

Seli Hydropower Limited

ESHS Management System

Overview of the Environmental
and Social, Health and Safety
Management System

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DEFINITIONS

ABBREVIATIONS AND DEFINITIONS

Abbreviation / Term	Term
ABP	Anti-Bribery Policy
Adaptive Management	The process of adapting environmental and social management in response to information on its effectiveness.
BAP	Biodiversity Action Plan
BCA	Bumbuna Conservation Area
BWMA	Bumbuna Watershed Management Authority
CDAP	Community Development Action Plan
CoBE	Code of Business Ethics
Compliance	Adherence to legal requirements, policies and commitments.
Continuous improvement	A process through which measures are implemented, monitored, and adapted to continuously improve their effectiveness
EHS	Environmental, health, and safety
EIB	European Investment Bank
EPA	Sierra Leone Environmental Protection Agency
EPC Contractor	Engineering, Procurement and Construction Contractor
ERMF	Enterprise Risk Management Framework
ESAP	Environmental and Social Action Plan
ESHIA	Environmental, Social and Health Impact Assessment
ESHS	Environmental, Social, Health and Safety
ESHS Management System	A dynamic and continuous process initiated and supported by SHPL management, to manage all ESHS impacts of the project and meet ESHS commitments.
ESMMP	Environmental and Social Management and Monitoring Plan
ESRCP	Environmental and Social Requirements for Contracted Projects
GIIP	Good international industry practice
H&S	Health and Safety
IESC	Independent Environmental and Social Consultant
Inspection	A rapid and frequent on-site check of adherence to environmental and social management measures, conducted by the developer's or the contractor's internal environmental personnel.
IRMF	Integrity Risk Management Framework
ISO	International Standards Organisation
KPI	Key Performance Indicator
LTIFR	Lost Time Incident Frequency Rate
NCR	Non-Compliance Report
Non-compliance	An occurrence or incident that does not meet the requirements of an environmental and social management system or plan, including legal, licence/permit, and contractual obligations.
NPAA	National Protected Areas Authority
OHSAS	Occupational Health and Safety Authority Standard (United States)
PPE	Personal Protective Equipment
Plan or Process	A set of activities that use resources to transform inputs into outputs. A documented plan or process describes <i>what</i> needs to be done. This includes the various SHPL ESMP plans and processes.
Procedure	A procedure is a specified way to carry out an activity or a process. A documented procedure describes <i>how</i> an activity is to be done. Also can be called a Standard Operating Procedure (SOP).
PRR	Project Risk Register
RAP	Resettlement Action Plan
Register	A written, version-controlled record of a list of items, normally in tabular format in Excel. E.g. Register of non-compliances.
SEP	Stakeholder Engagement Plan
SHPL	Seli Hydro Power Limited
Supervision	The overall process of oversight of adherence to environmental and social management measures and commitments, for example the developer conducting supervision of its contractor, or a regulator conducting supervision of the developer and operator.

Third parties	Parties other than SHPL, for example local and national government agencies, which have a role in ESHS management.
TRIFR	Total Recordable Incident Frequency Rate

1. Introduction

Seli Hydropower Ltd (SHPL) has established an Environmental and Social, Health and Safety (ESHS) Management System (ESHS Management System) to ensure that its environmental and social, health and safety (ESHS) policy and legal and other commitments are met, in an effective and efficient manner. The ESHS Management System was initiated by and is fully supported by SHPL's and Joule Africa's management.

The ESHS Management System provides a systematic and methodological approach to the identification, assessment, management, and monitoring of SHPL's and the Seli Hydropower Project's environmental and social risks and impacts, through the preparation, construction and operation of the project.

The ESHS Management System is designed to align with the internationally-recognised standards ISO-14001 (environment) and OHSAS 18001 (health and safety). They require SHPL to apply the established approach of "plan, do, check, and act", i.e. that SHPL continuously monitors, reviews and improves its management of environmental and social, health and safety risks and impacts on an ongoing basis. The Management System is designed to be a user-friendly framework that SHPL employees can use every day to identify, evaluate and manage risks and impacts across the entire operations of the company.

1.1 Seli Hydropower Policies

SHPL's environmental and social, and health and safety (ESHS) policy is set out in a separate policy document, approved by the SHPL Board (Document reference ES / POL / 1 / v1.0).

