

REPORT

Central Térmica de Temane Project - Cultural Heritage Chance Find Procedure

Moz Power Invest, S.A. and Sasol New Energy Holdings (Pty) Ltd

Submitted to:

Ministry of Land, Environment and Rural Development (MITADER)

Submitted by:

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1.0 INTRODUCTION

The Mozambican economy is one of the fastest growing economies on the African continent with electricity demand increasing by approximately 6-8% annually. In order to address the growing electricity demand faced by Mozambique and to improve power quality, grid stability and flexibility in the system, Moz Power Invest, S.A. (MPI), a company to be incorporated under the laws of Mozambique and Sasol New Energy Holdings (Pty) Ltd (SNE) in a joint development agreement is proposing the construction and operation of a gas to power facility, known as the Central Térmica de Temane (CTT) project. MPI's shareholding will be comprised of EDM and Temane Energy Consortium (Pty) Ltd (TEC). The joint development partners of MPI and SNE will hereafter be referred to as the Proponent. The Proponent propose to develop the CTT, a 450MW natural gas fired power plant.

The proposed CTT project will draw gas from either the Sasol Exploration and Production International (SEPI) gas well field via the phase 1 development of the PSA License area, covering gas deposits in the Temane and Pande well fields in the Inhassoro District and the existing Central Processing Facility (CPF) or from an alternative gas source. Consequently, the CTT site is in close proximity to the CPF. The preferred location for the CTT is approximately 500 m south of the CPF. The CPF, and the proposed site of the CTT project, is located in the Temane/Mangugumete area, Inhassoro District, Inhambane Province, Mozambique; and approximately 40 km northwest of the town of Vilanculos. The Govuro River lies 8 km east of the proposed CTT site. The estimated footprint of the CTT power plant is approximately 20 ha.

The baseline and impact assessment for the CTT project identified a potential for previously undiscovered cultural heritage features to occur throughout the project area. These include both sensitive cultural sites (sacred trees and pools, medicinal plants, graves) and archaeological remains (ancient stone tools, pottery sherds). The potential accidental disturbance of cultural sites is currently managed and mitigated through procedures outlined in the project Cultural Heritage Management Plan (CHMP).

To provide appropriate mitigation of potential archaeological disturbance during construction, Golder has prepared this Chance Find Procedure (CFP). This CFP should be disseminated to all relevant parties on site involved in the construction of the CTT project.

- Chance Finds are defined as cultural heritage objects, commonly related to archaeological or historic sites (e.g. pottery, bones, stone tools) that are unexpectedly encountered during project related activities/clearance. A CFP is a project-specific instruction that outlines the actions to be taken if archaeological objects are accidentally encountered.

Archaeological artefacts constitute “Moveable Cultural Heritage” assets as stated in, and protected by, Mozambique Law No. 10/88.

The Proponent is advised to commence clearance and preparation activities as early as possible, prior to the start of proposed construction activity. This will ensure that any delays that may result from the accidental disturbance of archaeological assets (and the subsequent implementation of this Procedure) are resolved as efficiently as possible. As set out in detail below, delays would involve time for the archaeologist to investigate a disturbed site and recommend appropriate recommendation (e.g. preservation *in situ* and Project redesign or archaeological excavation / evaluation and preservation by record).

2.0 BACKGROUND

Baseline studies undertaken by Golder's specialists have identified significant archaeological sites across the coastal zone. These findings provide an indication of the archaeological site types likely present across the CTT project area proposed for development.

These include:

- Stone Age settlement sites;
- Stone Age lithic scatters;



- Iron Age pottery scatters; and



- Shell middens.



There remains the possibility for previously unknown (and as yet undiscovered) archaeological objects (e.g. ancient pottery sherds, stone tools) to be disturbed during proposed construction activities.

3.0 OBJECTIVES

This CFP has been prepared in compliance with national regulations and guidance, including:

- Mozambican Archaeological Assets Regulations (27/94); and
- The Law on the Protection of Cultural Heritage (10/88).

The Regulations state that any project involving excavation and earth-moving, must involve preliminary prospecting for archaeological and cultural heritage assets under threat (to initiate protection as necessary). The law qualifies all cultural heritage assets discovered in Mozambican territory as State property.

Specifically, Article 13 of the Mozambican Law on the Protection of Cultural Heritage defines that, in the event of discovery of any places, buildings, objects or documents susceptible of being classified as cultural heritage assets, the closest administrative authorities must be informed in this regard.

No excavation or disturbance of archaeological sites should occur by persons without the appropriate licence.

Further to the national legislative requirements, international guidance on cultural heritage management and mitigation has been considered, specifically IFC/World Bank Group Performance Standard 8 which provides guidance on cultural heritage management best practice.

