

ACKNOWLEDGEMENT

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1.0 INTRODUCTION

These guidelines derive their authority from the Monuments and Relics Act 2001, which protects the natural and cultural heritage (includes archaeological resources). Section 19 of this act stipulates the need for pre-development archaeological and environmental impact assessment. These particular guidelines set standards and procedures to guide planners and developers in envisaged projects at both the rural and urban areas. Pre-development Archaeological Impact Assessment (AIA) and Archaeological Mitigation is the application of archaeological/historical research to an area where development is planned prior to its commencement. This includes architectural history assessment where historical buildings are involved. The purpose of pre-development AIA is to conduct an inventory of archaeological and historical resources in the project area before its commencement. The importance of these resources and the likely impact by the proposed project is assessed, and recommendations on preservation and mitigation options suggested.

2.0 THE LAW - MONUMENTS AND RELICS ACT CAP 59:03 OF 2001

- 2.1 The Act protects all archaeological and historical monuments, sites, buildings, relics and artefacts dating to before 1902, as well as gazetted recent historical buildings and natural monuments. These may not be damaged, removed or destroyed without the minister's permission.

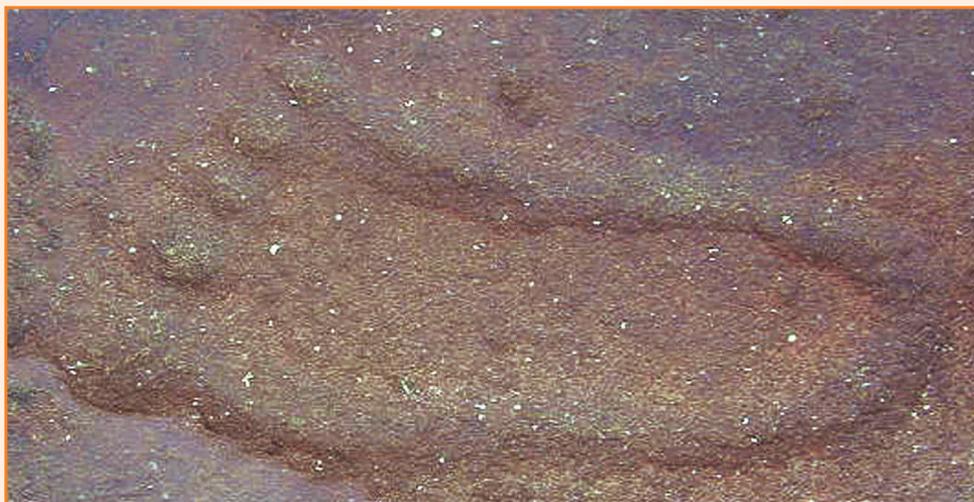


Figure 1 : The legendary Matsieng footprints near Rasesa in the Kgatleng District.

- 2.2 An ancient monument means “any building, ruin, remaining portion of a building or ruin, ancient working, stone circle, grave, cave, rock shelter, midden, shell mound, archaeological site, or other site or thing of a similar kind, which is known or believed to have been erected, constructed or used in Botswana before 1st June, 1902”.