This ESHS Management System is embedded in SHPL's wider Governance Framework, described in the Governance Manual. SHPL has additional Board-approved policies and plans, specifically:

- Enterprise Risk Management Framework (ERMF) including a requirement for a Project Risk Register (PRR);
- Integrity Risk Management Framework (IRMF) including an Anti-Bribery Policy (ABP);
- Code of Business Ethics;
- Information Technology (IT) policy;
- Data Policy; and
- Staff Handbook.

These policies establish the commitments that SHPL has made to its shareholders, and all other stakeholders, including its workers, local communities affected by the project, the government of Sierra Leone, civil society, and lenders.

The ESHS Management System includes a number of plans (or management programs) and procedures, several of which have been prepared to-date. This set of plans or programs and procedures will continue to be developed, expanded on, and adjusted as the preparation, construction and operation of the project proceeds. Therefore, the system also includes procedures for the systematic planning, documentation, implementation, monitoring and review of these plans or programs and procedures.

1.2 This document

This overview document consists of the following sections:

- Policy, legal and other commitments, including commitments to our lenders;
- Identification of risks and impacts, providing a reminder of the project's key environmental and social risks and impacts, how they have been documented, and how their identification will be reviewed;
- Management plans, a synopsis of the key management plans during construction and operation;
- Documentation, a description of how ESHS Management System documents are controlled;
- Organizational capacity and competency, describing how SHPL has organised its resources and those of third parties;
- Emergency preparedness and response;
- Stakeholder engagement; and
- Monitoring, reporting and review.

2. Policy, legal and other commitments

2.1 ESHS policy

SHPL's environmental and social, and health and safety (ESHS) policy sets out SHPL's objectives in relation to the Environment, Our Employees, Communities, Our Contractors and Sub-contractors, Engagement and Disclosure, and Ethics.

2.2 Legal commitments

SHPL will comply with all applicable national and international laws, regulations, and accepted local rules and standards, governing the environment, and occupational health and safety.

2.2.1 Register of compliance requirements

SHPL has established a register of the licences and permits that SHPL must obtain, and whether they are obtained and when they require renewal (for all licences and permits, not only environmental and social). We have developed a procedure for the systematic updating of this register on a monthly basis, and formally documenting it under the ESHS Management System.

SHPL will establish a register of all applicable environmental and social, and health and safety, laws and regulations, and requirements of the Implementation Agreement with the Government of Sierra Leone, and a procedure for keeping this register updated on a regular basis through the monitoring of the changing regulatory and legal context.

2.3 IFC's Performance Standards and Lenders' Requirements

SHPL is committed to meeting or exceeding IFC's Environmental and Social Performance Standards (2012) under the ESHS Policy, and has prepared and will continue to prepare its plans and procedures to meet these standards.

We will also refer to comparable standards and guidelines of other lenders or potential lenders, including African Development Bank, EIB, World Bank etc.

2.3.1 Register of lenders' requirements

Our Lender's Independent Environmental and Social Consultant (IESC; appointed to provide independent E&S review and monitoring) prepared an Environmental and Social Action Plan (ESAP) in 2019, which identifies further actions for SHPL to take to ensure that IFC Performance Standards are met. We have developed this into a register under this Management System, i.e. a 'tracker' of actions to be taken to close out ESAP actions, and will update this on a monthly basis).

2.4 Good international industry practice (GIIP) in hydropower

Will refer to the World Bank Group General EHS Guidelines. In addition, there is a growing range of guidelines available concerning GIIP in hydropower. We will follow these guidelines in our policies, plans and procedures to the extent that they are applicable or appropriate to the Seli Hydropower Project. The body of these guidelines that exists internationally is continuously developing and expanding, and we will maintain a library of such guidelines and ensure SHPL staff are familiar with them. These guidelines include:

- IFC, 2018, Environmental, Health, and Safety Approaches for Hydropower Projects. Good Practice Note;
- EIB Hydropower Policy;
- The Hydropower Sustainability Assessment Protocol and associated guidelines.

2.5 Human rights

SHPL will support and respect the protection of internationally proclaimed human rights. SHPL will base its approach to human rights on the UN Guiding Principles on Business and Human Rights, and has integrated these requirements into our plans and programs. We will review the Principles on a regular basis for updates and developments.

3. Identification of risks and impacts

SHPL prepared a detailed Environmental, Social and Health Impact Assessment (ESHIA) of the Seli Hydropower Project, identifying and assessing the significance of its environmental and social risks and impacts through construction and operation. These impacts are wide-ranging across all environmental and social receptors and are direct and indirect.

In addition, SHPL is committed to updating its cumulative impact assessment, taking into account other storage hydropower projects that are planned elsewhere in the catchment and cumulative surface water quality impacts.