The pertinent requirements of Performance Standard 8 (IFC, 2012), in relation to cultural heritage management, include:

- An objective to protect cultural heritage, as defined by IFC PS8, paragraph 3 (regardless of whether or not it has been legally protected or previously disturbed) from the adverse impacts of project activities and support its preservation;
- Where the risk and identification process (e.g. baseline assessment) determines that there a chance of impacts to cultural heritage, the client will retain competent professionals to assist in the protection of cultural heritage;

- **When in doubt about whether something is cultural heritage, the client should seek the knowledge and advice of local and/or international competent experts (contact details in Section 5.2);**
- Archaeological material should preferably be preserved *in situ*, since removal is likely to result in irreparable damage or destruction; and
- Where removal of materials is necessary, it should be conducted by appropriate, locally licenced, experts using the best available techniques.

The implementation of the CFP aims to ensure that accidental cultural heritage discoveries are managed in a clear and sustainable fashion throughout the lifetime of the CTT project. This procedure is intended for review on an annual basis so the content can be refined to take account of experiences learnt and any significant new phases of activity.

4.0 SCOPE

The scope of application for this CFP includes the CTT project area. It will be updated as the project progresses.

It applies to the following activities:

- Vegetation clearance / bush clearance / ground preparation;
- All geotechnical, hydrological and environmental investigation;
- Construction;
- Project Operation; and
- Project Closure.

5.0 CHANCE FIND PROCEDURE

Chance Finds are 'objects of potential cultural heritage significance recovered during any site work, commonly related to archaeological sites and/or historic sites. Including surface or sub-surface artefacts e.g. stones, bones, pottery, metalwork, iron slag, enclosures etc., individual burials and/or graveyards'.

The process to be followed in the event of a Chance Find is described below, with a summary flow chart provided in Appendix A.

All site workers and all contractors **MUST** have the authorisation to halt work if they suspect they may have encountered objects of cultural heritage interest.

5.1 Responsibilities of all Site Workers (including Contractors)

In the event that a Chance Find is observed and/or disturbed, site workers will prevent the illegal disturbance of archaeological material by:

- Immediately stopping work in the area of the Chance Find, in a safe manner;
- Demarcating the discovered site or artefact (*in situ*);
- Photographing the discovery (if possible);
- Immediately reporting the discovery to the CTT Project Environmental Specialist (PES); and
- Follow any instructions issued by the PES to protect the site, including arranging for security to prevent any loss of removable objects (e.g. overnight).

5.2 Responsibilities of CTT Project Environmental Specialist (PES)

The CTT PES is required to notify Golder's cultural heritage specialists and produce a Chance Find Memo (email) within 48 hours, to detail:

- The date and time of the Chance Find;
- The location (UTM Grid Reference) of the Chance Find site (obtained using a GPS);
- The details of the discovery team (names, roles, nature of activity);
- Estimated nature of the site/artefacts observed;
- The temporary protection (demarcation/security) measures implemented (e.g. overnight patrol); and
- The dates of the next steps to be implemented (as set out below) which must be completed within 48 hours from the production of the Chance Find Memo:
 - The Memo must be emailed to Professor Leonardo Adamowicz (leonardo.adamowicz@gmail.com) and Alice Hobson (alhobson@golder.com);
 - They will review the memo as a priority and decide on the next steps in conjunction with the local archaeological authority.

5.3 Exception

In the event that the chance find is a small, isolated (singular) object (e.g. a pottery sherd), the Project Environmental Specialist may use their professional judgement to decide that a Chance Find observed can be sensitively recorded and removed so that the work can continue. In this instance the following steps should be implemented and recorded within a Chance Find Memo to detail:

- i) The date and time of the Chance Find;
- ii) The location (UTM Grid Reference);
- iii) Photographs of the Chance Find *in situ* (if possible);
- iv) The method and rationale of collection and location of the collected find, including location of appropriate safe storage in the Camp Office; and
- v) The details of the discovery team (names, roles, nature of activity).

As per the procedure, the Chance Find Memo will be submitted to Professor Leonardo Adamowicz (leonardo.adamowicz@gmail.com) and Alice Hobson (alhobson@golder.com) who will in turn collate and notify the local authority as necessary.

These procedures are also outlined in Appendix A which includes emergency phone numbers for Golder's cultural heritage team.

5.4 Suspension of Work

In the event of significant findings, and in accordance with Mozambican law, Golder's cultural heritage experts may wish to carry out more detailed analysis. In this instance they will propose a scheme of work to the Proponent before taking steps to potentially request the temporary suspension of project works in the vicinity of the discovery site for an agreed period. Work should only resume once approval is received.

