

6.2.7.2 The department is aware of the fact that the development goes through very sensitive areas. However, the department is also aware of the strategic importance of the proposed development. Therefore, the proposed Biodiversity Offset Agreement is of crucial strategic importance. Although SANRAL has made a commitment to such an agreement and the undertaking thereof, the department needs the following issues to be addressed prior to the commencement of any construction activities within the greenfields sections:

- Details of the most appropriate type (and cost) of Biodiversity Offset as well as definite specifications must be informed by further specialist (incl. legal ) input, as appropriate, and engagement between SANRAL and the relevant national and provincial conservation authorities prior to the commencement of construction in the greenfields sections.
- Construction may not start in the greenfields sections before the offset arrangement has been negotiated and agreed to with DEA, the forestry section of DAFF, the Eastern Cape Parks Board and WWF, and the agreement has been signed. This needs to be in line with the existing policy on offsets for forest areas, as well as the national guidelines that are being developed.
- A botanist must be employed to conduct a search and rescue of threatened or protected species (TOPS) before construction of the project, and in the forest areas suitable tree seedlings and understorey plants inside the servitude must be rescued and kept in a nursery for re-planting in suitable sites after construction.
- A rescue and rehabilitation plan must be drawn-up to the satisfaction of the provincial conservation agencies, and implementation needs to be monitored and evaluated continuously.
- All TOPS and provincially protected species that can occur in the greenfields sections must be identified, the impact on them specified, and permits acquired from the provincial authority and submitted to the DEA Compliance Monitoring Section before construction commences on these two areas.
- All trees to be removed have to be marked; the number of trees, species and their relative location must be specified and indicated on a map.
- A forest ecologist must be part of the environmental management team to guide the control of impacts in the forest areas during construction.
- All impacted protected trees, including the impacted mangroves, need to be identified, mitigation measures identified, and permits acquired from DAFF and submitted to the DEA before construction is started on any of the affected sections.
- An alien invasive control programme must be drawn-up and submitted to DEA for approval. Implementation must be monitored, and measures to enforce implementation needs to form part of the programme.
- The construction of the road through or in close proximity to the proposed Red Desert Stewardship Site may not commence until such time as SANRAL has submitted all relevant detail to the DEA. The DEA has consulted all affected parties and the DEA communicates in writing that it is satisfied with the alignment.

## 6.2.8 Road layout and design

6.2.8.1 Final overall site layout plans and route alignment maps with coordinates must be submitted to this department for approval prior to construction.

6.2.8.2 A plan indicating the final road alignment (including bridges, over- and under passes, toll plazas, interchanges, etc.) must be submitted to this department for approval before construction commences.

*T. Yawn*

6.2.8.3 No major road upgrades must be undertaken in the vicinity of the three protected areas located adjacent to the existing R61, between the existing R61 and N2 between the Mthamvuna River and the Isipingo Interchange during the initial construction period.

6.2.8.4 Any change in the road alignment (including bridges, over- and under passes, toll plazas, interchanges, etc.) is subject to approval by the relevant authorities after input has been received from the ECOs, PEM, ACC and the environmental auditor. Independent specialist consultants must be called upon when, in the opinion of the PEM, environmental auditor, the ACC or a relevant authority, there is a need for expert opinion.

6.2.8.5 The road alignment must be sensitive to existing residential patterns and should be finalised taking into account the need to minimise the fragmentation of families and clans. This can be dealt with by consulting the directly affected communities and parties and also traditional leaders and relevant authorities.

6.2.8.6 All construction activities must be undertaken within the road reserve with the exception of sections highlighted and considered in the Final EIR report dated December 2009.

6.2.8.7 Hazard substance retention areas for spills must be designed and constructed for all major drainage line crossings to prevent pollution from accidental spills.

6.2.8.8 Access to the environmentally sensitive areas alongside the route must be controlled during both construction and operational phases to prevent disturbances, littering and increased accidental fires. Access control and waste management programmes are required in the sensitive greenfields sections.

#### **6.2.9 Road drainage and rehabilitation and safety measures**

6.2.9.1 Although generic guidelines exist in the SANRAL EMP for road drainage and rehabilitation, site-specific plans must be prepared in tandem with the final road design and must include specific measures to mitigate erosion as well as realistic and practical rehabilitation plans setting standards for rehabilitation, and indications on how these standards will be met.

6.2.9.2 The pass through the Tutor Ndamase mountainous area is in an area of geotechnical instability and erosion, and additional safety measures such as slope stability measures and retaining walls at unstable cuttings must be implemented.

#### **6.2.10 Waste**

6.2.10.1 An integrated waste management approach must be used that is based on best practices and should incorporate reduction, recycling, re-use and disposal, where appropriate. All waste generated on site during the construction and/or operation of the development must be stored, handled and disposed of in an environmentally acceptable way, and as directed by this department or any other relevant authority.

6.2.10.2 Construction waste (such as sand, gravel, concrete and waste material) that can not be used in the filling and rehabilitation of gravel pits, and other litter and waste generated during the construction and operational phases must be removed from site and disposed of safely and responsibly at an authorised landfill site.

6.2.10.3 Hazardous and flammable substances must be stored and used in compliance with the applicable regulations and safety instructions.

*T. Yank*

### 6.2.11 Wetlands and watercourses

6.2.11.1 The applicant must ensure that no construction camps, dumping or stockpiling of construction material is allowed in or close to the wetlands and other watercourses.

6.2.11.2 The applicant must ensure that all disturbed areas of the wetlands are re-vegetated using either specified indigenous seed mix where appropriate and/or vegetation removed from other stable sites within the wetland.

6.2.11.3 No trenches may be dug in wetland areas for disposal of stormwater.

6.2.11.4 All wetlands in the greenfields sections must be delineated by a suitably qualified wetland specialist, and specific mitigation measures for each wetland class must be drawn-up before construction can begin in the greenfields sections.

6.2.11.5 All necessary measures in line with the Department of Water Affairs (DWA) procedures and requirements must be implemented where deeply incised gorges and any watercourses (i.e. streams, rivers, etc) will be crossed.

6.2.11.6 The design of all bridges must be done in accordance with DWA, Department of Transport and SANRAL requirements and all environmental health and safety issues must be effectively considered.

6.2.11.7 All bridge designs have to comply with the mitigation measures as described in the aquatic ecosystems report in the Final EIR dated December 2009.

6.2.11.8 Construction must include appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of stormwater run-off.

### 6.2.12 Vegetation

6.2.12.1 Disturbance to vegetation must be restricted to the absolute minimum and areas disturbed as a result of construction activities must be rehabilitated as soon as possible to the satisfaction of this department, the relevant authorities, the ECO's, the PEM and the independent environmental auditor.

6.2.12.2 The relocation of plant species must be fully addressed in the final construction EMP in respect of responsibility.

6.2.12.3 All rare, endangered and endemic species and species of conservation value in the road reserve must be translocated, in close cooperation with the National Botanical Institute (NBI), to a suitable nursery with the aim to be re-established in a national botanical garden that is to be created in the Pondoland Centre of Endemism or a suitable existing conservation area.

*T. Yama*

### 6.2.13 Fauna

6.2.13.1 Road kills must be prevented by proper fencing as these can attract vultures. Measures must be developed and implemented to ensure that road kills do not occur and if they occur, that proper management measures are in place to address the potential negative impacts.

