

Archaeological Impact Assessment

**Proposed residential development: Farm 485, Plattenberg Bay,
Bitou, Eden, Western Province**

prepared for

**Ms. Francini van Staden, Cape Environmental Assessment Practitioners (Cape
EAPrac), PO Box 2070, George, 6530, Tel: 044 874 0365, Fax: 044 874 0432,
francini@cape-eaprac.co.za**

by



Centre for Heritage and Archaeological Resource Management cc

Peter Nilssen, CHARM, PO Box 176, Great Brak River, 6525
044 620 4936 | 0827835896 | peter@carm.co.za | www.carm.co.za

Executive Summary

Activities associated with the above-named project trigger the National Heritage Resources Act (Act 25 of 1999) and therefore, a Notice of Intent to Develop (NID) and Archaeological Impact Assessment (AIA) is required for the affected property. The NID was completed in collaboration with Mr. Stefan de Kock of Perception Heritage Planning. An AIA of Farm 485 Plettenberg Bay was conducted on 8 June 2010. Due to dense, mostly impenetrable vegetation cover and near zero archaeological visibility, the study was severely restricted.

The eastern extent of the study area is relatively flat while the western, larger portion is situated on the eastern, moderate slopes of a low ridge. Vegetation cover is dense and near complete over much of the study area and consists of grasses, exotic plants and trees, bushes, pine trees and partially disturbed costal Fynbos and thicket. Disturbances by modern human activities include disused vehicle tracks/roads, a dam and track clearings. Further disturbances may occur, but limited access to the property prevented more detailed inspection.

Despite severe limitations as described above, two archaeological occurrences of Stone Age origin were identified. One of these is considered to be of medium significance and recommendations are made in this regard. No material culture or structural remains of historical significance were observed.

Due to restricted access and limited archaeological visibility, this study was inadequate for an impact assessment. Nevertheless, one portion of the property earmarked for development is archaeologically sensitive.

Based on results from the current study it is recommended that;

- Because this study is deemed inadequate for assessment, the proposed activity should not be approved until an acceptable assessment is possible and completed,*
- The occurrence considered to be of medium significance should be investigated in more detail in order to establish whether it should be protected and conserved, or mitigated prior to commencement of development activities, and*
- A complete AIA should be conducted after vegetation clearing to assess the archaeological sensitivity of areas that are presently inaccessible and/or where visibility is severely restricted,*

Note that;

- In the event that vegetation clearing and earthmoving activities expose archaeological materials, such activities must stop and Heritage Western Cape must be notified immediately.*
- If archaeological materials are exposed during vegetation clearing and/or earth moving activities, then they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999) and at the expense of the developer.*

- *In the event of exposing human remains during construction, the matter will fall into the domain of Heritage Western Cape (Mr. Nick Wiltshire) or the South African Heritage Resources Agency (Ms Mary Leslie) and will require a professional archaeologist to undertake mitigation if needed.*

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1. Introduction

1.1 Background

The proposed activity triggers Section 38 of the National Heritage Resources Act (Act 25 of 1999) and therefore, a Notice of Intent to Develop (NID) and Archaeological Impact Assessment (AIA) is required for the affected property. On behalf of the client, Ms Francini van Staden of Cape Environmental Assessment Practitioners (Cape EAPrac) appointed CHARM to complete the relevant section of the NID and to conduct an AIA of the affected property in Plettenberg Bay, Western Province (Figures 1, 2 & 3).

The proposed development includes the following;

- 48 individual residential erven from 830m² to 2040m²,
- 24 units in group housing at 20 units per ha,
- A hotel site, and
- roads, bulk and other services, structures, amenities, etc. as usually associated with residential developments.

A layout plan of the project as provided by Ms van Staden is shown in Figure 4 and further details are available from Cape EAPrac (see contact details on title page). Coordinate data - supplied by Cape EAPrac - for the boundary points of the study area are given in Table 1 (also see Figure 3).

Development activities will include earthmoving operations that could have a permanent negative impact on archaeological and tangible heritage related resources.

1.2. Purpose and Scope of the Study

Objectives of the Archaeological Impact Assessment are:

- To assess the study area for traces of archaeological and heritage related resources to determine the archaeological sensitivity of the proposed site;
- To identify options for archaeological mitigation;
- To make recommendations for archaeological mitigation where necessary; and
- To identify heritage resources and issues that may require further attention.