6.0 SIGN OFF

The Chance Find Procedure has been acknowledged by the following signatories and disseminated to all parties involved in any ground disturbance activity within the project footprint:

Site Manager:

CTT PES:

Professor Leonardo Adamowicz:

Alice Hobson:

7.0 REFERENCES

International Finance Corporation, 2012: Performance Standard 8: Cultural Heritage, http://www.ifc.org/wps/wcm/connect/dd8d3d0049a791a6b855faa8c6a8312a/PS8_English_2012.pdf?MOD=AJPERES

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Signature Page

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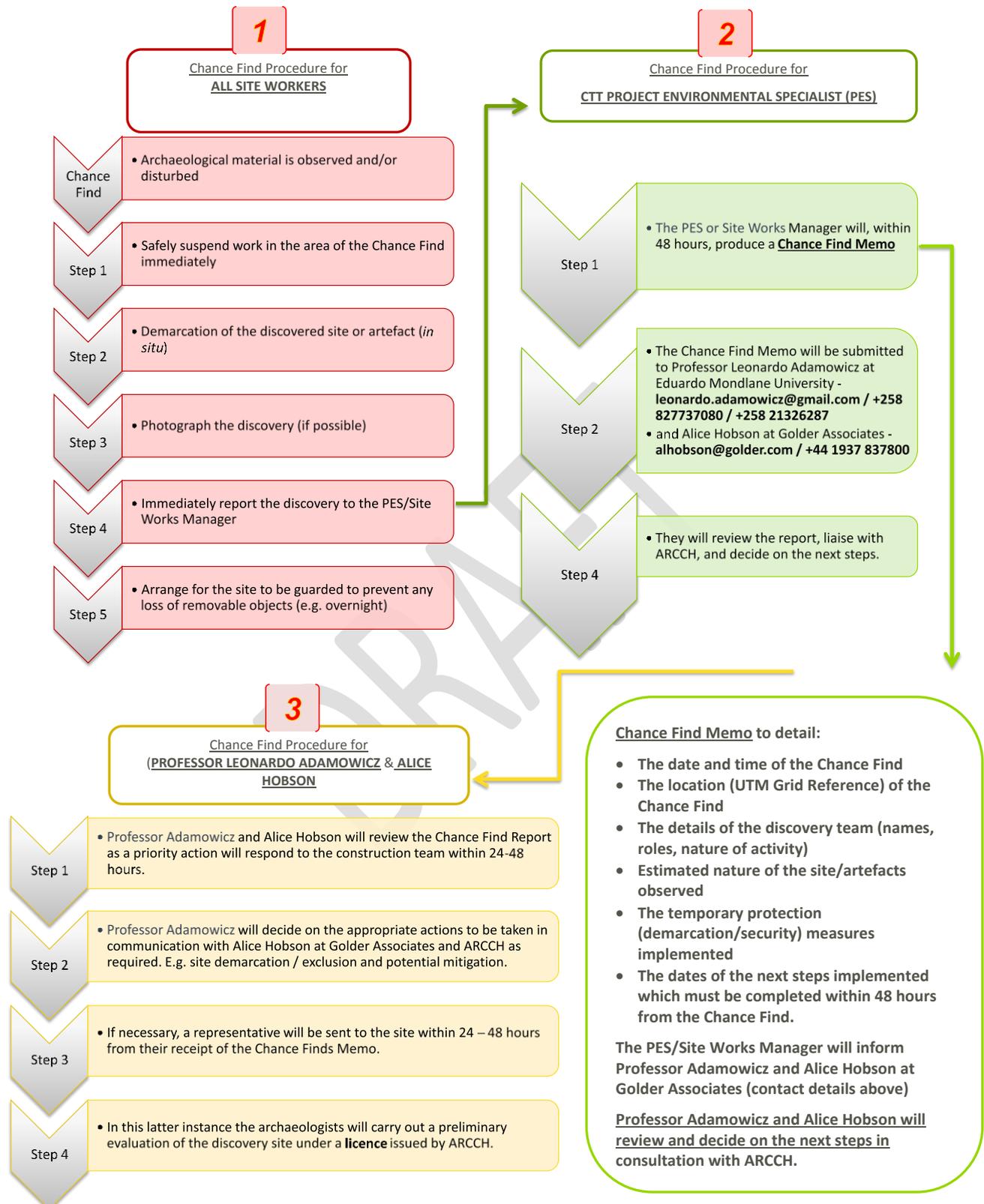
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APPENDIX A

**Chance Find Procedure Flow
Diagram**





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