The project's most significant impacts concern:

As a result of construction:

- The conversion or loss of natural habitat and critical biodiversity;
- Physical and economic displacement of over 1000 households;
- Land, water, noise and air pollution and impacts on communities arising from construction by the EPC Contractor and the presence of a large workforce; and
- Occupational health and safety and community health and safety risks arising from construction by the EPC Contractor and the presence of a large workforce.

During operations:

- Water quality, reservoir management (including the large draw-down area), and environmental flows; and
- Greenhouse gas (GHG) emissions.

3.1.1 Register of significant risks and impacts

We will prepare a register of significant environmental and social risks and impacts, indicating level of significance and (for risks) probability, identifying under which plan or program they will be managed. This register will be updated on an annual basis.

4. Management plans, practices and procedures

SHPL will manage its environmental and social risks and impacts through a series of management plans (or programs), sub-plans, and procedures. To the extent that it is fitting with their subject matter, we will document these plans, procedures and practices in a systematic manner, with each referring to: (i) definitions; (ii) applicable standards including quantitative standards of effluent or emissions where applicable (for example in Sierra Leone legislation or World Bank EHS Guidelines); (iii) scope and objectives of the plan; (iv) risks or impacts, and mitigation measures to address each; (v) responsibilities and resources necessary; and (vi) monitoring (including performance indicators, targets, and acceptance criteria) and reporting.

4.1 SHPL management plans

4.1.1 Environmental and social plans

SHPL has developed or will develop and will implement the following plans, during construction and operation.

	Prepared	In place
Environmental and Social Management and Monitoring Plan (ESMMP)	No	
Health and Safety Management System Framework	Yes	Yes
Stakeholder Engagement Plan (SEP)	In draft	Yes
Resettlement Action Plan – RAP-1	Yes	
Resettlement Action Plan – RAP-2	No	
Community Development Action Plan (CDAP)	In draft	
Biodiversity Action Plan (BAP)	Yes	
Environmental and Social Requirements for Contracted Projects (ESRCP)	Yes	Yes
Grievance Mechanism	Yes	Yes
Health Management Plan	In draft	
Local Content Management and Monitoring Plan	No	
Influx Management and Monitoring Plan	In draft	
Security Management Plan	In draft	
Master Emergency Response Plan	Yes	Yes

4.1.2 Health and safety plans

Every person present at any of our sites has the right to, and will be given the confidence to, stop and question any activity that causes concern about safety. SHPL management will show strong health and safety leadership, by establishing clear expectations, driving accountability and leading by example.

SHPL has developed or will develop and will implement the following health and safety procedures, for application during construction and operation.

	Prepared	In place
SHPL Worksite Health and Safety Management	Yes	
Health and Safety Risk Assessment Process	Yes	
Health and Safety Incident or Near-Miss Reporting and Post-Event Investigation	Yes	
General Worksite Safety Rules	Yes	
Personal Protective Equipment (PPE)	Yes	
First Aid Policy	Yes	
Fire Prevention Policy	Yes	
Drug, Alcohol, Tobacco and Firearms Policy	Yes	
Vehicle Safety Policy	Yes	
Visitor Safety Policy	Yes	

Visitors Handbook	Yes	
Health and Safety Incentive and Recognition Programme	Yes	
Health and Safety Monitoring Plan	No	

4.1.3 Register of plans and procedures

SHPL will establish a controlled register of all of the plans, programs, practices and procedures that it will implement through its ESHS Management System. This will identify the plan/procedure, whether it is planned, drafted or finalised, whether it is in place, timing of review, and owner, etc. The register will be updated on a monthly basis during construction and less regularly thereafter.

The appendix provides an initial list of procedures that SHPL has drafted or has identified as at March 2020.

4.1.4 Associated facilities

We will engage with the developers of facilities that are associated with the Seli Hydropower Project, principally the transmission line, to ensure that they are developed in line with our policies. We will undertake additional ESHS impact assessments and obtain consents and permits for any associated facilities as necessary.

