Azura-Edo Independent Power Project

Environmental Impact Assessment

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Annex A

Draft Azura Edo EIA and RAP Stakeholder Engagement Plan

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December 2011

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For and on behalf of
Environmental Resources Management Limited

Approved by: Tunde Morakinyo

Signed:

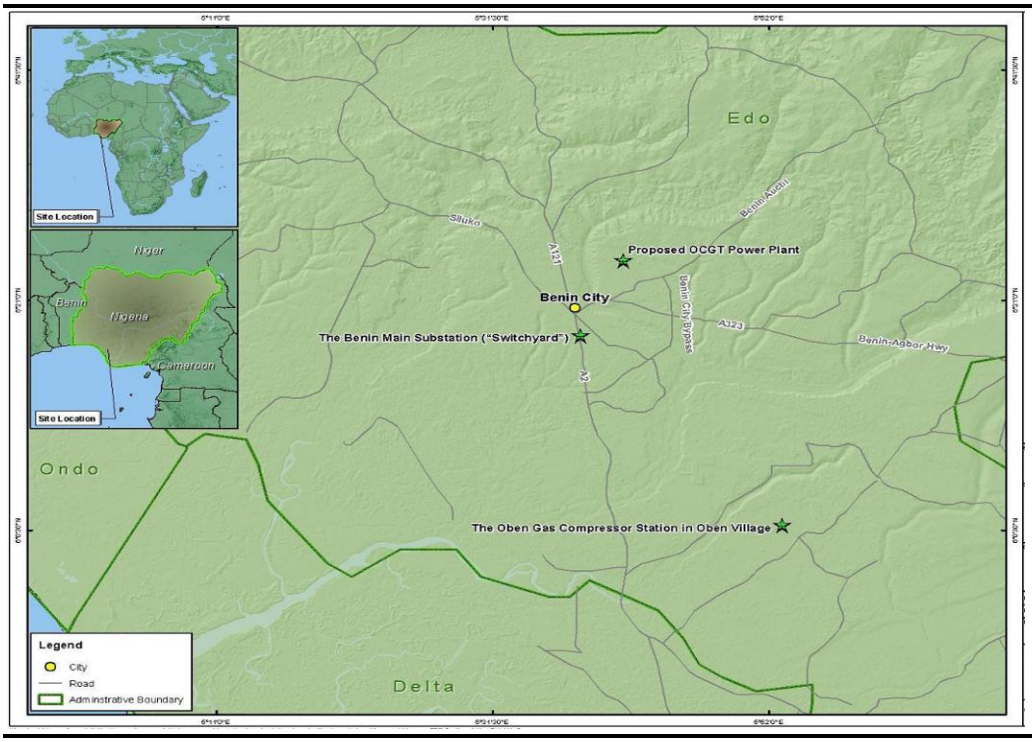
Position: Partner

Date: 15th December 2011

A1.1 BACKGROUND TO THIS DOCUMENT

Environmental Management Resources (ERM) has been appointed to prepare an Environmental Impact Assessment (EIA) and a Resettlement Action Plan (RAP) on behalf of Azura West Africa ('Azura'), for the construction of an independent power plant (IPP) and associated transmission line in the north-eastern outskirts of Benin City in Edo State, Nigeria. The following Stakeholder Engagement Plan (SEP) is a part of this process as required by Nigerian legislation.

Figure 1.1 Location of the project



This SEP defines the overarching strategy for consultation and engagement throughout the ESIA and RAP process with those directly affected by the Project, including local communities, the Government, NGOs and other identified stakeholder groups (a detailed description of stakeholder groups is outlined in *Section 3)*.

The SEP also sets out the strategy for the consultation required as part of the resettlement process.

The key objectives of this SEP are to:

- ensure that adequate and timely information is provided to identified stakeholders;

- provide sufficient opportunity to stakeholders to voice their opinions and concerns, and to ensure that these concerns influence project decisions.

A1.2 STAKEHOLDER CONSULTATION AND DISCLOSURE

Stakeholder engagement refers to a process of sharing information and knowledge, seeking to understand and respond to the concerns of others and building relationships based on collaboration. As such, stakeholder consultation and disclosure form key elements of engagement and are essential for the successful delivery of this project.

In this SEP, consultation is understood to be an inclusive and culturally appropriate process aimed at providing stakeholders with opportunities to express their views, so that these can be considered and incorporated into the decision making process. Effective consultation requires the prior disclosure of relevant and adequate project information to enable stakeholders to understand the risks, impacts, and opportunities of the project.

This SEP concentrates on consultation and disclosure activities during the Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) process, which are being undertaken to inform investment and design decisions. It will also include reference to consultation activities that will be undertaken by Azura as part of the later stages of stakeholder engagement during detailed design, construction and operation of the project.

A1.3 PURPOSE OF THIS PLAN

Azura is committed to undertaking stakeholder engagement in a manner which is consistent with international good practice, a summary of which is presented in *Section 2.*

In line with current international best practice, the engagement activities outlined within this SEP will ensure '*free, prior and informed consultation of the affected communities*'(1) and conducted on the basis of timely, relevant, understandable and accessible information, in a culturally appropriate format.

The primary goals of the SEP are:

- to define a consistent, comprehensive, coordinated and culturally appropriate approach to stakeholder engagement throughout the development of the Project;

- to generate a good understanding of the project by ensuring that adequate, appropriate and timely information is provided to stakeholders;
- to ensure stakeholders understand the potentially significant environmental and social impacts of the Project;

(1) IFC Performance Standard 1 on Social and Environmental Assessment and Management Systems, 2006. Page 5.

- to understand local opinion, expectations and concerns about the Project;
- to manage expectations and possible misconceptions about the Project;
- to assist in developing effective mitigation measures and management plans for these impacts;
- to optimise any local benefits that can be delivered throughout the Project;
- where possible , to enable affected communities to have an influence on and be involved in project design, construction and operation; and
- to lay a good foundation for future stakeholder engagement.

In addition the SEP is designed to:

- identify and include additional stakeholders that were not identified during previous engagement activities;
- document previous engagement activities that have occurred;
- devise a plan for engagement activities going forward taking into account activities that have occurred; and
- provide an overview of the high level Grievance Mechanism being developed.

The SEP is a 'live' document, which will be updated and adjusted as the EIA and the RAP progress and project planning evolves. It has thus provided, and continues to provide, a framework to facilitate and manage effective and meaningful engagement with key stakeholders.

A1.4 STRUCTURE

This SEP is organised in the following subsequent sections:

- ***Section 2:*** National and International Regulations and Requirements for Stakeholder Engagement;
- ***Section 3:*** Stakeholder Identification and Analysis;
- ***Section 4:*** Stakeholder Engagement Strategy and Key Issues Raised To-Date;
- ***Section 5:*** Photograph Log;

- ***Section 6:*** Grievance Mechanism;
- ***Section 7:*** Resources and Responsibilities; and
- ***Section 8:*** Monitoring and Reporting on Stakeholder Engagement Activities.
- *Appendix A: Example of a Grievance Mechanism*
- *Appendix B: Meeting Minutes*

A2 NATIONAL AND INTERNATIONAL REGULATIONS AND REQUIREMENTS FOR STAKEHOLDER ENGAGEMENT

A2.1 INTRODUCTION

Actions to be taken within the framework of Stakeholder Engagement and information disclosure will comply with the requirements of:

- relevant Nigerian legislation applicable to the project;
- principles and procedures specified by the World Bank in their Performance Standards and safeguard policies; and
- any policies adopted by Azura.

A2.2 NIGERIAN LEGISLATIVE REQUIREMENTS FOR STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE

In Nigeria, public authorities hold the main responsibility for informing the public about developments that might affect the environment.

The Federal Ministry of Environment (FMEnv) issues guidelines for environmental impact assessments for different industries. It also provides publications to inform the public of applicable effluent emission levels and other standards in place to prevent environmental pollution. FMEnv is the approving authority for EIAs in Nigeria.

Section 55 of the EIA Act provides for the maintenance of a Public Registry for the purpose of facilitating public access to records relating to environmental assessments. Public hearings to which interested members of the public are invited are a key part of the approval process for EIA reports by the FMEnv.

Section 6(b) of the Federal Environmental Protection Agency (FEPA) Act stipulates that FEPA has the authority collect EIA information and make it available through publications and other appropriate means.

The public authorities, in cooperation with public or private organisations, are also responsible for making information available pertaining to pollution and environmental protection regulations. Members of the public and persons requiring clarifications on environmental issues can visit the offices of the FMEnv or the relevant State environmental agency for environment-related information.

A2.3 WORLD BANK REQUIREMENTS FOR STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE

The project will endeavour to meet standards and requirements set out by the World Bank safeguard policies as defined below:

A2.3.1 World Bank OP 4.01 - Environmental Assessment

If there are risks or adverse impacts from the Project, engagement must be inclusive and culturally appropriate and provide stakeholders with opportunities to express their views. In line with current guidance from the IFC, engagement should ensure '*free, prior and informed engagement of the affected communities* [(1)].' OP 4.01 requires at least one round of engagement early in the ESIA process, and again one on the draft ESIA report before decision-making. In other words, effective engagement requires the prior disclosure of relevant and adequate project information to enable stakeholders to understand the risks, impacts, and opportunities.

A2.3.2 World Bank OP 4.12 – Involuntary Resettlement

In addition the safeguard policy on involuntary resettlement, physical and economic dislocation, OP 4.12, states that World Bank funded developmental projects should avoid or minimise displacement as much as possible. Unavoidable displacement should involve the preparation and implementation of a Resettlement Action Plan (RAP) or an Abbreviated Resettlement Plan (ARP) to address the direct economic and social impacts resulting from the resettlement. The nature and scale of the proposed project requires the development of an RAP.

OP 4.12 stipulates the following minimum requirements for a RAP with regard to stakeholder engagement:

- a census survey of displaced persons and valuation assets;
- description of compensation and other resettlement assistance to be provided;
- engagement with displaced people about acceptable alternatives;
- institutional responsibility for implementation and procedures for grievance redress;
- arrangements for monitoring and implementation; and
- a timetable and budget.

(1) IFC, 2006: p. 5

Box 2.1 World Bank standards

The WB Operational policy 4.12 on involuntary resettlement states, as a policy objective, that 'displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programmes (para 2 [b]). The OP further requires that the resettlement plan or resettlement framework includes measures to ensure that 'the displaced persons are…..consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives' (para 6 [a]).

The OP provides additional guidance that 'displaced persons and their communities, and any host communities receiving them, are provided with timely and relevant information, consulted on resettlement options and offered opportunities to participate in planning, implementing and monitoring resettlement. Appropriate and accessible grievance mechanisms are established for those groups' (para. 13 [a]).

OP 4.12 provides a detailed outline of the elements of a participation plan: Involvement of resettled and host communities, including

(a) a description of the strategy for consultation with and participation of resettled and host communities in the design and implementation of the resettlement activities;
(b) a summary of the views expressed and how these views were taken into account in preparing the resettlement plan;
(c) a review of the resettlement alternatives presented and the choices made by displaced persons regarding options available to them, including choices related to forms of compensation and resettlement assistance, to relocating as individuals, families or as parts of pre-existing communities or kinship groups, to sustaining existing patterns of group organization, and to retaining access to cultural property (eg places of worship, pilgrimage centres, cemeteries), and
(d) Institutionalized arrangements by which displaced people can communicate their concerns to project authorities throughout planning and implementation, and measures to ensure that such vulnerable groups as indigenous people, ethnic minorities, the landless, and women are adequately represented.

A3 STAKEHOLDER IDENTIFICATION AND ANALYSIS

A3.1 INTRODUCTION

For the purposes of this plan, a stakeholder is defined as any individual or group who is potentially affected by the project or who has an interest in the project and its potential impacts (1). The objective of stakeholder identification is therefore to establish which organizations and individuals may be directly or indirectly affected (positively and negatively), or have an interest in the project. Stakeholder identification is an ongoing process, requiring regular review and updating as the project proceeds.

A3.2 STAKEHOLDER IDENTIFICATION AND MAPPING

In order to develop an effective Stakeholder Engagement Plan it is necessary to determine:

- who is likely to be affected (both directly and indirectly) by the project; and
- who may have an interest in the project.

As part of the stakeholder identification process it is also important to identify individuals and groups that may be differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status.

Different issues are likely to concern different stakeholders and so stakeholders have been grouped based on their potential connections to the project in *Table 3.1*. Having an understanding of the connections of a stakeholder group to the project helps identify the key objectives for and best approaches to engagement for differing groups and individuals.

Deciding on which mechanism to use is dependent on the level of feedback required, as well as on the ease with which participants can be involved in the engagement activity. One-on-one meetings and village meetings may be more appropriate for directly affected stakeholders where a two-way information flow is required to understand opinions and concerns. Press releases might be more appropriate for the general public (not directly impacted) where the engagement is more about information dissemination as opposed to seeking opinions and concerns.

(1) This is considered to be equivalent to the definition of 'the public concerned' as discussed in the 2000 Implementation Guide to the Aarhus Convention (UN/ECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (see http://www.unece.org/env/pp/acig.pdf))

A list of the organisations identified to date is provided in *Section 4*, together with a plan for their involvement in the various phases of engagement. This list will be kept up to date as new stakeholders are identified or express an interest in the project. Contact details of the majority of the individuals/ institutional stakeholders have also been compiled by the EIA team to enable the project to readily communicate with each stakeholder. This information may be kept on a database for ease of use, but will not be shared with any third party.

Table 3.1 Stakeholder Groups and Connections to the Project

Stakeholder Groups and Types	Connections to the Project
Government and Community Leadership	
Government – National	National and regional government individuals are of primary political importance to the project with permitting requirements that must be met by the project.
Government – Provisional	
Government – District	
Local Leaders (eg Chief, elders)	Local community leaders and religious or educational leaders, acting as representatives of their local community.
Communities	
Communities in the vicinity of the proposed power plant site	Households and communities that will receive impacts (positive or negative) as a result of the project.
Community Based Organisations (CBOs)	
Vulnerable groups such as women, youth and elderly	Vulnerable groups may be affected by the project by virtue of their physical disability, social or economic standing, limited education, lack of employment or housing. They may also have difficulty in engaging with the stakeholder consultation process and thus may not be able fully express their concerns regarding the project.
Private Sector	
Business organisations	Individuals or organisation with direct economic interest in the project. This may be through gaining contracts with the project or due to economic impacts caused by the project. They may also be potential business partners.
Companies - potential suppliers and contractors	
Financial Lenders	
International financial institutions.	Multilateral, bilateral and private sectors financial institutions providing project finance for construction of the project
Nongovernmental Organisations	
Local NGOs	Organisations with direct interest in the project and that are able to influence the project directly or through public opinion. Such organisations may also have useful data and insight and may be able to become partners to the project in areas of common interest.
Other	
Research/Academic Institutions	Other international, regional and local groups with direct interest in the project.

A3.2.1 Regulators

Regulators are mainly government authorities or organisations who have the power to influence the Project in terms of the approvals' process, ensuring compliance with Nigerian Law throughout all stages of the project life-cycle including planning, construction, operation and decommissioning. It is therefore also important to engage with all appropriate regulators from an early stage and to maintain relationships with these groups.

The following regulatory groups were identified in the scoping phase:

- The Federal Ministry of Environment (FMEnv), Abuja;
- The Federal Ministry of Power;
- Nigerian Electricity Regulatory Commission (NERC);
- The Edo State Ministry of Environment and Public Utilities (MEPU); and
- The Department of Petroleum Resources (DPR) offices in Edo State.

The Project will continue to communicate closely with these agencies as the Project progresses, in the context of formal applications for relevant licences and through one-on-one meetings.

A3.2.2 Other Government Agencies

Local Government Area (LGA) Councils

The Project will be located in the area of the Unhumnwonde Local Government Area (LGA). All relevant departments of this LGA council will require ongoing engagement throughout all stages of the Project. This will ensure that they understand what is happening in their area, thereby enabling them to consider Project activities in their wider planning and work.

State Government

The Edo State Government will also need to be engaged on a continuous basis to ensure it understands what is happening in the State, so as to be in a position to consider the Project activities in their wider planning and activities. Particular agencies within the State Government that will be engaged include:

- The Governor's office;
- Ministry of Environment and Public Utilities;
- Ministry of Lands, Surveys and Housing; and
- Ministry of Energy and Water Resources.

National Government

The National Government and relevant ministries (as listed above) shall be provided with information about the Project as relevant.

A3.2.3 Community

Community Leaders

Traditional Leaders, their councils and the leaders of other social groups in the communities, such as women and local farmers, health workers and teacher groups, should all be engaged on a continuous basis about all aspects of the Project that may impact on their community, lands and other assets.

Meetings with these groups need to follow local practices and norms and be held prior to any wider communication in the villages in order to respect traditional structures.

Communities, Community Based Organisations (CBOs) and Vulnerable Groups

The communities identified during the Scoping Phase as affected by the Project are Orior-Osemwende, Ihovbor and Idunwow-Urho-Nisen. These are communities located within one kilometre of the power plant site. Stakeholder groups identified within these communities include chiefs, farmers, religious priest, traditional leaders, land allocation members, village chairmen, community valuer, Enogie, women, teachers, health workers and other groups.

Specific community based organizations (CBOs) were identified as important for engagement, both as representatives of the local community, and as effective means of disseminating Project information to their members. These groups include women's groups, youth groups and elderly groups in each of the three communities.

Based on the characteristics of the affected area, communication with local stakeholders, including advertisement of the grievance mechanism, will be conducted through community meetings. These will be held with all members of the communities at specific project milestones, for example at the end of the construction phase and beginning of the operational phase, to ensure that all voices in the community are heard. Communication with the communities will also include use of local media.

In addition, it is important to consult with groups classified by the World Bank as potentially marginalised or vulnerable. These groups need to be consulted separately since they may need particular attention and they may not necessarily be adequately represented through the traditional leadership structure. These targeted engagement measures ensure that vulnerable groups are also fully aware of the Project and are able to provide comments and concerns. The main stakeholder group identified as vulnerable by the study is women, by virtue of their economic vulnerability and their lack of opportunity to participate in decision making systems within the local cultural context. Women may not always be unable to attend or speak freely at open meetings and/or may have household restrictions on when they are able to attend such meetings.

To ensure adequate representation of women, the Project will hold women's meetings at times and places that suit the women in each community. These meetings will be led by a female member of the Project team, where possible. Where appropriate, these meetings will be organised through women-focused Community Based Organisations (CBOs).

Elderly and youth have also been identified as potentially vulnerable, also because of their economic marginalisation and limited input in local decision-making. As such, engagement activities will also specifically target groups of these stakeholders, to ensure that their views are accurately represented and that they are provided with full information about the Project and potential impacts that affect them.

A3.2.4 NGOs

NGOs can be important to engage with for a number of reasons. They may hold information of use to the Project, they may have concerns or actively campaign against the Project, or they may be potential partners (eg for social investment, monitoring etc).

The Project identified the Nigerian Conservation Foundation (NCF) as a key stakeholder. Other NGOs include Pro-Natura International Nigeria (PNI) and the Lift Above Poverty Organisations Microfinance Bank (LAPO). The main mechanism for engagement with NCF and other relevant NGOs is through face-to-face meetings at key stages of project development (eg at the onset of construction).

A4 STAKEHOLDER ENGAGEMENT STRATEGY AND KEY ISSUES RAISED TO DATE

This section of the SEP provides an overview of the stakeholder engagement strategy for the proposed project. In light of clear synergies between the ESIA and the RAP development process, ERM adopted an integrated approach to stakeholder engagement, consultation and socio-economic data collection, using common tools especially during the early phase of the ESIA work.

This section therefore summarises the key issues raised by stakeholders to date during the Scoping, EIA Study and RAP stages of engagement. The information provided in this section will aid the identification of proposed mitigation measures for the Project, which will be announced during Stage 3 of engagement – EIA and RAP Disclosure.

A4.1 STAKEHOLDER EIA AND RAP ENGAGEMENT STRATEGY

The EIA and RAP Engagement Strategy has been divided into four stages, each having slightly different objectives for engagement as presented in *Table 4.1.* Stage 2 was the latest stage of engagement and was held between June and October 2011.

Table 4.1 Stages of Consultation

Stage	Objective	Progress
1. Scoping	Set out the process of engagement throughout the lifecycle of the project and preliminary stakeholder identification.	Completed (October 2010)
2. EIA and RAP Study	Inform local stakeholders about project design, to obtain their key concerns and high level issues and to inform the development of mitigation for the Project.	Completed (June-July 2011)
	Train sub-consultants and the local government authority regarding the consultation during the EISA Phase and the resettlement process.	Completed (June-July 2011)
	Detailed Enumeration Study using participatory planning methods.	Completed (August 2011)
	Asset Census Survey using qualitative and quantitative questionnaires	Completed (October 2011)
3. EIA and RAP Disclosure	Public notice of the opportunity for information and comment on the draft EIA and RAP report for the Project.	Planned (January 2012)
4. Project Execution (construction and operation)	Ongoing engagement after submission of the EIA and RAP to monitor the success of mitigation measures.	To be planned in future

The stages of consultation consist of the following elements:

Stage 1: Scoping:

- Stakeholder identification and mapping; and

- Initial engagement with Government Authorities to inform them about the Project.

Stage 2: EIA and RAP Study

- Further engagement with the stakeholders consulted during scoping as well as with additional groups. The outcomes of these consultations were used to fine tune the scope and strategy for the next stage of data collection.

- Local community leaders and groups of key stakeholders in Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen were consulted further to provide them with an overview of the proposed EIA and RAP process, potential project impacts and likely mitigation measures. This was carried out at the same time as the collection of further baseline data using qualitative and consultative processes to better understand the stakeholders and their perceptions of the Project.

- One-on-one key informant interviews, village-level discussions and FGDs were also employed to explore the range of resettlement-related impacts of the Project's land acquisition process and other relevant issues.

- NGOs, private sector, research institutions and the general public/media were also engaged through one-on-one meetings, letters and a press release.

Stage 2A: Training and Capacity Building

A training workshop was organised by ERM for the local EIA consultants and local Government Authorities and aimed to:

- Discuss Project risks and the importance of stakeholder consultation as well as key 'dos and don'ts' of stakeholder consultation;

- Outline and explain the need for resettlement and a Resettlement Action Plan (RAP), including explaining the land acquisition and resettlement requirements of Nigerian legislation and international standards (specifically, World Bank OP 4.12);

- Define and provide an understanding of resettlement and key resettlement terms, including an overview of World Bank Policy OP 4.12 and key resettlement principles;

- Provide an overview of the resettlement process and an understanding of the processes involved in a RAP;

- Carry out a comparative analysis and gap assessment between the RAP process followed by the state government and that set out by the World Bank Operational Policy 4.12; and

- Facilitate an understanding of eligibility and entitlement for a RAP.

The training also served as an opportunity to finalise the socio-economic baseline survey and asset valuation questionnaires. The training workshop was concluded in July 2011.

Following the training workshop, stakeholder consultation and meetings were held with various government departments including:

- Edo State Ministry of Environment and Public Utilities (MEPU)
- Edo State Rural Electrification Board
- Edo State Ministry of Lands, Surveys and Housing; and
- Edo State Ministry of Energy and Water Resources
- Edo State PPP office
- Edo State Lands Survey Department
- Unhumnwonde LGA

Annex B contains the minutes of the meetings held with these stakeholders.

Stage 2A: Detailed Enumeration Study for RAP

Following preliminary investigations it was found that resettlement of certain communities was required and would thus require an enumeration survey. Although this enumeration survey is required for the RAP, the result s of the survey was also used to augment the socio-economic study and, as such, the associated consultation activities are also described below.

The socio-economic enumeration survey was conducted from the 22nd-27th August 2011 by a team that was composed of four surveyors from the Ministry of Lands, Survey and Housing and the four social specialists from the University of Ibadan. The survey covered the three key communities of Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen, with the aim of obtaining baseline socio-economic data and a quantitative description of the communities surrounding the proposed project, to inform the preparation of the RAP. The survey focussed on identifying all households, graves and shrines within these three communities.

The collection of additional data on the existing land users in the area also provided an opportunity to inform the community about the Project, obtain community approval for the forthcoming asset census survey and to define the cut-off date for this survey. The results of the survey are being used to

plan an asset census survey which will assess the direct economic and social impacts resulting from the proposed resettlement.

The detailed outcome of the survey will be further discussed in the RAP, which is being produced alongside the EIA. Further details of meetings held as part of the enumeration survey can be found in *Annex B*.

Stage 2A: Asset Census Survey for RAP

As part of the requirements for an international standard RAP, an asset census survey was carried out in the Project-affected communities Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen. The census made use of detailed questionnaires and census forms to develop a detailed understanding of the socio-economic profile of the affected communities, including property, livelihoods, housing and income/ savings.

In addition to being used to calculate compensation as part of the RAP, the information gathered during the asset census survey will be used to inform the social baseline, impact assessment and development of management measures.

The asset census survey was completed in October 2011.

Stage 3: EIA and RAP Disclosure:

As part of the formal regulatory process, the FMEnv will disclose the draft EIA report and RAP for the Project and invite public comments. Public stakeholders at both the state and LGA levels will be invited to provide their input. This notification is typically done through a newspaper announcement and is currently planned to be undertaken in December 2011.

The entitlements matrix developed as part of the draft RAP may need to be revised and augmented following disclosure and subsequent engagement.

Stage 4: Project Execution:

This stage involves ongoing engagement after submission of the EIA and RAP. RAP implementation will begin and engagement activities will be carried out to monitor implementation and effectiveness of other mitigation measures. This stage will also be designed to build on positive stakeholder relationships established during the EIA and RAP process and carry these forward through Project implementation and operation.

Stakeholder engagement activities and specific discussion areas for Stages 1 and 2 of the engagement strategy are detailed in *Table 4.2* below. Activities for Stages 3 and 4 will be detailed in the subsequent version of this SEP.

Table 4.2 Stakeholder Engagement Activities to Date

Consultation Stage	Engagement Activity	Stakeholders	Specific Discussion Areas	Timing
Stage 1: Scoping				
Government Authorities: National, state and local authorities whose support is needed for political and regulatory approval of the Project	• Meeting with State Government Officials	• Edo Ministry of Energy and Water Resources	• Consultation with affected communities: continuous consultation with stakeholders is needed throughout Project implementation; • Potential positive impacts: reduction of gas flaring, employment opportunities, and improvement in electricity supply; • Compensation for affected farmland.	December 2011
		• Edo Ministry of Lands, Surveys and Housing	• None: The Permanent Secretary declined to comment on the Project until his Ministry has conducted a visit to the proposed Project site at Ihovbor	December 2011
		• Edo Ministry of Environment and Public Utilities	• Consultation with affected communities: continuous consultation with stakeholders is needed throughout Project implementation; • Compensation for affected farmland: Concern that a poor inventory of assets would lead to inadequate compensation of affected communities; • Risk of accidents for people living near the plant: The power plant should be built in line with the highest safety standards. • Potential positive impacts: reduction of gas flaring, employment opportunities	December 2011
	• Meeting with Local Government Officials.	• Uhunmwode Local Government Area Council.	• Consultation with affected communities; • Compensation for affected farm land; • Potential positive impacts: employment opportunities for local people and provision of electricity to local people.	December 2011

Consultation Stage	Engagement Activity	Stakeholders	Specific Discussion Areas	Timing
Stage 2: EIA Study				
Community Engagement, engagement with local groups and traditional leaders, as well as further engagement with government authorities.	• Meeting with Edo State Land Department.	• Lands Officials • Public Private; Partnership (PPP) Representatives; • ERM Representatives; • Local Community Liaison Officer (CLO).	• Cut off date for enumeration and asset census. No legislative concept of a cut off date which can be followed by the land department; • Issue of new graves and other construction activities, as compensation only given for improvements to land; • Once compensation money allocated, people will go to the Enogie and pay a fee to gain permission to settle into new communities; • The enumeration process is asset, not household driven, and no format exists at present for use by the land department; • The acquisition process- steps; • Common understanding of issues between ERM and the land department.	27 July 2011
	• Meeting with Edo State Ministry of Lands, Survey & Housing.	• Government Officials; • Azura Representatives.	• The ministry has previously worked on projects funded by the World Bank (WB) and its requirements for resettlement; • The ministry has no objections to working with ERM and to the standards set by the WB and suggested that the land department work with ERM on the resettlement process; • The asset census form used by the government will be shared with ERM, and ERM's census survey and social baseline will be used to achieve WB standards; • Power is vested in the state and Edo State governor, who has the authority to make decisions with respect to land; • Land exploration is first approved by the governor and published in the gazette. Field surveys are then conducted and final compensation payments are allocated on approval of the governor.	27 July 2011
	• Meeting with Edo State Ministry Office Public Private Partnership (PPP) Office.	• Government Officials; • Azura Representatives; • PPP Office.	• Update on the EIA and RAP Process; • Key Concerns of the Ministry; • Request for support in conducting the EIA and RAP process.	27 May 2011

Consultation Stage	Engagement Activity	Stakeholders	Specific Discussion Areas	Timing
		• Local Councillors; • Local People; • Azura Representatives.	• Enogies are the traditional leaders of the communities; • Institutional clarity between the LGA and Councillors and traditional leadership; • The need for a grievance mechanism throughout the Project.	27 July 2011
Stage 2A Resettlement Action Plan	• Key informant interviews and Focus Group Discussions	• Local leaders • Traditional community leader • Local people • Director of Land • Permanent Secretary of Land • Director of Power • NGO representatives	• Consultation of potential resettlement-related impacts of the Project's land acquisition process	
	• Training for local government officials and local sub-consultants	• Sub-consultants • Government Departments	• Key Project risks; • Need for resettlement and a RAP • Define and clarify key resettlement terms and principles including World Bank OP 4.12 • Criteria around resettlement, including Nigerian and WB standards and process; • Procedures for stakeholder engagement; • Eligibility and entitlement for compensation as part of the RAP • Gap analysis between state government RAP process and process set out by World Bank OP 4.12	July 2011

Consultation Stage	Engagement Activity	Stakeholders	Specific Discussion Areas	Timing
	• Detailed Enumeration Survey for RAP	• Team of surveyors from Ministry of Lands, Surveys and Housing, and specialists from sub-contractor's social team. • Communities of Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen	• Collection of socio-economic baseline data; • Enumeration of physical & cultural community resources; • Description of Project and EIA; • Upcoming asset census survey; • Cut-off date for census survey.	August 2011
	• Socio-economic and Asset Census Survey for RAP	• Communities of Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen	• Household & community socio-economic conditions; • Enumeration & valuation of household assets; • Enumeration & valuation of land & livelihood assets; • Public perceptions regarding the Project	September 2011
Stage 3: EIA and RAP Disclosure				
TBC				
Stage 4: Project Execution and RAP implementation				
Activities to be carried forward by the Project promoter				

A4.2 SUMMARY OF KEY ISSUES RAISED TO DATE

Table 4.3 provides an overview of the key issues raised by stakeholder during Stages 1-2. This will be updated as the Project progresses so that issues can be assessed and managed as part of Project development.

Table 4.3 Key Issues

Key Issue	Description
Project Concerns	
Consultation	• Continuous consultation with stakeholders is needed throughout Project implementation. • Who will be primary responsible for the consultation? • How often will we be consulted? • All the consultation should be held with all accredited members of the executive council and chiefs of the community. • Respect and recognition of the community leader; chiefs; and tradition and customs of the people. • Formal complaint lodged regarding omission of Orior-Osemwende and Idunmwowina-Urho-Nisen from the revocation of right of occupancy and compensation notice published in newspapers. No further consultation was permitted until correction was made • Request a post-survey meeting of all 3 communities, with representation from the Government and the Project, to confirm land contribution
Compensation	• Concern that a poor inventory of assets would lead to inadequate compensation of affected communities. • Are we going to be paid compensation by Government?
Legacy Issues	• Following experience of last NIPP project, Orion and Idunmwowina-Urho-Nisen worry about unfair distribution of compensation • Orior-Osemwende and Idunmwowina-Urho-Nisen were unhappy that the previous NIPP project was named after Ihovbor, although all three communities gave up land. They don't want to see the same happen this time. • Orior-Osemwende and Idunmwowina-Urho-Nisen were unhappy that Ihovbor received the benefits of the NIPP (jobs, infrastructure, etc) and worry that the same could happen again.
Social Infrastructure:	• Concern about the provision of basic social infrastructure and amenities such as schools, hospitals, potable water.

Key Issue	Description
Health & Safety	• Fear of 'heat' from buried gas pipelines to nearby communities. • Risk of accidents for people living near the plant: The power plant should be built in line with the highest safety standards. • As far as possible community should operate with the minimum disruption of their means of livelihood of the people by adopting measures to mitigate any adverse impact on the environment. • All road traffic regulations and speed limits should be obeyed to prevent accidents, loss of lives and property, during the different stages of Project. •
RAP Impacts	
	• Idunmwowina-Urho-Nisen community does not have its own land to resettle displaced people • Orior-Osemwende community has enough land to resettle all displaced people and is willing to do so • The customary right to land ownership in the proposed resettlement lies with the Enogie, who allocates land in consultation with the community elders • Some issues identified by potentially displaced people concern lack of access to adequate street light; lack of access to a good road network; population explosion; security issues related to the influx of people • Issues considered in choosing resettlement sites include security, improving current living conditions, and improving accommodation standards
Potential Positive Impacts	
Employment	• Hopes that the Project will provide employment opportunities for the local community. • Preferential employment for the people who are likely to lose their land.
Provision of Electricity	• Hopes that the Project will allow improved access to electricity.
Reduction of gas flaring	• Hopes that the Project will reduce gas flaring.

It is important that issues raised throughout the Project cycle are recorded in a logical and systematic way. Issues that have been raised during the consultation process will therefore continue to be logged in order to monitor and manage stakeholder concerns.

Azura will need to undertake ongoing engagement with the communities in close vicinity to the Project going forward to ensure a good relationship is established and maintained with these communities.

A4.3 HOST SITE IDENTIFICATION AND RELOCATION

In line with international best practice, a participatory approach was used to identify resettlement sites for the affected communities (see *Table 4.1*). This method actively incorporates affected groups into the decision-making process and ensures that their preferences are taken into account. Active consultation with affected people increases the likelihood that the resettlement site/s ultimately chosen will be acceptable to all, and will provide a sustainable context within which to ensure that living conditions and livelihoods are at least restored to, and preferably improved beyond, pre-Project levels.

The communities were engaged in discussion on possible resettlement areas during the household survey, as a part of the initial stakeholder consultations, and also in consultations during the final stages of the valuation. The communities have also been regularly consulted by Azura West Power Limited through discussions with the Enogie, in order to understand their expectations regarding resettlement options and preferences for any specific resettlement site option.

Figure 4.1 The Participatory Resettlement Site Selection Process

Consultation about possible resettlement sites took place as part of initial Project stakeholder engagement activities, as well as during the more detailed socio-economic fieldwork that followed. Both the communities pending physical and / or economic displacement were consulted, as was the host community that currently resides in Resettlement Site 2 (see below).

Figure 5.1 Consultation with the permanent Secretary for Edo State Ministry of Lands

Figure 5.2 Social team in consultation with the Edo State Public Private Partnership

Figure 5.3 Consultation with Minister of Land, Survey and Housing

Figure 5.4 Consultation with Minister of Edo-State

Figure 5.5 Community Engagement- Ihovbor-Evboeka Community

Figure 5.6 Community Engagement Orior-Osemwende Communities

Figure 5.7 Community Consultation Idunmwuowina-Urho-Nisen Communities

Figure 5.8 Sensitization meeting in Orior Community

Figure 5.9 Consulting community on process for valuation and socio-economic survey

Figure 5.10 Valuation of economic assets in Iduiwina community

Figure 5.11 Meeting with the Enogie prior to undertaking the valuation and socio-economic survey

Figure 5.12 Verification of enumeration data by community leader and community valuer

Figure 5.13 Interview with a poultry farm owner on project site

Figure 5.14 Household survey with female headed household

Figure 5.15 Identification of potential relocation sites using participatory site selection

Figure 5.16 Team members meeting with ERM Staff and Azura Project Manager

A6 GRIEVANCE MECHANISM

A6.1 OVERVIEW

Grievances are any complaints or suggestions about the way a project is being implemented. They may take the form of specific complaints for damages/injury, concerns about routine project activities, or perceived incidents or impacts. Identifying and responding to grievances supports the development of positive relationships between projects and the communities, and other stakeholders they may affect. Grievance mechanisms therefore provide a formal and ongoing avenue for stakeholders to engage with the company, whilst the monitoring of grievances provides signals of any escalating conflicts or disputes.