Terms of Reference (ToR):

- a) Locate boundaries and extent of the study area.
- b) Conduct a survey of the study area to identify and record archaeological and heritage related resources.
- c) Assess the impact of the proposed development on above-named resources.
- d) Recommend mitigation measures and additional assessment where necessary.
- e) Prepare and submit a report to the client that meets standards required by Heritage Western Cape in terms of the National Heritage Resources Act, No. 25 of 1999

1.3 Study Area

Farm 485 Plettenberg Bay is some 13.2 ha in extent and is situated in the area of Schoongezicht Country Estate, immediately north and west of the Plettenberg Bay Golf Club, Plettenberg Bay, Western Province (Figures 1, 2 & 3). The study area was accessed by

vehicle by taking the Piesang Valley Road turnoff from the N2 and then by turning right into Schoongezicht Country Estate (see red directional arrows in Figures 1 and 2).

The eastern extent of the affected property is relatively flat while the western, larger portion is situated on the eastern, moderate slopes of a low ridge. The slopes rise up toward the west from an elevation of around 40m above sea level at the eastern edge, to a high point of about 120m above sea level in the NW corner of the property. Vegetation cover is dense and impenetrable in most places, and ground coverage is near complete over much of the studied area. Vegetation includes grasses, exotic plants and trees, bushes, pine trees and partially disturbed costal Fynbos thicket. Average ground visibility is less than 5%. Disturbances by modern human activities include disused vehicle tracks/roads, a dam and several wide (up to 3 or 4m) and narrow (2m or less) cleared tracts. Further disturbances may occur, but limited access to the property prevented more detailed inspection. Aerial photographs suggest the presence of additional disturbances (see Figure 3). Examples of the affected environment – vegetation, topography, and so on - are shown in Plates 1 through 5.

Apart from the above-named disturbances and a dam, the affected property is undeveloped.

Table 1. Coordinate data for boundary points of Farm 485 Plettenberg Bay (also see Figure 3)

Name	Description	Datum: WGS 84 Lat/Lon dec.degrees	Datum: WGS 84 SA National	Grid:
A	Farm 485 boundary point	S34.06034 E23.34365	23 Y-031726	X3770408
B	Farm 485 boundary point	S34.06118 E23.34708	23 Y-032042	X3770502
C	Farm 485 boundary point	S34.06114 E23.34732	23 Y-032064	X3770497
D	Farm 485 boundary point	S34.06139 E23.34838	23 Y-032162	X3770526
E	Farm 485 boundary point	S34.06118 E23.35099	23 Y-032403	X3770503
F	Farm 485 boundary point	S34.06086 E23.35230	23 Y-032524	X3770468
G	Farm 485 boundary point	S34.06107 E23.35301	23 Y-032589	X3770492
H	Farm 485 boundary point	S34.06178 E23.35197	23 Y-032493	X3770570
I	Farm 485 boundary point	S34.06187 E23.35103	23 Y-032407	X3770579
J	Farm 485 boundary point	S34.06127 E23.35096	23 Y-032400	X3770513
K	Farm 485 boundary point	S34.06148 E23.34838	23 Y-032162	X3770536
L	Farm 485 boundary point	S34.06127 E23.34748	23 Y-032079	X3770512
M	Farm 485 boundary point	S34.06296 E23.34728	23 Y-032060	X3770700
N	Farm 485 boundary point	S34.06428 E23.34779	23 Y-032106	X3770846
O	Farm 485 boundary point	S34.06638 E23.34603	23 Y-031943	X3771079
P	Farm 485 boundary point	S34.06463 E23.34586	23 Y-031928	X3770885

1.4 Approach to the Study

Two significant archaeological repositories in the area are Matjies River Rock Shelter at Keurboomstrand to the North and numerous pre-colonial sites on the Robberg Peninsula. The latter includes Nelson Bay Cave which is particularly significant as it contains a long archaeological record and evidence for climatic and environmental change over a long period of time (Deacon & Deacon 1999). More recently, AIA's conducted in the area identified archaeological materials of Middle Stone Age (MSA), Later Stone Age (LSA), Colonial and possible Early Stone Age (ESA) origin (Webley, 2004 and Yates 2006). The above demonstrates the archaeological sensitivity of this portion of the South African coastline.

On behalf of the client, Ms Francini van Staden of Cape EAPrac provided a locality map, conceptual layout plan and coordinate data for the study area. The study was conducted independently and carried out on foot. Due to dense, mostly impenetrable vegetation cover and near zero archaeological visibility, the study was severely restricted. The bulk of the area covered is along the boundaries or outside the boundaries of the property and, for the most part, are disturbed by previous developments on bordering properties. Impenetrable vegetation made it impossible to walk transects across the property. Archaeological visibility was less than 5%.

Survey tracks were fixed with a hand held Garmin Camo GPS to record the search area (Figure 3, gpx tracking file submitted to HWC and is available from author). The position of identified archaeological occurrences and photo localities were fixed by GPS (Figure 3, Plates 1 through 5 and Table 2). Digital audio notes and a comprehensive, high quality digital photographic record were also made (full data set available from author). In this report, localities of archaeological occurrences and photographs are established by matching the numbers on photographs with those of waypoints in Figure 3. Directions of views are indicated with compass bearing names like E is east; WSW is west south west, and so on. Bearing names on panoramic views indicate the bearing at the position of the label on the photograph.

