

PUBLIC DISCLOSURE OF PHASE II ENVIRONMENTAL AND SOCIAL MANAGEMENT PROGRAMME

1 Introduction and Background

To meet its environmental and social obligations and commitments, the Lesotho Highlands Development Authority (LHDA) will implement an Environmental¹ and Social Impact Management Programme to address the environmental and social impacts associated with implementation of Phase II activities.

In keeping with International Best Practice, the LHDA intends to disclose relevant project-related environmental and social information in a timely manner and in a user-friendly format and language understood by key stakeholders. This document provides a brief summary of the environmental and social programmes and initiatives that will be undertaken during Phase II.

2 Objective of the Phase II Environmental and Social Programme

The overall objective of the environmental and social programme is to minimise, mitigate or avoid impacts on the surrounding environment. This will be achieved by undertaking Environmental and Social Impact Assessments (ESIAs)² and through the implementation of appropriate environmental and social management and action plans identified from the ESIAs.

3 Relevant Legislation

The main environmental legislation governing the Lesotho Highlands Water Project (LHWP) activities is the national Environment Act of 2008 (Act 10 of 2008) and the associated Environmental Impact Assessment (EIA) Guidelines (2002). In addition to complying with national legislation, LHDA intends to carry out the implementation in accordance with internationally recognized Standards.

4 Environmental and Social Studies

4.1 Baseline Studies and Action Plans

LHDA has appointed Consultants to undertake a number of studies to establish baseline social and environmental conditions in the LHWP area. The Phase II baseline studies are listed below and their results will be used to inform the various ESIAs and Management Plans:

- A baseline study of Instream Flow Requirements, Water Quality and Geomorphology is being undertaken for the Senqu Catchment area (INR, 2014);

¹ **Environment:** the surroundings or conditions in which a person, animal, or plant lives or operates. It includes – bio-physical environment, social environment and economic environment.

² **Environmental and Social Impact Assessment (ESIA):** process used to predict the environmental and social consequences (positive or negative) of a plan, policy, program, or project prior to the decision to move forward with the proposed action.

- Biological and Archaeological (including Heritage) Baseline Study (CES, 2014) has been completed;
- A socio-economic baseline study (CES, 2014) of all households in the project area, including the area that will be inundated by water stored in the dam and a zone downstream of the dam wall, has been completed; and
- A baseline study to establish the state of public health in the principal areas to be affected by LHWP Phase II is currently being undertaken (Nonyanya Hoohlo Associates, 2014).

After completion of the Public Health Baseline Study, LHDA will appoint suitably qualified consultants to undertake a Health Impact Assessment (HIA) and to compile a Public Health Action Plan (PHAP). The HIA will be undertaken to identify processes for the mitigation of impacts on public health while the PHAP will be developed to identify the interventions that could be undertaken during and after construction activities to improve public health in the project area.

The Biological and Archaeological (including Heritage) Baseline Study (CES, 2014) provides a scope of work for the development and implementation of a Cultural Heritage Management Plan. The Plan shall mitigate the negative impacts on and promote the protection, preservation and management of cultural heritage resources that are at risk of being adversely impacted on by Phase II of the LHWP. An appropriately qualified team of specialists will be appointed early in 2015 to develop and implement a Cultural Heritage Management Plan.

4.2 Environmental and Social Assessment Studies

In terms of the requirements of the Environment Act of 2008, LHDA must obtain environmental authorisation prior to commencement of construction activities on any component of Phase II of the LHWP. Environmental studies in support of applications for such authorisation will, as a minimum, address the aspects outlined in Section 21(5) and in Section 21(6) of the Environment Act.

The Department of Environment (DoE) has agreed that the extent of the environmental and social impact studies required in terms of the Environment Act of 2008 for the different components of the project as listed in Section 4 should be as summarised in the table below.

| Number | Description of LHWP Component | Extent of Environmental Assessment |
|--------|---|--|
| 1 | Polihali Dam, Saddle Dam and Reservoir; Quarries and Borrow Pits; Eastern Transfer Tunnel; Major Bridges; and Project Housing and associated infrastructure components. | <ul style="list-style-type: none"> • Project Brief • ESIA • ³Environmental Management Plan (EMP) |

³ This EMP shall incorporate the EMP compiled for the Diversion Tunnel.

| | | |
|---|--|--|
| 2 | Polihali North East Access Road (PNEAR). This road forms the initial access to the Polihali area, by upgrading an existing gravel road. | <ul style="list-style-type: none"> • EMP |
| 3 | Polihali Diversion Tunnels. These tunnels form the river diversion for the construction of Polihali Dam, which are to be excavated in advance of the main dam construction contract. | <ul style="list-style-type: none"> • EMP |
| 4 | Polihali Western Access Corridor (PWAC) consisting of: <ul style="list-style-type: none"> • <u>Polihali Western Access Road (PWAR)</u>. This new asphalt surfaced road forms the main access road from the A8 (Katse) road near Ha Seshote to the Polihali site; • <u>Bulk power supply and telecommunications</u>. Infrastructure providing utilities connection points to the camps and works areas. | <ul style="list-style-type: none"> • ESIA • EMP |
| 5 | Feeder Roads and Bridges. This infrastructure will be built later in the project to provide replacement access for local communities affected by the reservoir | <ul style="list-style-type: none"> • EMP |
| 6 | Western (Katse) Facilities. These facilities relate to the construction and establishment of labour camps and works areas on the Katse / Matsoku side. | <ul style="list-style-type: none"> • Project Brief • EMP |
| 7 | Geotechnical investigations. Advance geotechnical investigations will be undertaken to confirm quarry and sand aggregate sites. | <ul style="list-style-type: none"> • Method Statements |

5 Stakeholder Consultation

According to internationally Recognized Standards, LHDA is expected to involve the communities in all the project stages, including the development of the terms of reference for the ESIA studies. Members of the Area Liaison Committee (ALC) are requested to provide comments on and inputs to the nature and extent of the proposed environmental studies.