A6.2 BEST PRACTICE PRINCIPLES

The IFC Performance Standards outline requirements for grievance mechanisms for some projects. Grievance mechanisms should receive and facilitate resolution of the affected communities' concerns and grievances. The IFC states the concerns should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, at no cost and without retribution. Mechanisms should be appropriate to the scale of impacts and risks presented by a project.

If the grievance system fails to provide a satisfactory result, complainants can still seek legal redress. The grievance system should be accessible to all affected parties.

A6.3 KEY OBJECTIVES OF THE GRIEVANCE MECHANISM

The primary objectives of a grievance management are to:

- build and maintain trust with community stakeholders;
- prevent the negative consequences of failure to adequately address grievances; and
- identify and manage stakeholder concerns and thus support effective risk management.

An effective grievance management process should include the components described in

Table 6.1.

Table 6.1 Key components of an effective grievance mechanism

Component	Description
Simple Process	It should be convenient to submit complaints. There should be several, appropriate channels through which community stakeholders can submit complaints free of charge (eg, no travel costs, free phone number) as well as the informal identification of complaints (eg when the Azura employees (or subcontractors) are approached at meetings with the community). The grievance management process should be communicated and disclosed so that community stakeholders are aware of the avenues available to them to submit complaints.
Simple Internal Procedure	A simple and consistent procedure is required to record grievances, identify those responsible for addressing them and ensure that they are resolved. The procedure must maintain the confidentiality of the complainant and ensure fairness (fair to the stakeholder, fair to Azura, and consistent). Transparency in how the grievance management process works; and involvement of stakeholders in developing resolutions, can help. Responses should seek to address all issues in a grievance and be clearly justified.
Staff Arrangements	Roles and responsibilities in the grievance management process need to be defined and agreed. For example, an Azura Grievance Officer (GO) will be assigned and responsible for the coordination of the grievance management process, from receiving a complaint to reporting back the response. Once received, complaints should be directed to an appropriate staff member/department for investigation and resolution, to ensure an effective response. Even where a formal system has been established, staff not associated with the grievance management process will receive complaints from stakeholders. Systems for managing and forwarding these should be established and all staff trained on how to respond to stakeholders and to feed into the grievance management process.
Training	The launch or modification of the grievance management process should include internal induction and/or training for operational staff and Community Liaison Officers. Training should outline key components, commitments and lines of communication in the process, and roles and responsibilities.
A Set Timeframe	The grievance process should set a timeframe within which complainants can expect: a) acknowledgement of receipt of grievance; and b) response and/or resolution of grievance. The timeframe should be feasible, whilst respecting community stakeholders' need for a swift response and resolution. Where complaints are urgent, tighter timeframes may need to be considered.

Component	Description
Sign–Off	Actions planned to resolve grievances considered to be of significant concern by the GO should be signed off by a member of the senior management, suitably qualified to assess the effectiveness of the response. This will help to ensure standards are met and that there is accountability in the grievance management process.
System of Response	A clear system of response is required to identify who should respond to the complainant and how.
Monitoring Effectiveness	Mechanisms should be set in place for monitoring the effectiveness with which complaints are being recorded and resolved. Reporting locally on the volume and nature of complaints received, and on key performance indicators helps to maintain transparency and trust.

The aim of the grievance procedure is to ensure that all grievances that are received are acknowledged and logged and that the complainant knows what to expect in terms of response and when.

The grievance mechanism will be advertised and announced to affected stakeholders so that they are aware of the process, know they have the right to submit a grievance, and understand how the mechanism will work and how their grievance will be addressed. In most cases, a grievance or complaint will be submitted by a stakeholder or community member by phoning, writing to or speaking with one of the company's Community Liaison Officers (CLOs).

A6.4 PROCESS FOR MANAGING GRIEVANCES

There are 10 steps that complete the grievance process. This process is summarised in *Figure 6.1*, and each step is described below.

Step 1: Identification of grievance through personal communication with Azura, phone, letter, during meeting, other.

Step 2: Grievance is recorded in the 'Grievance Log' (written and electronic) within one day of identification. The grievance log will be held at Azura's office. The significance of the grievance will then be assessed within five to seven days using the criteria outlined in *Box 6.1*.

Box 6.1 Significance criteria

Level 1 Complaint: A complaint that is isolated or 'one-off' (within a given reporting period - one year) and essentially local in nature.

Note: Some one-off complaints may be significant enough to be assessed as a Level 3 complaint eg, when a national or international law is broken (see Level 3).

Level 2 Complaint: A complaint which is widespread and repeated (eg, dust from construction vehicles).

Level 3 Complaint: A one-off complaint, or one which is widespread and/or repeated that, in addition, has resulted in a serious breach of Azura's policies or National law and/or has led to negative national/international media attention, or is judged to have the potential to generate negative comment from the media or other key stakeholders (eg, non-payment of compensation).

Step 3: Grievance is acknowledged through a personal meeting, phone call, or letter as appropriate, within a target of 10-14 working days after submission. If the grievance is not well understood or if additional information is required, clarification should be sought from the complainant during this step.

Step 4: The Grievance Officer (GO) is notified of Level 1, 2 or 3 grievances and the Project Manager/Director is notified of all Level 3 grievances. The senior management will, as appropriate, support the GM in deciding who should deal with the grievance, and determine whether additional support into the response is necessary.

Step 5: The GO delegates the grievance within five to seven days via e-mail to relevant department(s)/ personnel to ensure an effective response is developed eg, HR, Community Liaison Officer, Contractors etc.

Step 6: A response is developed by the delegated team and GO within 14 days, with input from senior management and others, as necessary.

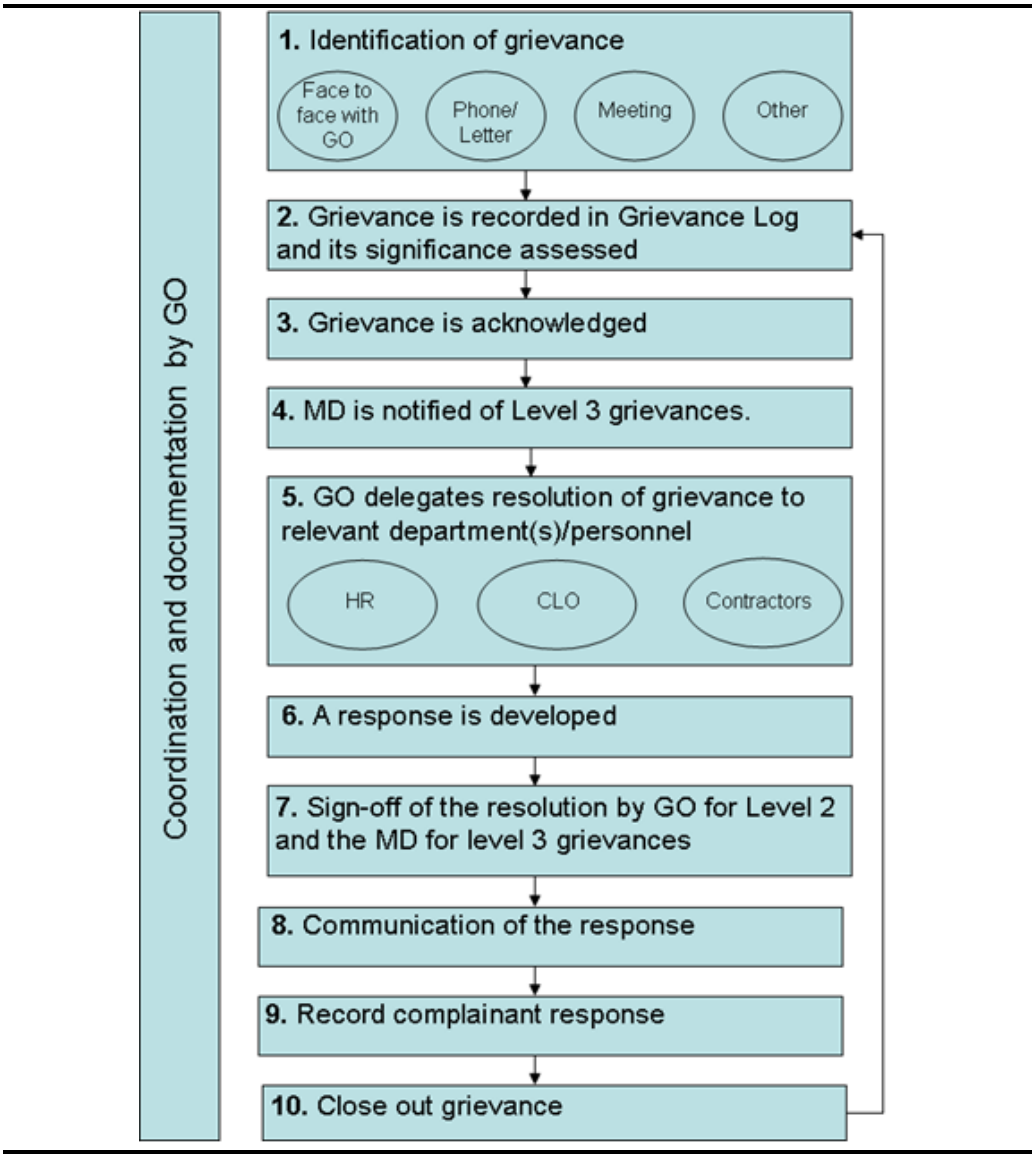
Step 7: The response is signed-off by the senior manager for level 3 grievances, the GO for Level 2 and Level 1 grievances within 14 days. The sign-off may be a signature on the grievance log or an e-mail which indicates agreement, which should be filed by the GO and referred to in the grievance log.

Step 8: Communication of the response should be carefully coordinated. The GO ensures that an approach to communicating the response is agreed and implemented.

Step 9: Record the response of the complainant to help assess whether the grievance is closed or whether further action is needed. The GO should use appropriate communication channels, most likely telephone or face to face meeting, to confirm whether the complainant has understood and is satisfied with the response. The complainant's response should be recorded in the grievance log.

Step 10: Close the grievance with sign-off from the GO. The GO assesses whether a grievance can be closed or whether further attention is required. If further attention is required the GO should return to Step 2 to re-assess the grievance. Once the GO has assessed whether the grievance can be closed, he/she will sign off or seek agreement from MD for level 3 grievances, to approve closure of the grievance. The agreement may be a signature on the grievance log or an equivalent e-mail, which should be filed by the GO and referred to in the grievance log.

Figure 6.1 Grievance process



To facilitate the implementation of the RAP, Azura West Power Limited will be required staff as set out in the institutional framework of Section 9 of this document where the roles and responsibilities of all involved are clearly defined.

The institutional framework will be the interface for stakeholders involved in the RAP implementation, allowing for close cooperation between Azura West Power Limited, Edo State Government, traditional leaders, NGOs and affected communities.

A8 MONITORING AND REPORTING ON STAKEHOLDER ENGAGEMENT ACTIVITIES

Azura will develop a stakeholder engagement database, which will be used to store, analyze and report on stakeholder engagement activities. It will be populated with information based on the meetings held and the information collected to date by Azura through the EIA and RAP process as well as the experience and knowledge of the social consulting team in the field.

The list of stakeholder groups to be consulted on an on-going basis will be continually revised and updated as additional stakeholders are identified and will include (but will not be restricted to) the following:

- regulatory authorities pertinent to all stages of the project lifecycle;
- national, state and local government;
- local community leaders including chiefs and leaders of women's groups, etc;
- representatives of local community members including farmers, health workers and teachers. It will also include vulnerable sub-groups such as women, young people and the elderly;
- local businesses/cooperatives and associations; and
- international, national and local environmental and social non-governmental organizations (NGOs and CBOs).

Minutes of all engagement activities will be uploaded onto the stakeholder database so that they can be referred to by the project team for consideration if needed.

The database will be interrogated on a regular basis by the social consulting team to identify any trends in grievances and corrective actions that are required. These trends will be provided to the core social team as well as the lead social specialist.

Appendix A

Example of a Grievance log

EXAMPLE OF A GRIEVANCE LOG

SECTION 1: COMPLAINANT DETAILS			
Complaint Reference Number	Date Received	Recipient of Complaint	Manner in which Complaint was Identified Submitted by Complainant
Name of Complainant / Organisation Registering Complaint (if not anonymous)			
Contact Details	Telephone Number	Physical and/or Postal Address	
SECTION 2: DETAILS OF COMPLAINT			
Company Manager Responsible for Addressing the Complaint			
Time and Date Complaint Refers to			
Description of Complaint and / or Evidence of the Issue			
SECTION 3: ACTION TAKEN / REQUIRED			
Acknowledgement of Complaint Sent to Complainant? (Y / N)	Date When Acknowledgment Provided	Date Set for Resolution of Complaint	
Description of Subsequent Action Taken (divide into Immediate Action and Subsequent Investigation, if applicable)			
Action Carried Out By Whom	Date of Completion	Method of feedback to Complainant	
Stakeholder Response to Action			
SECTION 4: EFFECTIVENESS REVIEW			
How was the Actions Verified to be Effective at Resolving the Complaint?			
Approved By		Date	

Appendix B

Meeting Minutes

Basic details	
Location : Edo State Ministry of Lands, Survey and Housing	Date: 27th July 2011
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time : 2:00 PM
Purpose of the visit: Status update on ERM's work with regard to RAP and support required from Ministry for taking the process forward.	

Important Notice: This document, intended for internal use of ERM, provides a working summary of the main facts captured during the meetings held, not formal minutes. It is therefore deliberately not exhaustive or chronological and, being provided for information, is not intended for official review or approval.

Key points Discussed :
ERM's proposed approach for RAP
Ministry Support required in taking the RAP forward

Data collected :	
1	None
2	
3	

Any further follow up decided :
Regular meetings and updates on the census Survey and the resettlement site along with sharing of the necessary information.

Detailed note of discussion :

Ministry of Lands, Survey and Housing

- The Ministry has already worked in some of the projects funded by the World Bank (WB) and appreciates the requirements of the WB with regards to Resettlement and ensuing entitlement framework and matrix.
- The ministry has no objection to working with ERM as per the standards of WB. Ministry recognizes that WB standards encompass requirements are way above the local requirements, and hence more beneficial for the local population.
- The Ministry would guide the land department to work in coordination with ERM on the resettlement process and all the requisite support will be provided.
- Power of the land is vested in the state and Governor is in the capacity to take decisions with respect to the land.
- Even the notice for the land expropriation is first signed by the Governor and is then released in the Gazette. This is followed by the rest of the processes at the filed level. Once the complete enumeration and survey process is completed, it is submitted to the Governor and the compensation is distributed.
- The Asset census form used by the Government would be shared with the ERM and ERM's census survey form and social baseline survey form, and asset census form will build up on the extra requirements laid down under WB standards.

Meeting Attended By :		
NAME	DESIGNATION	SIGNATURE.
1. Manish Singh.	CONSULTANT, ERM.	[signature]
2. Karen Opitz	Consultant, ERM	[signature]
3. Oze Akeekanwe	PPP Office	[signature]
4 Engr Ehigiator	Ag Gm RED	[signature]
5. Nick Abdo-Hadi	AZURA	[signature]
6. Bhavin Vyas	Consultant, ERM	[signature]
7 Didi Adodo	Hon Commissioner	[signature]

Basic details	
Location : Edo State Land Department	Date: 27th July 2011
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time : 3:00 PM
Purpose of the visit: Meeting and Discussion with the Land Department on the progress of the Resettlement process for Azura Power and support required	

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Key points Discussed :
Process of Enumeration; Enumeration to be done with ERM team
Asset valuation process
Cut Off date for the Project

Data collected :	
1	Typical Asset Valuation Report
2	Schedule of Rates
3	Organogram of the Land Department
4	

Any further follow up decided :

Regular meetings and updates on the census Survey and the resettlement site along with sharing of the necessary information.

Detailed note of discussion :

Key Points Discussed

- There is no concept of Cut off date which can be followed by the land department.
- The issues of new graves and rapid construction of assets in the areas being notified for land expropriation has been reported from other project sites as well. This is likely to happen as the compensation is given only for the improvements on the land and not for the land itself.
- Once the compensation money is distributed, the people go to the Enogie of other community and submit a part of the money there and request permission from the Enogie to settle down in the new community.
- The enumeration process is asset driven and not household driven. There is no particular format which is presently used by the land department. It mostly comprises of the generic questions that are administered orally, and on the basis of the factual information and observations, the entitlement for the families is suggested.

Acquisition Process:

- First of all the survey plan is approved for the project.
- The land department officials visit the community site.
- Tentative approval is given for survey.
- The perimeter is finalised.
- Meeting with the Enogie and estate valuers of the community to finalise the entitlement

Common Understanding:

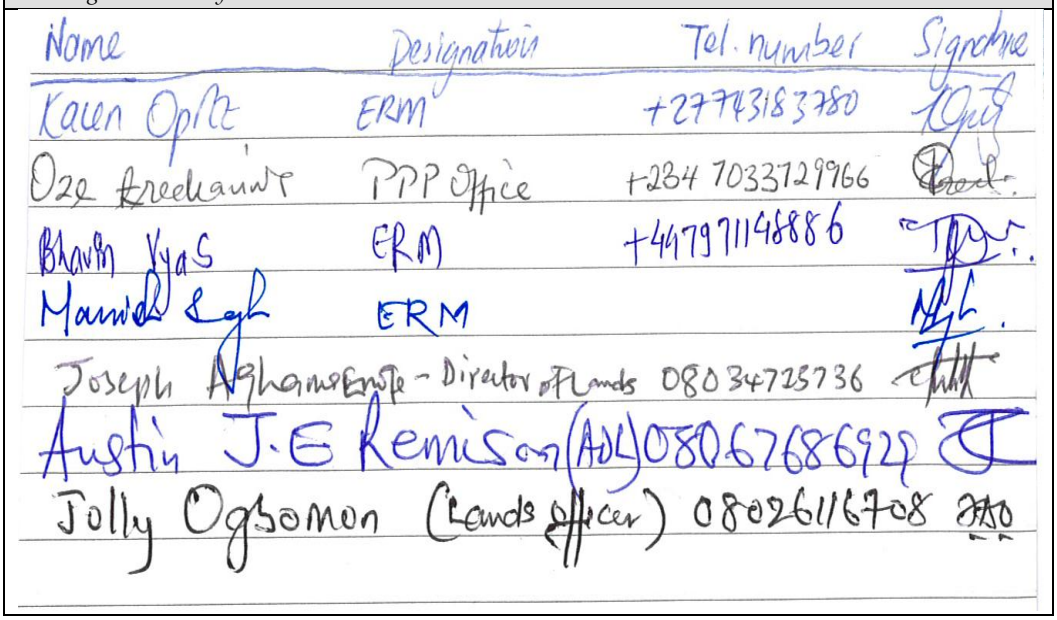
The land department will coordinate with ERM on the following :

- The enumeration date for Azura project is likely to be finalised in the meeting of the land department with community representatives of the proposed affected villages.
- Land Department will suggest the finalization of the dates in the last week of August which will overlap with the presence of the Team from University of Ibadan (Local Partner of ERM

for the project). This will facilitate easy coverage of the affected HHs and the valuation of the assets.

- The ERM local partner will accompany the government team while the land enumeration is going on.

Meeting Attended By :



Basic details	
Location : Edo State Ministry Office	Date: 27th May 2010
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time : 10:00 AM
Purpose of the visit: Briefing and discussion on the ESIA and RAP. Requesting support and information for the proposed ESIA and RAP.	

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Key points Discussed :

- Update on the ESIA and RAP progress
- Key concerns of the Ministry towards the project
- Request for support in conducting the ESIA and RAP process.

Data collected :	
1	None
2	
3	
4	
5	
6	

Any further follow up decided :

Detailed note of discussion :

Briefing on the EIA

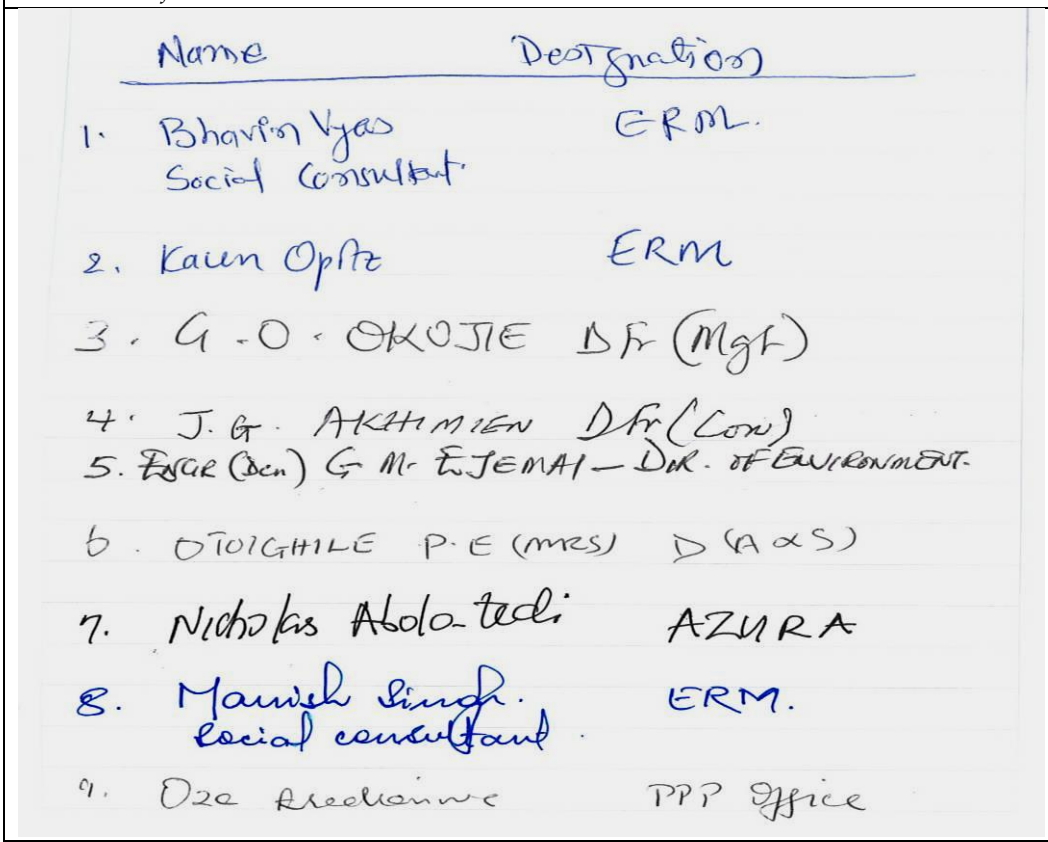
- Whether the briefing will cover the entire Edo state or immediate project area?
  - The Impact assessment will look into the primary area of influence, secondary area of influence and wider area of influence. The area of influence will be decided in the course of impact assessment.
  - Impact will be mainly based on keeping in mind the nature of developments during the operations and construction phase.
  - The impact will also cover any ancillary facility that will be developed as a part of the project.
- Does the Change in the inflation also account for the impact assessment?
  - The Impact assessment will not directly look in to the inflation issues; however it is something that will be captured in the financial feasibility, something which ERM is not doing for the project.
- Why is Azura looking at this investment from WB?
  - Azura is possibly looking at a bank guarantee in case the Power Purchase agreement with the Government fails.
- Are there any local partners involved in the ESIA and Rap process?
  - University of Ibadan and Environmental accord are local partners involved with ERM team in taking forward the ESIA and RAP work.

Key Concerns of the Government

- The population (immigrants or population involved in illegal activities) may possibly increase and hence the security concerns may increase in the area.

- The incidents of violence are likely to see an increase in the coming future with the increase in the opportunities here.
- The issues of land will become more important.
- The people from other states and elsewhere will come and play with the currently informal land tenure system.
- Urban rural migration may actually see a reverse with migration being rural bound.
- Commercial agriculture is likely to come with the availability of power.
- The issues of land reforms system will need to look into some of the key issues:
  - Land acquisition process has to be specifically laid down by the Government.
  - Compensation terms need to be agreed upon.
  - There is new act enacted in 2010, which gives guidelines on environment and pollution issues and the impact mitigation measures.

Detailed note of discussion :



Basic details	
Location : Edo State Public Private Partnership (PPP) Office	Date : 27 July 2010
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time : 11: 00 AM
Purpose of the visit: Discussion on the working of the resettlement committee and its role in the finalization of the list of the genuine squatters.	

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Key points Discussed :

- Role of the LGA and Councillors
- Local understanding
- Key issues to be considered while moving ahead with the RAP preparation.

Data collected :	
1	None

Any further follow up decided :

None

Detailed note of discussion :

Stressed upon the following points:

- Enogies are the heads at the community level. Head of the Benin is the main authority and the Enogies are responsible to them. The LGA does not get into this agreement.
- In case of land acquisition, it is the government which does the census and is the final authority.

Determining the Ownership of land in the communities:

- Support of the Enogie is crucial.
- In the villages either the actual ownership needs to be established through relevant documentation or Enogie as the head of all land.
- In all these process however the council needs to be represented very well.
- While doing enumeration, it has to be considered some of the claims of the people may be true however irrational cases may also be encountered.

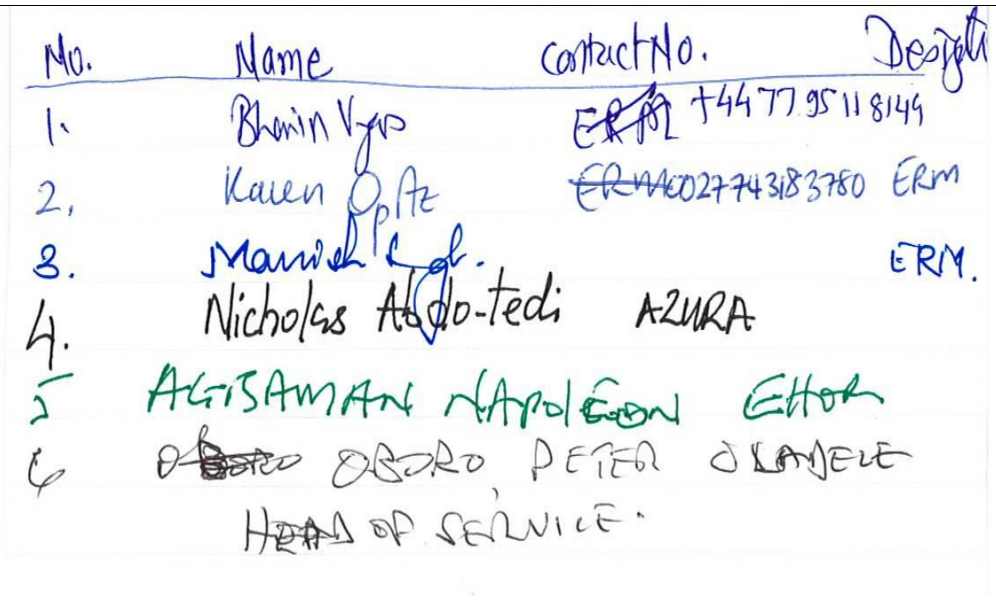
LGA and Councillors institutional clarity:

- Nigeria has 774 Local Government Areas (LGAs).
- Each local government area is administered by a Local Government Council consisting of a chairman who is the Chief Executive of the LGA, and other elected members who are referred to as Councillors.
- Each LGA will have 18-19 villages (community). Further the villages combine to form wards, and wards combine to form councils, which in turn combine to form LGAs.

Grievance Redressal System:

- Councillor representing the ward and Physical Planning Department should be involved in the grievance redress system.

Meeting Attended By :



Basic details	
Location : Constantial Hotel, Airport Road, Benin City	Date : 26th Sept 2011
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time :
Purpose of the visit: Review previous work undertaken on proposed Azura Power Project and plan for socio-economic survey.	

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Key points Discussed :

- Enumeration data
- Social team experience
- Relationship between socio economic and evaluation data
- Survey methodology
- Assessment of questionnaire survey

Data collected :	
1	None

Any further follow up decided :

- Meeting to be held with officials from State Government 27/10/2011.
- Socio-economic team to await outcome of validation exercise before validating enumeration data collected to date.
- Mobile telephone numbers of the team to be collected to ensure easy access when required.
- Three security officers to be attached to the team.

Detailed note of discussion :

- A GPS map of the Project site was assessed. Mr. Bhavin Vyas confirmed that it is confidential and should not be publicly shared.
- The initial scoping was not carried out well and has resulted in an excess of enumeration data.
- Mr Bhavin Vyas stressed the importance of the proper correlation between the socio-

economic survey and valuation data in the RAP research.

- Bhavin Vyas raised the idea of compensation being awarded on a household, as opposed to individual level. This was opposed by the socio-economic team. The majority of properties within the Project area are purchased by individuals within the community and ownership titles are never held on a household level.
- The questionnaire survey was reviewed to ensure previously agreed corrections had been made. Mr. Bhavin Vyas emphasised the need to follow the coding when completing the questionnaire.
- ERM standards are to be strictly followed throughout field process, with particular attention to respectful and professional communication and health and safety.

Meeting Attended By :

- Dr. J.O Oladeji- Social team
- Dr. O.B Oyesola –Social team
- Dr. K.A Thomas- Social team
- Mr. S.A Oyegbile- Social Team
- Mr. Nicolas Abele-Tedi- Azura Project Manager
- Mr. Adamu- Estate Valuer Team Leader
- Mr. Isiaku- Valuer
- Mr. Seyi- Valuer
- Mr Bahvin- ERM UK
- Mr Manish –ERM India

Basic details	
Location : Project affected communities Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen	Date : 26th Sept 2011
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time :
Purpose of the visit: Preliminary community engagement exercise prior to socio-economic and valuation survey .	

Important Notice: This document, intended for internal use of ERM, provides a working summary of the main facts captured during the meetings held, not formal minutes. It is therefore deliberately not exhaustive or chronological and, being provided for information, is not intended for official review or approval.

Key points Discussed :

- Proposed asset valuation and socio-economic survey process
- Verification and endorsement by community leaders of enumeration data previously collected

Data collected :	
1	None

Any further follow up decided :

None

Detailed note of discussion :
• The chairman of Idunmwowina-Urho-Nisen community was informed of the proposed valuation of the physical assets and the socio-economic survey. The enumeration data previously sent to the community was verified and endorsed by the community leaders. • A visit was made to the palace of Enogie of the Orior-Osemwende community in order to pay homage and provide information of activities. The team were received by Enogie's kinsmen and were given the verified and endorsed by enumeration data.

Meeting Attended By :
• Enogie of Orior-Osemwende • Youth Chairman of Idunmwowina-Urho-Nisen • Dr. J.O Oladeji • Dr. O.B Oyesola • Dr. K.A Thomas • Mr. S.A Oyegbile • Mr. Nicolas • Mr. Adamu • Mr. Isiaku • Mr. Seyi • Mr Bahvin • Mr Manish

Basic details	
Location : Meeting with the State Commissioner for Lands, Housing and Survey	Date : 27th Sept 2011
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time :
Purpose of the visit: Discussion of valuation and socio-economic survey methodology	

Important Notice: This document, intended for internal use of ERM, provides a working summary of the main facts captured during the meetings held, not formal minutes. It is therefore deliberately not exhaustive or chronological and, being provided for information, is not intended for official review or approval.

Key points Discussed :
• Assigning of the officials from Lands Department to go to the field with the team. • Allocation of people from the ministry to supervise the activities. • Orior-Osemwende conflict with the Ihovbor to be resolved in the course of the week. • Assessment should commence and where there is dispute, the payment of entitlement will be placed on hold.

Data collected :	
1	None

Any further follow up decided :
None

Detailed note of discussion :

n/a

Meeting Attended By :

- The State Commissioner for Ministry of Lands, Housing and Survey
- Director of Lands
- Permanent Secretary in the Ministry
- Dr. J.O Oladeji
- Dr. O.B Oyesola
- Dr. K.A Thomas
- Mr. S.A Oyegbile
- Mr. Nicolas
- Mr. Adamu
- Mr. Isiaku
- Mr. Seyi
- Mr Bhavin
- Mr Manish

Basic details	
Location : Project affected communities: Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen	Date : 1st October – 6th October 2011
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time :
Purpose of the visit: Socio-economic and valuation survey of physical and economic properties	

Important Notice: This document, intended for internal use of ERM, provides a working summary of the main facts captured during the meetings held, not formal minutes. It is therefore deliberately not exhaustive or chronological and, being provided for information, is not intended for official review or approval.

Key points Discussed :

- Explanation of valuation and social survey process to communities and answers to any questions about the process

Data collected :	
1	• Data for social-economic survey. • Data for valuation of physical and economic properties.

Any further follow up decided :

- Project Mamager to speak to the Enogie's brother to explore how the conflict can be resolved.

Detailed note of discussion :

- Mr. Adamu led the valuation team and Dr. Oyesola led the social team.
- 1st October: Courtesy call to community leader and chiefs made before commencement of valuation and social survey.
- 2nd October: Collation and harmonisation of collected data. Team met to review week's activities.
- 3rd October: Team met with community leaders and members to re-explain valuation and social survey process.
- 4th October: Work was interrupted in Orior-Osemwende community when a gunshot was fired in the area. Meeting was held to discuss the day's events. The shot was fired in the air by a group from Ihovbor community, led by the Enogie's brother, in relation to boundary disputes between the two communities. The shot was taken as evidence that conflict within the community is more serious than previously thought.

Meeting Attended By :

- Residents : Orior-Osemwende, Ihovbor and Idunmwowina-Urho-Nisen communities
- Valuation and socio-economic team

Basic details	
Location : Constantial Hotel, Airport Road, Benin City	Date : 6th October 2011
Project : **0130513 and 0139859- ESIA & RAP Azura Edo**	Time :
Purpose of the visit: Review of data collection and agree future activities.	

Important Notice: This document, intended for internal use of ERM, provides a working summary of the main facts captured during the meetings held, not formal minutes. It is therefore deliberately not exhaustive or chronological and, being provided for information, is not intended for official review or approval.