2. Results

On 8 June 2010 - in about 4.5 hours of survey - a distance of 5.3km was walked, covering an area of about 2.2ha of which an average of less than 5% provided good archaeological visibility (Figure 3 and Plates 1 through 5). Lack of access and poor archaeological visibility restricted the survey to a small portion of the study area.

No archaeological or tangible heritage resources of the historic period were identified and only 2 occurrences of Stone Age origin were recorded.

At waypoint 14, in an area containing outcrops of quartzitic sandstone and quartzites, a quarry site was identified (Figure 3, Plate 4 and Table 2). The area exposed for inspection is roughly 50m² in total and up to 10 flakes per 3m² were seen. It is anticipated that the quarry site is extensive and may cover an area of a few hundred square meters. The anthropogenic materials are of either MSA or LSA origin. Among naturally occurring stone are scatters of flakes in quartzite of varying quality. No cores were identified, but this is likely due to the limited area open for inspection. A few pieces of quartz were seen, but none of these displayed evidence of having been flaked. No formal tools or retouched pieces were noted and this is typical of Stone Age quarries, which represent the focused activity of raw material procurement.

Significance & Recommendation:

Stone Age quarries are rare and are an important component of stone tool technology. The site is therefore considered to be of medium significance and holds potential for scientific research. As such, the occurrence should be investigated in more detail in order to establish whether it should be protected and conserved, or mitigated prior to the commencement of development activities. Note in Figure 4 that the current development layout places residential units directly over this occurrence.

A single, isolated MSA flake was recorded at waypoint 18 (Figure 3, Plate 5 and Table 2). The artefact occurs in a disturbed area immediately adjacent to the electric fence running along the northern boundary of the property. The convergent flake is in a fine grained quartzite and has a well prepared platform. There is no evidence for retouch and the specimen is similar to the “chunky” MSA flakes considered typical of the Mossel Bay Industry.

Significance & Recommendation:

The find is considered to be of low significance and no further mitigation of this occurrence is required.

Table 2. Coordinate and descriptive data for archaeological occurrences and photo localities (see Figure 3 and Plates 1 through 5).

Name	Description img=image snd=sound	Datum: WGS 84 Lat/Lon dec.degrees	Datum: WGS 84 SA National	Grid:	Elevation masl
1	img7484-6 snd7486	S34.06158 E23.35215	23 Y-032510	X3770548	22 m
2	img7487-90 snd7490	S34.06143 E23.35103	23 Y-032406	X3770531	22 m
3	img7491 snd7491	S34.06126 E23.35093	23 Y-032398	X3770512	21 m
4	img7492 snd7492	S34.06142 E23.34917	23 Y-032235	X3770529	37 m
5	img7493-99 snd7499	S34.06119 E23.34708	23 Y-032042	X3770503	66 m
6	img7500 snd7500	S34.06076 E23.34359	23 Y-031720	X3770455	118 m
7	img7501 snd7501	S34.06163 E23.34254	23 Y-031623	X3770551	129 m
8	img7502 snd7502	S34.06284 E23.34241	23 Y-031610	X3770685	133 m
9	img7503-4 snd7504	S34.06343 E23.34390	23 Y-031747	X3770751	115 m
10	img7505 snd7505	S34.06463 E23.34577	23 Y-031920	X3770884	92 m
11	img7506 snd7506	S34.06486 E23.34586	23 Y-031928	X3770910	89 m
12	img7507-9 snd7509	S34.06468 E23.34643	23 Y-031981	X3770890	81 m
13	img7510-11 snd7511	S34.06500 E23.34615	23 Y-031954	X3770925	80 m
14	LSA/MSA quarry img7512-9 snd7519	S34.06446 E23.34594	23 Y-031935	X3770865	88 m
15	img7520 snd7520	S34.06412 E23.34509	23 Y-031857	X3770828	98 m
16	img7521 snd7521	S34.06270 E23.34346	23 Y-031708	X3770669	117 m
17	img7522-7 snd7527	S34.06097 E23.34613	23 Y-031954	X3770479	87 m
18	MSA img7528-33 snd7533	S34.06113 E23.34676	23 Y-032013	X3770497	79 m
19	img7534 snd7534	S34.06161 E23.34851	23 Y-032174	X3770550	46 m
20	img7535 snd7535	S34.06187 E23.34728	23 Y-032060	X3770578	52 m
21	img7536 snd7536	S34.06188 E23.34692	23 Y-032027	X3770580	54 m
22	img7537 snd7537	S34.06195 E23.34651	23 Y-031989	X3770588	51 m
23	img7538 snd7538	S34.06108 E23.35158	23 Y-032457	X3770492	27 m
24	img7539-42 snd7542	S34.06100 E23.35219	23 Y-032514	X3770484	23 m
25	img7543-4 snd7544	S34.06109 E23.35292	23 Y-032581	X3770493	22 m

