Site Number:
Evaluator:
Capacity:
Date:

CONSERVATION	Physical condition	No deterioration	0	
		Limited deterioration	3	
		Some deterioration	6	
		Serious deterioration	9	
	Vulnerability	Not vulnerable	0	
		Limited vulnerability	3	
		Some vulnerability	6	
		Serious vulnerability	9	
	Accessibility	Not accessible	0	
		Limited accessibility	2	
		Some accessibility	4	
		Very accessible	6	
	Frequency of access	Not accessible	0	
		Low	2	
		Medium	4	
		High	6	
BONUS POINTS	If the site is on, or directly adjacent to a road or footpath, ten bonus points must be added to the total.		10	
	Visibility (bonus points only)	Not visible	0	
		Limited visibility	1	
		Some visibility	2	
		High visibility	3	
SIGNIFICANCE/VALUE	Historical/Cultural	Low	1	
			2	
			3	
			4	
		High	5	
	Scientific	Low	1	
			2	
			3	
			4	
		High	5	
	Emotional	Low	1	
			2	
			3	
			4	
		High	5	
	Religious	Low	1	
			2	
			3	
			4	
		High	5	
	Unique	Low	1	
			2	
			3	
			4	
		High	5	
	Contextual	Low	1	
			2	
			3	
			4	
		High	5	
UTILISATION		No utilisation	0	
		Utilised	15	
			Total (75)	

4.0 METHODOLOGY

4.1 CONSULTING EXISTING CULTURAL RESOURCE INFORMATION

This component consisted of two main activities, literature studies and discussions with project participants.

Literature studies were undertaken in an effort to compile all published data on the cultural resources of the area. This included the published material on previous scientific and archaeological research that has taken place.

Information regarding known cultural resources was also obtained through discussions with knowledgeable community participants and AFNP staff members. All relevant data was recorded either in writing or with a hand-held voice recorder. In some cases site and field visits were undertaken with project participants.

4.2 CULTURAL RESOURCES SURVEY

a.   AUGRABIES FALLS NATIONAL PARK

The extent of this component of the study area necessitated the use of sampling techniques. The decision was therefore made to utilise an adaptation of the sampling technique known as Stratified Random Sampling. This technique has been successfully applied in similar cultural surveys undertaken in Australia by Rhoads (1992).

The AFNP component of the study area was divided into 500 m x 500 m survey squares. The squares were categorised into one of three topographically defined classes or strata:

1   Plains
2   Mountainous Areas
3   Riverbanks/Islands

When the squares were randomly selected for survey, the stratified sampling technique required that each of the strata from within the sample had to be represented by the same relative number of squares that was present in the original total. This means that if, from the total amount of say a 100 survey squares, 10% was derived from stratum 1 (or plains), 10% of the randomly sampled squares must also come from stratum 1 squares.

The idea behind this technique is that even though the study area has been reduced in size, its geographic and topographic nature would remain basically the same.

In the end a total 114 survey squares were sampled using this technique. These squares were then individually surveyed.

Due to the low visibility level of much of the archaeological and cultural materials found in the study area (i.e. small scatters of worked stone pieces), all surveying was conducted on foot. The longitudes and latitudes of all the corners of the randomly selected survey squares as derived from the 1:50 000 topographical maps were also fed into the hand-held GPS memory bank. This allowed the person undertaking the survey to stay within the borders of the particular square. The squares were surveyed using transects of 50 m.

b. RIEMVASMAAK

The size of Riemvasmaak, coupled with the project's timing constraints, did not allow for sampling surveys to be conducted. As a result more emphasis was placed on consulting the known resource data, and also to focus the survey activities on those areas that may potentially contain more cultural resources (i.e. areas close to permanent water sources etc.).

c. ADJACENT AREAS

As the land associated with the neighbouring communities comprise a relatively small area, research activities focused on obtaining all data related to the known cultural resources.

4.3 DOCUMENTING THE CULTURAL RESOURCES

The cultural resources (especially archaeological sites) located during the project were documented in a predefined manner using the standard ADRC site documentation form (refer Appendix F). Each located archaeological and historic site was given a specific site number. The minimum baseline data recorded for these sites consisted of GPS coordinates, photographic documentation (where possible) and a brief description of artefacts and features visible on site. Any visible or potential conservation problems were also recorded

The recording of non-archaeological resources took the form of qualitative recording and documentation.