Key points Discussed :

- Thank team
- Review of Orior-Osemwende and Idunmwowina-Urho-Nisen data collection.
- Experience of the socio-economic and valuation teams.
- Safety
- Plan for the next week

Data collected :	
1	None

Any further follow up decided :

Await *court and community resolutions before further work is undertaken in the Ibovor community.*

Detailed note of discussion :

Socio-economic team:

- *ERM staff efforts were commended especially in regards to ensuring the comfort and safety for the data collection team. The conflict over the boundary dispute in the Ihovbor community was reviewed. For health and safety reasons it was decided that the court and community resolution should be awaited for before work was undertaken in the community. It as also agreed that resolutions should be backed up with a written letter duly signed by partied involved.*
- *The socio-economic team requested to leave for Ibadan on Friday.*

Valuation team:

- *The work of the socio-economic team was praised and a correlation between the numeration and valuation list was confirmed. It was also observed that the Nigerian and World Bank standards were strictly followed during the data collection.*
- *A request was made by the valuation team to collapse the valuation from prepared by ERM into a single form for the future RAP project.*
- *The team requested five extra days to conclude the data collection in the Orior-Osemwende.*
- *Two types of shrine (private and communal) were identified during data collection. Concern centred on communal shrines due to potential agitation that may accompany their displacement however, it was reported that the community has showed readiness to move them.*
- *Alhaji Adamu responded to questions relation to unclaimed property, roles of the community valuers and community/association property.*

Meeting Attended By :

- Dr. J.O Oladeji
- Dr. O.B Oyesola
- Dr. K.A Thomas

- Mr. S.A Oyegbile
- Mr. Nicolas
- Mr. Adamu
- Mr. Isiaku
- Mr. Seyi
- Mr Bahvin
- Mr Manish

Annex B

EnvAccord Biophysical Baseline Data

Table 1: Soil sampling locations and physical description (March, 2011)

Sampling Code	GPS Reading	Soil Colour	Soil Texture	Soil Characteristics by physical observation
Location: Soil Samples – Proposed Site				
SS1A (0-15)	N-06.409520 E-005.680680	Dark brown	Fine grain	Friable
SS1A (15-30)	As for Top soil	Brown	Fine grain	Friable
SS1B (0-15)	N-06.410840 E-005.680240	Brown	Fine grain	Friable
SS1B (15-30)	As for Top soil	Reddish brown	Fine grain	Moist and Friable
SS1C (0-15)	N-06.413000 E-005.679480	Brown	Fine grain	Friable
SS1C (15-30)	As for Top soil	Reddish brown	Fine grain	Moist and Friable
Location: Soil Samples –Site Alternative 1				
SS2A (0-15)	N-06.403830 E-005.681370	Dark brown	Fine grain	Friable sand
SS2A (15-30)	As for Top soil	Reddish brown	Fine grain	Friable
SS2B (0-15)	N-06.403260 E-005.680930	Dark brown	Fine grain	Sticky
SS2B (15-30)	As for Top soil	Brown	Very Fine grain	Friable
Location: Soil Samples – Site Alternative 2				
SS3A (0-15)	N-06.402030 E-005.682050	Dark brown	Fine grain	Friable
SS3A (15-30)	As for Top soil	Light brown to reddish	Fine grain	Friable

Sampling Code	GPS Reading	Soil Colour	Soil Texture	Soil Characteristics by physical observation
SS3B (0-15)	N-06.400600 E-005.685880	Dark Brown	Fine grain	Friable
SS3B (15-30)	As for Top soil	Light brown to reddish	Fine grain	Friable

Table 2: ***Heavy metals concentrations (March, 2011) (Proposed Project Site)***

Sampling location	Cu	Zn	Fe	Cd	V	Pb	Cr	Hg	Ni	Ba
mg/kg										
SS1A(0-15)	1.60	0.92	656.2	0.43	< 0.01	1.22	0.22	<0.05	5.50	< 0.05
SS1A(15-30)	5.95	0.65	14320.0	0.81	< 0.01	1.4	0.40	<0.05	6.0	0.37
SS1B(0-15)	4.01	2.75	3840.0	0.26	< 0.01	2.08	0.42	<0.05	10.15	0.24
SS1B(15-30)	0.55	0.50	864.1	0.44	0.12	7.44	0.2	<0.05	5.60	1.16
SS1C(0-15)	0.65	0.55	1680.0	0.20	0.08	3.52	0.32	< 0.05	4.60	0.72
SS1C(15-30)	0.35	0.60	17160.0	0.24	0.08	3.92	0.41	< 0.05	17.05	0.60
Min	0.35	0.5	656.2	0.2	< 0.01	1.22	0.2	< 0.05	4.6	< 0.05
Max	5.95	2.75	17160	0.81	0.12	7.44	0.42	< 0.05	17.05	0.72
Mean	2.19	0.99	6420.1	0.40	0.05	3.26	0.32	< 0.05	8.15	0.52
S.D	2.29	0.87	7361.67	0.23	0.05	2.32	0.10	0.0	4.77	0.39
Naturally occurring level*	NS	10-50	NS	0.03-0.3	2-100	2-20	10-200	NS	5-500	NS

*Allen et al (1974)

Table 3: Anion and cation concentration (March, 2011) (Proposed Project Site)

Sampling station	SO42-	PO43-	NO3-	Cl-	Na+	K+	Ca2+	Mg2+
mg/kg								
SS1A(0-15)	4000.0	52.0	11088.0	2402.4	2450.0	10.82	368.8	410.3
SS1A(15-30)	3000.0	612.0	31248.2	1140.0	1500.0	12.44	320.6	219.5
SS1B(0-15)	5400.0	216.0	15624.1	2288.0	1125.0	11.96	400.8	238.6
SS1B(15-30)	4000.0	88.0	10080.0	17160	1200.0	29.0	286.2	248.1
SS1C(0-15)	4000.0	68.0	8064.0	800.8	1862.0	166.8	449.0	286.2
SS1C(15-30)	4000.0	720.0	53088.0	1144.0	2200.0	226.8	320.6	229.0
Min	3000	52	8064	800.8	1125	10.82	286.2	219.5
Max	5400	720	53088	17160	2450	226.8	449	410.3
Mean	4100	316	23793.04	5362	1739	86.93	360.2	282.7
S.D	765.94	296.90	17588.07	6404.60	539.67	95.48	60.30	71.58

Table 4: Physio-chemical and hydrocarbons Results (March, 2011) (Proposed Project Site)

Sampling Station	pH	Redox	Electrical Conductivity	Particle Size %			Total Nitrogen	Total Phosphorus	Oil& Grease	THC	TOC
		Mv	us/cm	Salt	Silt	Day	mg/kg				g/Kg
SS1A(0-15)	5.26	103	196.7	78.64	4.21	17.15	4529.6	34700	< 0.5	1.09	22.74
SS1A(15-30)	5.20	109	32.9	56.49	2.85	40.66	7667.8	18700	< 0.5	1.85	15.04
SS1B(0-15)	5.55	87	178.5	1.01	6.44	92.55	4758.4	46200	< 0.5	2.63	27.80
SS1B(15-30)	5.30	100	119.4	70.22	8.24	21.54	2742.3	18100	< 0.5	2.14	23.16
SS1C(0-15)	6.02	58	21.9	75.34	5.33	19.33	2289.8	8350	< 0.5	1.85	1.92
SS1C(15-30)	5.60	82	56.1	69.80	8.14	22.06	13645.0	7700.0	< 0.5	12.92	10.36
Min	5.2	58	21.9	1.01	2.85	17.15	2289.8	7700	<0.5	1.09	1.92
Max	6.02	109	196.7	78.64	8.24	92.55	13645	46200	<0.5	12.92	27.8
Mean	5.52	88.3	103.0	53.89	5.79	40.37	6445.9	23456.3	<0.5	4.56	16.34

Sampling Station	pH	Redox	Electrical Conductivity	Particle Size %			Total Nitrogen	Total Phosphorus	Oil& Grease	THC	TOC
S.D	0.31	18.58	75.38	29.20	2.16	29.17	4225.80	15253.4	0.0	4.52	9.62

Table 5: Results of Microbial Analysis (March 2011) (Proposed Project Site)

Sampling Station	Total Heterotrophic Bacteria	Total Heterotrophic Fungi	Total Coliform	Hydrocarbon Utilizing Bacteria	Hydrocarbon Utilizing Fungi
SS1A(0-15)	80	20	12	ND	ND
SS1A(15-30)	65	4	1	ND	ND
SS1B(0-15)	450	150	175	ND	ND
SS1B(15-30)	320	60	25	ND	ND
SS1C(0-15)					
SS1C(15-30)	120	12	20	ND	ND
Min	65	4	1	ND	ND
Max	450	150	175	ND	ND
Mean	210.6	56.9	61.13	ND	ND
S.D	154.92	54.01	66.13	ND	ND

ND =Not Detected; cfu = colony-forming unit

Table 6: Anion and cation concentration (March 2011) Site Alternative 1

Sampling station	**SO_4^{2-}**	**PO_4^{3-}**	**NO_3^-**	**Cl^-**	**Na^+**	**K^+**	**Ca^{2+}**	**Mg^{2+}**
	mg/kg							
SS2A(0-15)	4200.0	640.0	45528.0	3317.6	2450.0	221.3	464.9	276.8
SS2A(15-30)	4000.0	468.0	36288.0	1372.8	1775.0	218.8	320.6	248.1
SS2B(0-15)	1200.0	584.0	33768.0	915.0	1625.0	5.08	464.9	124.1
SS2B(15-30)	3600.0	680.0	51408.0	1372.8	1300.0	7.80	320.6	171.8
Min	1200	468	33768	915	1300	5.08	320.6	124.1
Max	4200	680	51408	3317.6	2450	221.3	464.9	276.8
Mean	3066.7	586.7	42028	1868.5	1816.7	113.3	392.8	203.6
S.D	1389.24	92.17	8187.30	1070.68	484.12	123.34	83.31	69.90

Table 7: Heavy metals concentrations (March 2011) Site Alternative 1

Sampling location	Cu	Zn	Fe	Cd	V	Pb	Cr	Hg	Ni	Ba
mg/kg										
SS2A(0-15)	3.60	2.00	8160.0	0.20	0.07	4.02	0.22	< 0.05	17.30	0.62
SS2A(15-30)	0.50	0.55	7400.0	0.42	0.16	8.24	0.20	< 0.05	14.95	0.92
SS2B(0-15)	2.90	4.90	14720.0	< 0.05	0.20	3.64	0.38	<0.05	19.20	0.56
SS2B(15-30)	2.90	1.30	12800.0	0.08	0.20	2.64	0.51	<0.05	18.50	0.64
Min	0.5	0.55	7400	0.08	0.07	2.64	0.2	<0.05	14.95	0.56
Max	3.6	4.9	14720	0.42	0.20	8.24	0.51	<0.05	19.20	0.92
Mean	2.33	2.37	10866.7	0.24	0.15	4.90	0.34	<0.05	17.35	0.70
S.D	1.36	1.90	3553.98	0.17	0.06	2.47	0.15	0.0	1.86	0.16
Naturally occurring heavy metal conc*	NS	10-50	NS	0.03-0.3	2-100	2-20	10-200	NS	5-500	NS

*Allen et al (1974)

Table 8: Physio-chemical and hydrocarbons results (March 2011)

Site Alternative 1

Sampling Station	pH	Redox	Electrical Conductivity	Particle Size %			Total Nitrogen	Total Phosphorus	Oil& Grease	THC	TOC		
		mv	Us/cm	sand	silt	clay	Mg/kg			g/kg			
SS2A (0-15)	5.17	110	263.7	56.84	4.82	38.34	11113.3	4850.0	< 0.5	2.66	11.22		
SS2A (15-30)	5.32	99	68.8	68.22	2.82	28.96	9077.4	7450.0	< 0.5	2.81	13.90		
SS2B(0-15)	5.83	67	36.5	65.87	4.66	29.47	8359.2	57000.0	< 0.5	2.92	23.04		
SS2B(15-30)	5.38	97	88.9	52.41	8.21	39.38	12502.2	39400.0	< 0.5	1.85	11.24		

Sampling Station	pH	Redox	Electrical Conductivity	Particle Size %	Total Nitrogen	Total Phosphorus	Oil& Grease	THC	TOC		
Min	5.17	67	36.5	52.41	2.82	28.96	8359.2	4850	-	1.85	11.22
Max	5.83	110	263.7	68.22	8.21	39.38	12502.2	57000	-	2.92	23.04
Mean	5.45	91.7	126.4	60.66	5.26	34.08	10318.9	28425	-	2.50	15.61
S.D	0.28	18.41	101.80	7.46	2.25	5.59	1894.48	25340.8	-	0.49	5.60

Table 9: ***Results of microbial analysis (March 2011)***

Site Alternative 1

(x 10^3 cfu/g)					
SS2A(0-15)	215	102	105	ND	ND
SS2A(15-30)	110	60	80	ND	ND
SS2B(0-15)	175	65	106	ND	ND
SS2B(15-30)	450	25	45	ND	ND
Min	110	25	45	ND	ND
Max	450	102	106	ND	ND
Mean	251.7	63.2	81.2	ND	ND
S.D	148.13	31.51	28.65	ND	ND

ND =Not Detected; cfu = colony-forming unit

Table 10: Physio-chemical and hydrocarbons results (March 2011) Site Alternative 2

Sampling Station	pH	Redox	Electrical Conductivity	Particle Size %			Total Nitrogen	Total Phosphorus	Oil& Grease	THC	TOC
		mV	µS/cm	sand	silt	clay	mg/kg			g/kg	
SS3A(0-15)	5.71	77	61.0	77.2	5.34	16.94	7719.7	38000.0	< 0.5	2.99	20.14
SS3A(15-30)	5.35	99	36.1	51.10	6.82	42.08	14050.0	57200.0	< 0.5	0.86	1.98
SS3B(0-15)	5.03	117	313.2	58.22	11.94	29.84	2674.4	6000.0	< 0.5	2.05	1.11
SS3B(15-30)	5.08	115	214.4	59.36	6.88	33.76	8873.8	9000.0	< 0.5	21.64	18.46
Min	5.03	77	36.1	51.1	5.34	16.94	2674.4	6000	< 0.5	0.86	1.11
Max	5.71	117	313.2	77.2	11.94	42.08	14050	57200	< 0.5	21.64	20.14
Mean	5.32	100.3	162.3	62.36	8.04	30.27	8340.4	28900	< 0.5	8.34	10.49
S.D	0.31	18.51	131.05	11.11	2.89	10.47	4668.06	24473.32	0.0	9.88	10.28

Table 11: Anion and cation concentration (March 2011) Site Alternative 2

Sampling station	SO_4^{2-}	PO_4^{3-}	NO_3^-	Cl^-	Na^+	K^+	Ca^{2+}	Mg^{2+}
					mg/kg			
SS3A(0-15)	4000.0	424.0	32928.0	1029.6	1700.0	5.33	577.1	280.6
SS3A(15-30)	3000.0	996.0	61152.0	1258.4	1500.0	15.92	320.6	171.8
SS3B(0-15)	2400.0	2280.0	10248.0	4004.0	1950.0	20.48	286.6	276.7
SS3B(15-30)	1200.0	1096.0	37800.0	2745.6	1500.0	8.40	288.6	190.8
Min	1200	424	10248	1029.6	1500	5.33	286.6	171.8
Max	4000	2280	61152	4004	1950	20.48	577.1	280.6
Mean	2633.3	1250	35588	2345.2	1683.3	12.7	389.4	228.7
S.D	1170.47	779.10	20877.34	1389.78	213.60	6.92	140.12	56.76

Table 12: Heavy metals concentrations (March 2011) Site Alternative 2

Sampling location	Cu	Zn	Fe	Cd	V	Pb	Cr	Hg	Ni	Br
					mg/kg					
SS3A(0-15)	1.40	2.30	15280.0	0.06	0.12	1.88	0.33	<0.05	5.35	0.80
SS3A(15-30)	1.87	1.05	36000.0	0.08	ND	1.36	0.24	<0.05	10.05	0.60
SS3B(0-15)	2.70	2.60	2320.1	< 0.05	< 0.01	2.32	0.32	<0.05	15.70	0.68
SS3B(15-30)	3.25	1.65	18800.0	0.12	< 0.01	2.72	0.48	<0.05	10.10	0.20
Min	1.4	1.05	2320.1	0.06	< 0.01	1.36	0.24	<0.05	5.35	0.2
Max	3.25	2.6	36000	0.12	0.12	2.72	0.48	<0.05	15.7	0.8
Mean	2.31	1.88	18453.37	0.08	0.04	2.06	0.35	<0.05	10.38	0.55
S.D	0.83	0.69	13878.73	0.08	0.04	2.07	0.34	0.0	10.30	0.57
Naturally occurring heavy metal conc*	NS	10-50	NS	0.03-0.3	2-100	2-20	10-200	NS	5-500	NS

*Allen et al (1974)

Table 13: Results of microbial analysis (March 2011) Site Alternative 2

Sampling Station	Total Heterotrophic Bacteria	Total Heterotrophic Fungi	Total Coli form	Hydrocarbon Utilizing Bacteria	Hydrocarbon Utilizing Fungi
		(x 10^3 cfu/g)			
SS3A(0-15)	450	205	150	1	ND
SS3A(15-30)	200	132	101	1	ND
SS3B(0-15)	250	85	70	ND	ND
SS3B(15-30)	210	30	38	ND	ND
Min	200	30	38	ND	ND
Max	450	205	150	1	ND
Mean	293.3	114.5	91.2	0.5	ND
S.D	117.01	74.16	47.70	0.58	ND

ND =Not Detected; cfu = colony-forming unit

Table 14: In-situ groundwater meter for measurement

S/N	Parameter	Equipment
1	pH, Conductivity, Total Dissolved Solids (TDS), Salinity	Extech Oyster Meter (Model 341350A)
2	Dissolved Oxygen (DO), Temperature, Oxidation-Reduction Potential (ORP)	Extech Digital DO700 meter

EnvAccord Fieldwork, 2011

Table 15: Groundwater sampling locations

S/N	Sampling Code	Sampling Station	Coordinates	
			Latitude (N)	Longitude (E)
1	IH BW	Borehole Water from Ihovbor Community	06.41432^0	005.69003^0
2	IG BW	Borehole Water from Iguemokhua Community	06.13801^0	005.82816^0

EnvAccord Fieldwork, 2011

Table 16: Dry season groundwater results (March, 2011)

Parameters	Ihovbor Borehole (IH BW)	Iguemokhua Borehole (IG BW)	FMEnv Limits
Physical Parameters and Anions & Cations			
Colour (Pt Co)	28.0	5.0	-
pH	5.20	4.45	6.5-8.5
Temperature	28.4	30.2	<40
Conductivity (µS/cm)	18.4	12.9	1000
Total Dissolved Solids (mg/l)	9.70	8.30	500
Dissolved Oxygen (mg/l)	2.15	0.45	7.5
Oxidation-Reduction Potential (mV)	132	207	NS
Salinity (ppm)	7.0	5.7	NS
Total Suspended Solids(mg/l)	9.0	4.0	>10
Turbidity(mg/l)	1.0	1.0	1.0
Total Hardness ($CaCO_3$ mg/l)	5.01	5.51	200
Biochemical Oxygen Demand (BOD mg/l)	<1.0	<1.0	0
Biochemical Oxygen Demand (BOD mg/l)	<1.0	<1.0	0
Chemical Oxygen Demand (mg/l)	8.0	<1.0	NS
Sulphate(mg/l)	1.0	1.0	500
Phosphate(mg/l)	0.12	0.21	5.0
Nitrate (mg/l as NO_3^-)	19.0	17.7	10.0
Chloride(mg/l)	10.0	7.22	250
Carbonate (as HCO_3^- mg/l)	2.67	3.34	NS
Sodium (mg/l)	25.2	24.4	200
Potassium (mg/l)	0.92	0.79	NS
Calcium (mg/l)	0.80	0.66	70
Magnesium (mg/l)	0.71	0.92	30
Heavy Metals			
Copper (mg/l)	0.001	0.002	0.1
Zinc(mg/l)	0.039	0.020	5.0
Iron (mg/l)	0.07	0.07	0.3
Cadmium (mg/l)	<0.001	<0.001	0.01
Lead (mg/l)	<0.001	<0.001	0.05
Mercury(mg/l)	<0.01	<0.01	0.001
Chromium (mg/l)	<0.01	<0.01	0.05
Nickel (mg/l)	0.073	0.056	0.05
Vanadium(mg/l)	<0.002	<0.002	0.01
Barium (mg/l)	<0.002	0.003	NS
Organics			

Parameters	Ihovbor Borehole (IH BW)	Iguemokhua Borehole (IG BW)	FMEnv Limits
Hydrocarbon THC (mg/l)	<0.05	<0.05	NS
Oil and Grease(mg/l)	<0.05	<0.05	0.05
Microbiological Test (cfu/100ml)			
Total Heterotrophic Bacteria ($x10^3$)	1	1	NS
Total Heterotrophic Fungi ($x10^3$)	ND	ND	NS
Hydrocarbon Utilizing Bacteria	ND	ND	NS
Hydrocarbon Utilizing Fungi	ND	ND	NS
Feacal Coliform	ND	ND	0

ND= Not Detected NS= Not Specified cfu= colony-forming unit

Table 17: Vegetation characteristics and conservation status of plant species that were encountered in the study area

S/N	Plant Species	Family	Habit	Common Names	Conservation Status
1	*Acroceras amplectens*	Poaceae	Herb	Abundant grass	Not threatened
2	*Acroceras zizanioides*	Poaceae	Herb	Arrocillo	Not threatened
3	*Ageratum conyzoides*	Asteraceae	Herb	Goat weed	Not threatened
4	*Alchornea cordiflolia*	Euphorbiaceae	Shrub	Christmas bush	Not Threatened
5	*Alchornea laxiflora*	Euphorbiaceae	Shrub	Christmas bush	Not Threatened
6	*Alstonia boonei*	Apocynaceae	Tree	Stoolwood	Not Threatened
7	*Andropogon gaynamus*	Poaceae	Herb	Gamba grass	Not Threatened
8	*Andropogon tectorum*	Poaceae	Herb	Giant bluestem	Not Threatened
9	*Antiaris africana*	Moraceae	Tree	Bark-cloth tree	Endangered
10	*Ananas comosus*	Bromeliaceae	Bromeliad	Pineapple	Not Threatened
11	*Anthocleista vogelii*	Loganiaceae	Tree	Cabbage tree	Not Threatened
12	*Artanema longiflorum*	Plantaginaceae	Shrub	A leafy vegetable	Rare
13	*Asechynomene indica*	Papillionaceae	Shrub	Curly-indigo	Not Threatened
14	*Aspilia africana*	Asteraceae	Herb	Bush marigold	Not Threatened

S/N	Plant Species	Family	Habit	Common Names	Conservation Status
15	*Asystasia gigantica*	Acanthaceae	Herb	--	Not Threatened
16	*Axonopus compressus*	Poaceae	Herb	Carpet grass	Not Threatened
17	*Azadiractha indica*	Meliaceae	Tree	Dongoyaro / Neem tree	Not Threatened
18	*Bacopa monnieri*	Plantaginaceae	Herb	Coastal Waterhyssop	Not threatened
19	*Bambusa vulgaris*	Poaceae	Tree	Bamboo	Not Threatened
20	*Brachiaria decumbens*	Poaceae	Herb	Signal grass	Not threatened
21	*Brachiaria* ruziziensis	Poaceae	Herb	Ruzi grass	Not threatened
22	*Carica papaya*	Caricaceae	Tree	Pawpaw	Not Threatened
23	*Cocos nucifera*	Palmae	Tree	Coconut	Not Threatened
24	*Cola nitida*	Sterculiaceae	Tree	Kolanut	Not Threatened
25	*Calopogoniu m mucunoides*	Papillionaceae	Climber	Fodder	Not Threatened
26	*Milecia excelsa*	Moraceae	Tree	Iroko	Endangered
27	*Chromolaena adorata*	Asteraceae	Shrub	Siam weed	Not Threatened
28	*Ceiba pentandra*	Bombacaceae	Tree	Silk cotton	Not Threatened
29	*Centrosoma pubescens*	Papillionaceae	Climber	Fodder	Not Threatened
30	*Conyza sumatrensis*	Asteraceae	Herb	Fleabane	Not Threatened
31	*Cnestis ferruginea*	Connaraceae	Shrub		Not Threatened
32	*Cyperus difformis*	Cyperaceae	Herb	Small flower umbrella-sedge	Not Threatened
33	*Cyperus esculentus*	Cyperaceae	Herb	Yellow nutsedge	Not Threatened
34	*Cyperus haspan*	Cyperaceae	Herb	Dwarf papyrus sedge	Not Threatened
35	*Cyperus rotundus*	Cyperaceae	Herb	Nutgrass Purple nut sedge	Not Threatened
36	*Cynodon dactylon*	Poaceae	Herb	Bahama grass	Not Threatened
37	*Croton lobatus*	Euphorbiaceae	Herb	Lobed croton	Not Threatened

S/N	Plant Species	Family	Habit	Common Names	Conservation Status
38	*Croton zambesicus*	Euphorbiaceae	Tree	Tiger bush	Not threatened
39	*Costus afer*	Zingiberaceae	Herb	Spiral ginger	Not Threatened
40	*Dendrocalamus strictus*	Poaceae	Shrub/tree	Iron bamboo	Threatened
41	*Dioscorea rotundata*	Dioscoraceae	Twinner	White Yam	Not Threatened
42	*Dacroyodes edulis*	Burseraceae	Tree	Native pear	Not Threatened
43	*Desmodium ramossimum*	Leguminosae	Herb		Not threatened
44	*Elaeis guineensis*	Palmae	Tree	Oil palm tree	Not Threatened
45	*Emilia coccinea*	Asteraceae	Herb	Yellow tassel flower	Not threatened
46	*Ethulia conyzoides*	Asteraceae	Herb	---	Not threatened
47	*Daniella ogea*	Papillionaceae	Tree	Ogea	Threatened
48	*Ficus exasparata*	Moraceae	Shrub	Sand paper plant	Not Threatened
49	*Gomphrena celosioides*	Amaranthaceae	Herb	Bachelors button	Not Threatened
50	*Gmelina arborea*	Verbenaceae	Tree	Gmelina	Not Threatened
51	*Heteranthera barteri*	Poaceae		Dwarf hairgrass	Not threatened
52	*Hura crepitans*	Euphorbiaceae	Tree	Sand box tree	Not Threatened
53	*Heterostis(= Dissotis) rotundifolia*	Melastomaceae	Herb	Dissotis	Not Threatened
54	*Hevea brasilensis*	Euphorbiaceae	Tree	Rubber	Not Threatened / Introduced
55	*Hallea ciliata*	Rubiaceae	Tree	Abura	Endangered
56	*Hallea stipulosa*	Rubiaceae	Tree	Abura	Endangered
57	*Hyptis lanceolata*	Lamiaceae	Herb		Not threatened
58	*Icacina trichanta*	Icacinaceae	Shrub	Icacina	Not Threatened
59	*Imperata cylindrica*	Poaceae	Herb	Spear grass	Not Threatened
60	*Ipomoea asarifolia*	Convolvulaceae	Herb	Morning gold	Not Threatened
61	*Irvingia gabonensis*	Irvingiaceae	Tree	Wild Mango/ Ogbono	Endangered
62	*Emilia coccinea*	Asteraceae	Herb	Tassel flower	Not Threatened

S/N	Plant Species	Family	Habit	Common Names	Conservation Status
63	*Euphorbia heterophylla*	Euphorbiaceae	Herb	Spurge weed	Not Threatened
64	*Eleusine indica*	Poaceae	Herb	Stubborn grass	Not Threatened
65	*Kyllinga erecta*	Cyperaceae	Herb	Sedge	Not Threatened
66	*Leersia haxandra*	Poaceae	Herb	Swamp rice grass	Not threatened
67	*Leuca maritinicensis*	Lamiaceae	Herb	Wild tea bush	Not Threatened
68	*Ludwigia decurens*	Onagraceae	Herb	Water primrose	Not Threatened
69	*Manihot esculanta*	Euphorbiaceae	Shrub	Cassava	Not Threatened
70	*Musa paradisca*	Musaceae	Pseudostem	Plantain	Not Threatened
71	*Momordica foetida*	Cucurbitaceae	Creeper	Wild cucumber	Not Threatened
72	*Musa sapientum*	Musaceae	Pseudostem	Banana	Not Threatened
73	*Mimosa indica*	Mimosaceae	Shrub	Giant sensitive	Plant threatened
74	*Mangifera indica*	Anacardiaceae	Tree	Mango	Not Threatened
75	*Mucuna puriens*	Leguminosae	Climber	Fodder	Not Threatened
76	*Musanga ceropodies*	Moraceae	Tree	Corkwood	Not Threatened
77	*Napoleona vogelii*	Lecythidaceae	Shrub	--	Not Threatened
78	*Newbouldia laevis*	Bignoniaceae	Tree	Chieftaincy tree	Not Threatened
79	*Nauclea diderrichi*	Rubiaceae	Tree	Opepe	Endangered
80	*Oryza barthi*	Poaceae	Herb	Wild rice	Not threatened
81	*Oryza sativa*	Poaceae	Herb	Rice	Not Threatened
82	*Oldenlandia corymbosa*	Rubiaceae	Herb	Flat-top mille graines	Not Threatened
83	*Panicum laxum*	Poaceae	Herb	Lax panicgrass	Not Threatened
84	*Panicum repens*	Poaceae	Herb	Torpedo rice	Not Threatened
85	*Panicum subalbidum*	Poaceae	Herb	-	Not Threatened
86	*Paspalum scrobiculatum*	Poaceae	Herb	Koda Millet	Not Threatened
87	*Paspalum vaginatum*	Poaceae	Herb	Turfgrass	Not Threatened

S/N	Plant Species	Family	Habit	Common Names	Conservation Status
88	*Psidum guajava*	Myrtaceae	Tree	Guava	Not Threatened
89	*Panicum maxmium*	Poaceae	Herb	Guinea grass	Not Threatened
90	*Pennisetum polytstachion*	Poaeceae	Herb	Rough millet	Not Threatened
91	*Physalis angulata*	Solanaceae	Herb	Gooseberry	Not Threatened
92	*Phyllanthus amarus*	Euphorbiaceae	Herb	Shatterstone	Not Threatened
93	*Peperomia pellucida*	Piperaceae	Herb	Man-to-man	Not Threatened
94	*Phyllanthus discoidens*	Euphorbiaceae	Tree	-	Not Threatened
95	*Portulaca quadrifida*	Portulacaceae	Herb	10 0'clock plant	Not Threatened
96	*Pycnanthus angolens*	Euphorbiaceae	Tree	Ilomba	Endangered
97	*Sclera depressa*	Poaceae	Herb	Sword grass	Not Threatened
98	*Rhynchospora racemosa*	Poaceae	Herb	Racemed Beaksedge	Not threatened
99	*Saccharum officinale*	Poaceae	Shrub	Sugar cane	Not Threatened
100	*Scoparia dulcis*	Scrophulariaceae	Herb	Sweet broomweed	Not threatened
101	*Sida rhombifolia*	Malvaceae	Shrub	Arrow leaf sida	Not Threatened
102	*Sida acuta*	Malvaceae	Shrub	Broomweed	Not Threatened
103	*Smilax anceps*	Smilacaceae	Climber	Sarsaparilla	Not Threatened
104	*Sphenoclea zeylanica*	Sphenocleaceae	Herb	Chickenspike	Not threatend
105	*Spondias mombin*	Anacardiaceae	Tree	--	Endangered
106	*Talinum triangulare*	Malvaceae	Shrub	Water leaf	Not Threatened
107	*Talfaira occidentale*	Cucurbitaceae	Climber	Field pumpkin	Not Threatened
108	*Terminalia ivorensis*	Combretaceae	Tree	Black afara	Endangered
109	*Thevetia peruviana*	Apocynaceae	Shrub	Yellow oleander	Introduced/ Exotic
110	*Trema orientalis*	Ulmaceae	Tree	Pigeon Wood	Not Threatened
111	*Trichosanthes cucumerina*	Cucurbitaceae	Climber	Snake gourd	Not Threatened
112	*Tridax procumbens*	Asteraceae	Shrub	Coat button	Not Threatened
113	*Uapaca togoensis*	Euphorbiaceae	Tree	-	Not Threatened

S/N	Plant Species	Family	Habit	Common Names	Conservation Status
114	*Urena lobata*	Malvaceae	Shrub	Congo jute	Not Threatened
115	*Uvaria chamae*	Annonaceae	Shrub	Bush banana	Rare
116	*Vernonia amygdalina*	Asteraceae	Shrub	Bitter leaf	Not Threatened
117	*Vernonia cinerea*	Asteraceae	Herb	Little ironweed	Not Threatened
118	*Vossia cuspidata*	Poaceae	Herb	Floating grass	Not Threatened
119	*Xanthozylum zanthoxyloides*	Rutaceae	Tree	Artar root	Threatened
120	*Xylopia aethiopica*	Annonaceae	Tree	Negro pepper	Not Threatened
121	*Waltheria indica*	Sterculaceae	Shrub	Sleeping morning	Not Threatened
122	*Zea mays*	Poaceae	Herb	Maize	Not Threatened / Introduced
123	Cryptogams : Fungi, Algae and Mosses				Not Threatened
124	Bryophytes				Not Threatened
125	Pteridophytes				Not Threatened

Table 18: ***The geographic coordinates of the sampling locations, wildlife composition and location description***

S/N	Longitude (E)	Latitude (N)	Wild life
001	005 68036^0	06 40944^0	Mammal, Insects, Mollusc, Aves, Amphibians Reptiles. (Ihovbor Community)
002	005 68091^0	06 40956^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. (Ihovbor Community)
003	005 68060^0	06 41000^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. (Ihovbor Community)

S/N	Longitude (E)	Latitude (N)	Wild life
003	005 68060^0	06 41000^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. (Ihovbor Community)
004	005 67968^0	06 38112^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. (Ihovbor Community)
005a	005 68137^0	06 40381^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. Oriore Community
005b	005 68093^0	06 40326^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. Oriore community
006a	005 68736^0	06 40235^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. Oriore community.
006b	005 68570^0	06 40050^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles.
007	005 74572^0	06 32565^0	Mammal, Insects, Mollusc, Aves, Reptiles. Open field
008	005 72256^0	06 25969^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. Ikpoba Local Government sign board erected.
009	005 75428^0	06 20675^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles.
010	06 20219^0	005 75957^0	Mammal, Insects, Mollusc, Aves, Reptiles, Amphibians. Orhionmwon community/ Local government.

S/N	Longitude (E)	Latitude (N)	Wild life
011	005 78617^0	06 17540^0	Mammal, Insects, Mollusc, Aves, Reptiles, Amphibians (Iguomokhua community)
012	05 94845^0	005 68615^0	Mammal, Insects, Mollusc, Aves, Amphibians, Reptiles. Nigeria Navy Barracks, Okhuro-Oghara. Control
013	06 03247^0	005 80973^0	Mammal, Insects, Mollusc, Aves, Reptiles, Amphibians.