3. Sources of Risk, Impact Identification and Assessment

The proposed development will involve considerable earthmoving activities and alteration of the landscape (see section 1.1 above). Construction activities will have a permanent negative impact on archaeological resources in the study area. Due to severe restrictions to the study reported here, results are considered to be inadequate for an archaeological assessment. Table 3 summarizes the potential impact of the proposed development on archaeological resources with and without mitigation.

Table 3. Potential impact on and loss of archaeological resources.

	With Mitigation	Without Mitigation
Extent	Local	Local
Duration	Permanent	Permanent
Intensity	Unknown	Unknown
Probability	Unknown	Medium to High
Significance	Medium	Medium
Status	Unknown	Unknown
Confidence	High	High

4. Required and Recommended Mitigation Measures

Recommended Mitigation Measures

- Because this study is deemed inadequate for assessment, the proposed activity should not be approved until an acceptable assessment is possible and completed,
- The occurrence considered to be of medium significance should be investigated in more detail in order to establish whether it should be protected and conserved, or mitigated prior to commencement of development activities, and
- A complete AIA should be conducted after vegetation clearing to assess the archaeological sensitivity of areas that are presently inaccessible and/or where visibility is severely restricted,

Required Mitigation Measures

- In the event that vegetation clearing and earthmoving activities expose archaeological materials, such activities must stop and Heritage Western Cape must be notified immediately.
- If archaeological materials are exposed during vegetation clearing and/or earth moving activities, then they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999) and at the expense of the developer.
- In the event of exposing human remains during construction, the matter will fall into the domain of Heritage Western Cape (Mr. Nick Wiltshire) or the South African Heritage Resources Agency (Ms Mary Leslie) and will require a professional archaeologist to undertake mitigation if needed.

References

Deacon, H. J & Deacon. J. 1999. Human Beginnings in South Africa: Uncovering the secrets of the Stone Age. David Philip: Cape Town.

Webley, L. 2004. Phase 1 Archaeological Impact Assessment of Portions 8 and 43 of Ganse Vallei 444, Plettenberg Bay. Unpublished report prepared for Grant Johnston Associates cc.

Yates, R. 2006. Archaeological Heritage Scoping Report: Dune Park Resort Upgrade - Part of Portion 9 of the farm Matjiesfontein No. 304, Plettenberg Bay: Unpublished report prepared for Sharples Environmental Services by Mossel Bay Archaeology Project: Cultural Resource Management.

Figures and Plates (on following pages)