### 6.2.14 Heritage

6.2.14.1 A Heritage Practitioner must be appointed to undertake a supplementary inspection of limited sections of the approved alignment; in different terrain types, with the objective of determining areas identified as sensitive in terms of the discovery of any heritage resources.

6.2.14.2 The department must be kept informed of all issues related to and discussed with the SAHRA.

### 6.2.15 Visual and Noise impacts

6.2.15.1 The siting of tollgates must take account of light pollution, and must be designed to minimize this impact on the surrounding environment.

6.2.15.2 The proposed new road will be located between 10m and 250m from numerous dwellings in the section from Ndwalane to the Ntafufu River. In terms of the Noise Control Regulations, noise mitigation would be required in order to ensure that the noise rating level does not exceed 65dBA at any of the affected residential dwellings.

6.2.15.3 Prior to construction of the Adams Road Ramp Toll Plaza, SANRAL must submit detailed information on the potential noise impacts, and relevant noise mitigation measures associated with the proposed Adams Road Ramp Toll Plaza and proposed additional lanes between the Amanzimtoti River and Prospecton to the DEA for their input and approval. The aforementioned mitigation measures must be incorporated into the detailed design stage.

### 6.2.16 Environmental Management Plans (EMPs)

6.2.16.1 SANRAL must submit a draft EMP to the department for approval before commencement of any activities related to this authorisation. The EMP must be compiled in terms of the requirements contained in this record of decision. The EMP must cover, but is not be limited to, the following aspects:

- a) Rehabilitation of areas to be disturbed during the construction of the N2 Wild Coast Toll Highway and associated infrastructure;
- b) Siting and management of construction camps;
- c) Plant search and rescue before commencement of any construction related activities;
- d) Waste avoidance and minimisation during construction;
- e) Management of traffic during the construction phase where the N2 and R61 crosses roads and other transportation networks;
- f) Measures to reduce soil erosion must be clearly stated in the EMP;
- g) Measures aimed at controlling invasive plant species and weeds must form part of the EMP;
- h) The organogram illustrating the management structure for implementation of the EMP;
- i) Roles and responsibilities of persons responsible for the implementation of the EMP.

6.2.16.2 The finalisation of the design must take the requirements of the draft EMP into consideration.

*T. Yauw*



- 6.2.16.3 The applicant must use the draft EMP to develop final comprehensive site specific construction and operation EMPs.
- 6.2.16.4 The final EMPs must incorporate the conditions contained in this ROD as well as the mitigation measures recommended in the Final EIA report and supporting documentation dated December 2009 and/or any other subsequent approved documentation/plans.
- 6.2.16.5 The final EMPs must at least have, but need not be limited to, the following headings: project phase, activity, environmental specification, and responsible person/s so that they are capable of being audited.
- 6.2.16.6 The final construction and operational EMPs and/or other required plans may be altered, where independent monitoring and auditing of the project show this to be beneficial. Any alterations to the final EMPs and other required plans shall be subject to approval by the relevant authorities.
- 6.2.16.7 The applicant must comply with the draft approved EMPs and/or any other subsequent approved documentation.
- 6.2.16.8 The final EMPs and other required plans must be made available to interested and affected parties upon request.
- 6.2.16.9 The final EMPs and other required plans must form part of all contractors' and sub-contractors' conditions of contract.
- 6.2.16.10 The final construction EMP must accommodate traditional issues and be sensitive to the fragmentation of families and clans.
- 6.2.16.11 Before operation commences, an operational EMP, which includes a maintenance plan and an emergency plan, must be developed and submitted to this department for approval. The applicable conditions of this ROD, the mitigation measures and recommendations contained in the Final EIA report and supporting documentation dated December 2009, the draft EMP and final construction EMP, and any other relevant subsequent submitted and approved documentation/method statements/plans must be incorporated within this operational EMP.
- 6.2.16.12 The operational EMP must be updated and resubmitted to this department annually or within an agreed specified period between the relevant parties.
- 6.2.16.13 The operational EMP will be subject to audits during its development as well as during its implementation.
- 6.2.16.14 The applicant must apply measures to ensure construction and maintenance crews take ownership of the environmental management relevant to their work as per recommendations in the EMP.
- 6.2.17 Method statements**
- 6.2.17.1 The applicant must prepare and submit detailed method statements, which are required to be implemented in order to meet the required environmental specifications.
- 6.2.17.2 The applicant shall ensure that all the method statements are reviewed by the project environmental manager and the environmental control officers prior to submission for approval.

T. Yawm

6.2.17.3 The applicant must submit all method statements to this department and/or other relevant authorities for approval prior to the activity taking place.

6.2.17.4 The development and implementation of method statements must be contractually binding.

#### **6.2.18 Cooperation, communication and information**

6.2.18.1 The applicant must submit a detailed communication strategy/plan, after input was obtained from the ACC and the EMC, to this department for approval prior to completion of final design. Such a plan must clearly indicate, amongst other, the mechanisms that will be used to involve local government, community forums, affected parties and interested parties and the mechanisms that will be used to facilitate two way communication between the applicant and the above parties regarding project progress, environmental performance, adherence to the conditions of this ROD and risk communication and management where applicable.

6.2.18.2 Interested and affected parties must be given further opportunities to comment on any additional environmental issues identified during the lifetime of the project. Public consultation must be undertaken on an on-going basis in order to inform final design - especially concerning details of accesses, under- and over-passes, service roads, fences and barriers and other safety measures, to ensure that complaints and concerns can be addressed during construction and operation of the road.

6.2.18.3 Any complaint from the public during the construction of the facility must be attended to as soon as possible. A complaints register must be established and maintained during construction and operation of the activity, together with any necessary actions to address issues raised. The register shall be produced upon request. A protocol for the management of complaints must be developed and must be included in the final construction and operation EMPs.

### **7. RECOMMENDATIONS**

7.1 It is recommended that an internationally recognized environmental management system (EMS), e.g. ISO 14000, be developed and implemented for all aspects related to the operation phase of the project. The EMS must incorporate the conditions of approval given in this ROD, the mitigation measures contained in the Final EIA and supporting documentation dated December 2009, the final operation EMP as well as any other applicable plan and/or programme. This will facilitate monitoring and auditing.

7.2 A range of permits (e.g. for borrow areas, river crossings, waste etc.) will be required from various authorities in order for the construction to proceed. These requirements must be identified as far as possible during the final design phase of the project. Planning is required to ensure that motivated applications are submitted to relevant authorities in advance of construction, so that construction is not delayed. Such delays generally leave disturbed and unrehabilitated works unduly exposed often with significant erosion and stream sedimentation, and other impacts.

7.3 It is recommended that all method statements be appended to the final construction EMP so that it can be submitted simultaneously to the relevant authorities for approval.

7.4 Interested and affected parties identified during the public participation exercise for this environmental impact assessment must be afforded the opportunity to comment on the tolling issue. It is recommended that SANRAL use the database of interested and affected parties that registered during the environmental impact assessment process and the comments and response report of the Final EIA report as a starting

*T. Yamm*

point for the public consultation in the "intent-to-toll" process.