ALC members, Community Councillors and Chiefs will play an important role in the Environmental and Social Programme and will work closely with LHDA and the various Environmental and Social Consultants. The typical responsibilities of the ALC members are presented below:

- Provide input into the Terms of Reference for the Environmental and Social studies (**this process**);
- Assist in the identification of impacts and associated mitigation measures during ESIA investigations;
- Assist in the identification of areas of importance within the project area;
- Organising the communities for the public participation activities;
- Assist in the resolution of conflicts that may arise during the construction phase; and
- Monitoring during implementation of the programme.

6 Description of Environmental and Social Assessment Terms of References for LHWP components

The LHDA has prepared a number of Requests for Proposals (RfP) for suitably qualified environmental and social consultants to undertake an environmental assessment of each LHWP components. The RfPs are in draft format and will be approved and advertised in 2015. This Section provides a brief description of the Terms of Reference for the two full environmental assessments; outlines the environmental authorisation process to be followed; and lists the proposed specialist expertise required for each full ESIA. It is anticipated that each ESIA will be undertaken over a period of approximately 13 months.

6.1 Polihali Dam, Saddle Dam and Reservoir; Quarries and Borrow Pits; Eastern Transfer Tunnel; Major Bridges; and Project Housing and associated infrastructure component

This study will assess the potential environmental and social impacts for the following components:

- Polihali Dam, Saddle Dam and Reservoir. Polihali Dam is a 164m high, concrete-faced rockfill dam with a side channel spillway. It will inundate an area of approximately 50km². The Saddle Dam is a 50m high, concrete-faced Rockfill dam. Works include cofferdams and two diversion tunnels;
- Quarries and Borrow Pits. Material for the rock-fill and concrete aggregate will be obtained from quarries located on the left and right flanks of the Polihali Dam, primarily below full supply level;
- Eastern Transfer Tunnel. The Works comprise the intake portal and gate shaft at the Polihali Reservoir and associated construction infrastructure including local site access roads, quarries, plant yards, labour accommodation, and spoil areas;
- Major Bridges including Ha Tlhakola, Senqu, Khubelu and Mabunyaneng Bridges and Associated Road Works. The Senqu, Khubelu and Mabunyaneng Bridges are all on the existing A1 national road from Oxbow to Mokhotlong. The impact of water stored in the Polihali Reservoir will necessitate a number of existing roads and tracks to be relocated and the construction of new bridge across the reservoir; and
- Project Housing and Site Establishment. The Phase II Works will be built under a number of construction contracts, each of which will require accommodation facilities for the staff and the labour force, site offices, workshops, plant yards, quarries, explosives stores and other facilities. Bulk utilities (power, water supplies, wastewater treatment and communications) will be provided to each Contractor under the Advance Infrastructure contracts.

In terms of the Environment Act, and in consultation with the Department of Environment, the Consultant will be required to submit the following deliverables:

- Project Brief;
- ESIA including Specialist Studies; and
- Environmental Management Plan

The following specialist studies are proposed for this ESIA:

- Ecologist/Biologist (to address specialist flora and fauna aspects);

- Wetland;
- Rangeland;
- Birds;
- Soils and Land Use Capability Analyst;
- Visual Impact;
- Culture and Heritage
- Social; and
- Public Participation.

6.2 Polihali Western Access Corridor (PWAC)

This ESIA assess the potential environmental and social impacts associated with the PWAC:

- Polihali Western Access Road (PWAR) that:
 - Comprises a new paved road link between the A8 in the vicinity of Ha Seshote to the Polihali Reservoir in the vicinity of Thloha re Bue;
 - Will be designed in accordance with the Lesotho Roads Directorate (RD) standards for a Class A road (as a minimum) and the Phase II Agreement, with due regard to the heavy traffic expected during construction;
 - Has tie-ins to local access roads where required; and
 - Includes associated road infrastructure such as drainage, culverts and bridge structures;
- Bulk Power Supply Infrastructure (transmission lines and substations) that includes:
 - Electrical infrastructure running from the existing substation near Ha Lejone to Ha Seshote and from Ha Seshote to the Phase II construction sites including the Polihali Dam, Polihali to Katse Tunnel, Polihali Camp facilities, Matsoku tunnel access area and the Katse Reservoir tunnel outlet; and
 - Re-alignment of the existing powerline along the A1 that crosses the Khubelu and Senqu Rivers where there is potential inundation of existing electrical infrastructure due to reservoir impoundment; and the
- Telecommunications component. This entails the provision of the required levels of telecommunications infrastructure to provide voice and data facilities to all the Project areas.

The Bulk Power Supply and Telecommunications ('Power and Telecoms') infrastructure component will primarily follow the alignment of the PWAR.

Discussions with the Department of Environment indicated that the Consultant will be required to submit a Full ESIA including Specialist Studies; and an EMP.

LHDA considers the following specialist expertise to be necessary:

- Ecologist/Biologist (to address specialist flora and fauna aspects);
- Wetland;
- Bird;
- Land Capability Analyst;
- Visual Impact;
- Cultural and Heritage;
- Social; and
- Public Participation.