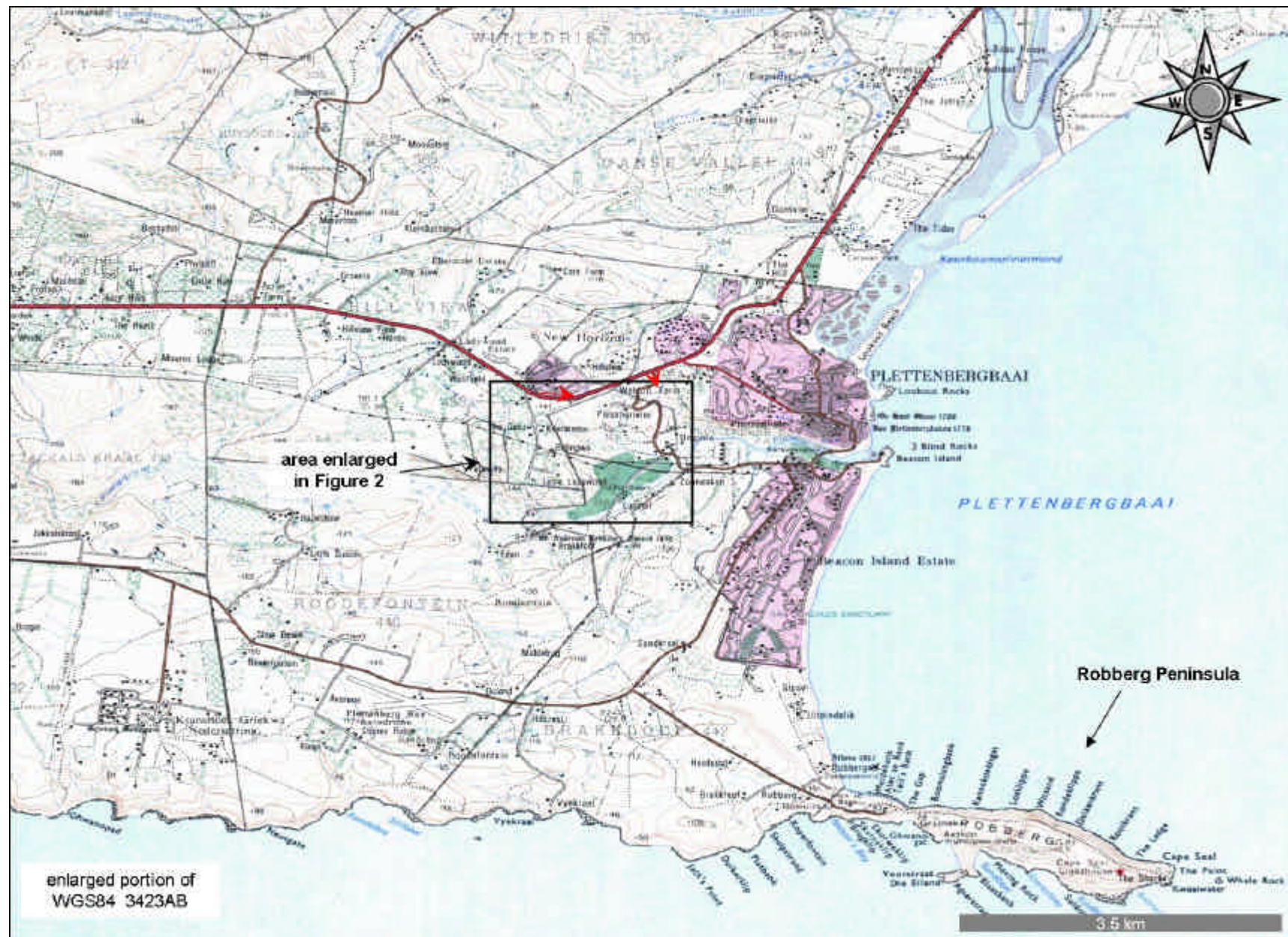


Figure 1. Location of study area relative to Plettenberg Bay. (Map courtesy of The Chief Directorate, Surveys & Mapping, Mowbray).



Figure 2. Enlarged area from Figure 1 showing location and access. (Aerial photos courtesy of The Chief Directorate, Surveys & Mapping, Mowbray).

