

GEORGIA ELECTRICITY TRANSMISSION NETWORK DEVELOPMENT PROJECTS

Environmental and Social Impact Assessment

Volume 8 Environmental and Social Management Plan (ESMP)

Document 8.3 Substation ESMP

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Acronyms

Acronym	Description
AA	Appropriate Assessment
AC/DC	Alternating current/direct current
AD	Anno Domini (also known as Common Era)
AMSL	Above mean sea level
AOP	Protected Designation of Origin
APA	Agency of Protected Area
AIS	Air insulated switchgear
ASL	Above Sea Level
BC	Before Christ (also known as Before Common Era)
BCoW	Biodiversity Clark of Works
BD	Bird Directive
[BIO-N]	Measure number N committed in Volume 3 Biodiversity of the ESIA Report
BP	British Petroleum
[CC]	Environmental and social management actions under the responsibility of the Contractor relevant to both substations and transmission line
CCTV	Closed circuit Television
CENN	Caucasus Environmental Network
CESMP	Construction Environmental and Social Management Plan
CH	Critical Habitat
CHS	Community Health and Safety
CLOs	Community Liaison Officers
[CO]	Construction
CSE	Cable Sealing End
dB(A)	Decibels (A weighted)
[DD]	Detailed design
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EHS	Environmental, Health and Safety

Acronym	Description
ELF	Extremely Low Frequency
EMF	Electromagnetic Fields
ENTSO	European Network of Transmission System Operators' for Electricity
EPC	Engineering-Procurement-Construction
E&S	Environmental & Social
ERS	External Relations Stakeholder
ESHS	Environment, Social, Health and Safety
ESIA	Environmental & Social Impact Assessment
ESMP	Environmental & Social Management Plan
ESMS	Environmental and Social Management System
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
[GC]	Government of Georgia E&S management actions
GE00000X	Candidate Emerald Site identifier
GEL	Georgian Lari
GEOSTAT	National Statistics Office of Georgia
GIP	Good International Practice
GIS	Gas insulated switchgear
GLAC	Guide to Land Acquisition and Compensation
GLVIA	United Kingdom Guidelines for Landscape and Visual Impact Assessment
GRC	Grievance Resolution Committee
GRM	Grievance Resolution Mechanism
GSE	Georgian State Electrosystem
GVWR	Gross Vehicle Weight Rating
ha	hectare
HD	Habitats Directive
HDV	Heavy Duty Vehicle
HGV	Heavy Goods Vehicle
HPP	Hydropower Project
H&S/HS	Health and Safety

Acronym	Description
HSMS	Health and Safety Management System
HVDC	High Voltage Direct Current
[HYD-N]	Measure number N committed in the Hydrology, Geology and Geohazards Assessment in Volume 5 Physical Environment of the ESIA Report
Hz	Hertz
IAS	Invasive Alien Species
IBA	Important Bird Area
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IDP	Internally Displaced Persons
IFC	International Finance Cooperation
IFC PS	IFC Performance Standards
ILO	International Labour Organization
JSCNH	Developer of Nenskra HPP
Key Biodiversity Area	KBA
KfW	KfW Development Bank
kHz	Kilohertz
km	Kilometre
KM	Kilometre markers along each proposed transmission line
kV	Kilovolt
L&V	Landscape and visual
LARCF	Land Acquisition and Resettlement Compensation Framework
LNK	Lower Namakhvani
LVIA	Landscape and visual impact assessment
[LVIA-N]	Measure number N committed in the Landscape and Visual Assessment in Volume 5 Physical Environment of the ESIA Report
m	Metre
MEPA	Ministry of Environmental Protection and Agriculture
mASL	Metres above sea level
MCP	Management of Change Procedure
MLARO	Municipal Land Acquisition and Resettlement Office

Acronym	Description
MoESD	Ministry of Economy and Sustainable Development
MoF	Ministry of Finance
MVA	Mega volt-ampere
MW	Megawatt
NACHP	National Agency for Cultural Heritage Preservation of Georgia
NACRES	Centre for Biodiversity Conservation and Research
NAPR	National Agency of Public Registry
NBSAP	The 2 nd National Biodiversity Strategy and Action Plan
NGO	Non-Governmental Organisation
NOI	Noise ESMP action
NOx	Oxides of nitrogen
NP	National park
NTS	Non-Technical Summary
[OC]	Owner Construction ESMS management actions
OHL	Overhead line
[OP]	Operation
PAH	Project Affected Household
PAP	Project Affected Person(s)
PBF	Priority Biodiversity Feature
PCBs	Polychlorinated Biphenyls
PDO	Protected Designation of Origin
PPE	Personal Protection Equipment
PR	EBRD Performance Requirement
PRRC	Property Rights Recognition Commission
PS	KfW Performance Standard
RAP	Resettlement Action Plan
RMT	Resettlement Management Team
RoW	Right of way
SEP	Stakeholder Engagement Plan
SF ₆	Sulphur hexafluoride