4.4 GEOGRAPHIC INFORMATION SYSTEMS

One of the outputs of the project is the generation of a database as well as distribution maps containing qualitative information pertaining to site attributes. This was accomplished through the use of a Geographic Information System (GIS). The ultimate objective of the GIS is to use it as a management tool for the cultural resources found in the AFNP and surrounding areas. It is important that the database be upgraded whenever new sites are found within the study area.

In order for the data to be used in a GIS project, it was captured in *EXCEL* and

converted to *dBase IV* files. These data files were then imported into GIS software (ArcView 3.2) and combined with digital 1:50 000 maps of the study area for the creation of the various outputs that consisted of the following:

Visual Outputs (refer Appendix A)

- Project orientation map showing the study area as well as major towns and rivers.
- Maps showing the areas of AFNP which were surveyed
- Distribution maps of the archaeological and historical sites located during the surveys.
- Map showing the areas in the AFNP surveyed by the consultant by way of a random stratified surveying method.

Data outputs (refer Appendix L)

- Table containing attributes of all ESA sites
- Table containing attributes of all ISA sites
- Table containing attributes of all MSA sites
- Table containing attributes of all LSA and Ceramic LSA sites
- Table containing attributes of all Historic sites
- Table containing attributes of all Graves and Cemeteries
- Table containing attributes of all Rock engraving sites

4.5 EVALUATION OF CULTURAL RESOURCES

a. EVALUATING CULTURAL RESOURCES FOR MONITORING

One of the most important aspects in the design and formulation of a cultural resource management plan is to ensure that heritage conservation is sustained into the future. Monitoring represents the only feasible way in achieving this objective of conservation sustainability. The importance of a sound monitoring system as part of a cultural resource management plan should not be underestimated. In the words of Wahl (*et al.*, 1998:162): "...(the) key to preventing and solving the problems surrounding the management of cultural resource sites...is an effective site-monitoring system."

An important component of any monitoring system is the frequency of visits to be undertaken to each site. A set of criteria was established by which this frequency can be calculated.

Evaluation Criteria

The assessment criteria used were designed around three main aspects related to monitoring, namely:

- Conservation

  This component has been divided into the criteria of physical condition, vulnerability, accessibility, the frequency of access, as well as the bonus point criteria.

  - In terms of the first of these criteria, the evaluator must assess the condition of the site. The possibilities range from "No deterioration evident" (= 0 points) to "Serious deterioration" (= 9 points).

  - Vulnerability deals with a site's level of exposure to deterioration as a result of its nature. A good example of high vulnerability would be a rock painting site that is quite exposed to deterioration activities. The possibilities range from "Not vulnerable" (= 0 points) to "Serious vulnerability" (= 9 points).

  - The criterion of accessibility has to do with the site's closeness to human activity. The possibilities range from "Not accessible" (= 0 points) to "Very accessible" (= 6 points).

  - The frequency of access relates to how often the site is visited or accessed. The options range from "Not accessible" (= 0 points) to "High" (= 6 points).

  - Two bonus point criteria have been included as well. The first deals with the situation where a site is situated on or directly adjacent to a road or a footpath (in such cases 10 bonus points gets added to the total). The second criterion deals with the issue of a site's visibility, with a maximum of three points to be added should a site be deemed to be very visible ("Great visibility").

- Significance (Value)

  The second component is the issue of significance (or value). The criteria utilised here are exactly the same as the ones used to evaluate a site's significance, namely the historical, scientific, emotional, religious, unique and contextual significance of the site. Each of these criteria has been given a maximum sub-total of 5, with a minimum of one.

- Utilisation

  The third key criteria component relates to the site's current utilisation status, and has been divided into two possibilities, namely "No utilisation" (= 0 points) and "Utilised" (=15).

Monitoring Frequency

Five monitoring classes have been defined and linked to a monitoring status. This status indicates the frequency of monitoring visits to be undertaken for a particular site.