4.2 EPC Contractor plans

SHPL will require its main contractor for the construction of the project, the EPC Contractor, to adopt its own ESHS Management System, and implement at least the following management plans, procedures, and practices that will address the identified ESHS risks and impacts of the EPC Contractor's execution of the works:

- Air Quality Management and Monitoring Plan
- Biodiversity Management Plan for Construction
- Camp Management Plan
- Chance Finds Procedures
- Emergency Prevention and Response Plan
- Erosion and Stormwater Control
- Hazardous Materials Management Plan
- Health and Safety Management Plan
- Human Resources Management
- Influx Management Plan
- Noise Management Plan
- Security Management Plan
- Site Clearance and Rehabilitation
- Site-specific EHS Management Plans
- Spill Management Plan
- Spoil and Tunnel Spoil Management
- Supply Chain Management
- Surface Waters Management Plan
- Traffic Management Plan
- Water, Sanitation and Hygiene (WASH) Plan
- Waste Management Plan

Specific health and safety procedures that we will require the EPC Contractor to adopt include:

- Fall Protection Procedure
- Heavy Equipment Procedure
- Heat Illness Prevention Policy
- Demolition Safety Procedure
- Electrical Safety Program
- Food Safety Program
- Trenching and Excavation Procedure
- Respiratory Protection Procedure
- Toolbox Safety Procedure.
- Hand and Power Tool Safety Program
- Concrete and Masonry Safety Procedure
- Bloodborne Pathogens Programme
- Rock Drilling and Blasting Safety Procedure
- Lock-out / Tag-out Procedure
- Hazardous Communication Program
- Confined Space Procedure
- Traffic Safety Program

We will require the EPC Contractor to continuously improve and update its ESHS Management System, including these plans, procedures, and practices, in response to its actual performance on a day-to-day basis, and systematically no less than on a quarterly basis.

4.3 Sub-contractors

SHPL will require its Sub-contractors to meet SHPL ESHS policies, and will require the EPC Contractor to apply the requirements of our policies and commitments equally to its sub-contractors, and in turn to parties contracted by these sub-contractors, including all employed and non-employed staff.

5. Documentation

We will maintain a system of document control under this ESHS Management System. This will consist of:

- Formal approval of all documents by the SHPL Environmental and Social Manager, prior to use;
- Clear indication of the date of drafting and version number on all ESHS Management System documents;
- A coding system to identify each document consisting of elements -
 - ES (to indicate it is a document in the ESHS Management System)
 - POL, REG, PLAN, or PROC to indicate whether it is a policy, register, plan, or procedure, respectively
 - A number e.g. '5' would indicate it is the 5th document in this category, and
 - The version number.

5.1.1 Control of records

6. Organizational capacity and competency

6.1 Resources, roles, responsibility and authority

We will establish, maintain, and strengthen as necessary an organizational structure that defines roles, responsibilities, and authority to implement the ESHS Management System, and will require our EPC Contractor to adopt an organisational structure that also defines roles and responsibilities clearly.

SHPL will allocate sufficient management, human and financial resources on an ongoing basis to ensure that all ESHS policies, commitments and plans are met. We have appointed personnel including management representative(s) with clear lines of responsibility and authority for ensuring that all ESHS policies, commitments and plans are met, and we will continue to develop our E&S capability through further recruitment and restructuring as the project moves towards construction.

6.1.1 SHPL personnel

Figure 6.1 below shows the current SHPL organizational structure for environmental and social management. Figures 6.2 to 6.5 show how this structure will develop in the near term, and for the construction and operation stages.

Throughout, the SHPL Board and the SHPL General Manager have overall authority for environmental and social management. Currently they assign responsibility for the fulfilment of the SHPL ESHS Policy and Management System to an ESHS Manager who manages a team mainly addressing the social aspects of project preparation, specifically the RAPs and CDAP. Prior to financial close and for construction, the team will be restructured to address the key environmental and social impacts:

- The Environmental Manager will focus mainly on EPC Contractor supervision and reporting;
- A Social Manager will oversee a team responsible for RAP planning and implementation, CDAP, and other social plans (Influx Management etc);
- An Infrastructure and Housing Construction Manager will manage all construction activities for resettlement;
- A Biodiversity Manager will over see BAP implementation; and
- The Grievance Redress Manager will report directly to the General Manager.

6.1.2 EPC Contractor personnel

SHPL also will require the EPC Contractor to allocate sufficient management, human and financial resources on an ongoing basis to implement all ESHS policies, commitments and plans. We will require the EPC Contractor to ensure that all personnel including skilled and unskilled labour, foreign and local employees, supervisory and supporting staff, site engineers, foremen, office staff, and managers, are aware and capable of their responsibilities in relation to ESHS management.