Table 19: List of fauna species at the proposed site (GPS readings: S/N 001-006b) Thermal station

Local Names	Species	Family	Group
Ojola	*Python sebae*	Pythonidae	Reptilia
Oka	*Bitis gabonica*	Viperidae	Reptilia
Sebe	*Naja melanoleuca*	Viperidae	Reptilia
Monitor lizard	*Varanus albigularis*	Varanidae	Reptilia
Boa	*Boa constrietor*	Boidae	Reptilia
Bush fowl	*Francolinus bicalcaratus*	Phasianidae	Aves
African Barn Owl	*Tyto alba*	Tytonidae	Aves
Little African Swift	*Apus affinis*	Apodidae	Aves
African Palm Swift	*Cypsivurus parvus*	Apodidae	Aves
Green fruit Pigeon	*Treron australis*	Columbidae	Aves
Senegal coucal	*Centropus senegalensis*	Cuculidae	Aves
Village weaver	*Ploceus cucullatus*	Ploceidae	Aves
White tailed horn bill	*Tockus fasciatus*	Bucerotidae	Aves
Cattle egret	*Ardeola ibis*	Ardeidae	Aves
Black Kite	*Muluus migrans*	Accipitridae	Aves
African green pigeon	*Treton calvus*	Columbidae	Aves
Black ant	*Lasius niger*	Formicidae	Insecta
Soldier ant	*Strongylognathus alboini*	Formicidae	Insecta
Termite	*Trinervitermes trinervoides*	Termitidae	Insecta
Dragon fly	*Acanthaeschna victoria*	Aeishnidae	Insecta
Giant African mantis	*Sphodromantis viridis*	Mnatidae	Insecta
Red patch butterfly	*Chlosyne rosita*	Nymphalidae	Insecta

Local Names	Species	Family	Group
White patch butterfly	*Chiomara asychis*	Hesperiidae	Insecta
Moth	*Chrysiridia rhipheus*	Uraniidae	Insecta
Africa cotton stainer	*Dysdercus fasciatus*	Pyrrhocoridae	Insecta
Snail	*Achatina achatina*	Achatinidae	Mollusca
	A. marginata	Achatinidae	Mollusca
	Limicolaria aurora	Achatinidae	Mollusca
Land Slug	*Limax maximus*	Limacidae	Mollusca
Toad	*Bufo bufo*	Bufonidae	Amphibia
Tree frog	*Litoria caerulea*	Hylidae	Amphibia
African clawed frog	*Xenopus tropicalis*	Pipidae	Amphibia
African yellow bat	*Scotophilus dinganii*	Vespertilionidae	Mammal
Striped ground squirrel	*Xerus erythropus*	Sciuridae	Mammal
Grasscutter	*Thryonomys swinderrianus*	Thryonomyidae	Mammal
African tree squirrel	*Heliosciurus gambianus*	Sciuridae	Mammal/Rodent
African giant rat	*Crecetomys gambianus*	Nesomyidae	Mammal/Rodent
Crested Porcupine	*Hystrix cristata*	Hystricidae	Mammal/Rodent
Mona monkey	*Cercopithecus mona*	Cercopithecidae	Mammal
African giant millipede	*Archispirostreptus gigas*	Spirostretidae	Arthropoda
Earthworm	*Lumbricus terrestris*	Acanthodrilidae	Annelida
	Aculepeira angeloi	Araneidae	Arthropoda
	Scutigera coleoptrata	Scrutigeridae	Arthropoda

Table 20: List of fauna species at the proposed site (GPS readings: S/N 012) Control station

Local Names	Species	Family	Group
Ojola	*Python sebae*	Pythonidae	Reptilia
Sebe	*Naja melanoleuca*	Viperidae	Reptilia
Lizard Buzzard	*Kaupifalco monogrammicus*		Reptilia
Monitor lizard	*Varanus albigularis*	Varanidae	Reptilia
Redneck cobra	*Naja pallida*	Elapidae	Reptilia
Chameleon	*Chamaeleo* sp.	Chamaeleonidae	Reptilia
Bush fowl	*Francolinus bicalcaratus*	Phasianidae	Aves
African Barn Owl	*Tyto alba*	Tytonidae	Aves
Little African Swift	*Apus affinis*	Apodidae	Aves
African Palm Swift	*Cypsivurus parvus*	Apodidae	Aves
Senegal coucal	*Centropus senegalensis*	Cuculidae	Aves
Village weaver	*Ploceus cucullatus*	Ploceidae	Aves
Grey parrot	*Psittacus erithacus*	Psittacidae	Aves
Cattle egret	*Ardeola ibis*	Ardeidae	Aves
Black Kite	*Muluus migrans*	Accipitridae	Aves
African green fruit pigeon	*Treton calvus*	Columbidae	Aves

Local Names	Species	Family	Group
Speckle pigeon	*Columba guinea*	Columbidae	Aves
Dove	*Columba* sp.	*Columbidae*	Aves
Black ant	*Lasius niger*	Formicidae	Insecta
Grasshopper	*Romalea guttata*	Romaleidae	Insecta
Long horned grasshopper	*Tettigonia viridissima*	Tettigoniidae	Insecta
Soldier ant	*Strongylognathus alboini*	Formicidae	Insecta
Termite	*Trinervitermes trinervoides*	Termitidae	Insecta
Dragon fly	*Acanthaeschna victoria*	Aeishnidae	Insecta
Cricket	*Gryllus sp.*	Gryllidae	Insecta
Giant Wasps	*Vespa sp.*	Vespidae	Insecta
Woodlouse	Armadilidium sp		Crustacea
Praying Mantis	*Mantis sp.*	Mantidae	Inscta
Honey bee	*Apis sp.*	Apidae	Insecta
Ladybird	*Coccinella sp.*	Coccinellidae	Insecta
Africa cotton stainer	*Dysdercus fasciatus*	Pyrrhocoridae	Insecta
Snail	*Achatina achatina*	Achatinidae	Mollusca
	A. marginata	Achatinidae	Mollusca
	Limicolaria aurora	Achatinidae	Mollusca
Land Slug	*Limax maximus*	Limacidae	Mollusca
Toad	*Bufo regularis*	Bufonidae	Amphibia
African clawed frog	*Xenopus tropicalis*	Pipidae	Amphibia
Little African Swift	*Apus affinis*	Apodidae	Aves
African Palm Swift	*Cypsivurus parvus*	Apodidae	Aves
Senegal coucal	*Centropus senegalensis*	Cuculidae	Aves
Village weaver	*Ploceus cucullatus*	Ploceidae	Aves
Grey parrot	*Psittacus erithacus*	Psittacidae	Aves
Cattle egret	*Ardeola ibis*	Ardeidae	Aves
Black Kite	*Muluus migrans*	Accipitridae	Aves
African green fruit pigeon	*Treton calvus*	Columbidae	Aves
Speckle pigeon	*Columba guinea*	Columbidae	Aves
Dove	*Columba* sp.	*Columbidae*	Aves
Black ant	*Lasius niger*	Formicidae	Insecta
Grasshopper	*Romalea guttata*	Romaleidae	Insecta
Long horned grasshopper	*Tettigonia viridissima*	Tettigoniidae	Insecta
Soldier ant	*Strongylognathus alboini*	Formicidae	Insecta
Termite	*Trinervitermes trinervoides*	Termitidae	Insecta
Dragon fly	*Acanthaeschna victoria*	Aeishnidae	Insecta
Cricket	*Gryllus sp.*	Gryllidae	Insecta
Giant Wasps	*Vespa sp.*	Vespidae	Insecta

Annex C

Traffic Control Management Plan Outline

C1.1 INTRODUCTION

The purpose of this management plan is to ensure that construction of the Scheme components does not adversely affect road users and other sensitive receptors. This Traffic Control Management Plan (TCMP) therefore identifies the potential impacts and appropriate measures to mitigate them.

Prior to the commencement of construction, the contractor(s) shall use the TCMP as the basis for undertaking a detailed Traffic Assessment (TA) and preparing a detailed TCMP; this will identify specific measures to mitigate any predicted impacts. The contractor's (or contractors') TCMP shall include detailed procedures that demonstrate how the impacts of traffic on communities have been taken into consideration. The contractor(s) shall develop and submit:

- procedures within 30 days of the start of the construction phase; and
- detailed project-specific procedures that specify how the requirements of their TCMP will be implemented to the satisfaction of the appropriate traffic authorities.

The contractor(s) shall regularly update their TCMP as the construction method is developed and vehicle movement and timing requirements are identified in detail.

The contractor(s) shall consult with the relevant government agencies to identify where Project plans can complement existing road development plans at the district and provincial level. The contractor(s) will also consult with the leaders of any communities that will suffer a significant increase in traffic in order to identify alternative routes where possible, or appropriate mitigation measures.

The contractor(s) will:

- identify those responsible for carrying out and managing the procedures;
- reference the procedures and activities the contractor(s) will develop and implement;
- identify work to be undertaken on the roads prior to construction activities to upgrade or stabilise the roads if necessary;
- identify the routes that will be used with the estimated numbers of traffic movements, speeds and times of travel;

- justify where a route has to pass through residential areas and the measures that will be used to ensure the safety of the community and minimise the nuisance impact of traffic movements;

- identify how existing road development plans have been taken into account in the identification of routes and road restoration measures;

- identify the programme of road restoration measures that are likely to be required post construction;

- address how the Contractor(s) can reduce the exposure of vehicle drivers, their passengers and other road users from the hazards of road-related accidents;

- identify (and adopt to the maximum extent feasible) all reasonably practicable alternatives to road transportation (rail) in order to reduce the number of trucks on the roads; and

- provide details of audits and reviews of the components of the project transport system.

Table C1.1.1 Traffic Control Management Plan (Construction)

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
Access to construction areas	The following environmental aspects shall be considered in finalising the location of the access road that will be constructed specifically for the Scheme: • environmentally sensitive areas; and • pedestrians.	*B1.1*	Contractor	No separate cost. Included in design fees.	Developed during Project planning, implemented during construction.
	Other measures for mitigating the impact of access roads are as follows: • Access will be via specified routes, which will be agreed with the relevant authorities. • Existing, upgradeable roads will be used where practicable, to avoid the need to construct new roads. • Access roads to previously inaccessible sensitive areas will be avoided.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• If the Contractor requires additional routes, a specific proposal will be submitted to the relevant authorities, if required, for consideration and approval. • Suitable measures will be implemented to avoid damage to public roads and any damage will be repaired to an equal or better standard in a timely manner. • The Contractor will remove all temporary roads or road enlargements, except where local communities or landowners request that a new road be left in place.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• Temporary access roads will be kept free from		Contractor	No separate cost.	Developed during

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	deposits to prevent silt, or other materials from entering drains or watercourses. Access routes to be used by construction traffic will be properly signposted. This shall be sufficient to prevent vehicles from leaving the designated routes and ensure that the appropriate speed limits are enforced particularly through residential areas. • Access and site roads will be maintained in good condition. • Temporary roads will be removed when no longer needed and will be reinstated. All damage to existing roads will also be reinstated. • Any additional routes will be selected to avoid ecologically sensitive areas, and to minimise erosion. • The Contractor will liaise with the appropriate regulatory authorities to gain approval to use, and regularly inspect, the road infrastructure.		Contractor	Included in Construction costs. No separate cost. Included in Construction costs.	Project planning, implemented during construction. Developed during Project planning, implemented during construction.
Routing of construction traffic	• Relevant authorities will be consulted to agree on specific routes for use by construction traffic to avoid any sensitive residential areas and unsuitable parts of the road network. • Precautions will be taken by the Contractor to avoid damage to the public highways used by vehicles or other items of equipment. Timber mats, tyres or steel plates will be laid as necessary, in particular under tracked equipment. Any road	*B1.2*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	damage will be repaired. • Advance warning will be given of any proposed road diversions and closures. • The Contractor should consider whether to use buses to transport workers to the construction site. • The Contractor will comply with all statutory vehicle limits (width, height, loading, gross weight) and any other statutory requirement.				
Temporary traffic control and management	• Traffic flows will be timed, wherever practicable, to avoid periods of heavy traffic flow along main roads. In addition, the Contractor will not commence any work that affects the public highway until all agreed traffic safety and management measures essential for the works are accepted and agreed with the relevant authorities. • In terms of traffic control, vehicles will be prohibited from reversing unattended into the construction site. Vehicles and plant shall enter and exit the site in a forward direction, as far as possible. In addition, the Contractor will ensure that all heavy goods vehicles are equipped with audible reversing alarms.	*B1.3*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• Clear signs, flagmen and signals will be set up where necessary. Where temporary traffic signals are required, the details and locations of the signs shall be discussed with		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	the relevant authorities. The signs will be fixed safely and securely to ensure that they do not become detached or dislocated, and will be visible and comprehensible by all. The Contractor will also carry out maintenance checks to clean and re-secure signs if necessary. • Appropriate supervision will be provided by the Contractor to control the flow of traffic when machinery needs to cross roads. • Liaison with the police and other authorities will occur prior to the movement of any abnormal loads. In particular, liaison with the relevant Highway Authority will occur prior to transportation on major highways and motorways. • Access to commercial and residential properties shall be maintained and speed limits will be established and enforced over all construction traffic routes. • Where roads used by children to reach schools are used by construction traffic, road safety education will be provided at schools. Vehicle traffic will be prohibited during hours that children are travelling to and from school. • Ambulances and fire services will be consulted regarding road diversions. Road diversions will not increase the response time of these services to		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
			Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	local communities. • Access to residential and commercial properties will be maintained.				
	• If road closures are required, diversions will be planned and communicated to the authorities (including emergency services and public transport providers) and affected communities in advance (via the pre-construction community meeting) and will be properly sign-posted. Crossing for pedestrians and animals will be provided to avoid the need for a diversion. No diversion will be permitted that prevents a public transport service from continuing or requires a diversion of more than 1km for vehicles or a diversion of more than 500m for pedestrians or livestock. Notification periods for road closures are as follows: two weeks minimum notice on closure of up to 28 days; one month minimum notice on closure of 28 days to three months; three months notice for closure over three months or for permanent closure.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• Education on traffic safety will be provided by the Community Liaison Officer(s) (CLOs) to communities not normally subjected to major infrastructure construction.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• Fuel use will be minimised during the transportation of construction materials and personnel. A fuel use assessment will be		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	undertaken, in conjunction with safety assessments, at the outset of the construction programme. • A 30 km/h speed limit shall be enforced on the access road. The speed limit shall be 50 km/h in the towns and villages. The speed limit on the motorways and highways shall be 90 km/hr. • A 30km/h speed limit shall be established and enforced over all roads on site.				construction.
Parking facilities	• Signposted, parking facilities shall be provided at accessible locations on the road network.	*B1.4*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• The Contractors will ensure that part of the Construction Site is set aside for the parking of emergency service vehicles. The Contractor is expected to make provision for a dedicated parking area on the construction base for the private vehicles of construction personnel.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Maintaining Highways	The Contractor is expected to keep highways free from mud and dust and to ensure that no vehicle or other items of equipment leaving the construction base or working width, deposit soil, debris or rock on public highways or public right of ways. Measures will be implemented to ensure that the transport of mud and dust from the site onto public highways and roads is limited. Such measures may include:	*B1.5*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	• paving the access road; and • the use of hard core surfaces on access roads;				
	• the provision of an easily cleaned hardstanding area within the construction site for vehicles entering, parking and leaving.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• the appointment of site personnel to clean the construction hardstanding area and to remove any mud or debris deposited on the public highways; • the provision to clean hardstanding areas and to clean any mud or debris deposited by work vehicles on roads or footways in the vicinity of the construction site;		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• fully sheeting all works vehicles carrying potentially dusty material or likely to deposit loose materials on the public highway during transit; and • the Contractor shall clean and maintain temporary and permanent roads, and shall remove mud and debris from public roads.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Road Related Accidents	Hazards to personnel associated with vehicle transportation, both on- and off-road, will present one of the most significant risk exposures of the Project. Accordingly, the Contractor shall be expected to develop and implement management systems and procedures that will provide the highest level of control over these hazards. Accordingly, the Contractor's procedures shall specifically	*B1.6*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	cover arrangements for the following important aspects: • the source of and number of qualified drivers required; • training and approval requirements for drivers; • hours of driving and rest periods; • security arrangements for drivers, vehicles and loads; • arrangements for driver communication with control points and vehicle equipment; • language/communication issues; • the source of suitable vehicles (e.g. quality and specification); • the number of vehicles required; • the programme for preventative vehicle maintenance; • vehicle routes, route planning and alternative routes; • overall vehicle movements; • procedures for the emergency recovery of vehicles; • an appraisal of the social impact of vehicles in the local community; • procedures for spot checks and audits of the transport system and for reporting problems. • pre-use vehicle inspections shall be completed and recorded on the approved form; • all drivers shall be trained and evaluated in defensive and off-road vehicle operation		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Vehicle Standards and Maintenance	The Contractor shall comply with all other aspects of the Construction Health and Safety Management Plan, which include requirements	*B1.7*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemente

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	for vehicle standards and maintenance. The contractor shall also ensure that:				d during construction.
	• All vehicles shall be maintained so that their noise and emissions do not cause nuisance to workers or local people.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• New vehicles: vehicles/equipment purchased 'as new' after contract award shall comply with the appropriate emission standards in force on the purchase date.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	• Older vehicles: vehicles/equipment not purchased 'as new' after contract award shall be maintained so that noise and emissions levels are no greater than when the vehicle/ equipment was new.		Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
	The contractor shall produce method statements, as part of their TCMP, to cover routine maintenance and to minimize equipment emissions. Routine maintenance shall be to a high standard to ensure that vehicles are safe and that emissions and noise are minimised. Method statements shall require regular maintenance of diesel engines to ensure that emissions are minimised, for example, by cleaning fuel injectors.	*B1.8*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Annex D

Construction Spoils and Waste Management Plan Outline

D1.1 INTRODUCTION

The purpose of this Management Plan is to address the risks presented by the generation and handling of construction spoils and waste during construction, operation and decommissioning. Particular risks to be avoided and managed during construction include the following.

- Pollution of the ground and groundwater if hazardous liquids such as used oils and cement/ wet concrete are not properly stored and disposed.
- Increased pollution of groundwater and surface waters, windblown litter, smoke from fires and potential health impacts to nearby residents to the waste disposal sites due to increased amounts of waste deposited.
- Fugitive dust arising from the handling and storage of excavated spoil, concrete batching, rubble, and other inert construction wastes.

The responsibility for minimising the impacts associated with construction spoil handling and waste management will rest primarily with the contractor(s) responsible for the construction and installation of equipment.

Azura Power should ensure that the contracts for all aspects of the construction include requirements to minimise waste generation and ensure proper disposal of those wastes that do arise in accordance with this management plan.

D1.2 CONSTRUCTION SPOILS AND DUST MANAGEMENT

By far the largest quantity of waste arising during construction will be spoil generated from the excavation of the terraces to create level platforms for the installation of the major items of plant and equipment. The spoil which is excavated in creating the platforms will, wherever possible, be re-profiled around the site or re-used for landscaping. The surplus of excavated material will be disposed offsite.

The objective of the Construction Spoils and Dust Management Plan will be that as little spoil as possible should be disposed off site. The spoil which is excavated in creating the platforms will, wherever feasible, be re-profiled around the site or re-used for landscaping.

D1.3 WASTE MANAGEMENT

D1.3.1 Objectives

During construction and operation the overall objective is to minimise the impacts of waste generated through the following;

- minimise the amount of waste that is generated;
- maximise the amount of waste that is recovered for recycling – including segregation of recyclable wastes at source;
- minimise the amount of waste that is deposited at landfill;
- ensure any hazardous wastes (e.g. used oils, lead-acid batteries) are securely stored and transferred to appropriate facilities;
- avoid dust impacts from handling of construction wastes;
- ensure all wastes are properly contained, labelled and disposed of in accordance with local regulations; and
- waste is disposed of in accordance with the waste management hierarchy.

The internationally recognised and accepted hierarchy of waste management is illustrated in *Figure D1.1*.

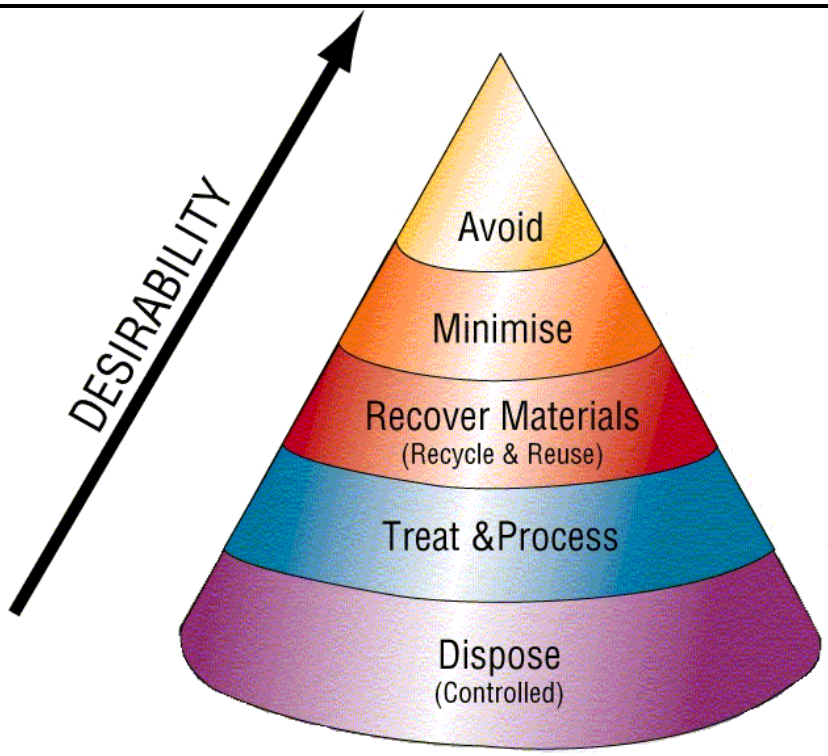

Figure D1.1 Waste Management Hierarchy

During decommissioning the overall objective is to minimise the impacts of waste generated through the following.

- reuse as much of the project's equipment and machinery as possible by selling it for use on other projects and selling for scrap any equipment that can't be sold for reuse;
- maximise the amount of waste from demolition of buildings that is recovered for recycling – including segregation of recyclable wastes such rubble, metals and wood;
- minimise the amount of waste that is deposited at the local dumpsite;
- ensure any hazardous wastes (eg used oils, lead-acid batteries) are securely stored and transferred to appropriate facilities;
- avoid dust impacts from handling of rubble from demolition wastes; and
- ensure all wastes are properly contained, labelled and disposed of in accordance with local regulations.

D1.3.2 Content

The contractor(s) will incorporate into the construction programme the following "good site practices" which will reduce the risk of impacts arising from waste management activities. The contractor(s) will produce a waste management plan that will cover the following key aspects:

- develop inventory and schedule of likely wastes;
- assessment of local waste management facilities;
- waste minimisation principles;
- maximise reuse /recycle opportunities;
- waste segregation (liquid and solid/reusable and recyclable);
- waste collection, storage and transfer;
- specific disposal procedures for all waste steams identified including waste transfer notes if moved to a offsite licensed facility;
- auditing and reporting procedures; and
- closure process which will include appropriate monitoring and recording.

Table D1.1 Construction Spoil and Waste Management Plan (Construction)

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
Construction Spoil – Handling and Storage	• Where possible align windrows with the prevailing wind to minimise surface area exposed to wind erosion. • Keep stockpiles to a minimum practicable height and use gentle slopes. • If practicable compact stockpile surfaces. • Minimise the storage time of stockpiles. • Minimise the height and fall of materials during handling.	*C1.1*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.
Construction Spoil – Transport	• Ensure that all dust generating materials transported to and from the construction works are covered by sheeting. • Clean wheels of vehicles leaving the work sites so that dirt and mud is not spread on surrounding roads. • Ensure that exhausts do not discharge directly at the ground	*C1.2*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.
Dust prevention – Haul Routes	• Locate haul routes away from sensitive sites if possible. • Pave heavily used areas, or use geotextiles e.g. around batching plant or haul routes. Sweep these regularly. • Pave access roads to the construction site. • Reduce the width of haul roads (while still allowing two-way traffic) to minimise surface area from which dust may be produced. • Sweep paved access roads (while still allowing two-way traffic) and public roads when necessary.	*C1.3*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	• Limit vehicles speeds – the slower the vehicles the less dust generated.				
Dust prevention – Concrete batching and pouring	• Mix large quantities of concrete or bentonite slurries in enclosed/shielded areas. • Before concrete pours, vacuum dirt out of formwork rather than blowing it out. • Keep large concrete pours clean after they have gone off. They can generate large quantities of dust.	*C1.4*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.
Dust prevention – cutting/grinding/ grouting /packing	• Minimise cutting and grinding on site. • On cutters and saws, use equipment and techniques such as dust extraction to minimise dust. Consider a wet cutting saw or use vacuum extraction.	*C1.5*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.
Hazardous Waste Management	• Hazardous wastes, such as batteries and fluorescent lights, will be collected, stored safely and then transported to an appropriate facility. • Waste oil generated at the construction sites will be collected and stored on site in sealed drums before being transported to an approved disposal facility. • All storage areas for hazardous substances will be hard surfaced with a secondary containment system in place.	*C1.6*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.
Solid Waste Management	For all construction works the following procedures will be applied to solid waste management: • All waste will be collected and segregated for reuse, recycling or disposal. • Waste will be disposed of at a licensed site by an authorised disposal contractor, where they are located within a reasonable	*C1.7*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	distance of the site. • Records of all waste stored, disposed of and transported shall be kept. • Other wastes (e.g. chemicals, oils, etc) will be segregated and stored for transport to recycling or disposal facilities. The Project will require contractors to take reasonable measures to dispose/recycle/transport wastes in a manner consistent with law and good environmental practice.				
Segregation of Solid Wastes	• Solid wastes will be segregated at source. • The Project will separate recyclable waste where possible. • Recyclable solid waste (plastic PET bottles, tin cans, aluminium cans and cardboard) should be compacted where possible for storage prior to removal. • Waste shipment request forms will be completed and used for monitoring waste streams and volumes removed from the construction site.	*C1.8*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.
Waste Transport	Waste will be securely transported from the point of arising to storage facilities and from there to treatment or disposal facilities so as to avoid spillages, windblown litter and other potential environmental problems by applying the following precautions: • The nature, composition and integrity of transport packaging and containers will be appropriate to the type and class of waste being transported. • Transport vehicles will be appropriate for the type, class and quantity of waste being transported in terms of its composition, load capacity, covering etc. • Loading and unloading procedures to avoid waste loss will be followed.	*C1.10*	Contractor	No separate cost. Included in Construction costs.	Implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	• Employees will be trained in the correct procedure to address accidents and emergencies. • All transport vehicles will be equipped with suitable materials or equipment to contain, manage and remove accidental spillages. • Vehicles carrying hazardous wastes shall be labelled appropriately. If a hazardous waste is mixed with non-hazardous waste, the entire consignment will be regarded as hazardous. A waste transfer note (WTN) system will be employed to provide evidence that all loads of hazardous waste have been taken to an approved treatment or disposal site.				

Annex E

Occupational Health and Safety Management Plan (Construction) Outline

ANNEX E: OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT PLAN (CONSTRUCTION)

E1.1 INTRODUCTION

The purpose of this Management Plan is to ensure that the Health and Safety of construction personnel is given paramount importance during the implementation of the Project.

Managing the Health and Safety of personnel at construction sites is an integral part of the overall management of construction. The hazards can be considered in two broad areas:

- hazards that are typical of most construction sites; and
- hazards arising from particular features of the location (hot, arid environment), etc.

The former hazards are well known; critical steps in managing them is selecting suitable contractors and ensuring the management system employed during construction is followed by site visits, audits, training, etc.

It is strongly recommended that a series of Hazard Identification (HAZID) Reviews are undertaken prior to construction. One of the issues to be considered in these HAZIDs is the health and safety of personnel arising from particular features of the Project. Once all the hazards have been identified, appropriate studies to assess the risks and plans to manage these can be initiated.

Table E1.1 identifies the key issues that should be included in a Health and Safety Management Plan for construction.

Table E1.1 Health and Safety Management Plan (Construction)

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
EHS Management	Occupational health and safety during construction will be managed under an EHS Management System. This involves the following: • compliance with international standards for good construction practices; • adherence to international guidance and codes of practice on EHS management during construction; • management, supervision, monitoring and record-keeping as set out in the project's EHS Management System and associated Contractor's Construction Environmental Control Plan; • implementation of EHS procedures as a condition of contract with the Contractor and its sub-contractors; • clear definition of EHS roles and responsibilities of the companies involved in construction, and their individual staff (including the nomination of EHS supervisors); • pre-construction assessment of the EHS risks and hazards associated with construction, including consideration of local cultural attitudes, education level of workforce and local work practices; • provision of appropriate training on EHS issues for all construction workers, including initial induction and regular refresher training, taking into account local cultural issues; • provision of health and safety information; • regular inspection, review and recording of EHS performance; and	*E1.1*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	• maintenance of a high standard of housekeeping at all times.				
Supervision	It is a requirement of the Contractor that HSE responsibilities and accountabilities are defined in individual job descriptions at all levels of the organisation.	*E1.2*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Supervision	HSE Manager will be responsible for assisting their Team Leaders in implementation of the HSE management system and in auditing and remedial actions. Each employee and contractor will be required to be individually responsible for taking reasonable care of the environment, their own health and safety and that of others.	*E1.3*	Contractor	No separate cost. Included in Construction costs.	During construction.
Supervision	Contractors will be selected on the basis that they are competent to perform the work and that their HSE management systems are compatible with International best practice. The Contractor and suppliers will be assessed during the contract evaluation process to demonstrate that these requirements are met.	*E1.4*	Client	No separate cost.	During procurement.
Personnel	A system will be established for selection and placement of qualified personnel to meet specific job requirements. Recruitment policies and procedures will include consideration of personal competencies and capabilities required to carry out the HSE functions of the job through the following deliverables: • individual Roles and Responsibilities Statements will be required from HSE contractor to define the HSE scope and required competencies of each position including accountabilities, main HSE tasks and hazards and relevant site specific HSE requirements; • Routine and Annual Appraisals will need to take into account applicable standards, the nature of operations and local circumstances to determine level of competence required for each position in terms of HSE related knowledge, experience and requirements; and • HSE training needs should be identified for all employees at all	*E1.5*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	levels.				
Staffing	The Contractor will ensure that recruiting plan provides sufficient numbers of competent staff for the facility.	*E1.6*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Training	The Contractor will develop a training programme. Recruits will be trained and continuously monitored against agreed standards. This will be a key strategy in enhancing safety and environmental protection.	*E1.7*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Competence	Key considerations of the Contractor in assessing competence will be based around safety and environmental factors including workplace risk assessment and hazard identification training, permit to work process, exposure to hazardous substances and chemicals, spill and accident reporting and waste management procedures.	*E1.8*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Training	The Contractor will educate and train employees to conduct their activities in a safe and responsible manner.	*E1.9*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
H&S awareness	The Contractor will promote the Health and Safety awareness of employees, suppliers and contractors.	*E1.10*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Workers risk	Workers will be subject to a risk assessment and then health monitoring if appropriate.	*E1.11*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Emergency	First aid will be provided on site. Employees should have access to fully equipped medical facilities, access to a doctor and paramedics if necessary. Emergency response plans will be in place for large scale events.	*E1.13*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
Accident Frequency and Severity	Procedures will be implemented for the investigation and reporting of accidents and incidents in accordance with the HSE standards. Records will be maintained and reported on a periodic basis. Appropriate action will be taken to minimise recurrence of such events.	*E1.14*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Accident investigation	Each accident or incident will be investigated, classified to determine the potential effect and appropriate remedial actions established. Implementation of remedial actions will be monitored.	*E1.15*	Contractor	No separate cost. Included in Construction costs.	During construction.
Accident record	Accidents and incidents will be classified according to their severity and frequency of occurrence. Records will be kept of all accidents and incidents as well as all reported near misses.	*E1.16*	Contractor	No separate cost. Included in Construction costs.	During construction.
Road Related Accidents.	Hazards to personnel associated with vehicle transportation, both on- and off-road, may present a risk to safety. Accordingly, the Contractor shall be expected to develop and implement management systems and procedures that will provide the highest level of control over these hazards.	*E1.17*			
HSE management of temporary work sites	Design and layout of all work sites will be reviewed from HSE perspective.	*E1.18*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Transport hazards	• Suitable infrastructure for transporting personnel, materials and equipment will be provided. • Assessment will be made of the transport risks associated with the delivery of materials and transport of staff.	*E1.19*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Environmental conditions e.g. extreme temperatures, inside and outside buildings	Exposure of the workforce to extreme climatic conditions shall be managed through the following: • Providing advice. • Monitoring of personnel. • Provision of potable water. • Suitable clothing.	*E1.20*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	• Sun screen if required.				
Noise	Exposure of the workforce to sources of noise shall be managed through the following: • Selection of equipment. • Maintenance of equipment. • Training for personnel.	*E1.21*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Vibration	Exposure of the workforce to sources of vibration shall be managed through the following: • Selection of equipment. • Maintenance of equipment. • PPE. • Training for personnel.	*E1.22*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Injury from materials and equipment	Injury of the workforce from handling materials and equipment shall be prevented through the following: • Suitable equipment which is tested and maintained. • Work Plans. • PPE.	*E1.24*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Slips, trips, falls	Injury of the workforce from accidental slips, trips and falls shall be prevented through the following: • Proper site set up. • Housekeeping. • PPE. • Site walk rounds.	*E1.25*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Flora and fauna	Injury of the workforce from exposure to hazardous flora and fauna shall be prevented through the following: • Identification of flora and fauna that could pose a hazard to personnel. • Advice to personnel. • PPE if required.	*E1.26*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Diseases	Injury of the workforce from communicable and non-communicable diseases shall be prevented through the following:	*E1.27*	Contractor	No separate cost. Included in	Developed during Project planning,

Issue	Mitigating/Monitoring Activity	ID No.	Responsibility	Cost ($)	Timing
	• Identification of diseases that could pose a hazard to personnel. • Advice to personnel.			Construction costs.	implemented during construction.
Stress associated with working environment	Stress within the workforce shall be managed through the following: • Advice to personnel. • Support. • Monitoring.	*E1.28*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.
Injury or illness	• First aid and medical facilities – appropriate to likely hazards and other facilities available. • Emergency Response Plan.	*E1.29*	Contractor	No separate cost. Included in Construction costs.	Developed during Project planning, implemented during construction.

Annex F

Benin Earthworks Physical Cultural Resources Management Plan

Prepared For:

AZURA

Azura-Edo Independent Power Project

Benin Earthworks Physical Cultural Resources Management Plan

Version 1.1, October 12, 2012

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FIGURES

TABLES

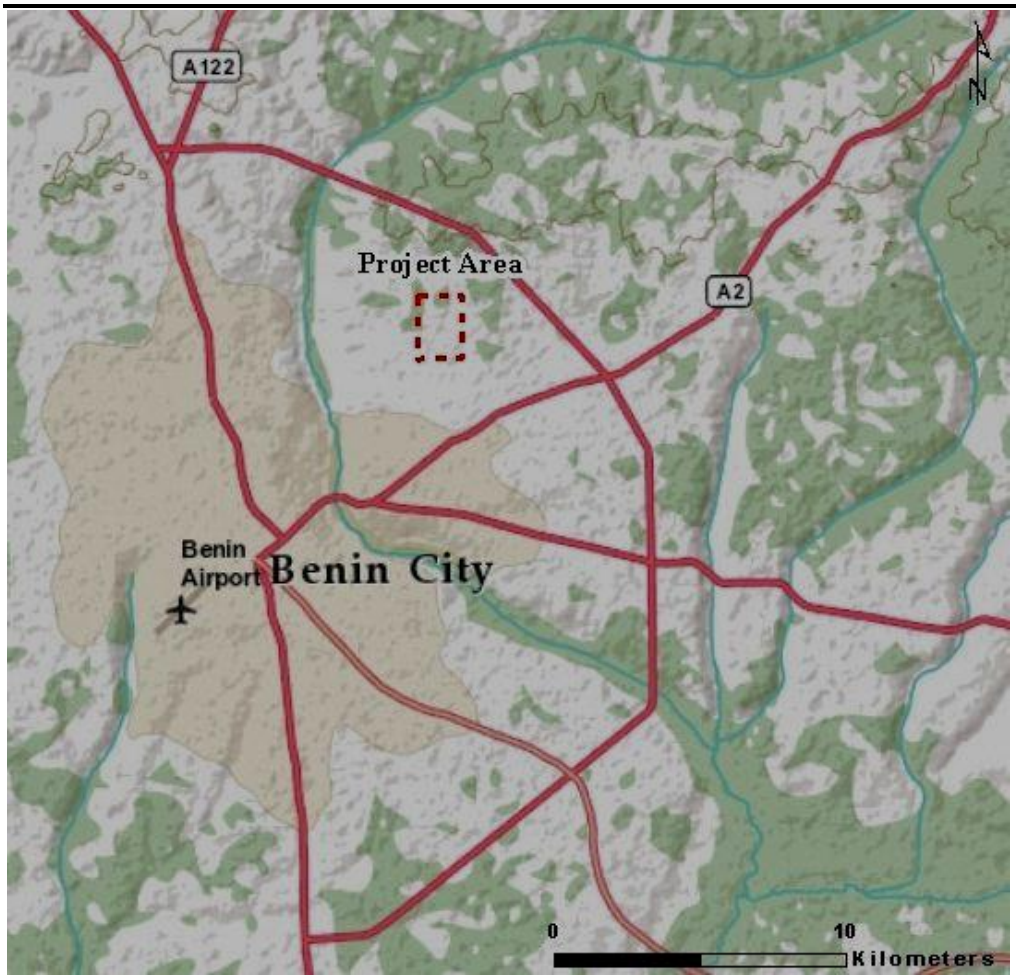
1 INTRODUCTION

Azura Power West Africa Ltd (APWAL), a subsidiary of *Amaya Capital Ltd*, is proposing to build a 450 MW gas-fired power plant (referred to hereafter as the Azura-Edo IPP) on the north-eastern outskirts of Benin City in Edo State, in the Federal Republic of Nigeria (*Figure 1-1*). The power plant structure will occupy 12.5 hectares within an overall plot of 102 ha. Additional buildings and residential quarters will be erected within the remaining 89.5 ha. The power plant will be constructed adjacent to the existing Ihovbor Power Plant, which is currently under construction under the auspices of the NIPP. In addition to the Project power plant, other relevant Project components are a short transmission line and gas pipeline spur.

The construction of the power plant and its associated components has the potential to impact physical cultural heritage resources, namely, portions of the Benin Earthworks, which occur within the Project site. The construction and operation of the power plant is the subject of various environmental and social commitments and requirements on the part of the Project and these are identified in the Environmental and Social Management Plan (ESMP), Nigerian legislation, and international standards and guidelines.