Monitoring Score	Monitoring Frequency
0-15	No monitoring
16-30	Once every 24 months
31-45	Once every 12 months
46-60	Once every 6 months
61-75	Once every 3 months

b. EVALUATING CULTURAL RESOURCES FOR UTILISATION

Scientific Utilisation

One of the primary aims of scientific research in archaeology is to answer questions about aspects of our human past. These questions often revolve around certain fundamental issues. Sites that could potentially assist in the answering of such key issues are often regarded as important scientific sites. In terms of the study area, such important scientific sites could, for example, be those that might provide more details regarding the spread of pastoralism through the subcontinent. However, the resolving of such scientific debates is not the only objective of archaeological research. Scientists often focus on sites that can potentially assists in reconstructing the lifestyles of our ancestors, answering questions such as: Who were they? What did they eat?, When did they live? Where did they live? What did their environment look like? etc.

Traditionally archaeological resources were viewed as being of scientific value if it contained stratigraphic deposits in a primary context. As mentioned elsewhere, however, archaeological sites from the region containing good stratigraphic sequences are extremely uncommon (Smith, 1995). It is furthermore often very difficult to judge the depth of a deposit without making a test pit – something that is not allowed on an archaeological site without a permit. It must also be remembered that in recent years the scientific importance of open-air surface sites (i.e. those sites without any visible archaeological deposit) have increased. As a result the presence of undisturbed deposits on a site, though important, is not always an absolute prerequisite for a site to be well suited for scientific utilisation. Nonetheless, any site from the study area with an undisturbed deposit would immediately be deemed as scientifically very important.

Another criterion to look at in evaluating sites for scientific research is that of context. If a site has been disturbed and its primary context destroyed, very little trusted and valuable scientific data can be expected from the site.

One more aspect to look for is the level of organic preservation evident from a site. Although it is often quite difficult to judge the organic preservation of a site by just looking at the visible (surface) features, high levels of preservation would necessarily count very favourably for a site to be deemed suitable for scientific research.

Before any scientific research is undertaken at a site, special care must be taken to involve all living communities who may be associated with it. This involvement must ensure that these communities understand why it is necessary for the excavations and research to take place, and in fact, every effort must be made to gain their support. What all of this means is that should a site be evaluated as being important for science, but the associated descendant communities do not support the research or are in fact against it, such utilisation must be re-evaluated.

Coupled with the issue of sensitivity toward the perspectives and attitudes of living descendants, is the highly emotional issue of the scientific excavation of human burials. Physical anthropologists and archaeologists believe that such excavations of burials are often the only way to reconstruct aspects about our past that would not be possible by normal site excavation (i.e. the physical characteristics of the people from that time, their diets, religious believes, customs and material cultural features). Opposed to this viewpoint, stand those people (often the direct descendants) who believe this excavation of graves is nothing other than grave robbery and can be equalled to the desecration of ancestral graves.

All of these issues and criteria must be brought to play in the evaluation of sites from the study area in terms of scientific utilisation.

Tourism

It is important to note here that cultural and heritage resources are non-renewable, and that tourist activities would necessarily have a negative impact on any such resources. Experience tells us that it is very difficult to control the impact of especially large-scale tourism on open air sites, and as a result that tourism must always be seen as having negative effects on an archaeological or heritage resource (Heydenrych & Jackson, 2000).

The criteria devised by Dr. Janette Deacon (1994) for evaluating rock art sites from two wilderness areas in the Western Cape, can be used (in an adapted form) in evaluating sites for tourism utilisation. The criteria include:

- Location
  The site should preferably be near to a recognised path.

- Size
  The site should be big enough to allow visitors free access and manoeuvrability without them posing a threat to the conservation of the site. This criterion is especially relevant for rock art sites.

- Quality
  The site should rate high in both interest and aesthetics for it to be well suited for tourism.

- Vulnerability
  Sites utilised for tourism purposes should not be easily damaged.

- Significance
  Unique sites or sites of high value should not be exposed to tourism.

- Public knowledge
  Sites that are already known and visited are better suited for tourism than those that are unknown and have not been exposed to any tourists or visitors before.