SHPL will require the EPC Contractor to appoint at least the following personnel:

Position(s)	Location	Number
Senior Management		
Senior Supervisor of EHS and Community Relations	Off-site, resident in China	1
Decision-making Level		
HSE and Quality Manager Human Resources Manager	On-site (Yiben)	2
Management Level		
Environmental Officer Safety Officer (Either to be Director of HSE Department)	On-site (Yiben)	3

Human Resources Officer (and manager of Employee Grievances)		
Environmental Officer Safety Officer	On-site (Bumbuna)	2
Operation Level		
EHS Site Engineers X 2 (dam site, and power station site) Medical officer Community Relations Officer Worker Accommodation Manager Site Security Manager Emergency Response Manager Supply Chain Manager	On-site (Yiben)	7
EHS Site Engineers X 2 (tunnelling site, and power station / tailrace site) Medical officer Community Relations Officer Worker Accommodation Manager Site Security Manager Emergency Response Manager	On-site (Bumbuna)	7
Other EHS Site Engineers for specific sites X 2 (e.g. road construction)	On-site	2

6.2 Role of third parties

A number of third parties will have roles in the management of Seli Hydropower's environmental and social risks and impacts. With the recent establishment of the Ministry of Environment, the Environment Protection Agency, National Protected Area Authority and the Forestry Division will all be subsumed under the Ministry of Environment.

6.2.1 Sierra Leone Environmental Protection Agency (EPA)

EPA will issue the Seli Hydropower Project Environment License, with Terms and Conditions specifying minimum standards and administrative conditions relating to regularity of reporting and meetings. The License will refer to commitments in the ESHIA and require SHPL to comply with those commitments. The Environmental License will be a public document, as any person can obtain a copy on demand (though it is not put on any EPA or GOSL website). EPA renews the Environmental License on an annual basis.

EPA will conduct inspections on a quarterly basis and will require SHPL to submit a quarterly E&S monitoring report in advance of each inspection. EPA will additionally conduct an annual Environmental Audit, throughout construction and operation, the result of which informs EPA's decision on the annual renewal of the Environmental License. The annual audit will be based on an annual report to be submitted by SHPL (which can be a synthesis of quarterly reports) in advance. EPA will provide recommendations after the conduct of each inspection/audit.

6.2.2 National Water Resources Management Agency

The National Water Resources Management Agency is responsible for regulating water resources, including the Seli-Rokel watershed.

6.2.3 Bumbuna Watershed Management Authority (BWMA)

Established by an Act of Parliament in 2008, BWMA is charged with the responsibility of promoting sustainable land use practices and environmental management in the Bumbuna watershed including the 1470 ha Bumbuna Conservation Area (BCA).

Some of the major programmes of the BWMA include: (i) Environmental and Social Management; (ii) Water Resource Management (WRM) and Water Quality Monitoring; and (iii) Disaster Risk Management (DR) by an Emergency Action Unit (EAU). BWMA was responsible for promoting conservation and biomass clearing activities in the Bumbuna reservoir area, as well as reservoir of the Goma Dam in Kenema, and Banksoka Dam in Port Loko.

BWMA has a team based in Bumbuna town including field biologists and a water quality laboratory. They submit a monthly report to the Ministry of Environment that compiles their hydrological and water quality monitoring data for the Bumbuna watershed. They monitor chimpanzees with camera traps in BCA, in partnership with researchers from the College of Houghton in New York, and they plan to construct tourist lodges to obtain revenue from chimpanzee-related tourism. They have established an Emergency Response Plan.

BWMA is challenged by serious resource constraints. There is no documented management plan for the BCA.

SHPL may partner with BWMA, either as a license commitment or on a voluntary basis, on:

- Emergency preparedness and response;
- Water quality and hydrological monitoring;
- Reservoir preparation and management, and watershed management; and
- Biodiversity monitoring, at least in the Bumbuna extension area.

6.2.4 National Protected Areas Authority (NPAA)

As some components of the Bumbuna extension are within the boundaries of the Bumbuna Conservation Area (BCA), NPAA will be required to consider authorisation these components, and issue an letter of authorisation if they choose to do so, as part of the EPA licensing process. SHPL may request NPAA's advance authorisation, prior to the issuance of the Environmental License, for example if necessary to meet lenders' requirements. SHPL has obtained an indication from NPAA's Executive Director that NPAA supports SHPL in the delivery of the project, and that this letter of authorisation will be provided.

In addition, NPAA is responsible for the Loma Mountains National Park. Under the BAP, SHPL is planning to support conservation of habitat within Loma Mountains National Park as an offset for the loss of critical and natural habitat, providing a net gain in biodiversity. They and the Forestry Division may also have a role in another offset area proposed under the BAP, the 'Wankako Forest Patch'. NPAA has significant interest in chimpanzees.