- 7.5 It is recommended that intersections be limited to existing access and planned roads as far as possible.
- 7.6 It is recommended that the applicant appoint a project liaison officer for the duration of the construction period. The responsibilities of such an officer will be among others to oversee the implementation of the communication plan and the dissemination of information to interested and affected parties, etc.
- 7.7 The focus areas identified in the National Protected Area Expansion Strategy (NPAES) approved in April 2009 should be avoided and any impacts on these areas must be minimized.
- 7.8 SANRAL and the concessionaire must consider setting up a biodiversity trust fund, as one element of the biodiversity offset against inevitable unmitigated or residual impacts (e.g. on the Pondoland Centre of Endemism and other societal concerns). The purpose of such a trust fund could be to fund biodiversity projects (research, protection, etc.) as a start. A trust is a particularly appropriate instrument for biodiversity protection. The Pondoland Centre of Endemism, for example, has existence and bequest values that are held by people other than those that use the N2, or who live within the N2's sphere of impact. For instance, overseas botanists also value the Pondoland Centre. A trust is a vehicle that permits these outsiders to donate funds, and other aid, to biodiversity protection.
- 7.9 The applicant must consider not simply fines and penalties as means of enforcing environmental compliance, but think creatively in terms of incentives and rewards for good housekeeping and continual improvement in environmental management.

## 8. KEY FACTORS INFORMING THE DECISION

- 8.1 The department's authorisation is based upon a review of the Final EIA report and supporting documentation dated December 2009. The EIA report concludes that both benefits and negative impacts are anticipated as a result of the project. The benefits associated with the proposed project predominantly pertain to the social environment. However, the direct ecological impacts of the alignment presented in the Final EIA report, although significant in identified sensitive areas, are considered to be acceptable from a holistic environmental perspective and should not prevent the further planning, design and construction of the proposed project.
- 8.2 The environmental impact assessment complies with the requirements of the EIA regulations. Information submitted by the independent environmental consultant is deemed to be sufficient and adequate to make an informed decision.
- 8.3 The public participation process followed as part of the EIA process conformed to the requirements of the regulations.
- 8.4 No fatal flaws have been identified during the EIA process and the review of the Final EIA report and supporting documentation dated December 2009.

*T. Yauze*

- 8.5 The department recognized that even with a high standard of impact mitigation, there will be some significant residual negative effects (e.g. fragmentation of sensitive faunal habitats, loss of habitat associated with the Pondoland-Ugu Sandstone Coastal Sourveld vegetation, disruption to community life organization). Under the circumstances, unless the negative effects are distributed inequitably (fall on one class that enjoys no or few benefits), the mere fact of some negative effects is not reason to refuse environmental approval for the project, especially in light of the strategic importance of the proposed project. The majority of the negative environmental impacts associated with the project can be reduced provided the conditions contained in this record of decision are implemented and adhered to.
- 8.6 The majority of the greenfields alignment is along existing district roads and across land that has previously been cultivated or otherwise disturbed. In recognition of the importance of the Pondoland Centre, the alignment has been fine-tuned and bridges are being designed to span the gorges with limited impact on the biota of the gorges and their surrounds. This fine-tuning is given thorough treatment in the Final EIA report.
- 8.7 The EIA report does not contain the detail of the preliminary design for the proposed road, including the location of access points and over- and under-passes, service roads, sidewalks, fences and barriers, safety measures, road widening and straightening that increase visibility for drivers and pedestrians, etc. The project is still in the preliminary design stage. These designs are the basis for discussion and refinement with affected communities. The EIA report supports the fact that public consultation to refine the preliminary design, and to finalise it, is a function that the applicant must undertake. Although authorization is granted to the applicant in terms of Government Notice No. R. 1183, there still lies ahead another round of pre-construction public consultation that must continue throughout the construction and operation phases. This process will be continued and mitigation measures will be tailored to the site specific conditions, to ensure a functional and safe road and associated infrastructure.
- 8.8 The purpose of the proposed N2 project is to provide a better, safer and shorter route between Durban and East London, and a national road that serves the interests of business, development and society between the centres. The construction of the road is also an integral part of the social and economic upliftment of the community in this part of the Eastern Cape. The benefits of the road includes amongst others, improved road access, better access to markets, education, social and health services, nature reserves and tourist destinations, employment opportunities, accessibility for development of agro-forestry, impetus for the Wild Coast SDI, improvement of road travel and safety and through the development of ecotourism, contribute to general tourism revenue accruing to the province and South Africa in general.
- 8.9 The issue of tolling and the associated socio- and economic impacts thereof, falls under the legal mandate of SANRAL. In terms of section 27 of the South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7 of 1998), notification of intent to toll is the responsibility of SANRAL. This notification would follow the environmental authorization. Issues related to the positioning of the toll plazas, fees, etc., other than the biophysical impacts, are the responsibility of SANRAL in terms of the above legislation.
- 8.10 The development of further tourism and business infrastructure that might flow from the improved accessibility to the region is subject to authorisation by the relevant authorities and applicable legislation.

T. Yawm

## 9. DURATION AND DATE OF EXPIRY

This Record of Decision is regarded to be an environmental authorisation in terms of the Environmental Impact Regulations, 2006. If construction does not commence within a period of five years (5) years from the date of issue the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.

Your attention is drawn to the provisions of regulation 78 of the Environmental Impact Assessment Regulations, 2006, as promulgated under the NEMA which are applicable to this decision.

## 10. APPEALS

Should any party, including you wish to appeal any aspect of the decision, they/ you must, *inter alia*, lodge an appeal with the Minister within 30 calendar days of the date of this letter by means of one of the following methods:

By facsimile: 012-320-7561;

By post: Private Bag X447, Pretoria, 0001; or

By hand: 2nd Floor, Fedsure Forum Building, North Tower, cor. Van der Walt and Pretorius Streets, Pretoria.

Appeals must comply with the provisions of Regulation 11 of Government Notice No. R. 1183 which reads as follows:

- (1) An appeal to the Minister or provincial authority under section 35(3) of the Act must be done in writing within 30 days from the date on which the ROD was issued to the applicant in terms of regulation 10(1);
- (2) An appeal must set out all the facts as well as the grounds of appeal, and must be accompanied by all relevant documents or copies of them which are certified as true by a commissioner of oaths.

A copy of the official appeal form can be obtained from:

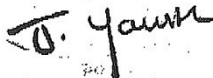
Mr. TH Zwane: Senior Legal Administration Officer (Appeals), Tel: 012 310-3929 [tzwane@deat.gov.za](mailto:tzwane@deat.gov.za);  
Ms. MM Serite: Legal Administration Officer (Appeals), Tel: 012 310-3788 [mserite@deat.gov.za](mailto:mserite@deat.gov.za)

at the Department.

*T. Yauw*

You (applicant) must also notify and serve a copy of the appeal which will be submitted to the Minister, to all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection, should you wish to appeal this authorisation. Proof of such notification must be submitted to the Minister with the appeal. Failure to comply with this provision may result in the Minister refusing to consider the appeal.

Please include the Department in the list of interested and affected parties, notified through your notification letter to interested and affected parties, for record purposes.