Although these criteria are well suited in terms of evaluating sites for tourism purposes in the present project, one addition can be made, namely:

- Management plan
  A site, which is suitable for tourism, must have an effective management plan in place. If it is impossible to implement such a plan on the site, the suitability of exposing the site to tourism must be re-assessed.

Educational/Interpretative

The criteria for the evaluation of sites in terms of educational/interpretative utilisation can be seen to be very similar to those used for the evaluation of tourism utilisation. This is because such sites would necessarily involve a human presence, similar to the tourist situation. One criterion can be added however, which is one of the significance evaluation criteria proposed by Whitelaw (1997):

- Potential for public display
  A site that has potential for public display could be well suited for interpretation or educational utilisation.

Historical Reconstruction

Sites suitable for historical reconstruction must ideally be associated with important historical figures or events, but can also be represented by sites that contain information related to history and its reconstruction, similar to sites that are suited for scientific utilisation.

Land Claims

The relevant criteria for the evaluation of sites in terms of land claims are as follows:

- Association
  The first obvious criterion would be whether the site could in any way be associated with any living communities who may potentially institute land claims against a certain section of land.

- Graves
  It is a given that graves, and especially those more recent graves, can be seen as well suited for utilisation within land claims.

c. Evaluating Cultural Resources for Significance (Value)

The evaluation of significance is of concern in any cultural resource management project, as the significance status of a particular cultural resource to a large degree determines the level of protection and management measures prescribed for that site.

The United States National Parks Service (NPS, 1991:11) defines cultural resource significance in terms of the concepts of association and integrity: "...(a) resource cannot be significant if it does not possess integrity relative to specific, noteworthy associations." Integrity is seen here as the physical dimension of significance (i.e. the artefact assemblage on a site, or its setting in the landscape), whereas association is viewed as its social dimension (i.e. the association of a site with a significant historical figure or event). The World Monuments Fund views the concept of significance in the same genre, and defines it as the "...intrinsic artistic and/or historic importance of a site within its cultural context." (World Monuments Fund, 2000).

In the evaluation of the significance of cultural resources, Whitelaw (1997) has defined a set of evaluation criteria. Although these criteria were designed for the evaluation of archaeological sites as national monuments, it may be of some relevance here. The criteria postulated by Whitelaw (1997) include the following:

- Degree of organic preservation
- Long sequences
- Presence of exceptional elements
- Potential for future archaeological investigations
- Degree of archaeological investigation
- Potential for public display
- Aesthetic appeal
- Historical and/or cultural significance
- Associated oral or written history

- Potential for long-term management plan.

It may also be a good idea to look at the significance criteria set out by English Heritage, the statutory body responsible for the protection of England's heritage. This criteria has been designed to evaluate sites for national importance, and include the following:

- Extent of survival
- Current condition
- Rarity
- Representativity, either through diversity or because of one important attribute
- Importance of the period to which the site dates
- Fragility
- Connection to other sites or monuments, or group value
- Potential to contribute to our information, understanding and appreciation
- Extent of documentation enhancing the site's significance (English Heritage, 2000).

Similarly, the United States National Historic Preservation Act (NHPA), passed in 1966, states that an archaeological site is significant if it is included in (or eligible for) the National Register of Historic Places. In order for a site to be included on this list, it must meet one or more of the following criteria:

- Association with important events or patterns of events in history, prehistory, or culture
- Association with important people in the past
- Possession of distinctive characteristics of a class, school of architecture, etc.
- Known or likely to contain data important in history or prehistory (Thomas, 1998).

The CANIS project also postulated a set of criteria for the evaluation of significance. This set of criteria focused on four main aspects:

- Cultural/Social interest
- Historical interest
- Aesthetic/Architectural/Scenic interest
- Natural/Scientific/Technical interest (De Jong, 1992).

Evaluation Criteria

The evaluation criteria defined for the present project is largely derived from the criteria laid down in the standard ADRC site documentation form (refer Appendix F). If one compares the various criteria sets laid out by the various individuals and organisations discussed above, the six principle

criteria appearing on the ADRC form is representative of most of these criteria.