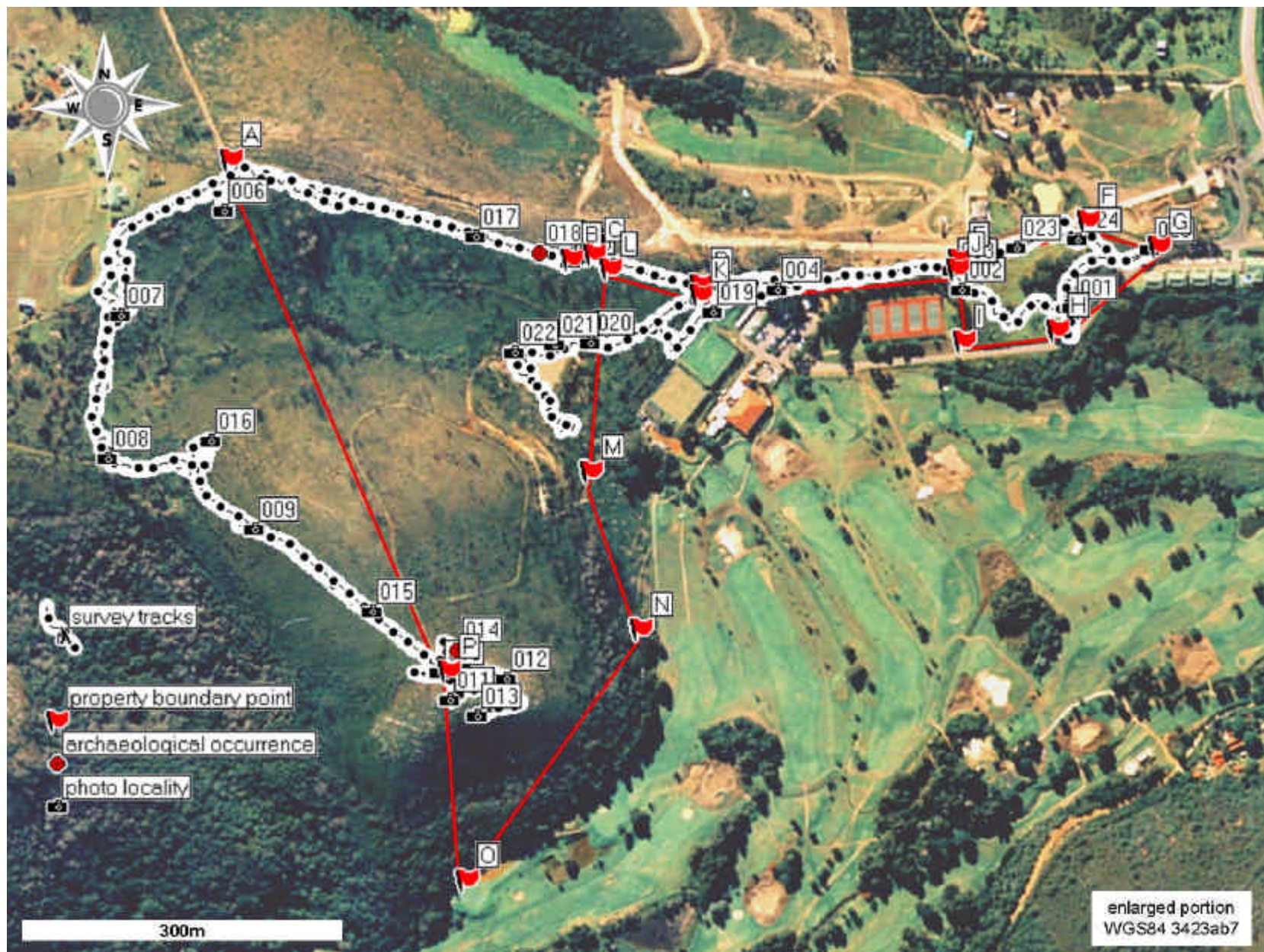


Figure 3. Enlarged from Figure 2 with walk tracks, waypoints and photo localities. (Photo courtesy of The Chief Directorate, Surveys & Mapping).



Figure 4. Conceptual development layout plan. (Figure provided by Cape Environmental Assessment Practitioners (Pty) Ltd).



Plate 1. Examples of the surrounding environment, topography and vegetation cover (see Figure 3 and Table 2).



Plate 2. Examples of the surrounding environment, topography and vegetation cover (see Figure 3 and Table 2).