Ms. J Yawitch

**DEPUTY DIRECTOR-GENERAL: ENVIRONMENTAL QUALITY AND PROTECTION**

DATE: 19/04/2010

## **Appendix 3. Correspondence from SAHRA**

### **List of correspondence from SAHRA**

- Appendix 3.1. SAHRA APM Unit. 2003. 'Review Comment on Archaeological/Palaeontological Impact Assessment', 27 February. Cape Town.
- Appendix 3.2. SAHRA APM Unit. 2007. 'Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment Reports'. Last edited May 2007. Cape Town.
- Appendix 3.3. SAHRA APM Unit. 2009a. 'Archaeological and Palaeontological Review Comment: Proposed N2 Wild Coast Toll Highway, Eastern Cape'. Letter to CCA Environmental, with attachment: 'Review Comment on Archaeological Impact Assessment', 21 August. Cape Town.
- Appendix 3.4. SAHRA APM Unit. 2009b. 'Proposed N2 Wild Coast Toll Highway: Further Clarification and Recommendations'. Letter to CCA Environmental and the South African Road Agency, 14 December. Cape Town.
- Appendix 3.5. SAHRA APM Unit. 2010a. 'Proposed N2 Wild Coast Toll Highway Environmental Impact Assessment'. Letter to CCA Environmental and SANRAL, 12 April. Cape Town.
- Appendix 3.6. SAHRA APM Unit. 2010b. Letter to CCA Environmental and SANRAL, 15 July. Cape Town.
- Appendix 3.7. SAHRA APM Unit. 2010c. Letter to CCA Environmental and SANRAL, 20 July. Cape Town.
- Appendix 3.8. SAHRA APM Unit. 2012. 'Compliance to SAHRA Minimum Standards for Phase 1 Archaeological Assessments', 12 September. Cape Town.
- Appendix 3.9. SAHRA BBG Unit. 2009. 'Draft Environmental Impact Report: Proposed N2 Wild Coast Toll Highway, Eastern Cape and Kwazulu Natal'. Letter to CCA Environmental (Pty) Ltd., 10 September. Braamfontein.
- Appendix 3.10. Heritage Kwazulu-Natal. 2008. 'Re: Proposed N2 Wild Coast Toll Highway'. Letter to NMA Effective Social Strategists, 21 November. Pietermaritzburg.



## Appendix 3.1. SAHRA APM Unit. 2003.



SAHRA AIA Review Comment FORM A March 02

FOR ATTENTION: Neo January

## FOR OFFICIAL USE ONLY:

File No.: 972/2001/161  
Date of comment: 27 February 2003 sent 7 April 2003  
Sent to peer review: No

REVIEW COMMENT ON  
ARCHAEOLOGICAL/PALAEONTOLOGICAL IMPACT  
ASSESSMENT

BY ARCHAEOLOGIST OF HERITAGE RESOURCES AGENCY

South Africa has a unique and non-renewable archaeological and palaeontological heritage. Such sites are protected in terms of the National Heritage Resources Act (Act No 25 of 1999) and may not be disturbed without a permit. Archaeological (and Palaeontological) Impact Assessments (AIAs, PIAs) identify and assess the significance of the sites, assess the potential impact of developments upon such sites, and make recommendations concerning mitigation and management of these sites. On the basis of satisfactory specialist reports SAHRA or the relevant heritage resources agency can assess whether or not it has objection to a development and indicate the conditions upon which such development might proceed and assess whether or not to issue permission to destroy such sites.

AIAs/PIAs often form part of the heritage component of an Environmental Impact Assessment. They may also form part of a Heritage Impact Assessment called for in terms of section 38 of the National Heritage Resources Act, Act No. 25, 1999. They may have other origins. In any event they should comply with basic minimum standards of reporting as required as indicated in SAHRA Guidelines.

This form provides review comment from the Archaeologist of the relevant heritage resources agency for use by SAHRA Regional Managers, for example, when informing authorities that have applied to SAHRA for comment and it may be used in conjunction with Form B, which provides relevant peer review comment.

- A. PROVINCE: Eastern Cape
- B. REGIONAL MANAGER: Neo January
- C. AUTHOR(S) OF REPORT 1: Dr Johan Binneman
- D. DATE OF REPORT: 2002
- E. TITLE OF REPORT: #1. N2 Wild Coast Toll Road Project Heritage Scoping Study (Archaeological!).
- F. AUTHOR(S) OF REPORT 2: Dr Billy de Klerk
- G. DATE OF REPORT: 2002
- H. TITLE OF REPORT: #2. N2 Wild Coast Toll Road Project Potential Impacts on Palaeontological Sites.
- I. Please circle as relevant: Archaeological and Palaeontological components of Scoping Report
- J. REPORT COMMISSIONED BY (CONSULTANT): Bohlweki Environmental, PO Box 11784, Vorna Valley, Midrand, 1686, Gauteng. (Att: Karen Kuck), 011 805 0250 (4)
- K. COMMENTS: (Please find comment which may be on separate sheet(s) attached. COMMENT ON THE REPORT ITSELF SHOULD BE SEPARATE FROM COMMENT ON THE RECOMMENDATIONS OF THE REPORT) .....  
Please see comment on next page.....

## SUMMARY COMMENT:

IN TERMS OF THE ARCHAEOLOGY, SAHRA HAS NO OBJECTION TO THE DEVELOPMENT TAKING PLACE PROVIDED THAT THE CONDITIONS OF THE SPECIALIST REPORT (AS MODIFIED BY SAHRA COMMENT (see overleaf) ARE MET: YES  
~~IN TERMS OF THE ARCHAEOLOGY, SAHRA HAS CONCERNS, OVER AND ABOVE THOSE EXPRESSED IN THE SPECIALIST REPORT (P.T.O.) AND THESE MUST BE PROVIDED FOR BEFORE THE DEVELOPMENT PROCEEDS: no~~

## REVIEW COMMENT ON ARCHAEOLOGICAL IMPACT ASSESSMENT

### #1. N2 Wild Coast Toll Road Project Heritage Scoping Study (Archaeological!)

Binneman, J. December 2002

SAHRA has read the report of the archaeologist. The scoping study is entitled a heritage study but appears to be archaeological. It is not clear whether other aspects of heritage were assessed, for example, the impact on structures older than 60 years, or on possible cultural landscapes and SAHRA can therefore only comment on the archaeological aspects.

Most often an archaeological desktop study is done as part of the field survey and the entire area to be developed is assessed on foot. (It is not clear whether this scoping study was a desktop study or a field trip but it is assumed here that the fieldwork remains to be done). SAHRA is presently setting up minimum standards as guidelines relating to such impact assessments. These will indicate that roads, powerlines and pipelines must be walked to cover whatever route is specified. In the field, at the discretion of the archaeologist, certain areas may be identified as disturbed and therefore not searched on foot, but this can only be established in the field. The report should state very clearly why such sections have been excluded.

SAHRA therefore accepts the recommendation of the archaeologist that a reconnaissance visit be undertaken but would stress that this should take the form of a full Phase 1 Archaeological Impact Assessment and that decisions about areas to be excluded may only be taken in the field and must be clearly described in the report.

The idea of empowering and training construction personnel to recognise artefacts they may encounter during earth moving operations is supported. This cannot not however replace the full field survey (Phase 1 Archaeological Impact Assessment) that is required.

### #2. Wild Coast Toll Road Project Heritage Scoping Study (Archaeological!).

De Klerk, B. December 2002

SAHRA Archaeology, Palaeontology and Meteorite Unit accepts the recommendations of the palaeontologist that the development may proceed without further detailed studies of the palaeontological resources.

NAME OF ARCHAEOLOGIST: *Mary Leslie*.....

SIGNATURE OF ARCHAEOLOGIST: .....

EMAIL: *mleslie@sahra.org.za*.....

NAME OF HERITAGE RESOURCES AGENCY: *SAHRA* .....