**Include other NPAA responsibilities e.g. for export

6.2.5 Lands authorities

6.2.6 Chiefdoms and District Authorities

SHPL will work closely with traditional authorities in all of its activities, and with the local District Authorities. SHPL will obtain necessary licences from District Authorities on an annual basis.

These institutions will be especially relevant to resettlement plans (RAPs) and CDAP:

Chiefdoms:

- Diang
- Kalanthuba
- Dasongoia
- Kasunko
- Safroko Limba

District authorities:

- Koinadugu
- Tonkolili
- Bombali.

6.3 Competence, training and awareness

SHPL personnel will have the skills necessary to perform their work, including current knowledge of the host country's regulatory requirements, the applicable requirements of IFC Performance Standards, and the skills to implement the measures and actions required under the ESHS Management System competently and efficiently.

SHPL is committed to:

- Ensuring all personnel are competent to do undertake their tasks;
- Providing personnel with ongoing training in health and safety working practices;
- Motivating and incentivising employees to take responsibility for their personal safety and the safety of their co-workers.

All employees will be inducted and trained to fully understand:

- Creating a safe environment is the personal responsibility of all of us. It is not somebody else's job.
- All staff are expected to raise any H&S concerns and to abide by the H&S rules and policies published by the company.
- All are expected to report H&S incidents and near-misses, and raise H&S concerns as they arise;
- Participate in H&S training sessions; and
- Comply with company policies.
- Safety Engagement Activities are those key daily activities that when effectively implemented, move us closer towards our H&S targets. Activities include;
- Toolbox Talks
- Pre-meeting Safety Moments
- Visible involvement of the H&S Team in all operational activity.

As part of the SHPL H&S embedding programme, a Health & Safety Incentive and Recognition programme has been designed. This programme is an effective way to recognize significant individual or team H&S achievements and behaviours that contribute to our safety goals.

6.4 Communication

We will define key ESHS responsibilities clearly and communicate them to all relevant personnel.

7. Emergency preparedness and response

SHPL has established and maintains an emergency preparedness and response system so that the company in collaboration with appropriate and relevant third parties, is prepared to respond to accidental and emergency situations associated with the project in a manner appropriate to prevent and mitigate any harm to people and/or the environment. This preparation includes the identification of areas where accidents and emergency situations may occur, communities and individuals that may be impacted, response procedures, provision of equipment and resources, designation of responsibilities, communication, including that with potentially Affected Communities and periodic training to ensure effective response. The emergency preparedness and response activities is periodically reviewed and revised, as necessary, to reflect changing conditions

Where applicable, the company also assists and collaborates with the Affected Communities and the local government agencies in their preparations to respond effectively to emergency situations, especially when their participation and collaboration are necessary to ensure effective response.

SHPL emergency plans address the following aspects of emergency preparedness and response:

- Identification of the emergency scenarios
- Specific emergency response procedures
- Trained emergency response teams
- Emergency contacts and communication systems/protocols (including communication with Affected Communities when necessary)
- Procedures for interaction with government authorities (emergency, health, environmental authorities)
- Permanently stationed emergency equipment and facilities (e.g., first aid stations, firefighting equipment, spill response equipment, personal protection equipment for the emergency response teams)
- Protocols for the use of the emergency equipment and facilities
- Clear identification of evacuation routes and muster points
- Emergency drills and their periodicity based on assigned emergency levels or tiers
- Decontamination procedures and means to proceed with urgent remedial measures to contain, limit and reduce pollution within the physical boundaries of the project property and assets to the extent possible.

8. Grievance Mechanism

8.1 Grievance Mechanism

SHPL has established and will maintain a grievance mechanism for external parties including community members and workers of any sub-contractors. We will clearly communicate the channels for raising grievances to these external parties, and report regularly on grievances raised and resolved.

9. Monitoring, reporting and review

9.1 Adaptive Management

SHPL will apply the principle of adaptive management to its management of environmental and social risks and impacts. If, during further designs of the project, there are deviations from the concept design, we will undertake (or we will ensure the EPC Contractor undertakes) additional ESHS impact assessments as necessary, appropriate to the scale of the potential impacts from the proposed design.

SHPL will and we will require the EPC Contractor to adapt and continuously improve our management systems, plans, procedures and practices, in response to changes in circumstances, unforeseen events, and the results of monitoring and review.