APWAL will meet these commitments through the implementation of the ESMP, which consists of a number of management plans, including this Physical Cultural Resources Management Plan (PCRMP). The present Plan summarises Cultural Resources Protection Program requirements and describes the processes, procedures and resources that will be used by APWAL to ensure protection of the Benin Earthworks. The Plan is a requirement and component of the overall Project Environment, Social, Health and Safety Management System. The Plan will serve as the basis for audits carried out by internal or external parties and is subject to the review and approval of international lending institutions financing the Project.

Figure 1-1 Benin City overview map showing location of Project site.



ERM, 2012

1.1 OBJECTIVES OF THE PCRMP

The purpose of the PCRMP is to provide concise and achievable management measures to preserve and protect physical cultural heritage associated with the Benin Earthworks from adverse impacts associated directly with construction and operation of any of the components of the Project. The specific objectives include the following:

- Identify the framework for compliance with Nigerian national law and national institutions charged with protecting physical cultural resources;
- Identify and accurately map physical cultural resources within the Project site through archaeological field reconnaissance;
- Use the results of the archaeological reconnaissance and mapping to avoid and/or minimise impacts to the identified physical cultural resources;
- Establish a chance finds procedure to minimise impacts to physical cultural resources that may be encountered during construction and operation of the Project; and
- Define the roles and responsibilities for implementing the above protection measures.

In addition to the protection of physical cultural resources, the PCRMP provides a plan that reduces the risk of Project delay by investing in pre-construction baseline field and desk research that will accurately map resource locations, document their preservation status and evaluate their importance to the local community and to national/international scientific and cultural institutions. Through the implementation of the PCRMP, during both the pre-construction and construction phase, Project resources will be better managed and local sensitivities to those resources better understood and addressed.

Specifically the PCRMP is intended to result in the following:

- A significant reduction in social grievances concerning the loss of physical cultural resources.
- A positive impact on the understanding of the ancient urban civilization that previously inhabited the landscape.
- Capacity building for Nigerian government officials charged with managing national physical cultural resources through engagement with archaeologists trained in modern mapping, survey, and preservation techniques.
- Reduction of the potential for project delay through compliance and engagement with national laws and institutions.

The overall purpose of this document is to clearly state the general characteristics and importance of the Benin earthworks, and to identify the

specific steps that will be taken to protect these resources, along with the rationale of these steps. From this basis, future and more specific iterations of the PCRMP will be developed. These future versions of the document may incorporate more specific language referencing APWAL project components, activities and timetables, as well as APWAL administrative and contractual relationships that are developed. Through these changes, the basic commitments to resource protection and management outlined in the present document will stay in place.

2 GENERAL REQUIREMENTS

As indicated in the Project ESIA, APWAL is committed to complying with all applicable national laws and international standards and guidelines, including World Bank Operation procedure 4.11 for the protection of physical cultural heritage. APWAL will ensure that this commitment is adhered to throughout the life of the Project by implementation of the present PCRMP.

2.1 NATIONAL LEGISLATION

The following is a list of Nigerian national laws and institutions charged with the protection of physical cultural resources.

- The 1953 Antiquities Ordinance (Ordinance 17): established the Federal Department of Antiquities and the Antiquities Commission charged with supervising archaeological excavations, declaring and protecting monuments and controlling the movement of antiquities.
- The 1957 Antiquities Export Permit Regulations: enhanced Ordinance 17 with specific reference to the control of movement of antiquities.
- The 1974 Antiquities Prohibited Transfer Decree: further enhanced Ordinance 17 with specific reference to the control of transport of antiquities.
- The 1979 Decree 77 (1) : the first Nigerian national law specifically protecting immovable cultural heritage. The Act dissolved both the Federal Department of Antiquities and the Antiquities Commission replacing them with the National Commission of Museums and Monuments (NCMM) which was granted additional authority to engage in the active protection of immovable cultural heritage. The Act requires government authorisation for all archaeological excavation and notification of the government for findings of archaeological interest; defines protocol for the handling and declaration of monuments; and restricts the purchase and sale of antiquities (2).
- The 2002 Cap 242: a re-enacting of the 1979 Decree 77.
- The 2002 NCMM Act 404: confirms the legal status of the NCMM and its power to protect physical cultural resources.

National legislation has not always been well implemented in the protection of the cultural landscape formed by the Benin Earthworks. Urbanisation, plantation expansion, agricultural intensification, infilling, and erosion have

(1) This law can be found at the following website: http://www.nigeria-law.org/LFN-1990.htm
(2) Sections relevant to the protection of immovable heritage within Decree 77 of 1979 are: Part II Section 13, Part II Section 15 and Part II. The specific sub-body of the NCMM charged with protecting immovable cultural heritage is the Department of Monuments, Heritage and Sites (DMHS).

contributed to the on-going destruction of all the Benin Earthworks. Although the *Federal Department of Antiquities* (FDA, the precursor to the NCMM) registered the Benin City Moat as a National Monument, government buildings, private residences and other structures have been allowed to encroach onto the earthworks. Additionally, an early 1970s state government drainage project routed its effluent along the easternmost section of the earthworks, inadvertently destroying a section of the City Earthwork.

2.2 *INTERNATIONAL STANDARDS AND GUIDELINES*

The primary international standard applicable to the Azura-Edo IPP is World Bank Policy OP 4.11 of July 2006. The policy addresses the protection of Physical Cultural Resources, which it defines as:

'*Movable or immovable objects, sites, structures, groups of structures, and natural features that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance, found in urban or rural settings, above or below the ground surface, or under water; and their cultural interest may be at the local, provincial, national or international level.'*

The policy also states that:

'physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic or social development, and as integral parts of a people's cultural identity and practices.'

The policy requires that the assessment of project impacts on physical cultural resources be part of the environmental assessment process and that it include: 1) consideration of likely impacts, 2) appropriate measures for avoiding or mitigating impacts, 3) development of a physical cultural management plan, 4) provisions for managing chance finds, 5) measures for strengthening institutional capacity, and 6) a monitoring system to track progress. Parallel to the Bank policy, and aligned with it, is the IFC's Performance Standard 8 for cultural heritage. This standard now serves as an international benchmark for the protection of physical cultural heritage in the implementation of internationally financed commercial projects.

Guidance Notes for Performance Standard 8 outline actions for the preservation and protection of physical cultural heritage from Project impacts including the following:

- include cultural heritage concerns in project assessment process and management systems;
- integrate cultural heritage impacts into the Social and Environmental Assessment;
- include opportunities for enhancement to cultural heritage in the Assessment;

- consult with experts, government authorities, local communities, and Indigenous Peoples to identify cultural heritage resources;
- comply with national laws and any applicable treaties and conventions;
- design and site projects to avoid cultural heritage;
- use internationally recognised practices for the protection, field-based study, and documentation of cultural heritage;
- develop and implement Chance Finds procedures for construction and operation;
- preserve sites in place unless there are no technically or financially feasible alternatives; and/or the benefits from the project outweigh any heritage losses; and
- remove cultural heritage that cannot be avoided using the best available techniques.

3 BASELINE CONDITIONS

The physical cultural resources of the Project site fall into four main categories:

- ancient linear earthworks or "*iya*";
- ancient anthropogenic dark earths (ADEs);
- surface artifacts such as ceramic remains; and
- modern/historic ritual shrines.

A short description is provided below of each cultural resource category.

3.1 LINEAR EARTHWORKS

The network of linear earthworks belonging to ancient Benin City is considered one of the most extensive culturally modified landscapes in the ancient world. Locally known as *iya,* the Benin earthworks have resulted from a gradual process of landscape modification, hypothesised to have served multiple social and environmental purposes.

Defensive enclosures, ritual thoroughfares, and drainage channels are three purposes most commonly attributed to the earthworks. Those earthworks that served as protective enclosures are believed in some instances to have reached a height of more than 18 meters. Other types of earthworks, particularly those believed to have ritual or environmental functions, are less vertically exaggerated and are probably the more common types of earthworks belonging to the Benin earthworks. Through time and modernisation, portions of the moats have disappeared, been used for other building sites, or have deteriorated from neglect (*Figures 3-1 and 3-2*).

In general, very little is known about the Benin earthworks and information pertaining to their dimensions, antiquity or functions should be considered as preliminary.

Overall knowledge of the earthworks is limited in relation to their importance. Two previous general archaeological surveys; a remote sensing analysis performed by ERM; and a recent scoping field visit (including on-the-ground observations and measurements by earthworks researcher Dr. Patrick Darling) have provided high level information appropriate for the development of this PCRMP.

Previously two archaeological surveys of the Benin Earthworks had been conducted. The first was a survey and excavation effort conducted in the 1960s in the area west of the Ikpoba River [(1)].

Figure 3-1 Section of Earthworks near Benin City.

ERM, 2012

Figure 3-2 Overgrown section of earthworks within the Project site.

ERM, 2012

(1) G. Connah, The archaeology of Benin, (Clarendon Press, 1975)

Radiometric (C-14) dates obtained during the excavations suggest that this part of the earthworks likely dates between AD 12th and AD 16th centuries. A second, and more specifically relevant project, was an archaeological survey conducted in 1974 which targeted the area to the east of the Ikpoba River (1). This second survey effort included the present Project site. A composite map of Benin earthworks based on the results of these surveys is presented in *Figure 3-3*.

Although these two surveys provide a general picture of the scope and extent of the earthworks, neither survey generated precise maps of the earthworks. Nonetheless, the location of the Project site in relation to the results of these surveys can be estimated by geo-referencing Project plans and the survey maps (*Figure 3-3,* shaded area). The results of this analysis suggest the Project site may contain multiple, distinct sections of earthworks.

In order to address the limited baseline knowledge of the earthworks contained within the Project site, ERM conducted a remote sensing analysis using publically available satellite images of the Project site. This survey was performed in order to identify potential abandoned earthwork features (*Figure 3-4*). The survey resulted in the identification of numerous potential earthworks within the Project site. The potential earthwork features identified during this survey represent the possible locations of additional *iya* sections or remains. This analysis provides additional evidence suggesting that there is significant potential for encountering multiple sections of earthworks within the Project site.

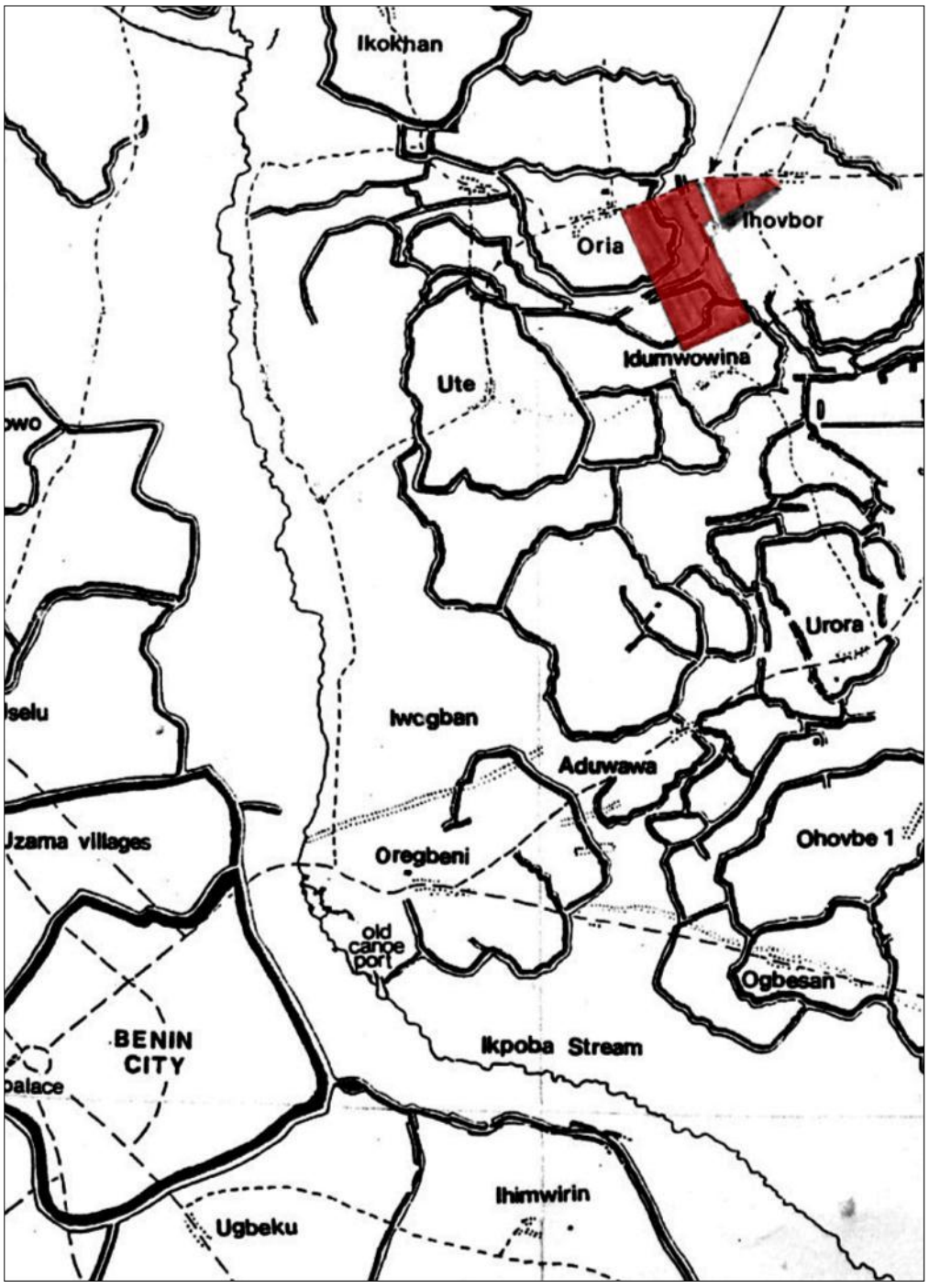
A recent specialist field scoping analysis conducted by Azura for the development of the PCRMP (including work done on Azura's behalf by Dr. Patrick Darling) confirmed the presence of earthworks features in the Project site. The field scoping analysis consisted of on-the-ground observations and GPS recordings taken by Azura during the specialist field scoping, complemented by interviews with the local community (*Figure 3-5)*. Two partially intact linear earthworks or *iyas* were identified on the Project site:

- The "Orior *iya*" is located in the north west of the Project site. It was GPS surveyed at about 50m intervals, with estimates made of the bank heights at every stop. Three cross-profiles were measured using a spirit-level to make stepwise vertical measurements for every horizontal meter. These results show that, for most of its length, the inner bank of the Orior *iya* ranges between four to six meters deep from bank top to ditch bottom, rising to seven or eight meters at only one estimate.

- The Idunmwowina *iya* (located on the southern edge of the Project site) is a much smaller feature than the Orior *iya*, being one-and-a-half to two metres from bank top to ditch bottom for most of its length and rising to three metres at only one point.

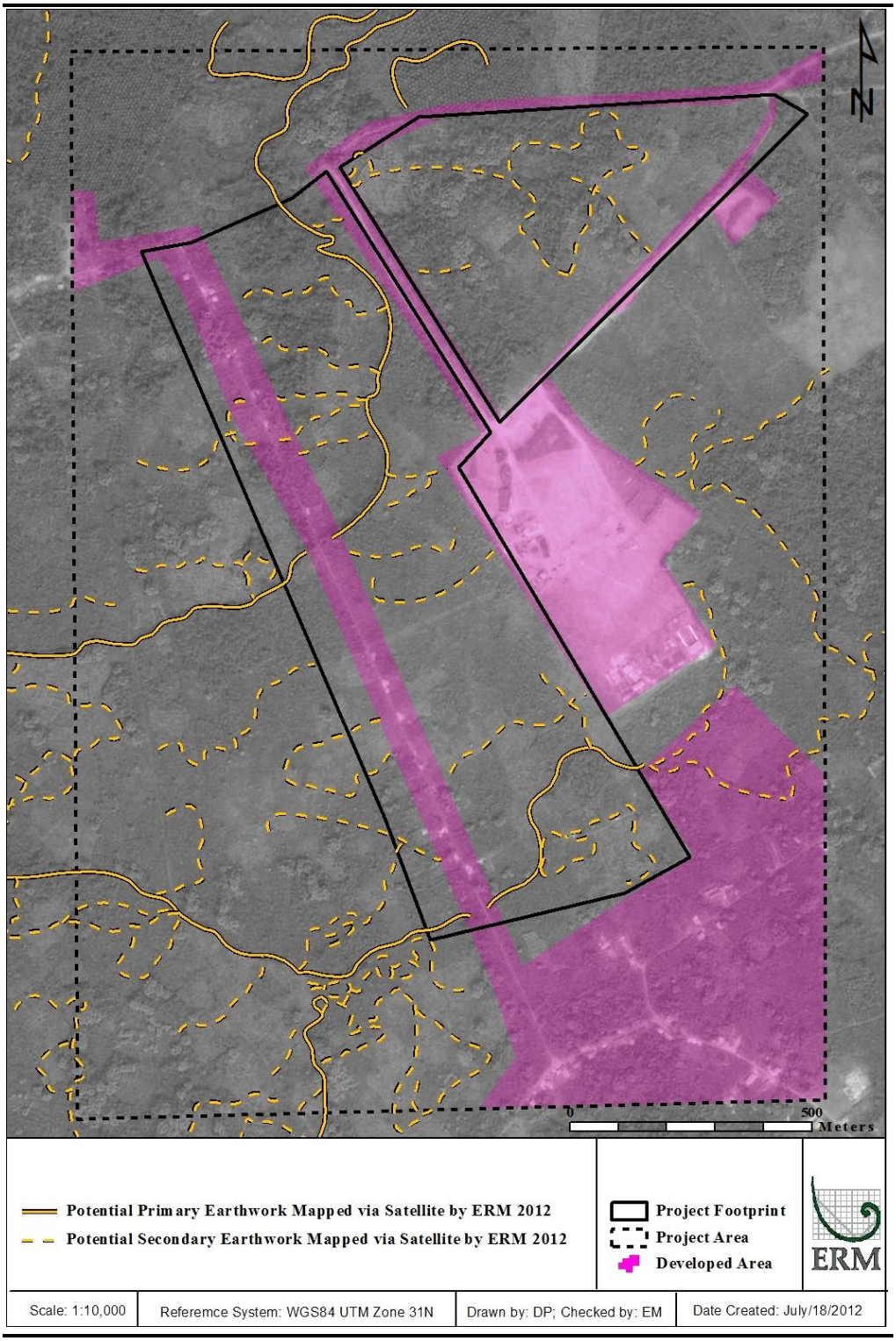
(1) P. Darling, 'Archaeology and History in Southern Nigeria, 2 vols', Cambridge Monographs in African Archaeology, 11 (1984).

Figure 3-3 ***Composite drawn map of Benin earthworks showing the results of Connah's 1964 survey to the west of Ikpoba Stream and Darling's 1974 survey on the east side of that river.***



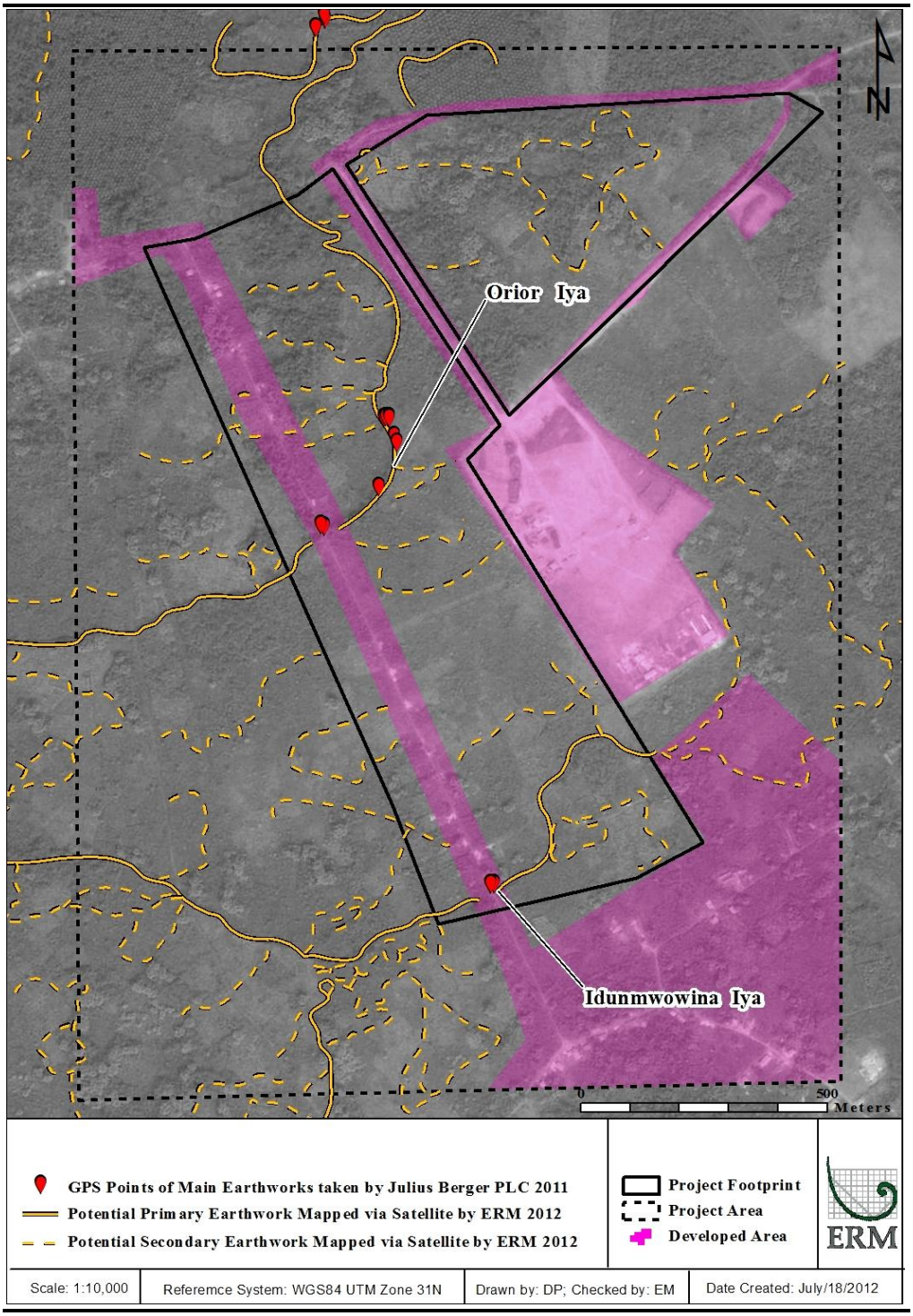
ERM, 2012

Figure 3-4 ***Project site showing approximate locations of potential earthworks based on remote sensing survey***



ERM, 2012

Figure 3-5 ***Project site showing GPS points taken during specialist field scoping analysis conducted by APWAL and potential earthworks locations based on remote sensing survey results.***



ERM, 2012

The locations of the two partially intact *iyas* identified during the specialist field scoping analysis survey appear to correspond with earthworks identified during both the 1974 survey of the east side of the Ikpoba River and the 2012 remote sensing analysis conducted by ERM (*Figure 3 -6*). The section of the Orior *iya* identified in the north west of the Project site during the field survey appears to match a similarly crescent-shaped section of earthworks depicted

in the 1974 survey map as well as the location of potential earthworks based on ERM's remote sensing analysis. The section of the Idunmwowina *iya* located in the southern edge of the Project site likewise corresponds to a northeast to southwest running section of earthworks identified during the remote sensing analysis and depicted on the 1974 survey map.

The geo-referenced 1974 survey map and the 2012 remote sensing analysis do not conclusively document the presence of additional earthwork sections within the Project site. However, the correlation between *iyas* identified during the specialist field scoping survey; the earthworks depicted on the 1974 survey map; and those identified during the remote sensing survey (*Figure 3-6*) suggest a high probability of encountering intact, fragmentary, or archaeological features associated with additional *iyas* in the Project site.

In summary, the information from the above mentioned surveys indicate the following.

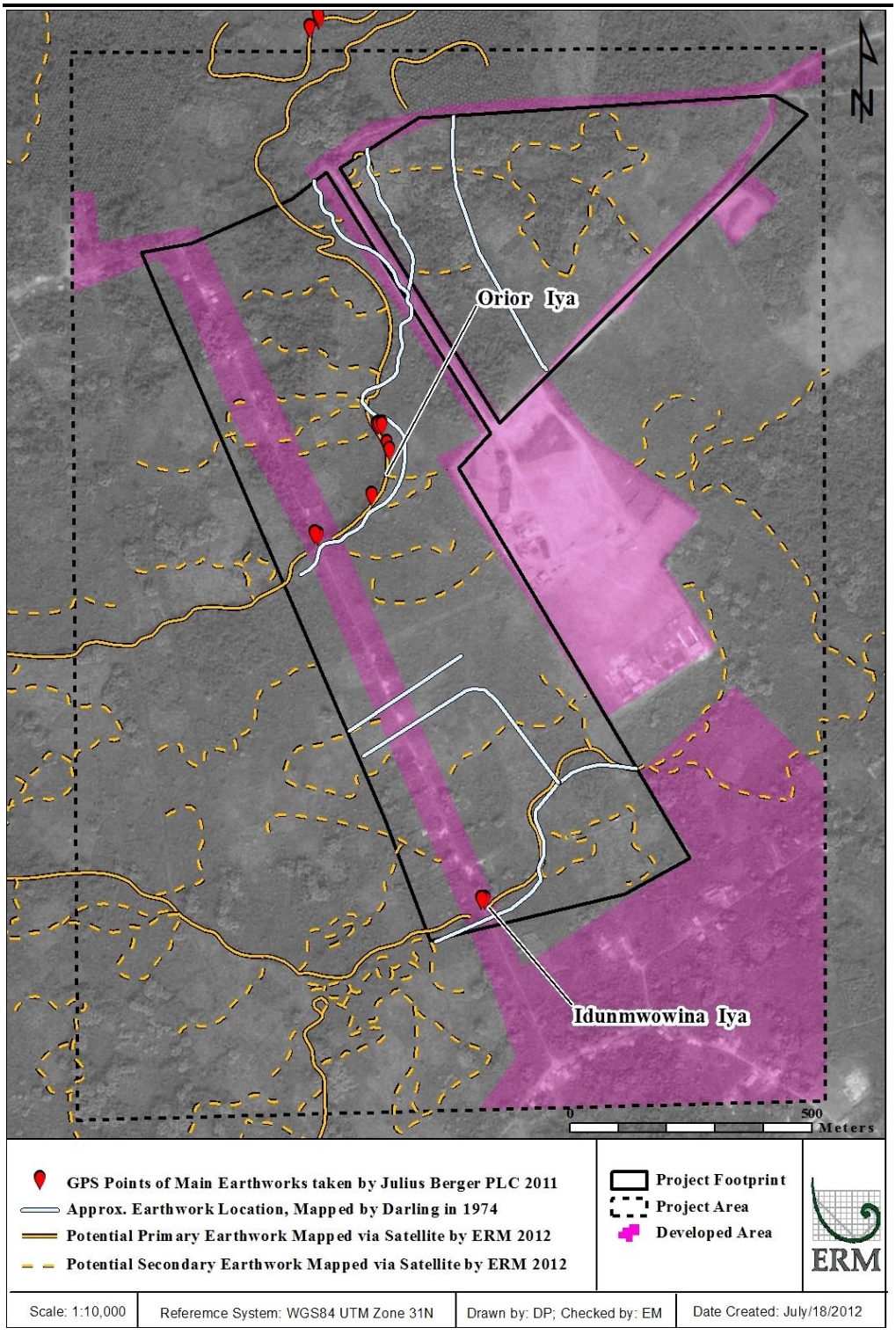
- Earthworks are present within the Project site.
- The earthworks may date between AD 12th and AD 16th centuries. This chronology is based on the C-14 dating conducted by the 1960s excavation project that focused on central Benin City and may therefore offer only general parallels to earthworks in the Project site.
- The original social or environmental purpose or purposes served by the earthworks are still poorly understood due to lack of research.

The positional accuracy of the earthworks in the Project site is sufficient to confirm the presence of the referenced resources and the high potential of additional resources being presented, but not yet sufficient for effective resource management. Survey techniques employed during all three above mentioned efforts were not intended to generate precise maps. Rather, the goal was to create a representation of earthworks locations for illustrative purposes [(1)].

- The extent to which earthworks within the Project site have been preserved is not confirmed and may be highly variable.

(1) The archaeology of Benin, p. 103

Figure 3-6 ***Project site showing extant and potential iya locations based on GPS points taken during specialist field scoping analysis; Darling's 1974 survey; and ERM's remote sensing survey results.***



ERM, 2012

3.2 *ANTHROPOGENIC DARK EARTH (ADE)*

Anthropogenic Dark Earth (ADE), sometimes termed *terra prieta*, represents an early, advanced and sustainable agricultural methodology thought to have supported ancient populations in tropical West Africa. In many cases, ADE deposits are also thought to form as a result of the burning of forests to clear them for agriculture (part of an agricultural strategy called "shifting cultivation").

ADE is thought to be produced through the incomplete combustion of organic material, known as "biochar", which improves the soil structure, aggregation, water filtration and retention, and nutrient storage capacity. As a result, ADE has up to three times the content of organic matter when compared to the natural and nutrient-poor soils typical of tropical environments. Importantly, ADE becomes richer with age, making them a sought-after resource for modern local agriculturalists. Much of the West African ADE is hypothesised to have been generated in pre-modern times (1).

The distribution of ancient ADE provides information about the urban layout of ancient settlements and their hinterlands and pre-modern agricultural practices. The presence of ADE is also considered to be an indicator of areas with a high potential to contain archaeological resources. The presence of ADE within the Benin earthworks is a strong possibility but has not yet been formally investigated. It is only within the past decade that ADE has been recognised as an ancient archaeological resource in Africa.

Multidisciplinary research projects focused on ADE are now underway in various West African nations (2). Investigations into ancient ADE in Nigeria have recently begun around the town of Kabba, located north of Benin City (3).

3.3 *SURFACE ARTEFACTS*

Surface artefacts, currently hidden by dense vegetation may reflect archaeological deposits buried within ADE, and are likely to be exposed during landscape clearing and topsoil removal. Individual artefacts or concentrations of artefacts may denote the location of different types of subsurface archaeological features including roads, houses, and areas of storage and refuse. Ceramic shards are the most common type of surface artefact encountered at archaeological sites in this part of Nigeria. Small and fragmented stone statues are also sometimes found within ADE deposits. On their own, these broken artefacts do not hold much cultural value. Rather, their value is recognised by the patterns in which these artefacts are dispersed

(1) Fairhead and M Leach, 'Amazonian Dark Earths in Africa?', in William I. Woods, Wenceslau G. Teixeira, Johannes Lehmann, Christoph Steiner, Antoinette WinklerPrins, and Lilian Rebellato, eds., Amazonian Dark Earths: Wim Sombroek's Vision (Springer Netherlands, 2009) pp. 265–278.
(2) Fairhead and M Leach, 'Amazonian Dark Earths in Africa?', in William I. Woods, Wenceslau G. Teixeira, Johannes Lehmann, Christoph Steiner, Antoinette WinklerPrins, and Lilian Rebellato, eds., Amazonian Dark Earths: Wim Sombroek's Vision (Springer Netherlands, 2009) pp. 265–278.
(3) P. Darling, 'Anthropogenic Dark Earth's in Nigeria's Rainforest', Athens, (2012).

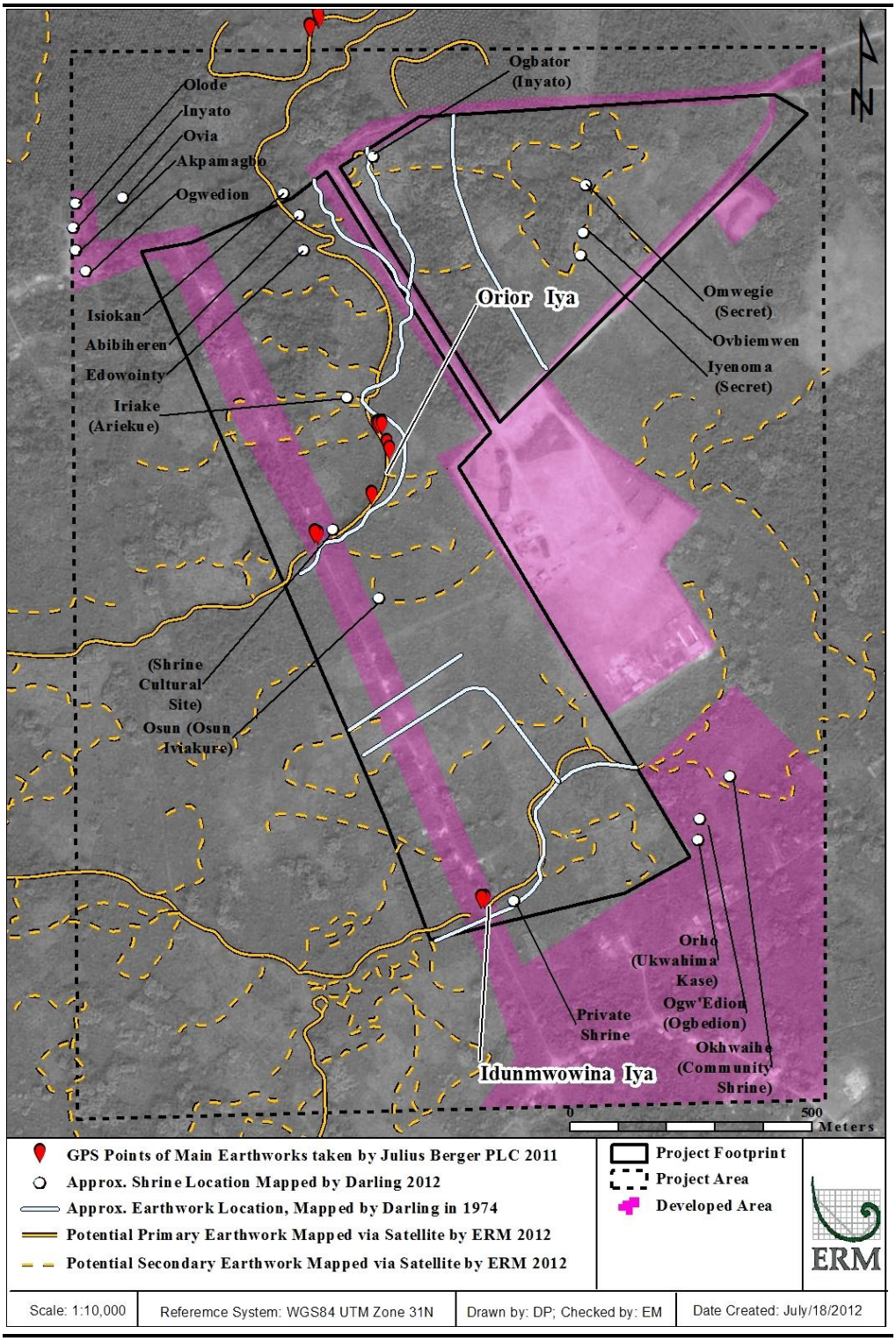
across the landscape. Broken ceramics are also commonly used as chronological indicators that help archaeologists to date associated occupational layers and features.

3.4 SHRINES

Data on shrines located within the Project site were obtained from a combination of published sources and information documented during interviews and field surveys. There are approximately 19 known shrines within the Project site. Of the 19 known shrines, three are designated as private/secret. The remaining 16 non-private shrines are assumed to be communal and are categorised into three main groups: 1) hero-deity cults, 2) community cults dating to the time of the Benin Empire (1440-1897), and 3) leadership cults associated with the historic ruling class of Benin City. The shrines function as gathering locations for religious ceremonies including traditional healing. Such shrines exist in a range of forms, including physical landmarks (such as trees), small free-standing wooden or steel huts, and more permanent walled structures.