**PLEASE NOTE THAT THE COMMENT (ABOVE OR APPENDED) CONSTITUTES THE COMMENT OF THE SA HERITAGE RESOURCES AGENCY ARCHAEOLOGIST (AND MAY BE TAKEN ONLY AS APPROVAL IN PRINCIPLE) AND THAT ANY DEVELOPMENT THAT INVOLVES DESTRUCTION OF ANY ARCHAEOLOGICAL SITE IS STILL SUBJECT TO A PERMIT FOR DESTRUCTION OF SUCH SITE GIVEN TO THE DEVELOPER BY THE RELEVANT HERITAGE RESOURCES AGENCY ARCHAEOLOGICAL PERMIT COMMITTEE (AND THIS WILL BE SUBJECT TO APPROVAL OF THE PHASE 2 OR ARCHAEOLOGICAL MITIGATION AS NECESSARY)**

PLEASE NOTE THAT, IN TERMS OF ARCHAEOLOGY AND PALAEOLOGY, SAHRA IS NOW ONLY RESPONSIBLE FOR GRADE I HERITAGE RESOURCES, BURIAL SITES AND EXPORT AND THE PROVINCIAL HERITAGE RESOURCES ARE RESPONSIBLE FOR GRADE II AND GRADE III, EXCEPT WHERE SAHRA MAY BE ACTING AS AN AGENT FOR A PROVINCIAL HERITAGE RESOURCES AUTHORITY.

## Appendix 3.2. SAHRA APM Unit. 2007.

*SG 2.2 SAHRA APM Guidelines: Minimum Standards for the Archaeological & Palaeontological Components of Impact Assessment Reports*



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# MINIMUM STANDARDS: ARCHAEOLOGICAL AND PALAEOLOGICAL COMPONENTS OF IMPACT ASSESSMENT REPORTS

## TABLE OF CONTENTS

1. WHAT ARE ARCHAEOLOGICAL AND PALAEOLOGICAL IMPACT ASSESSMENTS?	1
2. HOW DO IMPACT ASSESSMENTS FIT INTO PLANNING? .....	2
3. STAGES OF ASSESSMENT.....	3
3.1. Phase 1 Archaeological Component Impact Assessment .....	3
3.2. Phase 2 Archaeological Mitigation.....	4
3.3. Phase 3 .....	4
4. REQUIREMENTS FOR PERMITS .....	4
5. WHAT ABOUT THE PALAEOLOGICAL COMPONENT?.....	5
6. AIAs AND PIAs AND THE NATIONAL INVENTORY.....	5
7. PHASE 1 AIA REPORTS: MINIMUM STANDARDS.....	6
7.1. Every Archaeological Impact Assessment Report must include:.....	6
7.2. Phase 1 Archaeological Reports: General Comments .....	10
7.3. Phase 1 Reports on Particular Types of Archaeological Sites.....	10
8. PHASE 2 PERMIT MITIGATION REPORTS: MINIMUM STANDARDS .....	11
8.1. Every Archaeo/(Palaeonto)logical Phase 2 Permit Report must include: .....	11
8.2. Phase 2 Permit Reports: General Comments.....	12

## I. GENERAL INFORMATION

### 1. WHAT ARE ARCHAEOLOGICAL AND PALAEOLOGICAL IMPACT ASSESSMENTS?

South Africa's unique and non-renewable archaeological and palaeontological heritage sites are 'Generally' protected in terms of the National Heritage Resources Act (Act No 25 of 1999, section 35) and may not be disturbed at all without a permit from the relevant heritage resources authority.

As many heritage sites are threatened daily by development, both the environmental and heritage legislation require impact assessment (IA) reports by qualified professionals that identify all heritage resources including archaeological and palaeontological sites in the area to be developed, and that make recommendations for protection or mitigation of the impact of the sites.

Where possible archaeological and palaeontological sites should be saved, but where this is not possible, the loss of information about our heritage resources can be mitigated against or minimised through a process of excavation (or sampling) and dating of a representative sample of the evidence from the site. This allows us to record at least part of the history of the place. Experience has shown that early assessment and mitigation minimises the negative effects of development and often saves the developer considerable delays and related costs.

## 2. HOW DO IMPACT ASSESSMENTS FIT INTO PLANNING?

Archaeological Impact Assessments (AIAs) and Palaeontological Impact Assessments (PIAs) are most often specialist reports that form part of the wider heritage component of:

- Environmental Impact Assessments (EIAs) required in terms of the National Environmental Management Act, Act 107 of 1998, or of the Environment Conservation Act, Act 73 of 1989 by the provincial Department of Environmental Affairs; or
- Environmental Management Plans (EMPs) required by the Department of Minerals and Energy.

These specialist reports may also form part of:

- Heritage Impact Assessments (HIAs) called for in terms of Section 38 of the National Heritage Resources Act, Act No. 25, 1999 by a heritage resources authority.

The legislation<sup>1</sup> requires that all heritage resources, that is, all places or objects of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance are protected. Thus any assessment should make provision for the protection of ALL these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures over 60 years, living heritage and the collection of oral histories, historical settlements, landscapes, geological sites, palaeontological sites and objects.

The archaeological and palaeontological components discussed here therefore form only part of the heritage resources that the law requires heritage authorities to assess. Specialists must acknowledge this and ensure that if they do not have the capacity to assess other heritage components they team up with heritage practitioners who do, or, at least, refer heritage components for which they do not have expertise to appropriate specialists or draw the attention of consultants and developers to the need for assessment of other heritage components.

In this sense, Archaeological (or Palaeontological) Impact Assessments that are part of Heritage Impact Assessments are similar to specialist reports that form part of the EIA process.

The minimum standards discussed below for archaeological and, where applicable, for palaeontological specialist assessments should be adhered to during the compilation of any Heritage Resources Impact Assessment Report.

The process of assessment, for the archaeological (AIA) or palaeontological (PIA) specialist components of heritage impact assessments, usually involves:

1. An initial pre-assessment (scoping) phase, where the specialist establishes the scope of the project and terms of reference for the developer. This is not discussed further here.
2. A **Phase 1 Impact Assessment/ Specialist Report**, which identifies
  - a. Identifies the sites;
  - b. Assesses their significance;
  - c. Comments on the impact of the development;
  - d. Makes recommendations for their mitigation or conservation,
3. OR: A **Letter of Recommendation for Exemption** (if there is no likelihood that any sites will be impacted).
4. **Phase 2 Mitigation/ Rescue**, which involves planning the protection of significant sites or sampling through excavation or collection (in terms of a permit) at sites that may be lost.

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<sup>1</sup> National Heritage Resources Act (Act No. 25 of 1999, section 35) and KwaZulu-Natal Heritage Act (No. 10 of 1997, section 27)

5. A **'Phase 3' Heritage Site Management Plan** (for heritage conservation), may be required in rare cases where the site is so important that development will not be allowed. Developers may also choose to, or be encouraged to, enhance the value of the sites retained on their properties with appropriate interpretive material or displays.

### 3. STAGES OF ASSESSMENT

#### 3.1. Phase 1 Impact Assessments

Phase 1 Archaeological Assessments generally involve a field survey of the proposed development and will include:

- e. Details of the property to be developed and the type of assessment (s.38 (1 or 8);
- f. Location of the sites that are found;
- g. Short description of the characteristics of each site;
- h. Short assessment of the importance of each site, indicating which should be conserved and which mitigated;
- i. Assessment of the potential impact of the development on the site/s;
- j. In some cases, a shovel test, to establish the extent of a site, or collection of material might be required to identify the associations of the site. (A pre-arranged permit is required); and
- k. Recommendations for conservation or mitigation.