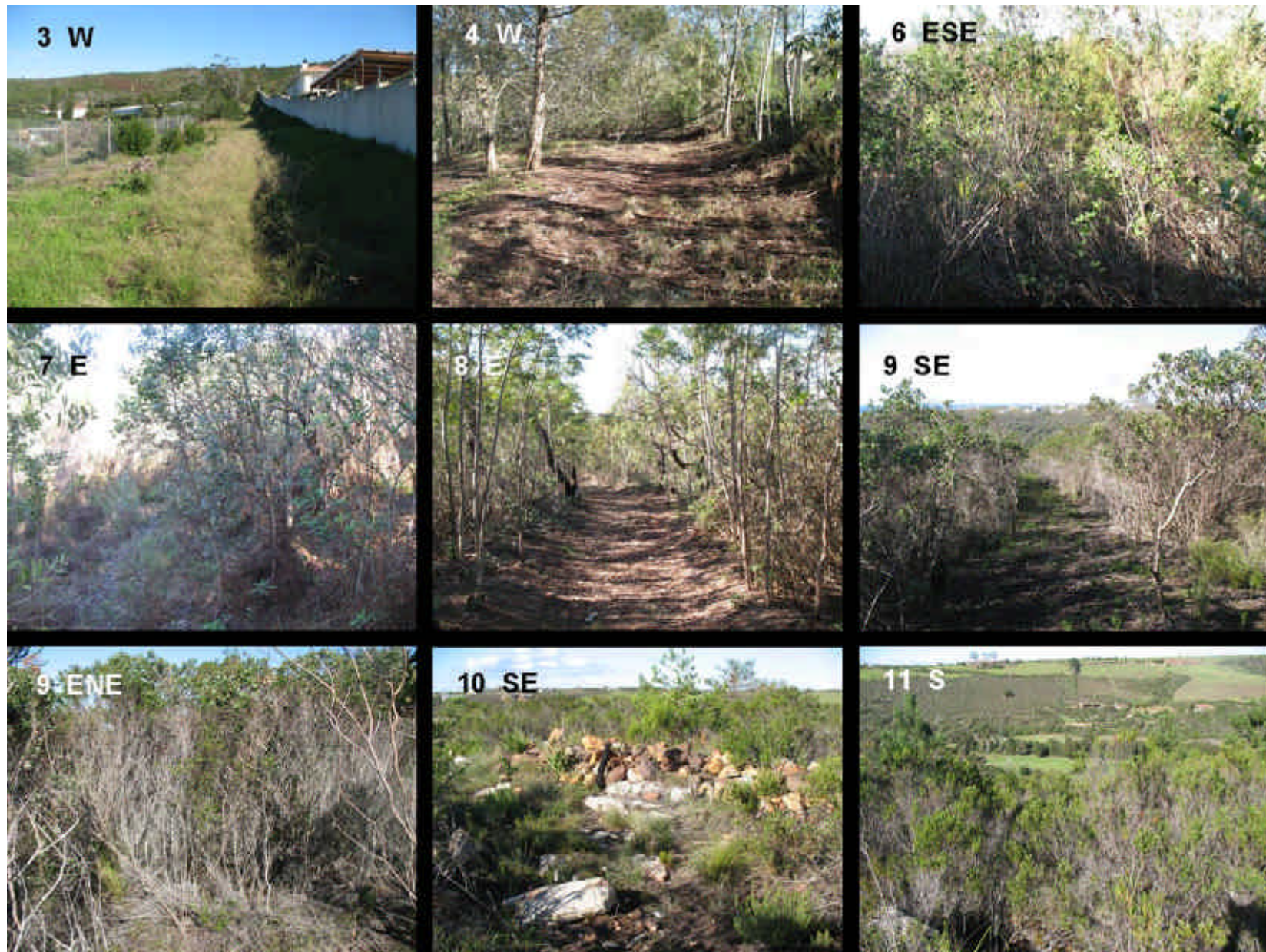


Plate 3. The surrounding environment, exposures, disturbances, outcrops, topography and vegetation cover (see Figure 3 and Table 2).