Acronym	Description
[SOC-N]	measure number N committed in Volume 4 Social of the ESIA Report
SPAB	Special Protection Area for Birds
TMP	Traffic Management Plan
TYNDP	GSE's Ten Year Network Development Plan of Georgia
UK	United Kingdom
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNK	Upper Namakhvani
VSC	Valued Social Components
WHO	World Health Organisation
WHS	World Heritage Site

Preamble

This document is the **Substation Environmental and Social Management Plan (ESMP)** of the Georgian Electricity Transmission Network Development projects (Project). It forms **Document 8.3** of **Volume 8** of the Environmental and Social Impact Assessment (ESIA) Report. This document should be read in conjunction with the **Project-wide ESMP, Document 8.1, Volume 8**.

The Project being developed by the Georgian State Electrosystem (GSE) comprises the construction of new and in some cases rehabilitation of existing transmission lines and substations. In summary, the Project is formed into 5 geographical component areas (Project Components), Components A, B, C1, C2 and D. Each new or rehabilitated line and substation is given a Project name which is used throughout the documents. The following table provides an overview of the Project Components and the Project names.

Component	Line description	Project name
A - Samtskhe-Javakheti & Imereti	Tskaltubo to Akhaltsikhe and on to Turkey border at Vale: - 500kV Tskaltubo to Akhaltsikhe Substation - 400kV Akhaltsikhe to Turkey border (and on to Tortum in Turkey) - Extension to the existing Akhaltsikhe Substation	Sairme line Tao line Akhaltsikhe extension
B - Guria	Ozurgeti to Zoti HPP and connection from Ozurgeti to the Paliastomi line: - 110kV Ozurgeti to Zoti HPP powerhouse - 220kV Ozurgeti to Paliastomi loop in connection - 110/220kV Ozurgeti Substation	Guria line Paliastomi loop Ozurgeti Substation
C1 - Svaneti	Nenskra to Mestia: - 110/220/500kV Nenskra Substation - 110kV Nenskra Substation to Mestia HPPs - 500kV Kavkasioni loop in loop out to Nenskra Substation - 220kV Nenskra substation to the Nenskra HPP Powerhouse	Nenskra Substation Mestia line Kavkasioni loop Nenskra HPP underground cable line
C2 – Racha Lechkhumi & Imereti	Lajanuri connections to Kheledula HPP, Oni HPP and Tskaltubo: - 110/500kV Lajanuri Substation - 220kV Lajanuri to Oni HPP - 220kV Lajanuri to Kheledula HPP - 500kV Lajanuri to Tskaltubo - 220kV Rehabilitation of the existing 220kV Derchi line from Lajanuri to Tskaltubo, with new connections into Namakhvani Cascade HPP - 220kV Lajanuri Substation to Lajanuri HPP	Lajanuri Substation Oni HPP line Kheledula HPP line Lechkhumi line New Derchi line Lajanuri HPP line
D - Kakheti	Reinforcement of the transmission infrastructure in Kakheti: - 110/220kV line from Gurjaani to Telavi, constructed on 220kV towers - 110kV line from Telavi to Akhmeta, constructed on 220kV towers - 110kV loop to Tsinandali	Gurjaani line Akhmeta line Tsinandali line

Component	Line description	Project name
	- 110kV loop to Mukuzani - Rehabilitation and extension of 110kV Akhmeta Substation - Rehabilitation and extension of 110/220kV Telavi Substation - Rehabilitation of 110kV Tsinandali Substation - Rehabilitation and extension of 110kV Mukuzani Substation - Rehabilitation and upgrade of 110/220kV Gurjaani substation	Mukuzani line Akhmeta Substation Telavi Substation Tsinandali Substation Mukuzani Substation Gurjaani Substation

The ESIA Report is formed of a number of volumes and documents, as follows:

- Volume 1 – Non Technical Summary;
- Volume 2 –Project Definition – including Project introduction, need and alternatives and project description;
- Volume 3 – Biodiversity:
 - Document 3.1 Biodiversity Project-wide Assessment
 - Document 3.2 Biodiversity Project Component Specific Assessment
 - Document 3.3 Biodiversity Figures
 - Document 3.4 Biodiversity Appendices
- Volume 4 – Social – including assessments on people, communities, the economy, cultural heritage and Electromagnetic Fields (EMF):
 - Document 4.1 Social Project-wide Assessment
 - Document 4.2 Social Project Component Specific Assessment
- Volume 5 – Physical Environment– including assessments on landscape and visual, noise, air quality:
 - Document 5.1 Physical Environment Project-wide Assessment;
 - Document 5.2 Physical Environment Project Component Specific Assessment;
- Volume 6 – Stakeholder Engagement Plan (SEP);
- Volume 7 – Land Acquisition, Resettlement and Compensation Framework (LARCF);
- Volume 8 – Environmental and Social Management Plan (ESMP):
 - Document 8.1 Project-wide ESMP;
 - Document 8.2 Transmission Lines ESMP;
 - **Document 8.3 Substations ESMP (this Report).**