The recent survey efforts, conducted on behalf of APWAL identified a number of contemporary shrines both within and adjacent to the Project site (*Figures 3-7 and 3-8*). The methodology was informal and consisted of village-level interviews of individuals charged with the responsibility of shrine upkeep. The baseline knowledge of these shrines is, for the most part, sufficient for managing impacts to this living heritage aspect of the earthworks. The living heritage component of the earthworks will be handled through social management plans including a resettlement plan identified in the ESIA.

Figure 3-7 *Location of shrines in relation to other physical cultural resources within and in the immediate vicinity of the Project site.*



ERM, 2012

Figure 3-8 Osun shrine within the Project site.

ERM, 2012

3.5 *PROTECTION STATUS OF THE BENIN EARTHWORKS SITE*

The physical cultural resources within the Project site are protected by the Nigerian national laws cited in Section 2.1, which would apply to earthworks, shrines, shrine contents, and surface artefacts.

Locally, efforts have been made to provide international protection for the Benin earthworks. While nominated twice as Nigeria's first choice for a UNESCO World Heritage Site, the Benin earthworks have not been formally listed by UNESCO due to the limited amount of research conducted on the earthworks themselves. The Benin earthworks remain on the UNESCO's Tentative List of World Heritage Sites (1) awaiting nomination by a Nigerian government entity (2) .

3.6 *STAKEHOLDERS*

The following stakeholder groups have an interest in the earthworks and related physical cultural resources. These groups should be consulted regarding further development and implementation of the PCRMP.

(1) The Benin Earthworks (iya) are number 488 on the UNESCO "Tentative List" and were first accepted to the list in 1995: http://whc.unesco.org/en/tentativelists/488/

(2) UNESCO Special Expert Meeting on "The Concept of Outstanding Universal Value", Kazan, Russian Federation, (April 2005)

Local Communities: The local chiefs, priests and farmers have a direct interest in the conservation of their cultural properties. These communities will expect to be informed about the potential impacts and preservation measures for the earthworks and shrines during both pre-construction and construction phases. If ADE distributions are found, the local community should also be consulted about whether the ADE should be used to enhance agricultural and/or gardening activities.

Oba of Benin: The Oba of Benin is the overall traditional owner of the land and symbolic custodian of all its shrines. The Oba will expect to be kept informed of what actions are being taken in respect of the cultural properties on this site. While detailed information on specific shrines located within the Project site is best provided by the local shrine custodians, priests and chiefs, the Oba may have important insights into the larger social framework of shrine use and the potential grievances concerning shrines and the impacts they might face.

National Commission for Museums and Monuments (NCMM): The NCMM is the legal body responsible for protecting cultural properties and cultural landscapes. It is also responsible for providing archaeological permits in advance of fieldwork. There will be active liaison between APWAL and the NCMM. The NCMM will be involved in both the pre-construction field survey and the construction monitoring program.

The National and International Scientific Community: The Benin Earthworks are generally considered to be of international scientific importance. Still, very little is known and no field investigation has occurred at these structures aside from the above mentioned projects undertaken in the 1960s and 1970s. Even the limited mapping and investigation of the earthworks and associated resources within the Project site may yield important information about these poorly studied resources.

3.7 SUMMARY OF SITE VALUE AND SENSITIVITIES

Earthworks: The earthworks are considered to be of local and national importance. Organisations, such as the Benin Moat Foundation (1) and African Legacy (2) actively promote the recognition and conservation of this archaeological resource. To the national and international scientific community, the earthworks are of high interest and any additional information pertaining to their previous social and/or environmental functions will be important for furthering the archaeology and history of ancient Nigeria.

(1) http://www.beninmoatfoundation.org/projects.html
(2) http://members.tripod.com/~african_legacy/AHC.html

Shrines: The shrine contents are the items of most immediate cultural value to local communities. Cultural landscape items have previously been subject to thefts so the contents of many forest shrines in the Benin Kingdom were taken for safe-keeping into the villages. It is understood that some of the objects on exhibit may be temporary restorations of the shrine contents after removal from their original locations.

Anthropogenic Dark Earths (ADE): ADE deposits are of potential archaeological significance. The local community in the Project site has not shown an interest in ADE and it is likely that it is not familiar with the concept. In other areas, ADE soils are a sought-after resource for modern local agriculturalists. It is not yet known if ADE exists within the Project site.

Surface Artefacts: Surface artefacts, whole or in fragmentary form, may be of scientific value as indicators of subsurface archaeological remains. This resource will likely not be valued much by the local population aside from rare and well preserved finds. Such finds and well preserved remains will be of interest to the NCMM and local museums.

Ground disturbing activities, especially construction activities, within the Project site have the potential to impact and irreversibly damage physical cultural resources associated with the earthworks. Such activities include site clearance, grading, excavation and trenching. Impacts occur wherever the construction footprint of the Project overlaps with earthworks or associated resources. This would include the footprint of both temporary and permanent structures.

The Benin earthworks as a whole represent a cultural heritage resource of international importance, a resource that is highly significant and yet poorly studied. In addition, the earthworks are under threat of encroachment from on-going development which in some cases may result in the irreversible loss of associated cultural heritage values. The mapping, study and preservation of earthworks and associated resources within the Project site, will thus contribute to both the understanding of the earth works and an understanding of how to preserve the earthworks generally. This, if achieved, would be a highly positive impact.

This section of the PCRMP identifies mitigation measures to be implemented to avoid and minimise these localised impacts: to the earthworks; to potential archaeological resources found within anthropogenic dark earths; to surface artefacts; and to shrines. A summary of these activities for the construction, operation, and decommissioning phase of the Project are provided in T*ables 4-1* through *4-4*.

Table 4-1. Preconstruction Phase: PCRMP Mitigation Measures

Impacts	Desired outcome	Mitigating/Monitoring Activity	ID #	Staff	Cost (Work Days)
The removal of sacred shrines during construction phase could disrupt local worship practices and could result in significant tension with the communities.	Minimise the disruption as a result of the relocation and removal of sacred sites	• Stakeholder engagement with members of the community to determine each shrine's level of importance; and	1	1 Social Specialist	5 days
		• Integrate locational data from mapping survey and shrine importance information from stakeholder engagement data into the Project's cultural heritage GIS database.	2	1 Geospatial Specialist	5 days
		• Avoidance of shrines determined to be important to the local community.	3	APWAL Personnel	Unknown
		• If shrines considered important to the local community cannot be avoided, consultation with the local community will occur to offer compensation for the loss of the cultural resource or to inquire about the possibility of relocating the resource.	4	1 Social Specialist 1-2 APWAL Representative(s)	7 days 7 days
Construction work could irreversibly damage the Benin Earthworks and the associated cultural heritage	Prevent any disturbance or damage to the earthworks in the Project site. If disturbance is unavoidable, mitigate the effects.	• Obtain archaeological fieldwork permits from the National Commission for Museums and Monuments (NCMM) before undertaking any intrusive physical cultural heritage fieldwork.	5	1 Archaeologist	2 days
		• Additional remote sensing survey/analysis and field reconnaissance to identify and assess the condition, and precisely map earthwork features in a GIS database.	6	1 Archaeologists 2 Archaeological Field Technicians	7 days 7days
		• Use the GIS database and associated condition assessment data to manage potential earthwork impacts throughout construction phase.	7	1 Geospatial Archaeologist	5 days
		• Where possible, design or re-design Project components to avoid or minimise impacts to known physical cultural heritage resources based on	8	APWAL Project Team	Unknown

Impacts	Desired outcome	Mitigating/Monitoring Activity	ID #	Staff	Cost (Work Days)
		input from cultural heritage specialists. • Mark the earthworks with high visibility flagging to avoid unintentional impacts to earthworks and related features that lie adjacent to the construction footprint.	 9	 1 Archaeologist 2-4 Laborers	 3 days 3 days
Construction work could damage archaeologically significant Anthropogenic Dark Earths (ADE) and surface artefacts.	Mitigate impacts to potentially significant archaeological deposits.	• Conduct a remote sensing analysis using available satellite imagery to identify areas potentially containing ADE. • If potential areas of ADE are identified, ground test areas using a standard field auguring methodology to determine their extent and selective excavation to obtain artifact samples and stratigraphic information. • Map identified areas of ADE in the cultural heritage GIS database. • Develop and provide training and information on physical cultural heritage issues and the Chance Finds protocol to all personnel working for or on behalf of the Project.	10 11 12 13	1 Geospatial Archaeologist 1 Archaeologists 1 Archaeological Field technician 1 Geospatial Archaeologist 1 Archaeologist	2 days 7 days 7 days 2 days 4 days

Table 4-2 Construction Phase: PCRMP Mitigation Measures

Impacts	Desired outcome	Mitigating/Monitoring Activity	ID #	Staff	Cost (Work Days)
Construction work could irreversibly damage the Benin Earthworks and the associated cultural heritage	Prevent any disturbance or damage to the earthworks in the Project site. If disturbance is unavoidable, mitigate the effects.	• Implement a Chance Finds protocol executed through an archaeological monitoring (watching brief) program during ground disturbing activity. • Stopping construction work and conducting rescue studies to mitigate impacts to unanticipated discoveries/Chance Finds through the construction process. • For components of the earthworks that cannot be avoided by ground disturbing construction works, undertake detailed recordation and selective excavation. • Solicit input from and provide information to local communities, the Oba of Benin, NCMM, and national and international scientific community on heritage issues, work, and concerns throughout construction and notify these groups of relevant Chance Finds as needed.	14 15 16 17	1-2 Archaeologists 2 Archaeologists 2 Archaeological Technicians 2 Archaeologists 2 Archaeological Field Technicians 1 Archaeologist 1 APWAL Representative	Duration of Construction Unknown 7 days 7 days 7 days* Duration of Construction
Construction work could damage archaeologically significant Anthropogenic Dark Earths (ADE) and surface artefacts.	Mitigate impacts to potentially significant archaeological deposits.	• Document ADE deposits and artifact finds during construction phase by means of a Chance Find protocol including archaeological monitoring (watching brief) executed during ground-disturbing activities.	18	1-2 Archaeologists	Duration of Construction

*7 days over the entire Operational Phase of the Project

Table 4-3. Operation Phase: PCRMP Mitigation Measures

Issue	Desired Outcome	Mitigating/Monitoring Activity	ID #	Responsibility	Cost (Work Days)
On-going disruption of traditional religious observance associated with removal/relocation of sacred sites.	Minimisation of any on-going disruption to traditional religious observance	• Ongoing stakeholder engagement to minimise impacts to traditional religious observances associated with removal/relocation of sacred sites.	19	1 Social Specialist and APWAL Representative(s)	7 days*
Unexpected ground disturbing activities associated with facility maintenance or upgrades as well as emergency disaster (i.e. fire, chemical spill/soil contamination) response and associated clean-up activities.	Prevent damage to the Benin Earthworks, ADE, and/or other archaeological deposits	• Share responsibility for PCR management (including that of the earthworks) with the NCMM. • Provide capacity building support to ensure that NCMM can help to support the plan's measures.	20 21	1 Archaeologist 1 Archaeologist	1 day 7 days*

*7 days over the entire Operational Phase of the Project

Table 4-4. Decommissioning Phase: PCRMP Mitigation Measures

Issue	Desired Outcome	Mitigating/Monitoring Activity	ID #	Responsibility	Cost (Work Days)
Unexpected ground disturbing activities associated decommissioning the facility. Currently there is no site closure and restoration plan.	Prevent damage to the Benin Earthworks, ADE, and/or other archaeological deposits	• Develop mitigation measures for potential impacts to cultural heritage as part of the site closure and restoration plan.	22	1 Archaeologist	7 day*

*7 days over the entire Operational Phase of the Project

5 CHANCE FINDS PROGRAM

The Chance Finds Protocol's objective is to identify and protect previously unrecorded cultural heritage sites, objects, or features from Project-related damage. The Protocol applies to potential cultural heritage objects, features or sites identified as a result of vegetation and topsoil removal and other ground disturbing construction activities. The procedure complements the other mitigation measures described above addressing finds that may not be identified in the planned preconstruction reconnaissance. As a key part of the Chance Finds protocol an archaeologist with a watching brief will be assigned to on-site direct observation of ground disturbing activities.
Chance Finds may be made by any member of the Project, but must be evaluated by an archaeologist as being Cultural Heritage. Two types of Chance Finds are likely to be encountered during construction works:

1. Cultural Heritage Chance Finds; and
2. Non-Cultural Heritage Chance Finds.

Non-Cultural Heritage Chance Finds may include modern objects and features as well as isolated artefacts (out of context, and therefore lacking scientific value). Individual artefacts, however, may be important as indicators of the presence of nearby surface or subsurface cultural heritage sites. The principal value of most cultural heritage artefacts is only realised, however, when the objects are part of an interpretable cultural heritage site. Distinguishing between the two types of Chance Finds requires the expertise of an archaeologist. This procedure concerns itself with artefacts as potential indicators of sites themselves rather than as artefacts of individual importance.

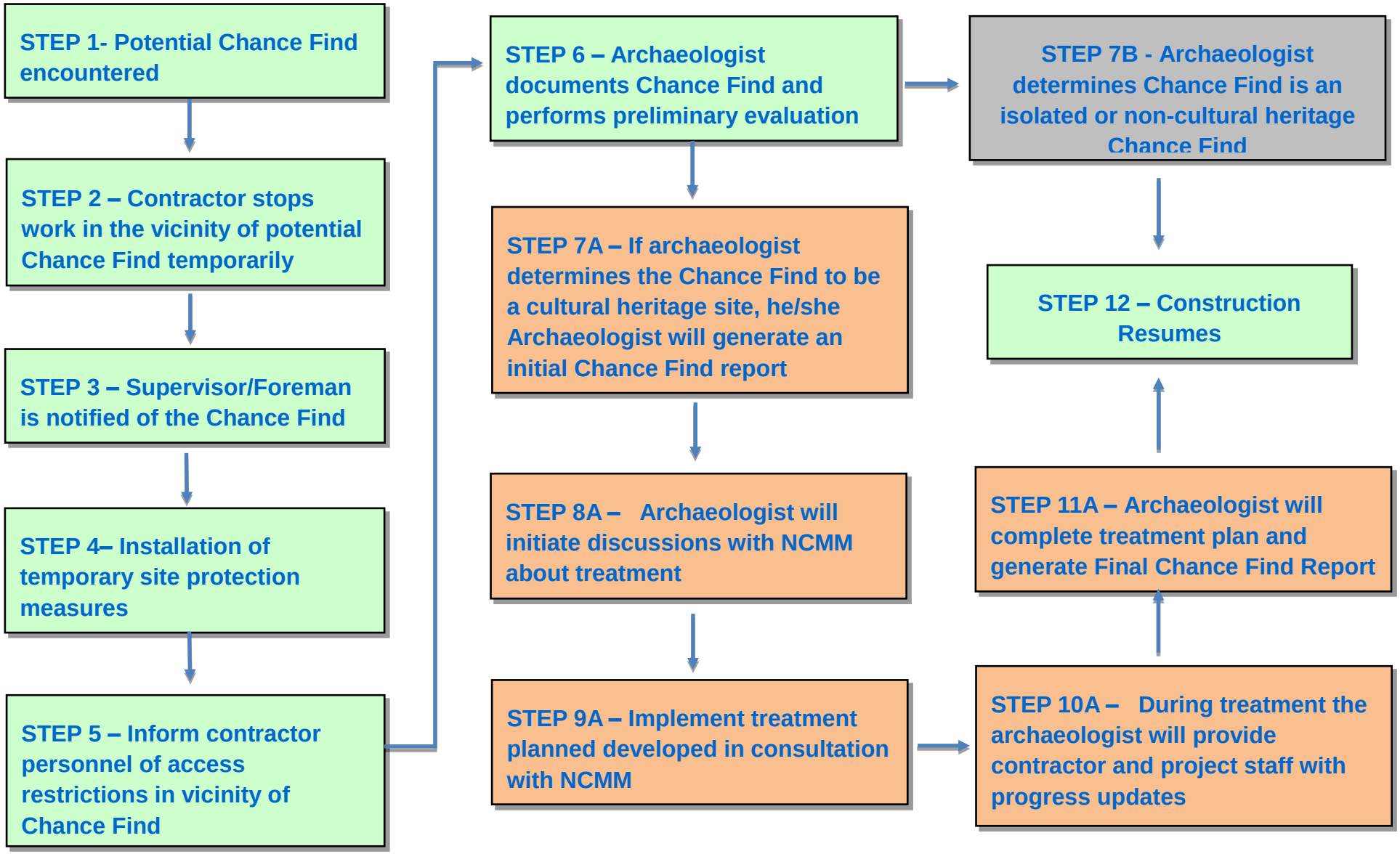
5.1 CHANCE FINDS RESPONSE PROCEDURES

In the case of a Chance Find, Project activity will cease temporarily in the vicinity and the area shall be marked for avoidance. Construction supervisors, field personnel, and staff will be notified. The Project archaeologist will also be notified of the find if he or she is not already aware of the find. If the find is significant, then government cultural heritage representatives will be notified as well, in order that appropriate treatment strategies can be developed and approved. Site treatment scenarios to be considered include preservation in place through redesign or specialised construction techniques, and rescue excavations in advance of additional construction work if avoidance is not possible. After treatment work is agreed and any required excavations carried out, Project excavation or construction activity will be cleared to resume in the area.

A more detailed, step-by-step description of the Chance Finds Protocol is provided below as well as in *Figure 5-1*:

- Stop work in the immediate area;
- Inform site supervisor/foreman;
- Install temporary site protection measures (warning tape and stakes, avoidance signs);
- Inform all personnel of the Chance Find if access to any part of the work area is restricted;
- Establish no-go area needed to protect the Chance Find;
- Archaeologist will perform a preliminary evaluation to determine whether the Chance Find is cultural heritage chance find and if so, whether it is an isolate or part of a larger site or feature;
- Artifacts will be left in place when possible; if materials are collected they will be placed in bags and labeled by Archaeologist and transported to the NCMM; no Project personnel are permitted to take or keep artifacts as personal possessions;
- Document find through photography, notes, GPS coordinates, and maps (collect spatial data) as appropriate;
- If the Chance Find is an isolated find or non-cultural heritage chance find, the Archaeologist will authorise the removal of site protection measures and activity can resume;
- If the Archaeologist confirms the Chance Find is a cultural heritage site he/she will inform the NCMM and initiate discussions with the latter about treatment;
- Prepare and maintain an initial Chance Finds report (for all possible Chance Finds, cultural heritage or not); include spatial data for use in cultural heritage database and GIS system;
- Implement treatment plan with qualified Archaeologists or using cultural heritage Contractors provided by the Project Owner;
- If a Chance Find is a verified cultural heritage site, prepare a final Chance Finds report once treatment has been completed;
- While treatment is ongoing, coordinate with on-site personnel keeping them informed as to status and schedule of investigations, and informing them when the construction may resume.

Figure 5-1. Chance Find Response Scenario



Artefacts collected in connection with Chance Finds will be minimised. Those retained because they are accidentally unearthed or broken free of their soil matrix should be retained with precise notation of their original location, and with photographs taken of their original context. Photos of the artefacts and site photos may be useful for consultation regarding Chance Finds and should be taken as soon as possible. Artefacts and associated notes and photographs taken by any Project personnel should be given to the Cultural Heritage staff as soon as possible. Ultimately the artefacts belong to the Nigerian government, and Project staff will be responsible for transferring the material to the appropriate authorities.

5.2 DOCUMENTATION OF CHANCE FINDS

Cultural Heritage staff, non-Cultural Heritage Project staff, Contractors, and subcontractors will be required to maintain records of monitoring, Chance Finds, and Chance Find response measures. These will include:

- Daily monitoring records indicating areas and activities monitored; reported Chance Finds and the results of any evaluations. Communications and instructions (such as stop work and resume work) will also be included.

- Weekly reports summarizing reporting period activities including Chance Finds, assessments and evaluations, internal and external communications and instructions and supporting photographic documentation (or other reference materials as appropriate). An additional report aimed at fulfilling any specific NCMM requirements is also anticipated.

Monthly reports summarising monitoring and evaluation results, status of any site treatment measures, instructions to Contractor, and other internal and external communications.

6 ROLES AND RESPONSIBILITIES

APWAL is responsible for the implementation of this PCRMP. It may delegate responsibility for specific tasks to individual contractors but it retains overall accountability and shall implement audit and verification procedures to maintain appropriate levels of oversight in this regard.

6.1 STAFFING AND ORGANISATION

APWAL General Manager is responsible for assuring that the *Environmental Health and Safety (EHS) Coordinator* has the resources, information and authority to implement the management measures described in this Plan.

APWAL Construction Manager together with the EHS Coordinator is responsible for staffing, planning and day-to-day execution of the management measures described in this Plan. As needed, this individual will develop and propose staff plans and contractual language to ensure that these measures are implemented by APWAL staff and contractors throughout the construction process.

APWAL Operations Manager together with the EHS Coordinator is responsible for staffing, planning and day-to-day execution of the management measures described in this Plan. As needed, this individual will develop and propose staff plans and contractual language to ensure that these measures are implemented by APWAL staff and contractors during Project operation.

APWAL Construction Sub-Contractors are responsible for following the procedures and requirements indicated in the Chance Finds Protocol, including the identification of Chance Finds in the field and the cessation of work activities in the vicinity of a Chance Find until the required treatment measures are complete.

APWAL Archaeological Contractors will meet international professional standards and will perform technical tasks required by this Plan with the assistance of technicians and labourers. These tasks will include preparation of written reports, analyses and recommendations; field reconnaissance; evaluation and rescue excavations; and monitoring of ground disturbing construction and maintenance activities.

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Darling, P. (2012) 'Anthropogenic Dark Earths in Nigeria's Rainforest'. Presentation at the A.G. Leventis Foundation, Athens.

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Annex G

Unplanned Events and Emergency Response Plan Outline

ANNEX G: UNPLANNED EVENTS AND EMERGENCY RESPONSE PLAN

G1.1 INTRODUCTION

Azura Power will develop an EMS that will, among other things, seek to prevent and limit environmental accidents and develop contingency procedures in case of such accidents. Given that most unplanned and emergency events have both environmental and health and safety consequences, the EMS will be developed alongside the Health and Safety Management System. This should be done within the overall framework of an Integrated Quality, Environmental and Health and Safety Management System.

G1.2 SAFETY PROGRAMME

G1.2.1 Introduction

A Safety Programme will be set up by Azura Power for specific use at the power plant. The Safety Programme will be based on achieving the objectives outlined in this section.

The General Manager will designate a senior member of his staff to serve as the Safety Co-ordinator. It will be the Safety Co-ordinator's responsibility to guide and direct the Safety Programme. Specifically, the Safety Co-ordinator will be responsible for the implementation of the following Programme requirements.

G1.2.2 Training, Instruction and Information

All employees will be provided with induction on the Safety Programme and given specific instructions regarding basic personal health and safety. Regularly scheduled safety meetings will be held for all employees including all contractor(s) employees. Each meeting will include instruction on a particular safety rule, procedure, tool, safety device or protective equipment, or potentially hazardous condition. Where appropriate, the meetings will utilise visual aids and demonstration gear and provide time for questions and discussion.

First Aid instruction will be provided to designated employees. Arrangements will be made with a local agency or association that is qualified to conduct First Aid instruction. Operators and maintenance personnel as well as administrative employees, where appropriate, will receive specific instruction regarding the hazards associated with substances and chemicals utilised at the Plant, the location of information and the storage requirements. Fire prevention and fire fighting instruction will be periodically conducted for all

employees. Where possible, arrangements will be made with the local Fire Authority for qualified assistance in conducting the training.

G1.2.3 Inspection and Testing

A routine inspection and testing programme will be implemented for all safety related equipment and protective devices. The programme will encompass equipment such as fire fighting equipment and first aid supplies. The programme will be designed to demonstrate the correct operability of the equipment, its availability for use in an emergency and its physical condition with regard for future use. Routine walk-through inspections will be conducted through all areas of the site.

The inspections will seek out any potential or current safety hazards including permanent equipment and building features, housekeeping problems, personnel working habits, safe clearance violations, and tool failures. The inspection will also cover safety equipment, training, records and other aspects of the Safety Programme, as required by the observed conditions and accident record among other things. A site inspection may be conducted in conjunction with periodic operational audits or as an independent activity, as required.

Inspections will typically include, firstly, a General Facility and Equipment Review covering:

- fire hazards;
- safety equipment;
- housekeeping;
- machine safeguards;
- equipment warnings and signs;
- personal work habits;
- first aid supplies; and
- hazardous substance/chemical handling.

Secondly, inspections will typically include a Records Audit covering:

- safety meeting reports;
- safe clearance logs;
- insurance reviews;
- safety manual updating; and
- chemical safety information files.

All inspections will be followed by a written report of the findings and recommendations where necessary.

G1.2.4 Accident Investigation and Reporting

Thorough reporting and investigation of all accidents and near misses will be conducted to ascertain the cause and methods of preventing reoccurrence or similar accidents. Detailed accident reports and records will be prepared and maintained at the site.

All personnel accidents will be reported on an Accident Report Form together with copies of any appropriate statutory form and associated medical data and other information.

G1.2.5 Accident Report Review and Follow-Up

Introduction

All accident reports will be reviewed by the General Manager. The Safety Co-ordinator is responsible for the collection, review, analysis and follow-up of accident reports.

After review by the General Manager, reports will be classified as:

- ***Serious*** - Requiring follow-up and/or investigation; or
- ***Minor*** - Correctable on site and requiring no follow-up.

The accident Reports will then be logged and noted as serious or minor.

Summary reports of serious and lost-time accidents will be communicated to all employees for awareness raising and lessons learned purposes. Each summary will include a description of the accident, the extent of personal injuries, a statement of the cause and corrective actions.

Serious Accident Review

All accidents classified as serious will be reviewed and analysed to determine the corrective action needed. The review considerations will include:

- errors on the part of plant personnel, including safety rule violations;
- equipment failure/wear conditions;
- shortcomings in plant procedures;
- shortcomings in the safety rules;
- design hazards;
- changes in operating practices;
- communication/instruction problems;
- training programme failures; and
- personnel protection equipment failure.

The accident analysis will include, as necessary, an on-site inspection and formal recommendations for changes in equipment, operating methods,

training, design and/or procedures. The recommendations will include methods for implementation of actions, when appropriate.

Minor Accident Review

Minor accidents will be tabulated periodically to determine similarities and trends.

G1.2.6 Year End Report

The Safety Co-ordinator will prepare a report on all outstanding serious conditions, continuing conditions or problems, and developing trends.

The Year End Report will also contain a summary of corrected conditions that have been identified through review of accident reports or during periodic on-site audits and inspections.

G1.3 EMERGENCY RESPONSE PLAN

The General Manager will develop a comprehensive Emergency Response Plan of response for the following conditions:

- environmental incidents;
- general natural disasters such as flooding, fire, explosion;
- individual emergencies such as injury, illness, fatality, drug reaction or medical emergencies; and
- civil disorders such as civil disturbances and strikes.

The Emergency Response Plan will be designed to permit a frame of reference for all types of emergencies and will in all cases provide for close co-ordination and co-operation with local agencies. The Emergency Response Plan will consider the following:

- an accurate assessment of the vulnerability of employees and property;
- the security of the Power Plant based on relative rather than absolute protection;
- the maximum use of existing operating structures, professional law enforcement officers, trained public safety fire fighting personnel, other emergency services, safety co-ordinators, proven supervisory and technical skills, and material and equipment on hand at the Power Plant;
- regular emergency drills will be conducted, reviewed, and revised for maximum effectiveness;

- environmental emergency procedures addressing spillage containment to minimise potential environmental impact, clean up instructions, emergency notices and specific emergency procedures;

- fire and emergency evacuation procedures; and

- contingency plans.

G1.4 FIRE PREVENTION/FIRE FIGHTING

As an integral part of the Safety Programme and the Emergency Response Plan, fire prevention and fire fighting capability will be among the top priority requirements of the Project. Employee awareness of the possibility and dangers of fire as well as the means of preventing fires will be a frequent topic of Safety Meetings. Training sessions and drills will also instruct employees in:

- emergency escape procedures and route assignments;

- emergency equipment operation or shutdown procedures;

- emergency rescue and medical assignments; and

- fire reporting, communication and co-ordination procedures with Local Fire Authorities.

The designated Safety Co-ordinator will contact the local Fire Authority to review the Project's fire procedures and plan and to establish an effective method of communication and co-ordination with that Authority.

The local Fire Authority will be invited to offer recommendations for in-plant fire response and assistance in training the Power Plant staff.

G1.5 SITE-SPECIFIC TECHNICAL SAFETY ISSUES

G1.5.1 Overall Potential for Operational Impacts

Major accidents that could result in hazards of concern with respect to the operation of the Power Plant are those with a potential for injury, impairment and/or damage external to the Power Plant's perimeter.

The assessment of hazards arising from major accidents associated with the operation of Power Plant considers the following issues:

- potential risk to third party premises, industry or facilities posed by the operation of the Power Plant; and

- potential risk to the Power Plant posed by third party premises, industry or facilities.

A Hazard and Operability (HAZOP) study will be conducted on the plant during the final design stage. Further assessments will be carried out on major new equipment or subsequent design modifications. The HAZOP study is a systematic structured review of the process and engineering design in order to identify potential hazards and operability problems and consequences. These assessments include consideration of the following risks:

- fire in the fuel delivery area;
- fire in the fuel oil storage tanks;
- fuel oil fire under various scenarios;
- fire in the diesel engines;
- substation fire;
- leaks of high pressure super heated steam (invisibility); and

With the incorporation of appropriate design measures and operational techniques into the design and operation of the power plant to prevent major accidents, major hazards are not anticipated to be a significant issue.

G1.5.2 Prevention of Contamination of Land and Water

A small amount of diesel will be held in an above ground storage tank, with secondary containment. All chemicals will be stored in an appropriate manner incorporating the use of bunding and other measures (such as acid and alkali resistant coatings) to ensure appropriate containment. The potential for accidents, and associated environmental impacts is therefore limited.

Further measures to limit the potential for accidents are listed below:

- Any hydrocarbons, fuels, lubricants and chemicals to be used will be stored in bunded and lockable oil storage tanks, with hoses and gauges kept within the bund. Regular checking and maintenance of all plant and machinery to minimise the risk of fuel or lubricant leakages;
- Waste and storage areas for hazardous substances shall be separated on site and waste storage areas shall be located on hardstanding (or bunded, if suitable) to prevent potential contamination. These include areas around gauges, pumps, sumps and loading/unloading areas;

- Waste shall be separated on site and waste storage areas shall be located on hardstanding (or bunded, if suitable) to prevent potential contamination;

- All surface water or other contaminated water which accumulates in the bund shall be removed by manually controlled positive lift pumps and not by means of a gravity drain; and

- Training and equipping relevant staff in safe storage and handling practices, and rapid spill response and cleanup techniques.

These measures should avoid the accidental release of materials to surface water, groundwater and land.

G1.5.3 Plant Design

The design of the Project has been carried out by plant designers and engineering contractors who have wide operational experience with similar facilities. The assessment of safety risks that has been carried out during the design has examined issues such as:

- the use of emergency shutdown valves (ESDVs) and electrical trips;
- gas, fume, dust and liquid detection;
- fire fighting systems;
- containment of releases; and
- emergency escape.

G1.5.4 Overall Reliability

Process reliability is a key issue because of the need to supply electricity continuously. One of the main features to aid reliable Plant operation will be the implementation of a preventative maintenance regime. The frequency of the maintenance work will be based on recommendations given in the manufacturer's instructions.

In addition, regular, planned outages will allow major items of equipment such as the gas turbine to be inspected, maintained and repaired. This will be on a rolling programme.

This high standard of maintenance will enable Project to operate as designed and will help to minimise the probability of all types of accidents, including those with potential environmental consequences.

G1.5.5 Risk Assessments

Assessments will take into account environmental as well as health and safety hazards and will include area and task based assessments. They will be

performed by trained staff and each hazard will be considered in the context of its effect upon the activities with regard to:

- materials/substances;
- equipment;
- the workplace;
- people;
- procedures; and
- the environment.

This risk assessment approach will consider the hazard, harm, potential severity, probability of occurrence, risk rating, control measures and residual risk. These assessments will also detail action dates and be reviewed on a regular basis.

TableG1.1 presents the Accidents Risk Assessment Management Plan.

TableG1.1 Accidents Risk Assessment Management Plan

The Risk			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk**
Fuel Handling						
Spillage of diesel	Soil Air Groundwater		• Training of staff • Impervious surfaces • Routine operator checks • Clean up response team	Unlikely	Ground contamination	Not significant
Air Pollution Control						
Flue gas leak	Air	Overpressure, material defect, corrosion/erosion	• Design and fabrication standards • Inspection and maintenance programme • Controls and alarms for pressure • Continuous emission monitors • Prompt shutdown of equipment	Very unlikely	Release of toxic combustion products to plant enclosures and potentially to atmosphere or via stack	Not significant
Leak/ spill of water treatment chemicals	Groundwater	Storage container leak or transfer spill	• Training in unloading practices • Design standards • Impervious surfaces	Very unlikely	Potential for contamination of groundwater	Not significant
Power Generation System						

The Risk			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk**
Leak of ion exchange regeneration chemicals (NaOH, HCl)	Air Soil Groundwater Surface Water	Storage container leak or transfer spill	• Bunded storage vessels • Routine inspection and maintenance programme. • Minimum of flanged connections • Tanks fitted with high level alarms • Design standards • Impervious operational areas indoors • Localised catchment volume • Training in unloading practices • Size of deliveries to reduce number of deliveries/unloading operations	Very unlikely	Potential contamination of soil, groundwater and surface water, and release of HCl fumes	Not significant
Vibration from out of balance rotating machinery or mechanical failure	Installation	Transmitted vibration	• Alarm and shutdown systems • Anti vibration mountings • Routine operator checks	Very unlikely	Transmitted vibration	Not significant
Turbine equipment failure	Equipment	Material defects, corrosion/ erosion, fabrication defect or vibration	• Specification of equipment • Implementation of correct codes of practice • Inspection and maintenance programme • Vibration sensors, isolation valves, emergency shutdown valves • Fire detection and fire protection systems • Equipment within concrete structure • Emergency Plan	Unlikely	Disintegration of the turbine, causing further adverse consequences through damage elsewhere in the power plant	Not significant
Fire from ignition of lube oil leak	Air	Oil leak plus ignition source	• Use of fire-proof lube oil • Oil collector installed • Minimum of flanged connections • Design standards • Routine operator checks • Fire detection and fire protection systems • Response procedure	Very unlikely	Smoke, toxic combustion products	Not significant

The Risk			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk**
Leak of lube oil/ seal oil from steam turbine equipment	Soil Groundwater Surface Water Installation	Equipment fracture or vibration	• Minimum of flanged connections • Design standards • Routine operator checks • Routine inspection and maintenance programme • Impervious surfaces indoors • Effluent drains isolate the area	Unlikely	Potential fire and groundwater contamination	Not significant
Steam leak to plant building/ atmosphere	Noise Visual	Faulty boiler tubes and connections	• Statutory design, fabrication and inspection standards for steam systems • Minimum of flanged connections • Controls and alarms for pressure • Routine operator checks	Unlikely	Noise and visible plume at leak	Not significant
Furnace/Boiler						
Overpressure in flue	Air Installation	Leak of high pressure steam into flue gases	• Design, fabrication and inspection of standards for steam systems • Statutory inspection and maintenance programme for steam systems • Controls and alarms for pressure • Routine operator checks	Unlikely	Flue gas emissions above limits; release of flue gases from plant if structure damaged; potential blinding of filters if steam condenses and equipment damaged noise	Not significant
Fire from ignition of gas leak	Air Plant	Ignition of gas leak	• Bunded storage tanks • Minimum of flanged connections • Design standards • Impervious operational areas • Routine operator checks • Limited sources of ignition • Fire fighting systems • Response procedure	Very unlikely	Smoke, toxic combustion products released to plant building, potentially to atmosphere; potential of consequential events	Not significant

The Risk			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk**
Leak of diesel for starter burner	Soil Groundwater Surface Water	Spill during delivery; leak due to faulty storage tank, burners or pipework connections	• Secondary containment for delivery and storage • Routine inspection and maintenance programme • Minimum of flanged connections • Design standards • Impervious surfaces indoors • Discharge point for attenuation ponds will be kept locked shut.	Very unlikely	Potential soil, groundwater and surface water contamination	Not significant
Pressure surge/explosion in combustion system	Air Plant	Delayed ignition of support fuel; presence of flammable material; gas explosion	• Combustion control system with interlocks • Boiler design standard • Operator training • Crane operator observation of gas bottles and back loading of rejected feedstock	Very unlikely	Flue gas emissions above limits and/or release of flue gases from plant if structure damaged	Not significant
Back flow of combustion gases up feed chute	Air	Waste ignition in chute	• suction created by ID fan or suction effect of stack if ID fan stopped • "plug" of waste in chute acting as seal • level detection/alarm in chute • extraction of tipping hall atmosphere by combustion fan • observation by crane operator CCTV and control room	Very unlikely	Combustion products released to tipping hall and potentially into atmosphere	Not significant
Miscellaneous						

The Risk			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk**
Leak of fuel oil/diesel for vehicle refuelling	Soil Groundwater Surface Water	Spill during delivery or refuelling, or leaks	• Secondary containment for delivery and storage • Routine inspection and maintenance programme • Storage Tank fitted with high level and leak alarms • Minimum of flanged connections • Design standards • Impervious surfaces outdoors • Oil water interceptors on drainage system	Very unlikely	Potential soil, groundwater and surface water contamination	Not significant
Leak from water treatment plant	Soil Ground water Surface Water	Leaks to ground	• Concrete flooring • Regular inspection and maintenance programme	Very unlikely	Leaching into ground and ground water	Not significant
Fire in stores containing flammable materials such as paints and solvent	Air Soil Surface water Ground water	Emission of toxic combustion products	• Fire precautions • Notices and training regarding fire hazards • Training regarding fire hazards • Fire hose nearby • Only store relatively small amounts of materials • Enforce no smoking rules • Permit-to-work system • Have a fire detection system and an emergency plan.	Very unlikely	Major fire with emission of toxic combustion products and subsequent contamination of air, soil, surface water or groundwater; also potential for release of contaminated firewater	Not significant
Spillage of raw materials	Soil Surface water Ground water	Leakage from containers in storage or spillage during use	• Store only small quantities of materials • Bunded area for tanks • Designated storage areas • Storage in accordance with requirements of the control of hazardous substances • Use of spill kits	Unlikely	Contamination of soil, surface water/groundwater	Not significant

The Risk			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk**
Equipment/part item fire	Air	Faulty electric motor, cabling	• Design and fabrication standards • Inspection and maintenance programme • Routine operator inspection • Fire detection systems and fire hoses • Response procedure	Very unlikely	Smoke, combusted products potentially released into the atmosphere	Not significant
Firewater contamination	Air Surface Water Ground Water	Ineffective firewater containment	• Containment within plant area with impervious surfaces • Containment in bunker • Drainage arrangements to waste water tank.	Very unlikely	Potential contamination of controlled water by run off through uncontaminated surface water system; potential for contamination of groundwater	Not significant

Annex H

Employment and Workforce Management Plan Outline

H1.1 INTRODUCTION

This Management Plan has been developed in order to ensure that the management of all employees (including those who are indirectly employed through contractor(s)):

- comply with Nigerian law and meets the requirements of international standards;
- optimises the benefits associated with construction employment; and
- mitigate wherever possible any negative impacts that might occur as a result of construction employment or subsequent retrenchment.

