoltaic Solar Park on a Portion of the Farm VoÅ«klip near Sprinbok in the Northern Cape Province
4475	AIA Phase 1	Dave Halkett, Timothy Hart	01/06/1997	An Archaeological Assessment of the Coastal Strip, and a Proposed Heritage Management Plan For: De Beers Namaqualand Mines Volume 1
4476	AIA Phase 1	Dave Halkett, Timothy Hart	01/06/1997	An Archaeological Assessment of the Coastal Strip, and a Proposed Heritage Management Plan For: De Beers Namaqualand Mines Volume 2
4479	AIA Phase 1	Dave Halkett, Timothy Hart	01/03/2001	An Initial Assessment of Heritage Resources on the Coastal Farm, Brazil, Namaqualand
4481	AIA Phase 1	Cobus Dreyer	11/11/2002	Archaeological Assessment of the Proposed Upgrading of the Road (Dr2955) between Springbok and Komaggas, Northern Cape
4484	AIA Phase 1	Hilary Deacon	22/04/2004	Specialist Report Heritage Impact Assessment Kornavlei Prospecting, near Komaggas, Northern Cape
4488	PIA Phase 1	Bruce Rubidge	06/08/2007	Palaeontological Desktop Study in Namaqualand
4501	AIA Phase 1	Jayson Orton, Dave Halkett	01/05/2007	Archaeological Impact Assessment of New Mining Areas Along the Buffels River, Namaqualand, Namakwaland Magisterial District, Northern Cape
7871	AIA Phase 1	David Morris	04/12/2011	Sato Energy Holdings Zuurwater Photovoltaic energy generation facility development near Aggeneys, Northern Cape

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8281	AIA Phase 1	Jonathan Kaplan	10/10/2010	ARCHAEOLOGICAL IMPACT ASSESSMENT OF A PROPOSED WIND ENERGY FACILITY NEAR SPRINGBOK NORTHERN CAPE
8282	AIA Desktop	Jonathan Kaplan	08/05/2010	ARCHAEOLOGICAL SCOPING STUDY OF TWO PROPOSED WIND FARM SITES (NAMA EAST AND NAMA WEST) NEAR SPRINGBOK, NORTHERN CAPE PROVINCE
8471	HIA Phase 1	Hilary Deacon	26/05/2003	Naroeshuis Report
9017	PIA Phase 1	John E Almond	28/09/2011	RECOMMENDED EXEMPTION FROM FURTHER SPECIALIST PALAEONTOLOGICAL STUDIES OR MITIGATION: Proposed Sato Energy Holdings (Pty) Ltd photovoltaic project on Portion 3 of Farm Zuurwater 62 near Aggeneys, Northern Cape Province
9086	AIA Phase 1	Celeste Booth	01/04/2012	A Phase 1 Archaeological Impact Assessment for the Proposed Establishment of the Inkululeko Solar Energy Facility on Portion 2 of the Farm Carolus Poort 167, near Noupoot, Northern Cape Province
9086	AIA Phase 1	Celeste Booth	01/04/2012	A Phase 1 Archaeological Impact Assessment for the Proposed Establishment of the Inkululeko Solar Energy Facility on Portion 2 of the Farm Carolus Poort 167, near Noupoot, Northern Cape Province
9110	HIA Phase 1	Lita Webley, Dave Halkett	01/04/2012	Heritage Impact Assessment: Proposed Aggeneys Photo-voltaic Solar Power Plant on Portion 1 of the Farm Aroams 57, Northern Cape Province
9158	Site Inspection Report	Chris Harris	16/05/2012	Report on site visit to potential meteorite impact site near Kangnas
16354	HIA Phase 1	Jayson Orton, Lita Webley	30/05/2012	Heritage Impact Assessment for the Proposed Project Blue Wind Energy Facility, Kleinzee, Namakwa Magisterial District, Northern Cape
26814	HIA Phase 1	Stephan Gaigher	02/05/2012	Heritage Impact Assessment Report Basic Assessment: Proposed Establishment of the Brax Energy Photovoltaic Solar Park on a Portion of the Farm Mesklip 259 near Springbok in the Northern Cape Province
30510	HIA Phase 1	Stephan Gaigher	02/05/2012	Heritage Impact Assessment Report Basic Assessment: Proposed Establishment of the O'Kiep 3 Photovoltaic Solar Facility on a Portion of the Farm Brakfontein 133 near Springbok in the Northern Cape Province
48774	HIA Phase 1	Stephan Gaigher	02/05/2012	HERITAGE IMPACT ASSESSMENT REPORT BASIC ASSESSMENT Proposed establishment of the Brax Energy Photovoltaic Solar Park on a Portion of the Farm VoÃ«lkliip near Springbok in the Northern Cape Province
49807	AIA Desktop	Jonathan Kaplan	01/07/2012	RECOMMENDED EXEMPTION FROM FURTHER ARCHAEOLOGICAL STUDIES: THE PROPOSED NAMAQUA REGIONAL WATER SUPPLY SCHEME BETWEEN HENKRIES AND STEINKOPF, NORTHERN CAPE PROVINCE
50008	PIA Desktop	Jennifer Botha-Brink	15/08/2012	Palaeontological Impact Assessment of the Proposed O'Kiep 3 PV Solar Energy Facility Project, Northern Cape Province