The report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential that it also provides the heritage authority with sufficient information about the sites to enable it to assess with confidence:

- a. Whether or not it has objections to a development;
- b. What the conditions are upon which such development might proceed;
- c. Which sites require permits for destruction;
- d. Which sites require permits for mitigation and what this should comprise;
- e. Whether sites must be conserved and what alternatives can be proposed that may re-locate the development in such a way as to conserve other sites, for example, by incorporating them in a wilderness area, or under a parking space; and what measures should/can be put in place to protect the sites that should be conserved.

Phase 1 Palaeontological Assessments should follow a similar process in order to characterise, date and record the fossil record in the area. However Palaeontological Phase 1 assessments may also involve collecting of material in this initial phase and the heritage resources authority will require that the practitioner hold a valid permit for this.

When a Phase 1 is part of an EIA, wider issues such as public consultation and assessment of the spatial and visual impacts of the development may be undertaken as part of the general study and may not be required from the archaeologist. If however the Phase 1 forms a major component of an HIA it will be necessary to ensure that the study addresses such issues and complies with section 38 of the National Heritage Resources Act.

Phase 1 Specialist Reports (AIAs) will be assessed by the relevant heritage resources authority. If the decision is that sites are of low significance, they may, after recording, be destroyed to make way for development. The final decision about this should be taken by the heritage resources authority, which should give formal permission for the destruction.

In the case of AIAs that are part of EIAs or EMPs, the heritage resources authority will issue comment or a record of decision (ROD) that may be forwarded to the consultant or developer, relevant government department or heritage practitioner and where feasible to all three.

When a property is either very disturbed (e.g. has been quarried or mined) or is very small and the archaeologist can see that it is highly unlikely that any archaeological remains will be found, a **'Letter of Recommendation for Exemption'** from a full Phase 1 report may be supplied. This must be accompanied by a map and photograph indicating landscape features. (Remember: *Absence of evidence is not necessarily evidence of absence* and **use this option with caution**).

### 3.2. Phase 2 Archaeological Mitigation

If sites that cannot or need not be saved from development carry information of significance about the past, the archaeologist will recommend a Phase 2 Archaeological Mitigation. The purpose is to obtain a general idea of the age, significance and broader cultural meaning of the site that is to be lost and to store a sample that can be consulted at later date for research, education and promotion of our cultural heritage at large. Artefacts may be collected from the surface, or there might be excavation of representative samples of the artefactual and faunal and possibly botanical material to allow characterization of the site and dating. It may be necessary to record or even rescue rock art. The heritage resources authority will require a permit for any disturbance of the site.

Should further material be discovered during the course of development this must be reported to the archaeologist or to the heritage resources authority and the developer may need to give the archaeologist sufficient time to assess and document the finds and if necessary rescue a sample.

In situations where the area is considered archaeologically sensitive (e.g. coastal settings) the archaeologist must monitor all earth-moving activities.

Provincial Heritage Authorities may have further special requirements.

Permission for the development to proceed can be given only once the heritage resources authority has received and approved a Phase 2 report and is satisfied that measures are in place to ensure that the archaeological sites will not be damaged by the impact of the development and/or that they have been adequately recorded and sampled. Careful planning can minimize the impact of archaeological surveys on development projects by selecting options that cause the least amount of inconvenience and delay.

This process allows the rescue of information relating to our past heritage for present and future generations. It balances the requirements of developers and the conservation and protection of our cultural heritage as is required of SAHRA and the heritage resources authorities.

### 3.3. Phase 3

On occasion, a Phase 2 mitigation process may be followed by a Phase 3 programme involving the modification or conservation of the site (or parts of it) or the incorporation of the site into the development itself as a site museum or display. When sites are of public interest the development of interpretative material is recommended and adds value to the development. A Heritage Site Management Plan is usually required for sites that are to be retained to ensure that arrangements are made for the long term maintenance and management of the site(s) so that their heritage value and significance may be preserved. Where possible these should be legally tied into Homeowners Associations or some other body that can maintain the sites.

## 4. REQUIREMENTS FOR PERMITS

There are three points during development at which SAHRA or the relevant heritage resources authority may be approached for permission to disturb a site during the impact assessment process.

1. **'Shovel-Test Permits':** in particular circumstances 'shovel-test' permits may be issued prior to or immediately after a Phase 1 survey (e.g. for testing the extent of coastal middens or collecting restricted ceramic samples for identification from Iron Age sites).



2. **'Mitigation Permits':** these are generally issued for excavation or collection of samples and assess sites that will be impacted by the development. These are issued to the specialist before the Phase 2 study, and after assessment of the Phase 1 report.
3. **'Destruction Permits/Permission' and/or 'Interpretation Permits':** these are generally issued to the developer after assessment of the Phase 2 report (but are usually filled in by the archaeologist!). 'Interpretation Permits' refer to situations where the addition of boardwalks or notice boards may impact on the site and the permitting process allows for the proposed actions to be discussed and possibly modified to better protect the site(s).

The specialist should explain the process to the developer and should generally apply for the permit. Permission from the owner must be obtained and this is better done at the beginning of the process.

Policy relating to permit applications is explained in the *General Guidelines to Archaeological Permitting Policy* (available from SAHRA) and the applicant should also consult the legislation (including the *Government Gazette*<sup>2</sup>).

## 5. WHAT ABOUT THE PALAEOONTOLOGICAL COMPONENT?

Palaeontological Impact Assessments are also required wherever palaeontological resources are threatened. This is especially necessary where there is disturbance of sedimentary strata or gravels that may include palaeontological remains.

Although the details of the Phase 1 Minimum Standards discussed below (s. 7.1) may not apply directly where these are specifically archaeological, these standards can be used as a general guide to what is needed in Phase 1 palaeontological reports. The minimum standards for Phase 2 reports discussed below (s.8.1) are more generic and apply to both archaeology and palaeontology.

As indicated above palaeontological collection may take place in the Phase 1 process and the practitioner should ensure that they have a valid permit for this. The development should not proceed until the heritage authority has approved the report.

## 6. AIAs AND PIAs AND THE NATIONAL INVENTORY

Phase 1 and Phase 2 AIAs and PIAs are very often the last opportunity we will ever have to record the remains or evidence of people who lived in this country before us, or the fossil record at the site. These records are immensely important to our understanding of the past and as such they form an important part of our National Estate. SAHRA is building up a national archive of these reports, in hard copy and where possible electronically and specialists are requested to ensure that SAHRA receives copies of all reports.

Developers or specialists are required to submit a copy of the report that goes to the relevant Heritage Resources Authority, usually the Provincial Heritage Resources Authority (PHRA). SAHRA will require a copy of these documents either from the specialist or the PHRA for record as part of the national inventory.

It is important that the quality of these reports is high, that they characterize and date the sites meaningfully and reflect best practice in terms of the identification, assessment, interpretation and management of our archaeological and palaeontological heritage.

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<sup>2</sup> *Government Gazette* Vol. 240, No. 21239.



## II. MINIMUM STANDARDS

### 7. PHASE 1 AIA REPORTS: MINIMUM STANDARDS

#### 7.1. Every Archaeological Impact Assessment Report must include:

##### A. Title Page with:

- a. A **Title** that identifies this report. It should give the name and geographical location of the site(s) and/ or project, including property or farm name (and magisterial district) and province;
- b. **Author(s) surname(s)** and details, company name and contact details;
- c. **Developer and consultant's** name (who commissioned the report), postal address, telephone and fax numbers;
- d. **Date of report** (including day and month).