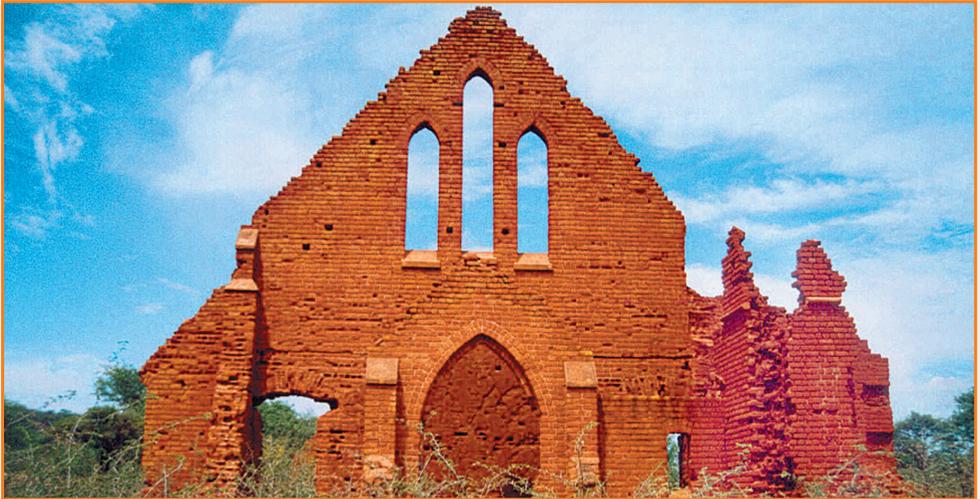


Figure 2 : Remnants of a church at Old Palapye (Phalatswe) Monument in the Central District (Phalatswe was inhabited from 1889 - 1902)

- 2.3 Ancient working means “any shaft, cutting, tunnel, quarry or stope or any building or machinery appertaining thereto, which was made or used for mining purposes in Botswana and was in existence before 1st June, 1902”.
- 2.4 Historic building means “any building, of national value, which was erected, constructed or used in Botswana after 1st June, 1902, which building has been declared an historic building under section 11” of the Monuments and Relics Act.
- 2.5 Monument includes;
- 2.5.1 Any ancient monument,
 - 2.5.2 Any recent historic monument,
 - 2.5.3 Any area of land which is of archaeological or historical interest or contains objects of such interest,

2.5.4 Any area of land which has distinctive scenery or a distinctive geological formation

2.5.5 Any area of land containing rare or distinctive flora



Figure 3 : Majojo National Monument near Serule in the Central District of Botswana

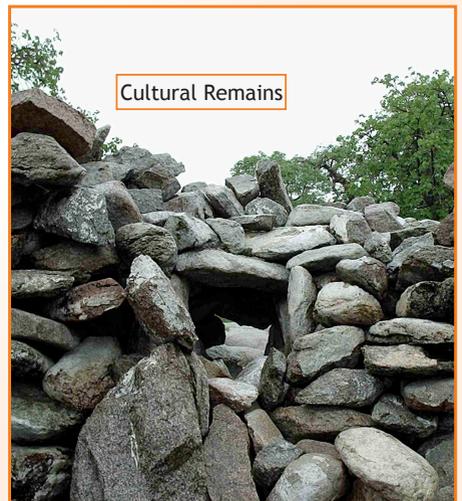
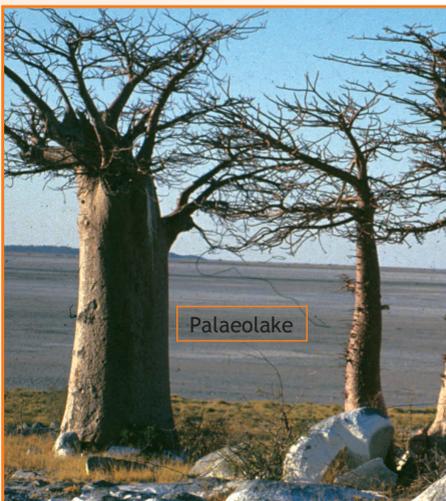


Figure 4 : The Makgadikgadi landscape is protected for its natural and cultural significance (the paleolake, geology, vegetation and cultural remains).

2.5.6 Any cave, rock shelter, grove of trees, tree, old structure or other object or article, whether natural or constructed by man



Figure 5 : Gcwihaba Cave is a National Monument in the Northwest District of Botswana.

2.6 Section 19 of this Act stipulates the requirement of a pre-development AIA for any major development (such as construction of roads, dams, pipelines, mining, prospecting, erection of structures) that may physically disturb the earth's surface



Figure 6 : Construction of major projects like dams may also affect the archaeological remains.

3.0 PRE-DEVELOPMENT ARCHAEOLOGY ASSESSMENT

- 3.1 Archaeology is the scientific study of human cultures through the recovery, documentation and analysis of material remains including architecture, artefacts, biofacts, human remains and landscapes. Archaeological sites, monuments and historical places or buildings are important evidence of the nation's cultural heritage, and have value in terms of research into our history, education, recreation and tourism.
- 3.2 Pre-development Archaeological Impact Assessment (AIA) and Archaeological Mitigation is the application of archaeological/historical research to an area where development is planned prior to its commencement.