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58485	PIA Desktop	Jennifer Botha-Brink	15/08/2012	Palaeontological Impact Assessment of the Proposed Kokerboom PV Solar Power Facility Project, Northern Cape Province
104912	HIA Phase 1	Jayson Orton, Lita Webley	01/08/2012	HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED KANGNAS WIND AND SOLAR ENERGY FACILITES, NAMAKWA MAGISTERIAL DISTRICT, NORTHERN CAPE
104914	PIA Desktop	John E Almond	01/08/2012	PALAEONTOLOGICAL SPECIALIST STUDY: DESKTOP ASSESSMENT Proposed Wind and Solar (Photovoltaic) Energy Facilities on Kangnas Farm near Springbok in the Northern Cape
108533	HIA		21/08/2012	
128950	HIA	Andrew B Smith	23/08/2013	HIA Melkboskuil
128951	HIA	Andrew B Smith	23/08/2013	HIA Klipdam
154274	HIA	Jayson Orton	23/01/2014	HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED NAMIES WIND ENERGY FACILITY NEAR AGGENEYS, NORTHERN CAPE
160248	Heritage Study	Chrispen Chauke, Vhalinavho Khavhagali	26/03/2014	HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED FOR GROMIS ORANJEMUND RECONDUCTORING Namaqualand Region, Richtersveld Local Municipality, Northern Cape
163707	Non Impact Assessment Related Reports	Cindy Postlethwayt	25/02/2013	NID for Proposed business premises on Erf 2883, Springbok
163712		Cindy Postlethwayt	29/10/2013	Comments LIHRA
168252	HIA	Chrispen Chauke	31/05/2014	HERITAGE IMPACT ASSESSMENT STUDIES FOR THE PROPOSED GROMIS ORANJEMUND RECONDUCTORING, Namaqualand Region, Richtersveld Local Municipality, Northern Cape
168287	HIA Phase 1	Lita Webley	01/04/2014	Heritage Impact Assessment: proposed Rehabilitation of the N7 between Okiep (KM 7.0) and Steinkopf (KM 47.2), Northern Cape
169697	AIA Desktop	Jonathan Kaplan	23/07/2014	
169752	HIA Letter of Exemption	Jonathan Kaplan	27/06/2014	RECOMMENDED EXEMPTION FROM AN ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED RESIDENTIAL DEVELOPMENT ON ERVEN 4995, 4997, 5007, & 5009, HARMONY ESTATE, SPRINGBOK (NAMA KHOI MUNICIPALITY), NORTHERN CAPE PROVINCE
179164	PIA Desktop	John E Almond	01/04/2010	Proposed wind farm near Springbok, Namaqualand, Western & Northern Cape Provinces
185047	HIA	Lita Webley, Natalie	24/11/2014	Heritage Impact Assessment for the Korana Solar Energy Facility on a Farm Namies South 212 / Portion2; Khai-Ma

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		Kendrick, Timothy Hart, Dave Halkett		Municipality
185063	HIA	Timothy Hart, Lita Webley, Dave Halkett, Natalie Kendrick	23/11/2015	Heritage Impact Assessment for the Proposed Khai-Ma WEF on farm portions south of Pofadder in the NC Province
185150	HIA	Timothy Hart, Lita Webley, Dave Halkett, Natalie Kendrick	24/11/2014	Heritage Impact Assessment for the Proposed Poortjies Wind Energy Facility on Two Farm Portions South of Pofadder, NC Province
185156	HIA	Timothy Hart, Lita Webley, Dave Halkett, Natalie Kendrick	24/11/2014	Heritage Impact Assessment for the Proposed Korana Wind Energy Facility on Farm Portions Namies South 2/212 and Poortjies 1/209 South of Pofadder in the NC Province
361645	HIA	Jayson Orton	08/04/2016	Heritage Impact Assessment for the Proposed Sol Invictus 1 PV Facility, Namakwaland Magisterial District, Northern Cape Province
375113	AIA Phase 1	Munyadziwa Magoma	16/05/2016	CONSTRUCTION AND OPERATION ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE PROPOSED ESKOM JUNO GROMIS 400kV TRANSMISSION LINE IN THE NORTHERN AND WESTERN CAPE PROVINCES
375149	AIA Phase 1	Munyadziwa Magoma	15/08/2016	PHASE I ARCHAEOLOGICAL AND CULTURAL HERITAGE IMPACT ASSESSMENT SPECIALIST REPORT FOR THE PROPOSED 400KV POWER LINE FROM THE EXISTING ESKOM JUNO SUBSTATION TO THE EXISTING ESKOM GROMIS SUBSTATION IN THE WESTERN AND NORTHERN CAPE PROVINCES RESPECTIVELY.
375282	HIA Phase 1	Polke Birkholtz	22/09/2016	
384358	Archaeological Specialist Reports	Timothy Hart	19/07/2016	IMPACT ASSESSMENT FOR THE AMENDMENT OF AN ENVIRONMENTAL MANAGEMENT PROGRAMME AND ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF A MINING RIGHT HELD BY WEST COAST RESOURCES ((PTY)) LTD OVER THE NAMAQUALAND MINES, NORTHERN CAPE PROVINCE

Sites from PalaeoBiology Database in figure 5

Collection No.	Collection	Formation	Reference
68017	Well, farm Kangnas, portion Goebees		S. H. Haughton. 1915. On some dinosaur remains from Bushmanland. <i>Transactions of the Royal Society of South Africa</i> 5(1) :259-264
168115	Whaling Survey		D. W. K. Au and W. L. Perryman. 1985. Dolphin habitats in the eastern tropical Pacific. <i>Fishery Bulletin</i> 83 :623-643



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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 PALAEOONTOLOGICAL 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.