This Plan seeks to achieve the above objectives through clear and manageable plans and procedures, underpinned by the explicit guiding principles detailed in *Section H1.2* below.

H1.2 WMP GUIDING PRINCIPLES

Azura Power and their contractor(s) will implement this WMP with reference to the following guiding principles:

1. Adherence to International Standards;
2. Commitment to Transparency;
3. Commitment to Non-discrimination and Equality;
4. Optimisation of Local Content; and
5. Commitment to Health and Safety.

These guiding principles, which are outlined in more detail below, are intended to provide a first point of reference with regards to all activities associated with the management of employees.

H1.2.1 WMP Guiding Principles

Principle One: Adherence to International Standards

The WMP will be guided at all times by international best practice around labour force management. In practical terms, this means that Azura Power and its contractors will satisfy the requirements of IFC Performance Standard 2, and the underlying United Nations (UN) and International Labour Organisation (ILO) instruments. Where there are discrepancies between international standards and Nigerian law the more stringent shall take precedence.

Principle Two: Commitment to Transparency

Azura Power and its contractor(s) will commit to ensuring transparency to all key stakeholders (e.g. communities, worker organisations, NGOs, government agencies etc.) around the hiring process, conditions of work, policies and procedures, employment duration and related matters.

Principle Three: Commitment to Non-discrimination and Equality

Azura Power and its contractor(s) will ensure that at all time they do not discriminate on the basis of gender, race, colour, sex, religion, political opinion, national extraction or social origin, sexual orientation, HIV status or disability, in the course of hiring, managing or terminating the employment of its workforce.

Principle Four: Optimisation of Local Content

Azura Power and its contractor(s) will seek to enhance the level of local participation in its labour force. This means that to the extent possible, they will hire workers who are in the first instance members of the communities adjacent to the project, and in the second instance from Edo State and thirdly Nigerian nationals. This also means that they will, to the extent possible, transfer and develop the local skills base.

Principle Five: Commitment to Health and Safety

Azura Power and its contractor(s) will implement best practice with regards to health and safety for the entirety of its workforce. This will include appropriate training, procedures, safety equipment, reporting, and monitoring and improved protocols.

H1.3 RESPONSIBILITIES

Azura Power is ultimately responsible for the implementation of this WMP.

H1.4 LEGAL AND OTHER REQUIREMENTS

H1.4.1 Overview

The reference sources that will be used to identify legal and other associated requirements relating to the management of employees are show in *Table H1.1.*

Table H1.1 Reference Sources

Source	Documents
International Finance Association	Performance Standard 2: Labour and Working Conditions
Nigerian Legislation	Labour Act (Chapter 198) (No. 21), as amended 1990
	National Agency for the Control of HIV and AIDS (Establishment) Act, 2007
	Factories Act (No. 16 of 1987)

H1.5 HIRING POLICY (RECRUITMENT AND SELECTION)

H1.5.1 Development of Hiring Guidelines

Azura Power will develop hiring guidelines designed to fill the required roles on the basis of its commitment to optimise local participation in the workforce. This will be done via the following.

- By establishing clear organisational objectives around the hiring of local workers in the form of percentage targets for the employment of local workers. Such targets will be based on existing demographic employment and skills profiles of communities around the project site.
- By clearly defining the roles required by the organisation and estimating the number of workers required in each role.
- By developing an adequate job description for each role, which should include:
    - clear responsibilities associated with each role;
    - clear physical/medical, and psychological attributes required for each role;
    - an enumeration of the minimum general skills and experience required for the fulfilment of each role;
    - general reporting lines for each role;
    - health and safety requirements for each role (e.g. safety protocols, materials handling safeguards, *etc*); and
    - an overview of the general performance metrics for each role.
- By developing general evaluation criteria's under a number of categories for each role. This will include how the Azura Power and their contractors plan to assess the workforce applicants for each role.
- By ensuring that hiring guidelines for each role are transparent.

H1.5.2 Applications, Short-listing, Vetting

Azura Power and its contractor(s) will ensure a transparent and accessible application and short-listing process. This will help manage expectations, ensure an equitable hiring process, enhance opportunities for members of the local population and increase the potential pool of applicants. To this end, Azura Power and its contractors will ensure that:

- Advertisements for available jobs are made via the most relevant information media to the local population. This should include local newspapers, adverts on village notice boards and pamphlets to local businesses. Azura Power and its contractors will seek to ensure transparency and clarity around positions potentially available and the potential hiring process. They will also ensure that vacancies are advertised as consistently as possible.

- Advertisements include key information, such as:

  - general descriptions of roles available or potentially available;

  - clear instructions regarding the application process including how to apply, potential roles available and skills required;

  - clarity around potential hiring and employment timelines; and

  - minimum age requirements (18 years old).

- They maintain an updated register of positions potentially available which is communicated to local stakeholders.

- Candidates are short-listed on the basis of a consistent application of the *Hiring Guidelines* established in *Section H1.5*. This will include an evaluation of skills and experience of applicants against those required for each role.

- It maintains a running register of applicants and a skills database for all applicants for skilled roles. The register and database will be used to:

  - assist in short-listing candidates once vacancies arise;

  - help define skills and Health and Safety (H&S) training requirements;

  - identify promising candidates for longer-term during the operation phase of the project; and

  - record the results of the application process.

- All applicants are above the minimum age of 18 years of age. This will be established via the verification of ID cards, birth certificates and other forms of official identification.

H1.5.3 Selection

Once the applications have been received and processed into the skills register, applicants will be selected on the basis of the following:

- establishment that applicants are above the minimum age of 18 years old;
- for unskilled roles, priority will be given to applicants from the local communities;
- for skilled roles, priority will also be given to candidates from the local communities in instances where two or more candidates possess equal qualifications;
- Azura Power will make a judgement of each candidate's suitability for training in the required skills where skills or experience gaps exist between the best candidates and the requirement of the role;
- selection of all roles will be based on the application of the Hiring Guidelines set out in *Section H1.5.1* and the Guiding Principles of this plan as set out in *Section H1.2*;
- once applicants are selected, they will formally receive an offer of employment;
- an employment contract or card will be prepared which will include details of the job description for each role, remuneration, employment duration and employee expectations;
- Azura Power and its contactors will be able to deliver a consistent and transparent message to all non-successful applicants and to any other stakeholder, the reasons for the selection of the candidates to be employed; and
- where there are concerns around discrimination or a lack of transparency of any aspect of the hiring process, Azura Power shall investigate the matter through the grievance mechanism (see *Annex A*: *Stakeholder Engagement Plan*), consult any relevant parties and provide a report on the investigation and any corrective actions to the owner.

H1.5.4 Engagement

Legal and Other Requirements

- Azura Power will ensure that it complies with all Nigerian employment legislation;
- Azura Power will develop a Human Resources Policy; and
- Azura Power will ensure that workers will at least receive fair living wages.

Expectations Management

- All workers will be fully informed of the nature and duration of employment.

- Azura Power will implement a grievance mechanism whereby workers can formally ask questions or voice any concerns about any aspect of their employment. All employees will be made aware of the mechanism at the time of hire.

- Azura Power will assist workers prepare themselves psychologically for the eventual completion of the construction phase of the project, and by consequence, the termination of employment.

- All employees will be briefed on all relevant policies and expectations at the time of hire. This will include:

    - H&S policies and protocols;

    - general conduct expected, including conduct expected of employees in the course of interaction with communities, in line with the company's code of conduct which Azura Power will develop; and

    - disciplinary policies.

Training Plan

Azura Power will establish a training plan for its workforce based on the skills register of applicants. This will aim at developing the necessary skills required for the fulfilment of roles (i.e. filling of skills gaps) and the transfer of knowledge and skills to local workers. The training plan will also aim at helping workers manage the transition process between employment during the construction phase and termination of employment post-construction. The plan will identify training requirements, numbers of workers to be trained and rough timelines for training programmes.

HIV/AIDS

Azura Power's Occupational Health and Safety programme will include components on HIV/AIDS and other sexually-transmitted infections (STIs). This will include:

- the facilitation of awareness briefings on HIV/AIDS and other STIs for all employees;

- the provision of informational material on AIDS / HIV and other STIs;

- guidance on conduct within the local community by members of the workforce preparing do's and don't of conduct specially related to respecting local customs, norms and traditions; and

- the facilitation of access to advice for workers on the nature of HIV/AIDS and other STIs, as applicable.

Record-keeping and Management

- Azura Power will maintain up-to-date records of:

    - the company's employment register. This will include numbers of employees at each role, employment status of each employee (including subcontractors) duration of employment, days and hours worked by each employee, and wages and social security contributions paid;

    - training provided to each employee;

    - the skills register established in the hiring process;

    - H&S incidents and concerns; and

    - grievances as recorded in the grievance mechanism, including details of grievance follow-up and closeout.

Management and Monitoring

Azura Power shall have overall responsibility for the implementation of this Plan, but all managers will be made aware of and sensitised to this Plan. Formal reporting mechanisms between managers shall include reporting on the implementation of the commitments enumerated in this Plan.

Annex I

Stakeholder Engagement Documentation

Socio-Economic and Health Baseline Study for Proposed

AZURA-EDO 450 MW INDEPENDENT POWER PROJECT

MINUTES OF MEETINGS WITH OFFICIALS AND COMMUNITIES DURING STAKEHOLDERS' ENGAGEMENT PROCESS

by

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Dept. of Agricultural Extension and Rural Development
University of Ibadan, Ibadan, Nigeria.

Submitted to

Environmental Resources Management

August 2011

Preparatory Meetings with Officials and Community Leaders

1. **Monday 20th June, 2011**: The team comprising of Drs Oladeji and Oyesola, and Mr. Nicholas Abolo-Tedi (Project Manager, Azura-Edo IPP) paid courtesy calls to the following government officials to intimate them about the purpose of the social assessment:
    - Permanent secretary Edo State Ministry of Lands in person of Mr. J. Akin Olorunfemi

Plate 1: Social team in consultation with the Permanent Secretary Edo State Ministry of Lands, Housing and Survey

- State Surveyor General, Ofiare (08078676811)
-
-
-

Plate 2: Social team in consultation with Edo State Surveyor General

- Executive Director Edo State Private Public Projects (had discussion with the personal assistance to the executive director and fixed the next **day 21st June 2011 for briefing, this is because the Director went to attend the swearing of the new secretary to the State government**)

- The team later proceeded to the project site to identify communities to be involved in the SIA and make preliminary consultations.

2. During preliminary consultation in Ihovbor community, community leaders agreed on **Wednesday 22nd June 2011, 10am** to conduct stakeholders meeting as well as In-depth Interview with key informants and Focus group Discussion. Present at the meeting were the Enogie, Pa Agbuza, Jolly Omokegbe, Eric Erhunmawase (community chairman), Friday Agbonze (community vice chairman) and Igbineweka Clifford (community secretary).

3. During the preliminary consultation in Orior Osemwende Community. Those present at the meeting included HRH V.N. Ohenzuwa (community leader), Agbonlahor Sunday (community chairman), Iyiewuare Eric (community secretary), Pa Ohenhen Patrick, Pa Kennedy Osayande. **Wednesday 22nd June 2011, 2pm** was agreed upon to conduct stakeholders meeting, IDIs and FGDs.

Tuesday 21st June 2011

1. Executive Director Edo State Public Private Partnership in person of Mr. Igbinidu Inneh was met in his office to intimate him and members of his board on the purpose of the assessment.

Plate 3: Social team in consultation with the Executive Director Edo State Public-Private Partnership

2. During preliminary consultation in Idunmwonminna community, we met with the community chairman, vice chairman and secretary. The stakeholders meeting was fixed **for Thursday 23rd June 2011 at 10am**

3. The team also met the state commissioner for lands, survey and housing (Hon. Elder Calistus O. Ojieabu) to intimate him with the activities of the team to be conducted in the 3 communities.
4. The following preliminary observations were made in the communities identified and visited:
    - Orion and Idunmwonminna communities express their grievances on the revocation of right of occupancy and compensation publication in Daily Observer and Vanguard Newspapers of Saturday 18th June 2011, that the names of their communities were not included in the publication, while Ihovbor community was the only community mentioned in the publication.
    - Representatives of the communities with their lawyers came to lodge complaints officially in the state ministry of lands, survey and housing. The state permanent secretary in the ministry with officials of the ministry including Azura project manager (Nicholas) promised to make necessary amendments within the next few

days and republish it in the two newspapers. The social team also assisted in providing information that no matter how small the size of land a community is contributing to the proposed project, the name of the community should be included.

- The 2 communities said that they will not allow the surveyors to continue their work until the necessary amendments are made.
- By the close of work today 21st June the necessary amendments had been made in government gazette and the 2 newspapers to be published on Wednesday 22nd June 2011.
- During the consultation with the commissioner today, he agreed to accompany the permanent secretary, 2 state officials, Azura project manager on Thursday 24th June to the affected communities to make presentation of the amended document and to apologize on behalf of the state government while the social assessment will commence tomorrow in 2 communities.
- The 2 communities also expressed their disappointment over the naming of the on going national independent power project after Ihovbor community, while other 2 communities that also contributed land were not mentioned. They want this not repeated in the proposed IPP project.
- The 2 communities also complained that all benefits from the NIPP is going to Ihovbor community (employment of unskilled labour, contracts, social benefits, school,etc). They said they will not allow this to happen in the proposed project.
- The 3 communities agreed that the social assessment should take place since it is World Bank standard and requirement for the project to commence. But recommendations of the social assessment should be followed.
- It was also agreed that on completion of the general survey a meeting of the 3 communities with government officials and Azura project manager and his team will be called for communities to know the size of the land that will be affected by the project and the size of land contributed by each community to the proposed project.
- With this development the quantitative social survey of households, 25 households thought to be affected, land owners and users cannot be conducted during this field trip
- It was agreed with the state director of public-private partnership that qualitative method will be used now to collect adequate data for SIA report component of EIA and gaps identified will be amended during next phase of data collection for resettlement action plan (RAP) late July. By that time all differences between communities would have been resolved.
- The team got back to the hotel at 6.15pm

Stakeholders' Meeting in Ihovbor Community

Wednesday 22nd June 2011

The meeting started with general briefing on the project and purpose of the assessment. Present at the meeting are community leaders, men, women and male and female youth. The meeting started around 12 noon and ended 3.15pm. FGDs were conducted with men, women and youth. IDIs with community leader, women leader, youth leader and community chairman. The team comprises of Azura project manager, representative of state ministry of lands, survey and housing, and 2 social assessment consultants for ERM U.K. List of attendees has been scanned and attached. Total number of attendees 44 men, 15 women and 39 youth.

Plate 4: Men during the stakeholders meeting in Ihovbor Community

Plate 5: Women during the stakeholders meeting in Ihovbor community

27/06/2011

AZURA

Ihovbor meeting (1)

	NAME	POSITION	SIGNATURE
1	ALBERT IRORERE	CHAIRMAN	AIe
2	FOLORUNSHO OKUNMAFIY	ASST. C. SECRETAR	Okunmafia
3	MICHAEL EMOREGIE	2nd in Command	Michael
4	D.O. AGHEDO	ODIONWERE	D.Aghedo
5	O. VINCENT IDUWE	2ND. i/Command	V/Iduwe
6	OSEMWINGIE OSIFO	ELDER	Osifo
7	FULLERN OSAYAMWEN	✓	F. Osa
8	G.O. OGBOMWAN	✓	Ogbomwan
9	EKENOMOGHEHE AYMO	✓	Osaminnge
10	O. IBOUYOR	✓	AH
11	OSARUGO ERHARHOMWEN	✓	
12	ERHAHON OVIAWE	ODIONWERE	
13	EFOSA UYIGUE	ELDER	
14	ALFRED ISIBOR	✓	
15	Iduwe Roland	Comm. Secretary	
16	NOSA EMOREGIE	ELDER	
17	ANTHONY OSIFO	ELDER	A. Osifo
18	B.I. OSAYANDE	ELDER	
19	ENOBAKHARE Edebiri	Elder	
20	EMMANUEL OGBAMWOSE	ELDER	
21	Roland. O. Igbinoba	Elder	
22	Godwin Otaiwo	✓	
23	Pius Omoregbe	odion Elder	
24	HENRY Uwuigbusun	ELder	
25	GAB. ODIA	ELDER	Odia

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www.azurawa.com

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NO	NAME	POSITION	(2) SIGNATURE
26	MONDAY Omasigho	✓	[signature]
27	OSAZUWA OSARIEN	P.R.O	[signature]
~~28~~	~~[illegible]~~		
28	Ogbebor Joseph	ELDER	[signature]
29	Isaac Omosigho	✓	[signature]
30	Victor Iyique	✓	[signature]
31	Friday Edebiri	✓	F.O
32	Monday Omusigho	✓	[signature]
33	Eguagie Super	✓	[signature]
34	Victor Edughaen	✓	[signature]
35	Stephen Igbinedes	Sec	[signature]
36	Erhunmwun MOSES	elder	[signature]
37	Godwin OTAKpolor	elder	[signature]
38	Mosa Iyique	✓	[signature]
39	Tanus Ogbebor	✓	[signature]
40	Aileme Amadasu	✓	[signature]
41	Friday Uwuigbusa	Manager	[signature]
42	Ufuomo Uwuigbusa	Elder	[signature]
43	Friday Agho	✓	[signature]
44	John Obasohan	✓	Obasohan

IBOR COMMUNITY WOMEN

(3)

1 Helen Uwugbusun ——— 07025917876

2 MISS Gladys Agho ——

3 ~~MRS~~ EHIMWENMA EGHOBAMIEN

4 " AKUGUE IYOHA.

5 " OSABOHIEN ERHABOR.

6 " VERO OBASOHAN

7 " Aigbokhor Omorogieva

8 " EASTHER Uwuigbusun — ~~[illegible]~~68
08138024131

9 " Omodubi Okunmafiyi

10 VICTORIA Omosigho

11 Lucy AIWUYOR.

12 Helen Omosigho

13 ~~Jeneth~~

14 Jenneth Aghedo

15 Evylen OTASOWIE

?/06/2011

AZURA

(4)

Ihovbor Youth Attendance

NO	NAME	POSITION	SIGNATURE
(1)	Monday Omoregie	Vic Chairman	
(2)	Moses Oviewe	Chairman	[signature]
(3)	E. O. Obamwonyi	Adviser / Advice	[signature]
4	Henry E. Omoregie	Fincial Sec.	[signature]
5	Osayamwen Frank	Asst. Sec. Ihovbor Youths	Frank
6	Paul Uyigue	Ihovbor Youth's chairman	[signature]
7	Felix Obasohan	V. chairman	F. O. [signature]
8	Lucky Uwagbusun	Ihovbor Commt. member	[signature]
9	Patrick Otasowie	✓	[signature]
10	Nelson Iduwe	youth comm. sec.	[signature]
11	Johnbull Isibor	Committee Chairman (Evboeke com)	[signature]
12	HENRY Isibor	ASS Sec. Evboeke com	[signature]
13	Stanley Igbinosun	Member	[signature]
14	Benjamine Isibor	Member	[signature]
15	OSAS IDAH	work Committee	[signature]
16	Ihibor Kingsley	member	[signature]
17	Ufuomen uwaifo	~~[illegible]~~	[signature]
18	OSAS ISAAC	~~Isaac~~	[signature]
19	Osarobo friday	Member	[signature]
20	Iwobiden Kingsley	Representatives (SEC)	[signature]
21	Ajayi Owuegbosun	Youth MANAGER	[signature]
22	D. O. CHARLES Shegun	Jesporting officer	[signature]

23	Aiyan Obanoyi	Member
24	Aiyamhoba Osasiodunwa	secretary Ihovbor
25,	Monday Eghabamien	financial secretary
26,	Evans Igbinoba	youth Sectry
27	Enoriwa Monday	Dep. Of Affe
28	Paul Otasowie	✓
29	Wilfred Aigbavo	Member
30	Femi Osahenrin	Member
31	Tunmi Osahenrey	Member
32	Eguagie Enoma	Member
33	Osawere Enomwa	Youth
34	Osamudiamwen Uwadia	Member
35	Osagie Olasoke	plot chairman
36	Uyikpen Iyoha	Members
37	Orobosa Ogbevan	Member
38	Allen Obanoyi	member
39	Osadebamwen Omosigho	Member

Stakeholders' Meeting in Orior Osemwende community

The meeting started in the community 3.45pm on the 22nd of June. Community leaders, men, women and youth present were sensitized about the proposed project and purpose of the social assessment. FGDs were conducted with groups of men, women and youth. IDIs with youth leader, community leader and women leader. The community complained about the non inclusion of the name of their community in notice of revocation in the national newspaper. The project manager for Azura intimate the community that corrections had been made and it will be published in Observer and vanguard newspaper the following day 23rd and 24th June respectively. The team comprises of Azura project manager, government official from state ministry of lands, survey and housing; and 2 social assessment consultants. The team left the community 6.40pm. List of the attendees is found below. Total number of attendees are 21 men, 57 women and 48 youths.

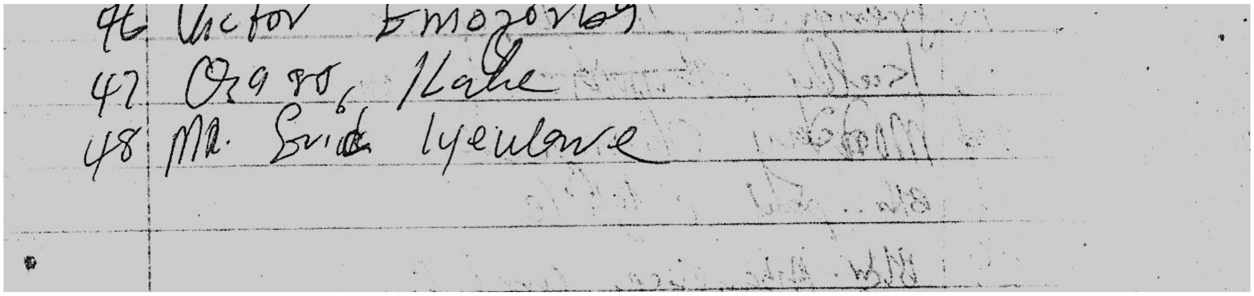
Plate 6: Men during stakeholders meeting in Orior community

ORIOR-OSEMWIENDE COMMUNITY ELDERS

(1)

1 Chief Osakue Ihams
2 Stephen Iyienwuane
3 Chief Ekuase Ugiagbe
4 Agbonlahor Sunday
5 Osazee Ogbomo chief
6 Friday Oqansuyi
7 Edhiagbonya Felix
8 Isaac Ihase
9 Aetor Osayande
10 Ohenhen Patrick
11 Igbinigie Haluyi
12 Aiwuro Kennedy
13 Eniye Adebayo
14 Ojowuro Peter
15 Agbonlahor Henry
16 Aiguokhian Gabriel
17 Ekhator Joseph
18 Eniye Osaro
19 Amos Aide
20. Barr. Kelvin Aigbe
21 Valuer, Melody O. Odumah

22 Frendrick Imagbemkaro
23 Kelly ~~Ahama~~ Aghama
24 Monday Ohenzuwa
28 Bro. paul . C. Ighile
29 Bro. Aibangbee, Cyril - O.
30 Friday Imagbenikaro
31 Pecco Osayande
32 Edosa Uwohen
33 Andrew Uwohen
34 Imafidon Ohenzuwa
35 Stanley Ohenzuwa
36 Odion Aulero
37 Micheal Osifo
38 Osayiki Ogisoba
39 Emmual Ohezuwa
40 Osasuwa Ohezuwa
41 Frank Ojie
42 Wilfred Agbonlahor
43 Osazuwa Aulone
44 Tony ~~Ahama~~ Aghama
45 Romanus Iyeuwe



46	Victor Emozorby
47	Ozagro, Ikale
48	Mr. Sunida Iyeulawe

Plate 7: Women during stakeholders meeting in Orior community

The women of Oror Osemwende
A The names of the Comunit

~~1 ... Awamere ...~~
2 Kantuft Agbonlavor ②
3, Rose Ogiesoba.
4 victoral Omoregi
5 Jenetu Akhonbare tel=
6 08027934950
7 magnet Esol gbowa
8 Osaremen Eseigbowa
9 Tel 080 71179570
10 MISS Eson Steller Ohenzuwa
11 mary omoragi
12 vero Ohenzuwa
13 Eldnat Saturday
14 Chrisitanal Ehigiator
15 hellen Okohie
16 Mrs Mary O. Emmanuel
17 Stella Osagitae
18 beneditta Obinen
19 Lekhoba Egbe tel-080
~~20~~ 272 11002
~~21~~

(3)

20 Faith Ilekhoba Tle = 080-
71441623

21 Stella Adebayo
22 Aghaarimaghaogho Ilekhoba
tel 08036013688
23 Juliet Aimufeia tel = 080539534-
29

24 Victoria Popo = Tel 080
25 Stella Izegbe Tle 081626974
26 Roslyn Ekkumanwan
~~Olokhor Onieki~~
27 Grace Osayende
28 Roselin Ikpefuwa
29 Eghe Ogiehe Ohenzuwa
30 Justina Ohenzuwa
31 Grace Asedo
32 dora Ohenzuwa
33 Osimwense Ohenzuwa
34 Ayor Peter

(3)

=080-

ba

539534-

269747

(4)

35 Osifo- Uictoria
36 Rita Ohenzuwa
37 Confort Ohenzuwa
38 Glory Ifeloye
39 Ester Ogenka
40 Osatu Ohenzuwa
41 Beuty Adima
42 Iboken Ohenzuwa
43 Doriss Aguokhan
44 Roselin Ohenhen
45 Grace Omoruyi
46 Rebecca
47 Rebecca Eke 0808
48 Percent Oriakhi
49 Abies Edomwan
50 Loveth Ekenomwen
51 Charity Ebosereme
52 Esohe Agaokian
53 Loveth Ihekhoba
54 Percent O Ohenzuwa
55. Kate Okobie

56 Jonah
57 The Cross

Youth of Orior-Osemeda. (

1 MR Sunday Agbonlahor
2 MR Soto A. Omoroghe
3 MR Osayande Kenneth
4 MR James Agbonlahor
5 MR Oseukhai Aguakhene
6 MR. Esosa Ohenzuwa
7 MR Lizzy Osagbore
8 MR Monday Imarighe
9 MR Osagie Ilekhuoba
10 MR. Mathew Ogbeide
11 MR Augustin Oheguewa
12 MR Michael Igbhide
13 MR Godday Amonighe
14 MR Osamudi Osagi
15 MR Osagie Aighoaguea
16 MR. Kelly. Ilekhuoba
17 MR Harrison Ogunsuyi
18 MR Collins O. Ilekhuogba
19 MR Osagieda Igbodalo
20 MR Okhokhae Amoko
21 MR Emmanuel Ogie

Stakeholders' Meeting in Idunmwonwinna Community

Thursday 23rd June 2011

The team got to the community around 10.15am and intimate members of the community present about the activities of the proposed project and the purpose of the project. FGDs were conducted with groups of men, women and youth. List of attendees has been attached. Total men 13, women 33 and youth 22.

IDIs were also conducted community leader, community chairman, women and youth leaders. Social assessment of sacred sites within and around the community was unable to taken place because the chief priest was not around and certain rituals are needed to be carried out before the assessment can be done.

Plate 8: Men during stakeholders meeting in Idunmwonwina community

PA. OKAOWUA AGBURA 23/
OKAOWUA BENSON OBASOTTAN.
PA OWUE OMONUWA.
OTTEN JOLLY OMOKEGBE.
PA IMADE ORUNMWESE.
JOHNBULL OSAREMWEN.
MR ROLLANDS. AGBONLE.
ANTHONY AGBONLE.
ERTHUMANWAMASE DANIEL.
ERIC. ERIC ERTHUMANWASE -
FRIDAY AGBONLE. - VICE CHA
IGBINEDWEKA CLIFFORD - SEC.
OSAGHAE OMONUWA. SIS

FGD MEN

Plate 9: Women during Stakeholders meeting at Idunmwuowinna Community

Plate 10 :Youth during Stakeholders meeting in Idunmwuowinna Community

Youth F.G.D. 23/6/201

Idunmwowina Community B/C

1. Eric Ekhumamwanse. chairman.
2. Friday Agbonze Vice chairman.
3. Clifford Igbinoveka. Sec.
4. Philip Omonuwa.
5. Samuel Osagzemwende.
6. Osagie Ekhumwanse.
7. Sunny Imaghodo
8. Paul Aghabahi
9. Peter Ekhumwanse.
10. Osamudiamen. Ekhator.
11. Osaretin Ekoma.
12. Osaghae Omonuwa.
13. Austin Omonuwa.
14. William. Osazemwende.
15. Edward Ekhator.
16. Felix Mewagbon.
17. Osaretin Aifuwa.
18. Osagbovo Odihi
19. Hele Aghardia.
20. Monday Aifuwa.
21. Osayande Ekhumwemase.
22. Julius Omoregbe

Women of Idunmwunmwine 23-6-2011 5/2E

1 Mrs Ogbeide
2 Mrs Obasokhan H.
3 Madam Obasokhan 08020370132
4 Mrs I Obasokhan
5 Deaconess C.O. Asemota 07060471385
6 Mrs F. Omoruwa 08053957415
7 ~~Mrs faith 08063327593~~
8 Mrs Joy Ogbeide 07067333111
9 Mrs Iriwenbuwa Osagiebo.
10 mrs faith Ogbeide 08063327593
11 Mrs Edoghogho Omoruyi Ehim.
12 mrs Eatona ESther. O
13 Mrs Osazuwa Felicia
14 Mrs J Omonuwa
15 Mrs Joy ogbede
16 Esten Erumase
17 Doris Efe
18 Mrs Hohan AGBONZE
19 osaimwen Osaro
20 Isoken Agbonze
21 Maria Agbonze
22 Mrs Uyigue 3
23 mrs Aifuwa. m.

①

24 Esohe OSAYede
25 Mrs Osazee
26 Mary Nola OMOROGBE Okhu
27 FAITH OMOROGBE
28 Mirable OMOROGBE
29 Izieg bo
30 Mrs Aifuwa
31 Mrs fath Osazemwede
32 Mrs J. Osagie
33 Mrs Joy Omonuwa

AZURA POWER INDEPENDENT POWER PLANT FACILITY – SCOPING PHASE ASSESSMENT

We would like you to take part in this EIA process so you can raise any issues and comments you may have about the proposed Project. Your comments are a key part of the study to and it is important that Azura Power understands your comments so that they can be responded to in the Scoping Report.

To receive regular information throughout the EIA process, you must register as an Interested and Affected Party. To register please send this form to EnvAccord at any of the addresses given below. If you want to make any comments at this stage please use this form. Alternatively, please do not hesitate to send an email or write separately.

You can make additional comments for the study team to record on a separate page or on the reverse side of this form. Please post or fax this comment sheet to any of the addresses below as soon as possible and preferably by *17 December 2010* so that we can take your comments into consideration.

Please fill in your details

Name: HON (Barr) BENJAMIN IREDIA	Organisation: UHUNMWODE LOCAL GOVT COUNCIL.
Telephone: 08034009150 08053285251	Position: SECRETARY
Cell phone:	Email: Bredia@yahoo.comm
Address:	

Please post or fax this form to any of the following addresses:

Environmental Accord Nigeria Limited
Attention: Mr Ibrahim Salau
Tel: 0 802 360 9591
Email: isalau@envaccord.com
Address: ENVACCORD
PO Box 73642, Victoria Island, Lagos, Nigeria

Environmental Resources Management
Tel: +27 21 702 9100
Fax: +27 21 701 7900
Email: Kate.stuart-williams@erm.com
Address: Postnet Suite 624, Private Bag X29, Gallo Manor, 2052, Johannesburg, South Africa

Comments Form

It would be useful if you could answer the questions below but please feel free to provide any comments you would like to raise. Please continue on additional paper if required.

1. What are the primary comments that you have about this project?

Very good intention, proper evaluation of communities involved. To understand the advice impart of the heat to the healt of the Vasions communities the piles are passing through. To conside adequate compensation for the communities, consulting with the Engee/ Vasions Heads of Communities. We also believed that the Vasions Communities would have their indipence employed.

2. Do you have or know of any information that we should know for the EIA (eg environmental information or community, social or economic information related to the proposed site or the project activities)?

We have no objection to the proposed site. Healt degredation should be consider for some communities if impart is high. The right of way must be properly define and protected.