9.2 Reporting and implementation planning

SHPL will apply a cycle of implementation planning and reporting based on annual implementation planning, weekly supervision reports during construction, monthly and quarterly reports, an annual audit and management review, and annual reports.

9.2.1 Weekly inspections

SHPL will complete ESHS inspections on a weekly basis during construction, at all sites of construction. These inspections will be reported using a standard 1-2 page checklist format separately for each main site of work. They will be discussed at weekly on-site meetings at an operational level between SHPL and the EPC Contractor.

9.2.2 Monthly and quarterly reports

SHPL will prepare monthly reports on ESHS Management System implementation and performance. Each quarter, the report will be presented as a quarterly report, compiling information and data from the entire quarter. Each year, the report will be prepared as an annual report, compiling information and data for the entire year.

These reports will be presented to the SHPL Board, and submitted to EPA. They will follow a standard report format and structure, set out in an ESHS Management System procedure.

SHPL will require its EPC Contractor to provide similar monthly, quarterly and annual reports, providing sufficient information for SHPL to compile at least the following content for both SHPL and the EPC Contractor:

- Progress in implementing the ESHS Management System, and any major changes to ESHS management;
- Compliance with permits and consents;
- Numbers of local, national, and foreign personnel; male and female personnel; and skill levels (unskilled, skilled, supervisory, professional, management);
- ESHS staffing – new hires and departures, and listing of current staff and titles;
- ESHS training including dates, number of trainees, and topics;
- Results of Key Performance Indicator (KPI) monitoring;
- Safety statistics – hours worked, recordable incidents (lost time incidents, medical treatment cases), high potential near misses, and corresponding Root Cause Analysis, and remedial and preventive actions required;
- Environmental incidents and near misses – environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and remedial and preventive actions required;
- Non-compliance incidents with permits and national law, project commitments, or other ESHS requirements – raised, corrected and outstanding, with details and summary of numbers;
- Details of any work occurring outside of the site boundaries or major off-site impacts caused by ongoing construction—to include date, location, impacts, and actions taken;
- Summary of ESHS inspections and audits, by the Contractor, Employer’s Engineer, or others including authorities, including date, inspector or auditor name, sites visited and records reviewed, major findings, and actions taken;
- Summary of external stakeholder engagement activities, including formal and informal meetings, and information disclosure and dissemination;
- Security risks, i.e. updated analysis of threats from third parties including security personnel or public security forces;
- Grievances raised by community members, including occurrence date, the grievance, date submitted, whether resolved or outstanding, and actions taken and dates, with summary table of numbers raised, resolved and outstanding to-date and during the reporting period; disaggregated by gender;
- Grievances raised by workers, including occurrence date, the grievance, date submitted, whether resolved or outstanding, and actions taken and dates, with summary table of numbers raised, resolved and outstanding to-date and during the reporting period; disaggregated by gender;
- Complaints raised by any external body, raised, resolved and outstanding;
- Deficiency and performance management: actions taken in response to previous notices of deficiency and/or plans for actions to be taken;
- Priority actions in the following month;
- Any other information on activities relating to ESHS.

9.2.3 Annual Implementation Plans and Annual Reports

Each year, the monthly /quarterly report will be prepared as an annual report, compiling information and data for the entire year. At the same time, SHPL will prepare an Annual Implementation Plan and Budget setting out the actions to be followed that year.

The report and plan will be presented to the SHPL Board for approval, and submitted to EPA. They will follow a standard report format and structure, set out in an ESHS Management System procedure.

9.3 Monitoring and measurement

SHPL will identify monitoring measures in separate plans within the ESHS Management System, and in some cases set out separate monitoring plans for specific areas, such as a Biodiversity Monitoring and Evaluation Plan.

Prior to construction, we will require the EPC Contractor to identify ESHS monitoring plans, and obtain our agreement to them. We will also monitor the performance of the EPC Contractor directly and through the use of its agents such as the Employer’s Engineer, through all phases of the contract including mobilization, the main construction phase, and demobilization.

We may modify ESHS monitoring plans and updated them in response unforeseen ESHS incidents, and in response to the results of monitoring activities.

9.3.1 Objectives

The objectives of monitoring will be to:

- Ensure regulatory requirements are met;

- Check that impacts do not exceed applicable standards in certain areas;
- Ensure that mitigation measures are implemented and are effective, so that impacts are not occurring on any receptors;
- Identify corrective actions;
- Provide early warning of emerging ESHS issues; and
- Contribute to the continuous improvement of the ESHS Management System; and
- Provide formal assurance to the Employer and other Project stakeholders that the project is compliant with regulations and agreed limits and that mitigation measures are being implemented and are effective.