Figure 7 : Construction of pipelines may also be a threat to archaeological deposits

- 3.3 The AIA and archaeological mitigation are necessary for research, documentation and safeguarding heritage resources at pre-construction, construction and post construction stages of a development project.
- 3.4 The purpose of pre-development AIAs is to conduct an inventory of such monuments and sites in the project area, to identify and assess the impact on these by the development project, and to recommend mitigation options so as to preserve these monuments or rescue information on them.
- 3.5 The AIA has three major phases that guide the process, and these are the literature search or record survey, fieldwork and analysis, and mitigation.



Republic of Botswana

PRE - DEVELOPMENT
ARCHAEOLOGICAL
IMPACT ASSESSMENT

Guidelines for Planners and Developers

- 3.5.1 Record Survey: This entails reviewing all the necessary archaeological records for the region and the specific area that is to be affected by development. The outcome of the findings usually forms part of the overall inception report for the development project. This stage of the AIA is to guide the preparations for the fieldwork, and even the planning process. As an example, where the record survey reveals the presence of archaeological sites of national value, the development planning process should immediately consider alternative areas, or how best to work around the resource.
- 3.5.2 Fieldwork: The archaeologist shall list all archaeological and historical sites and other monuments in the project area, assess their importance, and assess the impact of the proposed development on such. The purpose of this phase is to augment the findings of the record survey. It involves the foot survey to locate sites - with exact locations noted using GPS or UTM coordinates. After the fieldwork, the archaeologist should produce a report (as per reporting format set by the National Museum) with recommendations indicating whether development may be permitted or not, as well as the necessary mitigation options. The AIA report should be submitted in duplicate to the National Museum with a letter of application for permission to carry out the proposed development.



Figure 8 : Rock Art site documented during the AIA of the Ntimbale Dam project

3.5.3 Mitigation: Where the fieldwork has recorded significant archaeological sites, the mitigation options should be discussed in the AIA report. The options may range from total preservation of the site, extensive salvage (including site plans, excavations, photos, video etc), test excavations, systematic sampling and auguring, and recommendation for no further work. Once the mitigation work is completed, a report should be submitted in duplicate to the National Museum for evaluation and consideration for a development or impact permit. No development may take place without such a development permit.

3.6 Where sites and monuments are evident in the project area, the National Museum may require an Archaeological Management Plan (AMP) detailing mitigation, preservation, and monitoring and procedure requirements during the construction and post-construction phases of the project.

4.0 APPLICABILITY OF PRE-DEVELOPMENT ASSESSMENT

4.1 Pre-development impact assessment shall be applicable where there is potential for development or disturbance of earth's surface, and no assessment has ever been done.



Figure 9 : An example of major projects that disturb the earth's surface and may therefore disturb heritage resources

- 4.2 Where an extension to a previously assessed area is proposed, a new assessment shall be required for the extension area.
- 4.3 An application for exemption may be made by a developer where;
- The proposed development/project is within a previously assessed area
 - The proposed project is of the same nature with that for which the previous assessment was made.