Many thanks for your participation

ATTENDANCE : ORHIONWON L.G.A STAKEHOLDERS MEETING AT GOVT HOUSE, 08/12/2010

S/NO	NAME	PHONE NO	DESIGNATION	OFFICE	SIGNATURE
1.	Ogbole J.O Esq	08033705869	HOLGA	ORHIONWON L.G. AREA	
2.	R. Edenamigho	08056403129	CEHO	~	
3.	NIDU INNEM	08087184668	EXEC. DIRECTOR PPP OFFICE	PPP OFFICE	
4.	OZE REDIMUNT	07059442792	ANALYST	TPP Office	
5.	Ibrahim Saka	08023609691	MD, ENVACCORD	Consultant	
6.	Bosah Ekwerekwu	07082146565	ENVACCORD	~	

ATTENDANCE ON MEETING HELD IN THE CHAIRMAN OFFICE, EHOR L.G.A, EDO STATE 08-12-2010

S/NO	NAME	PHONE NO	DESIGNATION	OFFICE	SIGNATURE
1	Hon Agbama M.	08035408608	Chairman	CHAIRMAN	[signature]
2	Hon (Barr) Ben Iredia	08034009150	Sec. L. govt.	SLG	[signature]
3	J.J IDADA.	08053858243	DAxG.S.	U.L.G. EHOR	[signature]
4	Felix Eghoti	08055611022	Treasurer	✓	[signature]
5	C. E. Asonmwonriri	08068044081	HOD Legal	✓	[signature]
6	Osemwegie Ogbemudia	08058773058	HOD: Social Welfare	✓	[signature]
7	Uwadiae Henry	08052854248	HOD Agric	✓	[signature]
8	Esohe A. Ogunje	08035027003	HOD. Planning	✓	[signature]
9	Lawrence A. Arebu	08037099407	Director/HOPLW	✓	[signature]
10	Joseph Uhunmwangho	08069703676	Admin. Officer		[signature]
11	Sule Umoru	08038473121	Establishment Officer	✓	[signature]
12	Engr. Ibrahim Salau	08023609591	ENVACCORD MD	ENVACCORD	[signature]
13	Mr. Bosah Ekwerekwu	07082146565	OFFICER	✓	[signature]
14	OZE FRED, ANWA	07059442192	ANALYST	Economic Team	[signature]
15	Surv. Charles Iyawe	08023410931	SURVEYOR	LANDS & SURVEYS	[signature]

ATTENDANCE ~~MEETING~~ AT MIN. OF ENVT & PUBLIC UTILITIES; OFFICE OF Perm Sec.

07-12-2010

S/NO	NAME	PHONE NO	DESIGNATION	ORGANISATION	SIGNATURE
1.	JIM GOSTLEE AKHIMIEN	08060662133	DFR(CON)	Min of Env.	
2.	G.O. OKOJIE	08033910915	DFR (Mgt)	Min of Env.	
3	P.E. OTOIGHILE(MRS)	08023389323	DAcS	Min of Env.	
4	Chief S.O. Usiemwanta	08023446022	DPA	——do——	
5.	Dr Ercdiauwa	07059442792	Analyst	PPP/EST	
6.	Engr. Ibrahim Salau	08023609591	MD,	ENVACCORD	
7.	Bosah Ekwerekwu	07082146565	OFFICER	✓	
0	A.H. Ikhelowa	08034036512	PS	Min of Envir.	
9	Ogaboze T.O	07034458197	ADE(EA/LS)	✓	

AZURA-EDO IPP PROJECT: EIA SCOPING MEETING

ATTENDANCE SHEET 7TH DEC. 2010

S/NO	NAME	ORGANISATION	DESIGNATION	SIGNATURE
1.	Com Didi Adodo	MEWR	Hon. Comm	[illegible]
2.	Engr. S.I. Ekenimoh	✓	Perm. Secretary	Ekenimoh
3.	OHIOZEUA A.E	✓	DFA	[illegible]
4	Engr. A.I. Ehigiator	RER	Ag. GM 08030…	[illegible]
5	S.O. Ovuosu	RER	C.P.D	[illegible]
6	Oisonkede .O.O	MEWR	A.O	[illegible]
7	Engr. A.J. Orobor	MEWR	DW	[illegible]
8	Itua Uleicor	MEWR	P.A.H.C.	[illegible]
9.	Mr L.O. Asibor	✓	Rep. DAS.	[illegible]
10.	Oze Aredianwe	PPP/EST	Analyst	[illegible]
~~11~~	~~Didi Adodo~~	~~M~~		
11	Ibrahim Sabo	ERM/ENVACCORD	MD, ENVACCORD	[illegible]

AZURA-EDO IPP PROJECT: EIA Scoping meeting
At The Perm. Sec Min. of Lands, Survey etc.
07-12-2010

NO	NAME	PHONE NO	DESIGNATION	ORGANISATION	SIGNATURE
01	TPL J.A. Olorunjemi	08055646661	P/S.	Min. of Lands Surveys & Housing	
02	TPL. S.O. OLAYEMI	08034926318	DIRECTOR	TOWN PLANNING (STATE CAPITAL)	
03	TPL J. Osarenkhoe	08033815013	DIRECTOR	Urban & Rural	
04	Engr. Ibrahim Sabu	08023609591	ENVACCORD, MD	ENVACCORD	
05	Bosah Ekwerekwu	07082146565	✓ officer	✓	
06	Oze Frederick	07054942792	Analyst	PPP/EST	

AZURA POWER INDEPENDENT POWER PLANT FACILITY – SCOPING PHASE ASSESSMENT

We would like you to take part in this EIA process so you can raise any issues and comments you may have about the proposed Project. Your comments are a key part of the study to and it is important that Azura Power understands your comments so that they can be responded to in the Scoping Report.

To receive regular information throughout the EIA process, you must register as an Interested and Affected Party. To register please send this form to EnvAccord at any of the addresses given below. If you want to make any comments at this stage please use this form. Alternatively, please do not hesitate to send an email or write separately.

You can make additional comments for the study team to record on a separate page or on the reverse side of this form. Please post or fax this comment sheet to any of the addresses below as soon as possible and preferably by *17 December 2010* so that we can take your comments into consideration.

Please fill in your details

Name: Engr A. I Ehigiator	Organisation: Edo State Rural Electrification Board
Telephone: 08023064603 3	Position: Ag - Gm
Cell phone:	Email: aiehigiator@yahoo.co
Address: 5th Omo-Osagie Avenue, GRA, Benin city	

Please post or fax this form to any of the following addresses:

Environmental Accord Nigeria Limited
Attention: Mr Ibrahim Salau
Tel: 0 802 360 9591
Email: isalau@envaccord.com
Address: ENVACCORD
PO Box 73642, Victoria Island, Lagos, Nigeria

Environmental Resources Management
Tel: +27 21 702 9100
Fax: +27 21 701 7900
Email: Kate.stuart-williams@erm.com
Address: Postnet Suite 624, Private Bag X29, Gallo Manor, 2052, Johannesburg, South Africa

Comments Form

It would be useful if you could answer the questions below but please feel free to provide any comments you would like to raise. Please continue on additional paper if required.

1. What are the primary comments that you have about this project?

(1) What is the obligation(s) of the state Government under the power purchase Agreement?

(2) Who runs or operate the plant on completion - the State Govt or Azura

2. Do you have or know of any information that we should know for the EIA (eg environmental information or community, social or economic information related to the proposed site or the project activities)?

NIPP ~~has~~ in some vicinity planned to give electricity to host communities, what is your own plans for the communities outside to elect in order to ensure company/community relationship.

Many thanks for your participation

AZURA POWER INDEPENDENT POWER PLANT FACILITY – SCOPING PHASE ASSESSMENT

We would like you to take part in this EIA process so you can raise any issues and comments you may have about the proposed Project. Your comments are a key part of the study to and it is important that Azura Power understands your comments so that they can be responded to in the Scoping Report.

To receive regular information throughout the EIA process, you must register as an Interested and Affected Party. To register please send this form to EnvAccord at any of the addresses given below. If you want to make any comments at this stage please use this form. Alternatively, please do not hesitate to send an email or write separately.

You can make additional comments for the study team to record on a separate page or on the reverse side of this form. Please post or fax this comment sheet to any of the addresses below as soon as possible and preferably by *17 December 2010* so that we can take your comments into consideration.

Please fill in your details

Name: Mr. OJEAGBASE T.O	Organisation: EDO STATE Min. of Env. & Public Utilities
Telephone: 07034455197	Position: ADE (EA/LS)
Cell phone: 07034455197	Email: theoje@yahoo.com.
Address: 2nd floor, Palm House, Sapele Rd Benin City.	

Please post or fax this form to any of the following addresses:

Environmental Accord Nigeria Limited
Attention: Mr Ibrahim Salau
Tel: 0 802 360 9591
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Fax: +27 21 701 7900
Email: Kate.stuart-williams@erm.com
Address: Postnet Suite 624, Private Bag X29, Gallo Manor, 2052, Johannesburg, South Africa

Comments Form

It would be useful if you could answer the questions below but please feel free to provide any comments you would like to raise. Please continue on additional paper if required.

1. What are the primary comments that you have about this project?

The primary Comments about this project has to do with the National Importance of power project as it will go a long way to stabilize National energy supply. Being a major project, it demands the conduct of Environmental Impact Assessment in accordance with the provisions of the EIA Act NO.86 of 1992 which makes EIA studies mandatory for this project. The following, are steps to enhance the conduct of an EIA:

- The need to use an accredited Environmental Consultant whose accreditation is with both Federal and State Ministry of Environment.
- Wide consultations with host communities and stakeholders, particullarly during scoping and datea gathering
- The involvement of some youths in the communities with regard to employment during the EIA Studies.
- Involving regulators in all the EIA processes.

2. Do you have or know of any information that we should know for the EIA (eg environmental information or community, social or economic information related to the proposed site or the project activities)?

- Compliance with the State policy of obtaining EIA Permitt before the EIA Studies.
- Compensations for properties that might be tampered with, during the process.
- Eventually, after the review/approval of the EIA draft, there is the need to obtain an Environmental Impact Statement (EIS) from the State Ministry of Environment ((This has to be so, as Environmental matters are entrenched in the ~~Constitution~~ Concurrent list of the Nigerian Constitution))

Many thanks for your participation

Figure 1: ERM/EnvAccord representative (in glasses) discussing with the Honorable Commisioner for Energy and Water Resources and his Ministry officials

Figure 2: ERM/EnvAccord representative meeting with the Permanet Secretary of the Ministry of Lands, Surveys and Housing

Figure 3: ERM/EnvAccord representative meeting with the Ministry of Lands, Surveys and Housing officials

Figure 4: ERM/EnvAccord representative meeting with the Permanaent Secretary and officials of the Ministry of Environment and Public Utilities

Figure 5: ERM/EnvAccord representative meeting with the Local Government Chairman and officials of the Uhunmwonde LGA (where Ihovbor is located)

Figure 6: ERM/EnvAccord representative meeting with the officials of Orhionwon LGA where Oben is located

Figure 7: ERM/EnvAccord representative and officials of Public Private Parnership (PPP) Office and Ministry of Lands, Surveys and Housing at the proposed AzuraEdo power plant site at Ihuovbor

Figure 8: ERM/EnvAccord representative and officials of Public Private Parnership (PPP) Office and Ministry of Lands, Surveys and Housing at the Oben Gas Compressor Station

Minutes of Meeting Held By the Hon. Commissioner Ministry of Lands, Survey and Housing with Orior Osemwende, Ihovbor, and Idunmwina Communities on the Edo – Azura Independent Power Project

Date: 09 June 2011

Time: 11:30am

Venue: Conference Room of the Ministry of Lands, Survey and Housing, Benin.

Topic: Notification of government acquisition

Attendance:

Government delegation

Mr. Calistus Ojieabu -	Hon. Commissioner for Lands, Survey & Housing
Mr. J.A. Olorunfemi -	Permanent Secretary, Ministry of Lands
Mr. A.Ofaire -	Surveyor – General
Mr. S.O. Olayemi	Director of Town Planning
Mrs. Q. Egonwan -	Director of Finance/Accounts
Mr. J. Aghama – Enofe -	Director of Lands
Mrs. R. I. Omo – Bare -	Acting Director of Administration & Supplies
Mr. G. Osayande -	Secretary Boundary Commission
Mr. H.O. Enabulele	Secretary, Lands Use & Allocation Committee
Mr. D. Enakhimion -	Assistant Surveyor - General

Ihovbor Community

HRH. F.O. Igbinakenzuwa -	Enogie of Ihovbor
Mr. Roland Iduwe -	Member
Mr. Omorogbee Victor -	Member
Mr. Osifor Anthony -	Member
Mr. Dennis Irorere -	Member
Pa. Osarobo Iduwe -	Member
Mr. Albert Irorere -	Chairman Ihovbor Community
Pa. Pullen Osayamwen -	Member

Orior Osemwende Community

HRH. V.N. Ohenzuwa -	Enogie of Orior Osemwende
Mr. Iyiewuare, I. Eric -	Secretary Orior Osemwende
Mr. Felix Ediagbonya -	Member
Chief P.I. Adonuin -	Member
Mr. Osemwenkhac Aiguokhian -	Member
Mr. Idurase Osayaude -	Member

Idunmwnwina community

Mr. Eric Erhuwmwamuse -	Chairman Idunmwnwina Community
Mr. Igbweweka Clifford -	Secretary
Mr. Solomon Agbonlahor -	Member
Mr. O.M. Odumau -	Estate Valuer to Orior and Idunmwina Community

Azura: - Nicholas Abolo-tedi

Introduction

The meeting commenced with a prayer said by the Enogie of Ihovbor and introduction of the Hon Commissioner for Lands, Survey and Housing by the Permanent Secretary of the Ministry, and self introduction by every attendee. The Permanent Secretary thereafter declared that the three communities were invited to the meeting to officially inform them of the decision of government to acquire certain lands for a power project in their communities, request them to suspend any dispute and to underscore the importance of the project to the State government.

Remarks by the Hon. Commissioner

The Commissioner declared that electric power was central to government's economic vision to transform the state and extend the amenities and comfort available in urban areas to remote communities and villages in order to reduce rural – urban migration. He noted that though there is an ongoing power project by the federal government (NIPP) located in their communities, the State power project is to complement the effort of the federal government and that there cannot be too much of a good thing. He informed the meeting that more industries, projects and businesses would gravitate towards the communities on the back of the success of the power projects.

The Hon. Commissioner then sued for support and cooperation of the three communities arguing that the government exists for the good of the people, noting that the determination of the present administration to develop the state should be marched by the strength of the support of the people. He urged the communities to be forward looking and erase any misgivings they may have about the project saying the project would bring only good to the communities.

Remarks by the Permanent Secretary

He highlighted the immediacy of the need to mark out on the ground the land for the power project and thereby determine how much of it is in each of the three communities. He stressed that it is only after a survey that any claim or objection can be properly made by each of the communities. He noted that government valuers and independent valuers would work together to establish fair and acceptable values for the crops and improvements on the acquired land for the purposes of compensation. The traditional rulers present were then invited to respond on behalf of their communities in line with Edo custom.

Response by the communities

The Enogie of Ihovbor spoke first and commended the initiative of government to build a power plant and associated himself and his community with efforts to make the plan a reality. He however raised the issue of dispute over ownership of the land government intends to acquire and adequacy of compensation.

The Enogie of Orior Osemwende spoke next and also in the same vein. He however, observed that it is early yet to determine if any part of the land to be acquired fell within the disputed areas until a proper survey has been done and if disputed land is also acquired then it can be discussed. He appealed to the Hon. Commissioner to convene another meeting upon completion of survey to settle any disagreements that might arise as to the ownership of the land covered in the survey map.

The Chairman of Idunmwina community spoke for his community in similar vein. He however stressed that while the community was happy to give land to government for the

project, companies and past governments have failed to deliver on their promises in the past to pay adequate compensation and contribute to the developments of the host community as soon as land acquisition was completed.

A member of Ihovbor community that had initially sought to speak before his Enogie but overruled by the Commissioner (Omoregbe Victor) was allowed to speak and ask his question after all the traditional rulers/leaders had spoken. His question was on the size of the land to be acquired for the Edo – Azura IPP which in his view exceeds what is needed to build a two turbine power plant, noting that the federal government's NIPP plant with four turbines was on smaller size land than the land to be acquired for the Edo – Azura project and wondered why?

Response by government team

The Hon. Commissioner in his response to the remarks by the traditional rulers and Chairman of Idunmwina community granted their request for another meeting with him after the survey work is done. He assured them that government would not take more land than was necessary to execute the project. The Permanent Secretary in his own response assured that the government had subjected the power project and land application to strict technical review before approving the size of land and the World Bank is involved in this project to ensure that communities are given their due and compensation paid. He summarized his comment with a local proverb of the Ishan people of Edo state that "a person should not shut his eyes because he has seen ugly masquerade, that when the beautiful masquerade will pass by the person will miss it." He urged the communities to keep an open mind despite their sad experience of the past so as not to miss a good opportunity. The Permanent Secretary thereafter invited the Project Manager to say something.

Remarks by Azura Project Manager

The Project manger responded to twin issues that dominated the meeting and agitated the minds of the communities: Size of the land and payment of compensation. The impression that the power plant is to be a two turbine plant was corrected and the meeting was informed that four gas turbines exactly the same configuration as the NIPP with an initial capacity of 450MW is to be built plus a plan for expansion to an ultimate capacity of 2000MW; as such the size of land acquired now was to make room for future expansion. The PM called for patience and advised members of communities who might have any issues relating to the technical details of the project or any other matter to approach the PM or the government authorities for correct and updated information. The PM also assured all that the communities would experience a different and positive way of dealing with communities and that issues including compensation will be managed to World standards.

Conclusion

The meeting ended with an agreement that surveyors move to site immediately, starting next day Friday, 10th June 2011 and the leadership of the three communities reconvene at the conference room of the Ministry of Lands, Survey and Housing for a second meeting at the completion of survey work to address any outstanding issues. A prayer was also said to end proceedings by the Secretary of the Land Use & Allocation Committee at about 12:30pm.

Report written by
Nicholas Abolo-tedi

MINUTES OF STAKEHOLDERS ENGAGEMENT MEETING HELD WITH ORIOR, IHOVBOR AND IDUNMWUMOWINNA COMMUNITIES on Wednesday 22nd and Thursday 23rd June, 2011

Key issues arising:

1. Orion and Idunmwumowinna communities expressed their grievances on the revocation of right of occupancy and compensation publication in Daily Observer and Vanguard Newspapers of Saturday 18th June 2011, which omitted the names of their communities in the publication. Ihovbor community was the only community mentioned in the publication.
2. Representatives of the communities with their lawyers lodged a complaint officially with the state Ministry of Lands, Survey and Housing. The Permanent Secretary of the ministry promised to make the necessary amendments and to republish the notice in the two newspapers. The 2 communities said that they would not allow the surveyors to continue their work until the necessary amendments were made.
3. On the 21st June, the necessary amendments were made in the government gazette and the new notice recognizing the other two communities was to be published in the same 2 newspapers on Wednesday 22nd June 2011.
4. The Commissioner from the same ministry agreed to accompany the consultants to the affected communities during the stakeholder engagement meetings to make present the amended document and to apologize on behalf of the state government.
5. The 2 communities also expressed their disappointment over the naming of the NIPP after Ihovbor community, while other 2 communities that also contributed land were not mentioned. They do not want this not repeated in the new proposed IPP project.
6. The 2 communities also complained that all benefits from the NIPP will go to Ihovbor including employment of unskilled labour, contracts, social benefits such as schools, etc). They said they will not allow this to happen in the proposed project.
7. The 3 communities agreed that the social assessment should be allowed to take place since it is World Bank standard and a requirement for the project to commence.
8. The communities requested that on completion of the general survey, a meeting of the 3 communities with representation from the government and the project should be called so that all could be clear about the area of land that will contributed by each community to the proposed project.
9. It was also agreed at the community meetings that the quantitative social survey of affected households and land owners and users cannot be conducted during this field trip until the grievances between the communities and the government have been resolved (regarding the revision of the gazette notice and the newspaper publication, and distribution of benefits, etc), have been resolved. Only qualitative data would be collected for now.
10. The communities stated that by the time the team was ready to carry out its detailed census, they hoped that the differences between themselves would have been resolved.

Ihovbor Community stakeholder engagement meetings – Date: Wednesday 22nd June 2011

Preliminary consultation was carried out in Ihovbor community on Monday 22nd June. Community leaders agreed to meet two days later to conduct the stakeholders meeting as well as In-depth Interview with key informants and Focus group Discussion. Present at the meeting were the Enogie, Pa Agbuza, Jolly Omokegbe, Eric Erhunmawase (community chairman), Friday Agbonze (community vice chairman) and Igbineweka Clifford (community secretary).

On Wednesday 22nd June 2011 the meeting started with general briefing on the project and purpose of the assessment. Present at the meeting are community leaders, men, women and male and female youth. The meeting started around 12 noon and ended 3.15pm. After this, FGDs were conducted with men, women and youth. IDIs with community leader, women leader, youth leader and community chairman. The team comprises of Azura project manager, representative of state ministry of lands, survey and housing, and 2 social assessment consultants for ERM U.K. List of attendees has been scanned and attached. The total number of attendees were 44 men, 15 women and 39 youth.

Fig1: Men during the stakeholders meeting in Ihovbor Community

Fig2: Women during the stakeholders meeting in Ihovbor community

27/06/2011 AZURA Thorbor meri (1)

	NAME	POSITION	SIGNATURE
1	ALBERT IRORERE	CHAIRMAN	[signature]
2	FOLORUNSHO OKUNMAFIY	ASST. C. SECRETAR	[signature]
3	MICHAEL EMOREGE	2nd in Command	[signature]
4	D.O. AGHEDO	ODIONWERE	[signature]
5	O. VINCENT IDUWE	2ND. I/C COMMAND	[signature]
6	OSEMWINGIE OSIFO	ELDER	[signature]
7	[illegible] OSAYAMWEN	✓	[signature]
8	G.O. OSAGBOMWAN	✓	[signature]
9	EKENOMOGHELE AYHO	✓	[signature]
10	[illegible] O. AWOUYOR	✓	[signature]
11	OSAKUE ERHAHON[illegible]	✓	[signature]
12	ERHAHON OVIAWE	ODIONWERE	[signature]
13	EFOSA UYIGUE	ELDER	[signature]
14	ALFRED ISIBOR	✓	[signature]
15	Iduwe Roland	Comm. Secretary	[signature]
16	NOSA EMOREGIE	ELDER	[signature]
17	ANTHONY OSIFO	ELDER	A. Osifo
18	B.I. OSAYANDE		[signature]
19	ENOBAKHARE Folabin	ELDER	[signature]
20	EMMANUEL OSAMWONYI	ELDER	[signature]
21	Roland O. Igbinoba	Elder	[signature]
22	Godwin Otasa	✓	[signature]
23	Pius Omoregbe	odion Elder	[signature]
24	HENRY Uwuigbusun	ELder	[signature]
25	GAB ODIA	ELDER	[signature]

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(2)

NO	NAME	POSITION	SIGNATURE
26	MONDAY Omoregie	✓	[signature]
27	OSAZUWA OSARUEN	P.R.O	[signature]
~~28~~	~~[illegible]~~		
28	Ogbebor Josph	ELDER	[signature]
29	Isaac Omoregie	✓	[signature]
30	Victor Uyigue	✓	[signature]
31	Friday Edebiri	✓	F.O
32	Monday Omuegiehe	✓	[signature]
33	Eguagie Super	✓	[signature]
34	Victor Edughaen	✓	[signature]
35	Stephen Igbinedion	sec	[signature]
36	Eduwuhon MOSES	elder	[signature]
37	Godwin Otakpolor	elder	[signature]
38	Moses Uyigue	✓	[signature]
39	Tanwo Ogbebor	✓	[signature]
40	Aleme Amadas	✓	[signature]
41	Friday Uwuigbusa	Manager	[signature]
42	Ufuomanosa Uwuigbusa	Elder	Uwuigbusa
43	Friday Aghio	✓	Aghio
44	John Obasohan	✓	Obasohan

IBOR COMMUNITY WOMEN

(3)

1 Helen Uwugbusun — 07025917876

2 MISS Gladys Agho —

3 MRS EHIMWENMA EGHOBAMIEN
4 " AKUGUE IYOHA.
5 " OSABOHIEN ERHABOR.
6 " VERO OBASOHAN
7 " Aigbokhor Omorogieva
8 " EASTHER UWUigbusun — ~~07034976268~~ 08138024131
9 " Omodubi Okunmafiyi
10 VICTORIA Omosigho
11 Lucy AIWUYOR.
12 Helen Omosigho
13 ~~Jeneth~~
14 Jenneth Aghedo
15 Evylen OTASOWIE

24/06/2014

AZURA

(4)

Ihovbor Youth Attendance

NO	NAME	POSITION	SIGNATURE
(1)	Monday Omoregie	Vic chairman	
(2)	Moses Oviewe	Chairman	
(3)	E.O. Obanwangi	Advice	
4	Henry E. Omoregie	Financial Sec.	
5	Osayamwen Frank	Asst. Sec. Ihovbor Youths	
6	Paul Uyigue	Ihovbor Youth's chairman	
7	Felix Obasohan	V. chairman	
8	Lucky Uwagbosun	Ihovbor Comm. chairman	
9	Patrick Otasowie		
10	Nelson Iduwe	Youth comm. sec.	
11	Johnbull Isibor	Committee Chairman (Evbueke Com)	
12	Henry Isibor	Ass Sec. Evbueke com	
13	Stanley Igbinosun	Member	
14	Benjamin Isibor	Member	
15	Osas Idah	Work Committe	
16	Ihibor Kingsley	Member	
17	Ufuomen	Treasurer	
18	Osas Isaac	Isaac	
19	Osamudia Friday	Member	
20	Amahien Kingsley	Representatives (Sec)	
21	Ajayi Uwagbosun	Youth Manager	
22	DO CHARLES Shegun	Secretary	

23	Aikyan Obanoryi	Member	[signature]
24	Aiyantahoba Osasiodunwa	secretary Ihovbor	[signature]
25,	Monday Eghabamien	fanacia secetry	[signature]
26,	Evans Igbinoba	youth Sectry	[signature]
27	Eruiwa Monday	Rep of [illegible]	[signature]
28	Paul Ofasowie	✓	[signature]
[illegible]	Wilfred Appayo	Member	[signature]
30	Femi Osalewun	Member	[signature]
31	Tunting Osolewen	Member	[signature]
32	Eguagie Enoma	Member	[signature]
33	Osasere Enomwa	Youth	[signature]
34	Osamudiamwen Uwadia	Member	[signature]
35	Osagie Olasoko	plot chairman	[signature]
36	Uyikpen Iyoha	Members	Uyi
37	Orobosa Ogbevan	Member	[signature]
38	Allen Obanoryi	member	[signature]
39	Osadebamwen Omosigho	Member	[signature]

PA. OKAOWUA AGBUZA
OKAOWUA BENSON OBASOHAN.
PA OWIE. OMONUWA.
OTTEN JOLLY OMOKEGBE.
PA IMASE ORUNMWENSE.
JOHNBULL OSAREMWEN.
MR ROLLANDS. AGBONLE.
ANTHONY AGBONLE.
ERHUNMWUNSE IMASE DANIEL.
ERIC. ERIC ERHUNMWUNSE - C
FRIDAY AGBONLE - VICE CHA
IGBINEDION CLIFFORD - SEC.
OSAGHAE OMONUWA. SIE

FGD MEN

Orior Osemwende Community stakeholder engagement meetings – Date: Wednesday 22nd June 2011

Preliminary consultation was carried out in Orior Osemwende Community on Monday the 20th of June. Those present at the meeting includes HRH V.N. Ohenzuwa (community leader), Agbonlahor Sunday (community chairman), Iyiewuare Eric (community secretary), Pa Ohenhen Patrick, Pa Kennedy Osayande. It was agreed to carry out the stakeholder meeting in the community two days later.

On Wednesday 22nd June 2011, the meeting started in the community at 3.45pm. Community leaders, men, women and youth present were sensitized about the proposed project and the purpose of the social assessment. FGDs were then conducted with groups of men, women and youth. IDIs were also carried out with the youth leader, community leader and women leaders. The community complained about the non inclusion of the name of their community in the notice of revocation in the national newspaper. The project manager for Azura intimated the community that corrections had been made and that it would be published in the Observer and the Vanguard newspapers the following day (23rd and 24th June respectively). The team comprised of the Azura project manager, government official from state Ministry of Lands, survey and housing; and 2 social assessment consultants. The team left the community at 6.40pm. The list of the attendees is attached. The total number of attendees were 21 men, 57 women and 48 youths.

Fig 3: Men during stakeholders meeting in Orior community

Fig 4: Women during stakeholders meeting in Orior community

ORIOR-OSEMHIENDE COMMUNITY
ELDERS ①

1. Chief Osakue Thomas
2. Stephen Iyiewuare
3. Chief Ekuase Ugiagbe
4. Agbonlahor Sunday
5. Ogiee Ogbomo chief
6. Friday Ogiamsuyi
7. Ehiagbonyg Felix
8. Isaac Thase
9. Aetor Osayande
10. Ohenhen Patrick
11. Igbinigie Haliyi
12. Awuru Kennedy
13. Eniye Adebayo
14. Oduwuru Peter
15. Agbonlahor Henry
16. Arguokhian Gabriel
17. Ekhator Joseph
18. Eniye Osaro
19. Amos Aide
20. Barr. Kelvin Aigbe
21. Valuer, Melody O. Odumah

22 Frendrick Imagbemkaro
23 Kelly ~~Ahama~~ Aghama
24 Monday Ohenzuwa
28 Bro.. paul . C. Ighile
29 . Bro. Aibangbee Cyril - O.
30 friday Imagbenikaro
31 Pecco Osayen~~doy~~
32 Ediso Uwohen
33 Andrew Uwohen
34 Imafidon Ohenzuwa
35 Stanley Ohenzuwa
36 Odion Awoloro
37 Michael Osifo
38 Osayifor Ogisoba
39 Emmual Ohezuwa
40 Osasuelen Ohezuwa
41 frank Ogie
42 Wilferd Aghonlabor
43 Omorume Aulome
44 Tony ~~Ahama~~ Aghama
45 Romanus Iyeuemwe

46 Victor Emozorlay
47 Orgaro, Kate
48 Mr. Enid Iyenlawe

The women of Orior Osemwende
A The names of the Community

1 ~~Mrs~~ ~~Uwamevere~~ [illegible]
2 Kanault Agbonlaivon
3, Rose Ogiesoba.
4 victoral Omoregi
5 Jenetu Akhonbare tel=
6 08027934950
7 magnet Esol gbowa
8 Osaremen Eseigbowa
9 The 080 71179570
10 MISS Eson Steller Ohenzuwa
11 mary omoregi
12 vero Ohenzuwa
13 Eldnat Saturday
14 Chrisgana Ehigiator
15 hellen Okolie
16 Mrs Mary O. Emmanuel
17 Stella Osagi Rae
18 beneditta Obinen
19 Lekhoba Egbe tle-080
~~20~~ 272 11002
~~21~~

②

(3)

20 Faith Ilekhoba Tle = 080-
7144 1623

21 Stella Adebayo
22 Aghaeimwonmoegho Ilekhoba
tel 08036013688
23 Jullet Amufeia tel = 080539534-
29

24 Victoria Popo = Tel 080
25 Stella Izegbe Tle 0816269[illegible]
26 Roslin Ekhomanwan
~~Otakhor~~ ~~Onieri~~
27 Grace Osayende
28 Roselin Ikpefuwal
29 Eghe Ogiehe ohenzuwa
30 Justina Ohenzuwa
31 Grace Asedo
32 dora Ohenzawa
33 Ehimwenma Ohenzuwa
34 Ayor Peter

(3)

=080-

ba

539534-

269744

uwa

(4)

35	Osifo-	Victoria
36	Rita	Ohenzuwa
37	Confort	Ohenzuwa
38	Glory	Iferioge
39	Erster	Ogenka
40	Osatu	Ohenzuwa
41	Beauty	Adima
42	Iboken	Ohenzuwa
43	Doriss	Agwokhan
44	Roselin	Ohenhen
45	Grace	Omoruyi
46	Rebecca	
47	Rebecca	Eke 0808
48	Percent	Oriakhi
49	Abies	Edomwan
50	Loveth	Ekenomwen
51	Charity	Ebosereme
52	Esohe	Agaokian
53	Loveth	Ihekhoba
54	Percent	O Ohenzuwa-
55.	Kate	Okobe

(5)

56 Jeneth Ohenzyuwa
57 Pre Cous Christofer

Eminuwenmayowenzuwa
Stanle

Youth of Orior-Osemeda. (

1 MR Sunday Agbonlahor
2 MR Soto A. Omoroghe
3 MR Osayande Kenneth
4 MR James Agbonlahor
5 MR Oseukhan Aguakhene
6 MR. Esosa Ohenzuwa
7 MR Lizzy Osagbare
8 MR Monday Imarighe
9 MR Osa[illegible] Ilekhuoba
10 MR. Mathew Ogbeide
11 MR Augustin Ohaguewa
12 MR Michael Ighede
13 MR Godday Anonyhard
14 MR Osamudi Osagi
15 MR Osagie Aishoaguwa
16 MR. Kelly. Ilekhuoba
17 MR Harrison Ogunsuyi
18 MR Collins O. Ilekhuogba
19 MR Osaguedy Ighodalo
20 MR Okhokhae Anosko
21 MR Emmanuel Ogie

Idunmwumowinna Community stakeholder engagement meetings – Date: Thursday 23rd June 2011

The preliminary consultation in Idunmwumowinna community was carried out on Tuesday 21st June 2011. We met with the community chairman, vice chairman and secretary. Two days later on Thursday 23rd June 2011, the team got to the community around 10.15am and intimated members of the community present about the activities of the proposed project and the purpose of the project. FGDs were then conducted with groups of men, women and youth. IDIs were also conducted with the community leader, community chairman, women and youth leaders. Social assessment of sacred sites within and around the community did not take place because the chief priest was not around and certain rituals are required before an assessment can be done. The team was asked to come back for the census and asset enumeration after the land demarcation has been completed. The list of attendees is attached and comprised of men 13, women 33 and youth 22.

Fig 5: Men during stakeholders meeting in Idunmwumowinna community

Fig 7: Women during Stakeholders meeting at Idunmwumowinna Community

Fig 8 :Youth during Stakeholders meeting in Idunmwumowinna Community

Youth F G. D. 23/6/201.

Iduninmwinowunma Community B/C.

1. Eric Ekhumamwanse. chairman.
2. Friday Agbonze Vice chairman.
3. Clifford Igbinoveko. Sec.
4. Philip omonuwa.
5. Samuel Osagzemwende.
6. Osagie Ekhumwanse.
7. Sunny Imaghodo
8. Paul Aghabahi
9. PETER Ekhumuanse.
10. Osamudiamen. Ekhator.
11. Osaretin Ebomo.
12. Osaghae omonuwa.
13. Austin omonuwa.
14. William. Osazemwende.
15. Edward Ekhator.
16. felix Mewagbon.
17. Osaretin Aifuwa.
18. Osagboro Odihi.
19. Hele Agharchia.
20. monday Aifuwa.
21. Osayande Ekhuwmwemose.
22. Julius Omoregbe.

Women of Idumwunmwina 23-6-2011 5/2

1 Mrs ogbeede
2 Mrs Obasokhan H.
3 Madam obasokhan 08020370132
4 Mrs I. Obasokhan
5 Deaconess C.O. Asemota 07060471385
6 Mrs F. omoruwa 08053951415
7 ~~Mrs faitha 08063327593~~
8 Mrs Joy Ogbeide 07067333111
9 Mrs Irowenbuyi Osoghoerio
10 mrs faith Ogbeide 08063327593
11 Mrs Edoghogho omoruyi Chim,
12 mrs Eatona ESther. O
13 Mrs Osazuwa Felicia
14 Mrs J omoruwa
15 Mrs Joy ogbede
16 Esten Erumase
17 Doris Efe
18 Mrs Hohan AGBONZE
19 Osaimwen Osaro
20 Isoken Agbonze
21 Maria Agbonze
22 mrs Uyigue
23 mrs Aifuwa. m.

1

24 Esohe Osayedie
25 Mrs Osazee
26 Mary Nola Omorogbe Ohu
27 FAITH OMOROGBE
28 Mirable OMOROGBE
29 Iziegbe
30 Mrs Aifuwa
31 Mrs Fath Osazemwede
32 Mrs J. Osagde
33 Mrs Joy Omonuwa

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