9.3.2 KPIs, Measurable Acceptance Criteria, and Targets

SHPL will define and report on Key Performance Indicators in specific ESHS areas. The frequency of measurement and reporting of these KPIs will depend on each KPI.

In advance of construction, SHPL will agree KPIs pertaining to the EPC Contractor's impacts with the EPC Contractor, and measurable acceptance criteria and targets for each, and the EPC Contractor will measure and compile these KPIs to confirm that their activities on-site are not resulting in impacts, for example including water quality of effluents and river water quality below discharge points, safety indicators, indicators of the frequency of poaching by employees, or indicators of the number of community grievances.

All KPIs, measurable acceptance criteria, and targets, with the corresponding Monitoring Plan, will be recorded in a excel-based matrix (a Register?), and updated with performance data.

9.3.3 Health and Safety KPIs

SHPL will manage health and safety to achieve the following KPIs:

- Zero fatalities;
- Zero serious injuries;
- Lost Time Incident Frequency Rate of less than 1 (LTIFR);
- Total Recordable Incident Frequency Rate of less than 2.75 (TRIFR)
- H&S Near-Miss reports;
- H&S Incident reports;
- Post-Incident H&S Team Investigations;
- H&S Training delivery;
- H&S Risk Assessments completed..

These targets will be reported on a monthly, quarterly and annual basis, with results for the reporting period and to-date. If exceeded, the targets will be adjusted to further continuously drive improved health and safety performance.

9.4 Compliance auditing

9.4.1 Evaluation of compliance

SHPL's ESHS personnel will conduct supervision monitoring of the performance of the EPC Contractor during construction and of SHPL in general at any stage, in order to evaluate compliance with ESHS policies and commitments, and this ESHS Management System.

SHPL will itself and will require its EPC Contractor to recognise non-conformities, document them in Non-conformance Reports (NCR), and take corrective actions accordingly.

SHPL and the EPC Contractor will hold weekly meetings on-site at each site to observe and discuss ESHS Performance, and additional meetings on an at least monthly basis to discuss all aspects of ESHS performance, including those that may not be evident on-site (for example Local Content).

9.4.2 Non-conformity, corrective action, and preventive action

Incident and Non-Compliance Report (NCR): SHPL staff, EPC Contractor Site Engineers, Environmental and Safety Officers, or other employees will report breaches of accepted standards to SHPL immediately for action and investigation, using a standard NCR form.

SHPL will compile and continuously update a register of non-conformities. This will document the corrective actions taken for each, by when the non-conformity was corrected, and preventive actions to prevent the non-conformity from arising again or elsewhere.

9.4.3 Internal audit

During construction SHPL will require the EPC Contractor to conduct internal audits on a quarterly basis to assess compliance of on-site activities with its ESHS Management System.

SHPL or, during construction the EPC Contractor, will arrange an Annual External Audit, conducted by an independent external agency, in conformance with ISO-14001 or OHSAS-18001 requirements.

9.5 Management review

SHPL will conduct a management review of its performance in implementing this ESHS Management System, on an annual basis. In addition during construction, SHPL will require that the EPC Contractor, in conjunction with SHPL, conducts a Performance Review of the EPC Contractor's ESHS Management System, on a periodic basis.

10. Appendix – Procedures (drafted and planned)

Register of compliance requirements

Register of lenders' requirements

Register of significant risks and impacts

Register of Plans and Procedures

Incident and Non-Compliance Reporting procedure

Non-conformance management procedure

Weekly inspection reporting procedure

Register of non-conformities, corrective action, and preventive action

Reporting procedures (Report Forms and Structures): Monthly, Quarterly, Annual

Environmental and Social Requirements for Contracted Projects (ESRCP)

Grievance Mechanism

Internal audit procedure

ESHS indicators and reporting

Management review procedure

Health and Safety Plans and procedures:

SHPL Worksite Health & Safety Management

Emergency Preparedness and Response Management

Health and Safety Risk Assessment Process

H&S Incident or Near-Miss Reporting and Post-Event Investigation

General Worksite Safety Rules

Personal Protective Equipment (PPE)

First Aid Policy

Fire Prevention Policy

Drug, Alcohol, Tobacco and Firearms Policy

Vehicle Safety Policy

Visitor Safety Policy

Visitors Handbook

Health & Safety Incentive and Recognition Programme