- Historical
- Scientific
- Emotional
- Religious
- Uniqueness
- Contextual

d. **Evaluating Cultural Resources For Conservation**

The four categories of protection status as defined by the CANIS project have been used for evaluating sites in terms of conservation. The same criteria in evaluating sites for protection status have also been applied.

The protection status classes and their criteria are as follows:

Ascertained Danger

"The property is faced with specific and proven imminent danger, such as:

(a) Serious deterioration of materials;
(b) Serious deterioration of structure and/or ornamental features;
(c) Serious deterioration of architectural coherence;
(d) Serious deterioration of urban or rural space, or the natural environment;
(e) Significant loss of historical authenticity;
(f) Important loss of cultural significance."

Potential Danger

"The property is faced with threats which could have detrimental effects on its inherent characteristics. Such threats are, for example:

(a) Modification of legal status diminishing the degree of its protection;
(b) Lack of (conservation) policy;
(c) Threatening effects of planning projects;
(d) Threatening effects of nature conservation or forestry planning;
(e) Outbreak or threat or armed conflict;
(f) Gradual changes due to geological, climatic or other environmental factors."

No Danger

The site is not under threat from one or more of the criteria set out above.

Unknown Status

The protection status of the site is unknown, either because it has not been visited yet, or alternatively because its level of protection status can only be established over time.

(De Jong, 1992:47 and 48).

ADRC: SITE DOCUMENTATION

* = Office use only

1. FORM #:.............. 2.   SITE #:*...

3. SITE CATEGORY: Broad:.............. Narrow:.............. Industry/Culture:..............

4. SITE NAME:...

5. FARM NAME & #:...

6. DISTRICT:... 7. MAP #:......................

8. COORDINATES:.........°.........'........." S; ....°.........'........." E

9. CURRENT OWNER:... 10. TELEPHONE:..............

11. ADDRESS:...

12. RESIDENT:... 13. TELEPHONE:..............

14. CONTRACTOR:.. 15. TELEPHONE:..............

16. SITE POSITION: Mountain/Koppie:...... Top:...... Slope:...... Plateau:...... Valley:......
Riverbank:...... Plains:...... Urban:...... Erf #:........ Suburb:.............................

17. EXPOSURE: Open:...... Midden:...... Shelter:...... Cave:...... Terrace:...... Rockface:......
River:...... Marine:...... Other:..

18. ASPECT: North:... East:... South:... West:... 19. HEIGHT ABOVE SEA LEVEL:........

20. DEPOSIT:...
....

21. VISIBLE STRUCTURES:..
....

22. ARTIFACTS: Stone:...... Pottery:...... Bone:...... Metal:...... Slag:...... Tuyers:......
Glass:...... Grindstones:...... Glass beads:...... Ostrich eggshell beads:...... Porcelain:......
Walling:...... Paintings:...... Engravings:...... Other :..................................

23. PROXIMITY TO WATER:...

24. FLORA:...
....

25. FAUNA:...
....

26. GEOLOGY:...
....

27. DISTURBANCE:...
....

28. THREATS TO SITE:...... 29. DESC THREAT:...

30. ZONING (Urban):...

31. SITE SIGNIFICANCE (1=low/5=high): Historical:..... Scientific:..... Emotional:.....
Religious:..... Unique:..... Contextual/environmental:..... = Average score:............

32. MERITS CONSERVATION/SALVAGE:..

33. DECLARED/LISTED MONUMENT:..... DATE & GOVT NOTICE:..........................

34. GRAPHIC RECORD: Slides:...... Photos:...... Tracings:...... Redrawing:...... Air
photo:...... Plan:...... Site drwngs:...... Report:...... Correspondence:...... Year:............

35. WHERE KEPT:...

36. SITE DATES:.. Technique:............ Lab & no:..................

37. RESEARCH ON SITE:...

38. REFERENCES:...

39. RECORDER OF SITE:... 40. CAPACITY:..................

41. ADDRESS:.. 42. DATE:.........................

43. DOCUMENT OWNERS' NAME:*...

44. DOC OWN ID:*......................... 45. DATE COMPUTER:*...............................

46. DIRECTIONS TO SITE:...
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47. COMMENTS:..
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