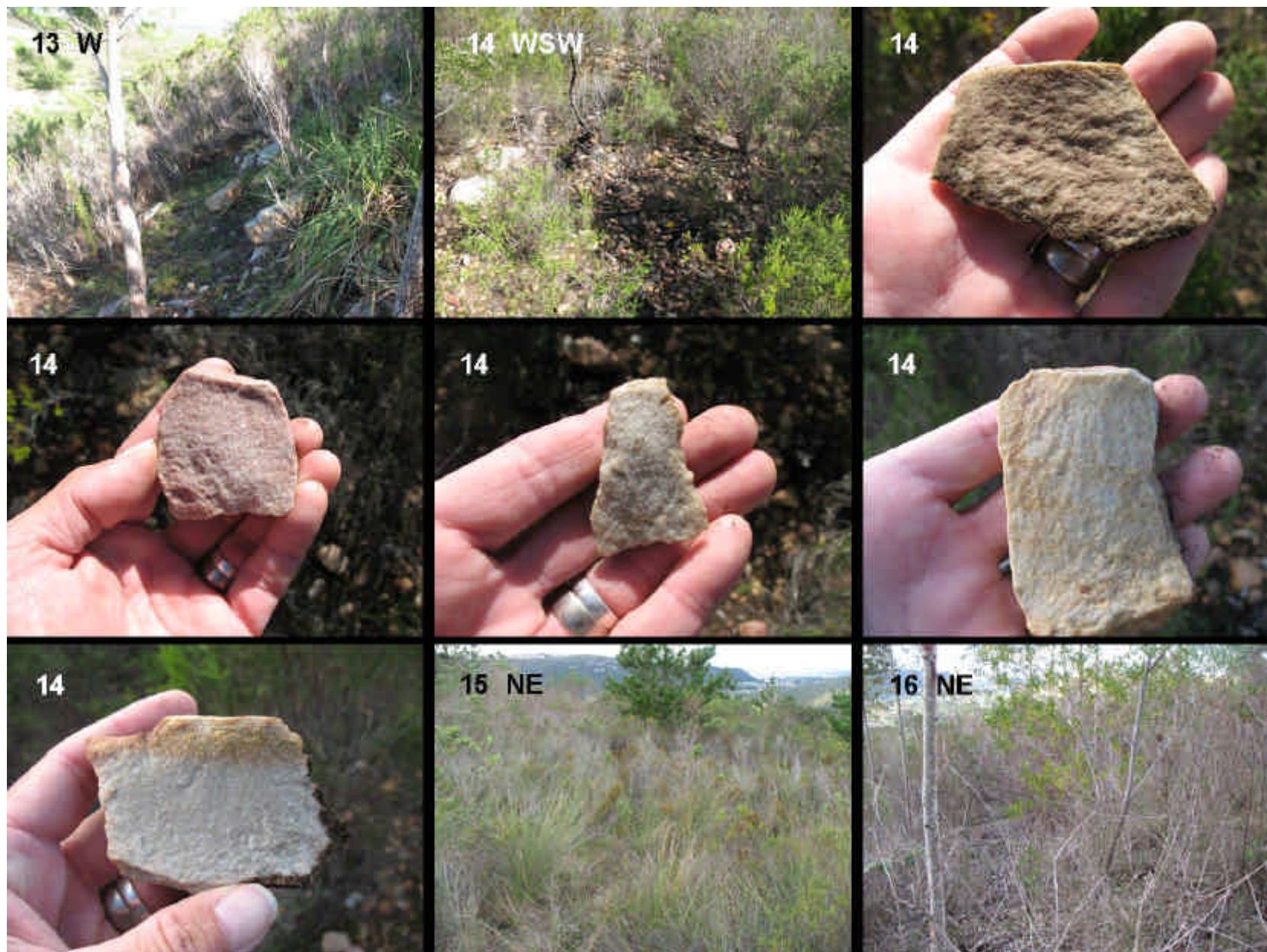


Plate 4. Examples of exposures, vegetation cover, context and archaeological finds at Stone Age quarry site (see Figure 3 and Table 2).

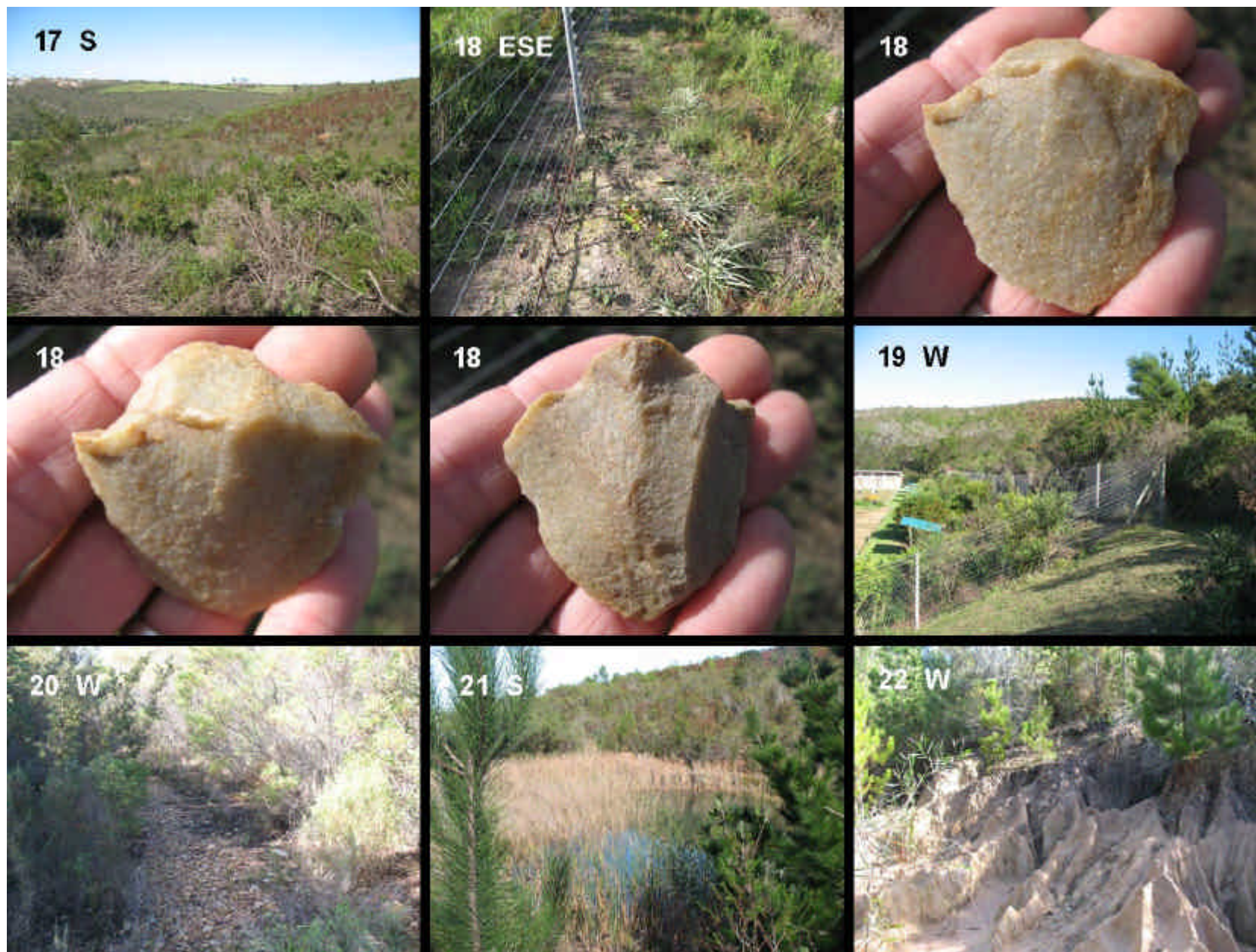


Plate 5. Examples of the surrounding environment and the MSA convergent flake described in the text (see Figure 3 & Table 2).