##### B. Executive Summary including:

- a. The **purpose** of the study;
- b. A brief summary of the **findings**;
- c. The **recommendations**; and
- d. Any **stakeholders** or people responsible for decisions and actions.

##### C. Table of Contents, for reports longer than 10 pages.

##### D. Background Information on the Project with:

- a. Whether the report is part of a scoping report/ EIA/ HIA or not;
- b. Type of development (e.g. low cost housing project, mining);
- c. Whether re-zoning and/or subdivision of land is involved;
- d. Developer and consultant and owner and name and contact details;
- e. Terms of Reference;
- f. Legislative requirements.

##### E. Background to the Archaeological History and other relevant heritage components of the area with,

- a. Literature review or archival research sufficient to place the sites located in context;
- b. Reference to museum or university databases and collections;
- c. Previous relevant impact assessment reports for the area.

This background is required in part to anticipate or predict the kinds of heritage resources that might occur, and in part to gauge the regional significance of findings made during the current assessment.

##### F. Description of the Property or Affected Environment its setting and heritage resources, with:

- a. **Details of the area surveyed** including;
  - i. Full **Location Data** for Province, Magisterial District/Local Authority and property (e.g. farm/erf) name and number, etc.;
  - ii. **Location Map(s)/ orthophotos** of the general area. These must include the map name and number (e.g. 3318DC Bellville). Maps must include at least a 1:50 000 and (if available) also a 1:10 000 (i.e. most detailed possible). Large scale colour satellite photos make a useful addition. Maps should be preferably at least A4 in size.

- iii. Either the Location Map or the Site Map (see 7.1Gi below) must have the polygon of the **area surveyed** marked on it and full geographical co-ordinates for all relevant points and, where applicable, indication of the area to be developed (footprint). The report or map must indicate exactly what area was searched, and if any area was not searched why this was so; and what the probability is of sites being found there.
- b. **Description of the methodology** used including:
  - i. How the area was searched (e.g. a three-person team for two days, and whether on foot or not!) and what, if any, sampling techniques were used;
  - ii. What the restrictions to the study were, for example:
    - visibility affected by high grass or bush or vegetation cover, walls or concrete surfaces;
    - physical or other impediments (e.g. vlei, swamp, steep kloof, mobile dune) to the assessment of the area;
  - iii. How the data was acquired, and details of research equipment (e.g. GPS).

#### **G. Description of Sites identified and mapped with:**

- a. Details of the **location of all the sites** including:
  - i. Site Map or aerial photograph of the specific area with the location of all sites marked on it (at least A4 size). Make it clear how this relates to the Location Map described above (7.1Fii).
  - ii. GPS readings with the model and datum used (WGS 84 is considered the most useful). Please comment on the accuracy. If co-ordinates are read off the 1:50 000 map, please indicate this. Wherever possible the GIS track actually surveyed should be mapped.
- b. An adequate **description of each site** including:
  - i. Type of site (e.g. open scatter; shell midden, cave/shelter);
  - ii. Site categories (e.g. Earlier Stone Age, Late Iron Age);
  - iii. Context (detailed description of depositional history and environment);
  - iv. Cultural affinities, approximate age and significant features of the site;
  - v. Estimation or measurement of the extent (maximum dimensions) and orientation of the site(s);
  - vi. Depth and stratification of the site (where shovel test permits have been given or natural exposures available), both in the text and through photographs of sections;
  - vii. Possible sources of information about past environments, such as stalagmites/stalagmites, flowstone, dassie middens, peat or organic rich deposits and natural bone accumulations; and
  - viii. Photographs and diagrams, of good quality, with a centimetre scale (e.g. for artefacts) or metre scale (e.g. for large scale village plan) and a caption. Include a 'wide angle' photo of the sites.
- c. **Threats or sources of risk** and their impact on the heritage resources (e.g. earth moving, traffic of vehicles or humans, erosion).
- d. If the sites are in KwaZulu-Natal or the Northern Cape please apply to the old Archaeological Data Recording Centres at the Provincial Museums for **National Site Numbers** (for sites that will be conserved, excavated or collected).

#### **H. Description of the Artefacts, Faunal, Botanical or Other Finds and Features** for each site.

Record meaningful information and consider supplying:

*SG 2.2 SAHRA APM Guidelines: Minimum Standards for the Archaeological & Palaeontological Components of Impact Assessment Reports*

- a. Raw material, type, maximum dimensions and relative frequency of and significant attributes of stone tools observed on the surface;
- b. Basic description of ceramics, other artefacts and occurrences such as rock art;
- c. Description of features (e.g. hearths, bedding, walling);
- d. Basic description of faunal or botanical taxa and estimated frequencies;
- e. Adequate photographic and graphic representations (with scale in centimetres); and cross-reference photographs with a map showing where the objects in the photographs were found;
- f. Location of repositories at which artefacts, photographs, rock art tracings and field records (from other sites in the area) are kept.

**I. Clear Description of Burial Grounds and Graves with:**

- a. Clear written and photographic description of any graves;
- b. Exact or estimated age and affinities of the burials;
- c. Clear discussion for the client of the legal implications (include reference to both the Act and the regulations for s.36<sup>3</sup>, and particularly the public participation process, and whether this should be done by the archaeologist or may be better done by a social consultant).

**J. Field Rating (Recommended grading or field significance) of the site:**

While **grading** is actually the **responsibility of the heritage resources authorities**, all reports should include **Field Ratings** for the site(s) discussed (proposals for grading), to comply with section 38 of the national legislation, for example:

- a. National: This site is considered to be of Field Rating/Grade I significance and should be nominated as such (mention should be made of any relevant international ranking);
- b. Provincial: This site is considered to be of Field Rating/Grade II significance and should be nominated as such;
- c. Local: this site is of Field Rating/Grade IIIA significance. The site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised;
- d. Local: this site is of Field Rating/Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance);
- e. 'General' Protection A (Field Rating IV A): this site should be mitigated before destruction (usually High/Medium significance);
- f. 'General' Protection B (Field Rating IV B): this site should be recorded before destruction (usually Medium significance);
- g. 'General' Protection C (Field Rating IV C): this site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

**K. Statement of Significance (Heritage Value) giving the significant archaeological heritage value of relevant sites in terms of the legislation (NHRA, section 3 (3) listed below) or any other relevant criteria, and give reasons.**

- a. its importance in the community, or pattern of South Africa's history;
- b. its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- c. its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;

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<sup>3</sup> National Heritage Resources Act (Act No. 25 of 1999) and the permit regulations (*Government Gazette* Vol. 240, No. 21239).

*SG 2.2 SAHRA APM Guidelines: Minimum Standards for the Archaeological & Palaeontological Components of Impact Assessment Reports*

- d. its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- e. its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f. its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g. its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h. its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- i. sites of significance relating to the history of slavery in South Africa.