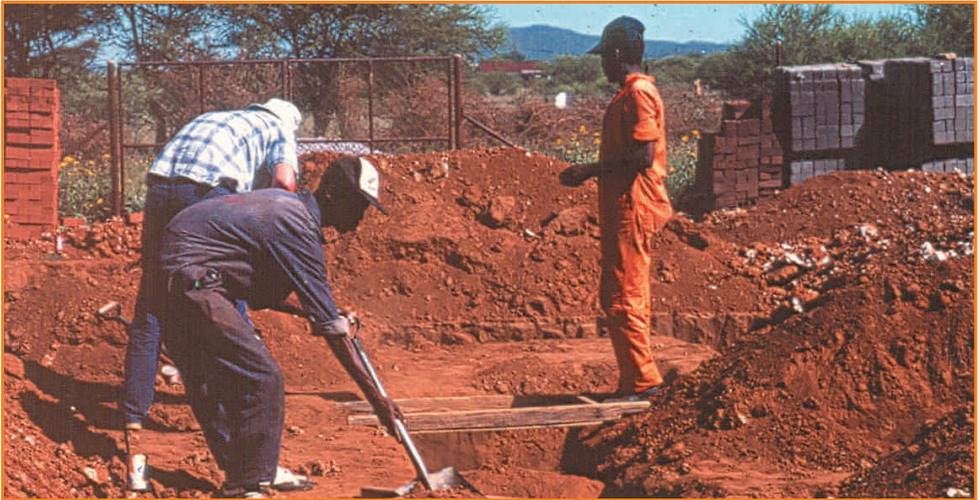


Figure 10 : Archaeologists rescuing cultural material exposed by foundation trenches of a house in Tlokwen, Southeastern Botswana.

5.0 PAYMENT FOR AIA AND MITIGATION

- 5.1 Pre-development AIA and mitigation shall be commissioned and paid for by developers. The payment shall cover, but not be limited to:
- Desk top study
 - Field work (survey and mitigation)
 - Analysis and interpretation of findings
 - Dating of material

- Watching-brief, when recommended and where necessary

6.0 PLANNING AUTHORITIES

- 6.1 It is important that consideration for heritage preservation is made part of the development planning and process to avoid unnecessary delays and costs once the project commences.
- 6.2 Developers and planners shall engage an archaeologist, accredited by the National Museum, to carry out an AIA or a preliminary study if the project is at the feasibility stage.
- 6.3 Planners, developers, and contractors are expected to ensure that AIA and associated works are budgeted for, planned and completed before the commencement of development projects.
- 6.4 The National Museum may participate in Reference Group meetings to advise on all necessary processes of the AIA



Figure 11 : Museum involvement at a site visit with Reference Group members and contractors at an early stage of a dam project

7.0 CONSTRUCTION AND POST - CONSTRUCTION PHASES

- 7.1 In cases where archaeological and historical materials are evident in the project area, or expected to be present, a watching brief may be necessary during stripping of topsoil and digging of trenches.
- 7.2 Section 12.2 of the Monuments and Relics Act stipulates the need to immediately suspend excavation or construction in the event that archaeological remains are recovered.
- 7.3 Work may only resume after the National Museum has directed whether any materials need to be removed, and when and the manner in which excavation or construction may proceed.
- 7.4 Both the developer and the supervising engineers should be familiarized with and implement recommendations from the AIAs and AMPs
- 7.5 The National Museum reserves the right to inspect and monitor projects at all stages of development
- 7.6 The post-construction management of a monument that falls within boundaries of a development project may be the responsibility of the National Museum and the developer.



Figure 12 : Museum participates in the post construction phase of a dam project to ensure the developer adheres to management programmes.

8.0 THE NATIONAL MUSEUM

- 8.1 The role of the Archaeology Division of National Museum is to provide archaeological advice to planners, developers, contractors and local authorities.
- 8.2 The National Museum will provide a list of consulting archaeologists (qualified archaeologists accredited by the Museum) to planners, developers and contractors.
- 8.3 The National Museum assesses the outline of the archaeological work required (Terms of Reference) in consultation with the developer and the consulting archaeologist.
- 8.4 Two typed and bound reports of the Archaeological Impact Assessment shall be submitted to the National Museum, with a letter of application for a development permit.
- 8.5 The reports shall be evaluated on the basis of methodologies, findings and recommendations, and thereafter developers advised accordingly.
- 8.6 The assessment may recommend approval of the project, modification of the design or relocation of the project, depending on the importance of the archaeological sites and monuments found.
- 8.7 No development may therefore take place before an Archaeological Impact Assessment is done, mitigation requirements implemented and a development permit is issued.

9.0 FOR FURTHER INFORMATION, CONTACT:

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APPENDIX 1: AIA EVALUATION PROCESS - NATIONAL MUSEUM