**L. Recommendations** including:

- a. An assessment of the potential impact of the development on these sites, relative to sustainable social and economic benefits;
- b. Proposals for **protection or mitigation** relating to:
  - i. Possible alternatives in the development that might allow the protection and conservation of the sites; or
  - ii. The need for mitigation of adverse impacts; or
  - iii. The need to conserve certain sites because of their high heritage value.
- c. Detailed recommendations with regard to **burial grounds and graves**. This must inform the client about the full process and enable the heritage authority to make decisions about permits. This must include:
  - i. Recommendations for protection of the grave(s) during the development and in the long term, e.g. fencing and plans for maintenance (mini-management plan); OR
  - ii. Recommendations for relocation of the grave(s), public participation and possibly further archival research, or both (i & ii).
- d. An **indication of what must be done at each site**:
  - i. If the site is of Low<sup>4</sup> Significance (see Kg above) the recommendation may be that the site must be mapped, documented and then destroyed (with a permit / letter of permission / Record of Decision from the heritage authority);
  - ii. If the site is of Medium<sup>5</sup> Significance the recommendation may be for a measure of mitigation after which the site may be destroyed. Mitigation usually involves a requirement to collect or excavate a sample of the cultural and other remains that will adequately allow characterization and dating of the site. (The archaeologist will require a permit for the excavation and collection. If, after this mitigation significant archaeological residues or parts of sites remain, the archaeologist should request the developer to apply for a permit for destruction or fill in the application for them to sign! In this way the heritage resources authority can help the archaeologist ensure that the recommended mitigation takes place;
  - iii. If the site is of High Significance the recommendation may be that it be formally graded and conserved (with. provision of boardwalks, fencing, signage, guides) and protected

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<sup>4</sup> or in rare circumstances Medium

<sup>5</sup> or in rare circumstances High

as a heritage resource (either being listed on the Heritage Register or being declared as a Provincial or National Heritage Site).

If sites are to be protected a Site Management Plan should be required. For mini-plans, where small sites are incorporated into developments, this must include an indication of who is responsible for maintenance and how this process will be monitored.

#### **M. Conclusions.**

**N. Bibliography** detailing citations in the text of the report. Remember that all sources should be adequately acknowledged (even the web).

**O. Appendices** if any.

### **7.2. Phase 1 Archaeological Reports: General Comments**

- a. Take into account:
  - i. That ephemeral sites may not be unimportant as they may represent the only trace on the landscape of a particular people or period and must be adequately sampled and described so as to supply important information about human settlement patterns.
  - ii. That bush clearing and construction work (e.g. access roads and camps) may have a strong negative impact on sites.
  - iii. That specialists are expected to assess the whole property or to indicate why only part of the property is to be affected by short term and long term effects of the development.
  - iv. The relative significance of sites identified in relation to current knowledge of sites in the general area.
- b. Indicate the location of any significant extra documentation or photographic material not included in the report itself.
- c. Provide information and recommendations to the client including the scope of the heritage legislation that applies; the need to apply for permits in good time before disturbing sites in any way; and the need for approval of the heritage authority before the destruction of sites that have been recorded.
- d. Give the Heritage Resources Authority enough information to assess with confidence whether those recommendations should be approved or modified and whether to issue permission for destruction of sites.
- e. Indicate whether an assessment of other heritage components (palaeontology, built environment, living heritage) are being commissioned by the developer, and if not whether this should be done.
- f. Make it clear to the developer that the final decisions rest with the heritage authority and that permission is required for destruction.

### **7.3. Phase 1 Reports on Particular Types of Archaeological Sites**

SAHRA and Heritage Western Cape are working independently (with experienced practitioners) on minimum standards and recommendations for particular types of sites or concerns. SAHRA has drafted recommendations for Shell Midden Sites and Suburban and Historic Sites and HWC has finalized recommendations for Early Stone Age sites and Dating. In time these will be added as appendices.

## **8. PHASE 2 PERMIT MITIGATION REPORTS: MINIMUM STANDARDS**

### **8.1. Every Archaeo(/Palaeonto)logical Phase 2 Permit Report must include:**

#### **A. Title Page with:**

- a. A **Title** that indicates the name and geographical location of the site(s), including property name (possibly magisterial district) and province (please include key names already used in Phase 1 reports and permit applications!);
- b. **Author(s) name(s) and details**, company name and contact details;
- c. **Developer / consultant** name (if applicable);
- d. **Date** (and month);
- e. **Permit Number (NB!)**.

#### **B. Executive Summary** including:

- a. The purpose of the work;
- b. A brief summary of the findings;
- c. The recommendations for the future of the site.
- d. Stakeholders.

#### **C. Table of Contents**, for reports longer than 10 pages.

#### **D. Background Information on the Project** (as applicable, see section 7.1.D above):

#### **E. Background to the Archaeological/ Palaeontological History** of the area,

- a. A literature review, archival research;
- b. Previous relevant work done in the area.

#### **F. Name and Geographical Location of the Site(s)** including:

- c. Name of site and full location data for property (e.g. farm/erf) name and number, etc., Magisterial District and Province;
- d. Location Map(s)/Orthophotos of the general area. These must include the map name and number (e.g. 3318DC Bellville). Maps must include at least a 1:50 000 and (if available) also a 1:10 000 (i.e. most detailed possible). They should be preferably at least A4 in size.
- e. Site Map(s) or aerial photograph(s) of the specific area showing the location of all sites (at least A5 size);
- f. GPS readings with the model and datum used (WGS 84 is considered the most useful); and with the accuracy attained.

#### **G. Description of the Work Done:**

- a. Site description (see also section 7.1 above).
- b. Methodology used (including number of people and their responsibilities. [Note: Spits must not be used in archaeological excavations if stratigraphy can be detected. No spits should be >100mm in depth, in the case of M/LSA excavations!])
- c. A written assessment of the work done including discussion of:
  - i. features and object(s), graves or fossils excavated or removed;
  - ii. conclusions reached regarding the site and its cultural (or, if palaeontological, its stratigraphic) affinities, approximate age and significant elements.

- d. Suitable illustration including:
  - i. A detailed site plan on which excavated or collected areas are marked;
  - ii. Table(s) categories of artefacts, fauna / fossils etc, excavated or removed;
  - iii. Accurate scale drawings of the stratigraphy;
  - iv. Photographs with a centimetre scale and a caption. Include a 'wide angle' photo and avoiding high contrast situations.
- e. Name of the Repository, that is, the institution curating the material and the field notes and records.

#### **H. Description of Artefacts, Faunal, Botanical, Other Remains / or Fossils (see s. 7 above).**

#### **I. Recommendations including:**

- a. Possible declaration as a heritage site;
- b. Conservation requirements for the site, e.g. fences boardwalks, etc (and the need for a permit);
- c. The need for Site Management Plan;
- d. Plans for or the need for interpretation and signage at the sites
- e. Any other recommendations pertaining to site.

#### **J. Conclusions.**

#### **K. Bibliography** detailing citations in the text of the report.

#### **L. Appendices** if any.

### **8.2. Phase 2 Permit Reports: General Comments**

- a. Remember that the objectives of Phase 2 Mitigations include:
  - i. Investigation of each potentially important site to establish significance and so determine the future of the site;
  - ii. Rescue of representative material from the site to allow us to record the nature of each site and establish its age before it is destroyed and to make samples accessible for future research;
  - iii. Interpreting the evidence recovered to allow for education of the public and promotion of heritage (which may form part of a Phase 3 project).
- b. Every permit holder must submit to the relevant Heritage Authority:
  - i. Annual '**Interim**' or progress Phase 2 permit report(s) which should be as comprehensive as possible and must:
    - reflect the full details about the location of the site and its setting;
    - the archaeological/palaeontological background;
    - a description of the work done (with photos, maps and diagrams); and
    - results to date.
  - ii. A systematic '**Final**' Phase 2 permit report (within one year of the expiry of a permit) including :
    - the above data; and full details of the excavation, collection, removal, analysis and interpretation of the material.
- c. Researchers are requested to remember that copies of all publications, reports and theses relating to material acquired in terms of a permit (even if the work is done by other researchers and students, and even if the final report is in) must be sent to the relevant