1.0 Introduction

1.1 Project Overview

This report is the **Environmental and Social Management Plan (ESMP)** specific to **substations** of the Georgian Transmission Network Development Project (Project). It forms Document 8.3 of the Volume 8 of the ESIA. It should be read in conjunction with **Document 8.1 Project-wide ESMP** which sets out the framework of the ESMP, roles and responsibilities, project-wide mitigation measures and the requirements (referred to as *specifications*) for contractors, GSE and others. This **Substation ESMP** focuses specifically on the additional aspects relevant only to substations. It provides mitigation measures that apply to all substations irrespective of location and also measures specific to a Project Component, where appropriate.

This **Substation ESMP** is a draft prior to being made available for public disclosure. Feedback on the ESIA and ESMP during the public disclosure process could affect the content of the final ESMP.

1.2 Structure of the Transmission line ESMP

This document, Document 8.3 of the **ESMP (Volume 8)**, has been structured as follows:

- Section 2 summarises the Project’s commitments to mitigate or compensate the impacts predicted by the ESIA that are specific to **substations**;
- Section 3 describes the general measures that must be adopted by the **substation** contractors employed to deliver the Project; and
- Section 4 outlines the specific measures that must be adopted by the **substation** contractors in each Project Component.

There are no **substation** specific measures that are the responsibility of the GSE/Implementation Consultant. However, the specification outlined in Section 6 of the **Project-wide ESMP** apply and are the responsibility of GSE/Implementation Consultant.

1.3 ESMP document schedule

Table 1.1 lists the document schedule that will be prepared by the Contractor that are specific to Substations and are in addition to those identified in Section 2.8 of the **Project-wide ESMP**. The justification and the content of these documents are further described in the referred specification references listed in Table 1.1.

TABLE 1.1 ESMP MANAGEMENT PLAN DOCUMENTS FOR SUBSTATIONS

Documents	Specification reference
Documents to be prepared by the Contractor	
Access Track Management Plan	Section 3.2.1
General Substation Landscaping Strategy	Section 3.6.1
Abnormal Loads plan	Section 3.5.1
Documents to be prepared by the Contractor for Component C1	
Visual Screening plan for Nenskra Substation	Section 4.4.1

Documents	Specification reference
Documents to be prepared by the Contractor for Component C2	
Visual Screening plan for Lajanuri Substation	Section 4.5.1
Documents to be prepared by the Contractor for Component D	
Visual Screening plan for Telavi Substation	Section 4.6.2
Contaminated Land Desk Study Reports	Section 4.6.3
Contaminated Land Remediation Plans	Section 4.6.3
Asbestos Management Plan	Section 4.6.5

2.0 Summary of ESIA Impacts and Commitments for Substations

2.1 Introduction

This section sets out the **substation** commitments or measures being made by the Project to control the potential impacts of the Project. Table 2.1 summarises the Project-wide **substation** impacts and Project Component impacts identified and the corresponding mitigation and/or compensation which has been identified in the ESIA (Volume 3 to 7). This table forms the substation specific 'Commitments Register' for the Project. The impacts and commitments outlined in the **Project-wide ESMP** in Table 3.1 also apply.

These measures are all translated into implementable terms called 'specifications' (management action, schedules, and responsibilities) in this **Substation ESMP**.

For the sake of tracking and consistency, Table 2.1 identifies which specification of the **Substation ESMP** addresses the commitment made in the ESIA report.

Each commitment is given an acronym as follows:

- for the timing of impact:
 - [DD]: Detailed Design;
 - [CO]: Construction; and
 - [OP]: Operation.
- for the relation between commitments made in this ESMP and measures committed in ESIA Report:
 - [BIO-N]: measure number N committed in Volume 3 Biodiversity of the ESIA Report;
 - [SOC-N]: measure number N committed in Volume 4 Social of the ESIA Report;
 - [LVIA-N]: measure number N committed in the Landscape and Visual Assessment in Volume 5 Physical Environment of the ESIA Report;
 - [NOI-N]: measure number N committed in the Noise Assessment in Volume 5 Physical Environment of the ESIA Report; and
 - [HYD-N]: measure number N committed in the Hydrology, Geology and Geohazards Assessment in Volume 5 Physical Environment of the ESIA Report.

TABLE 2.1 SUMMARY OF ESIA REPORT IMPACTS AND COMMITMENTS SPECIFIC TO SUBSTATIONS

Transmission Line Potential Impact	Timing	ESIA Report Mitigation Ref	Mitigation Commitment made	Implementation Responsibility	ESMP Section Ref
Volume 3 Biodiversity – All Substations					
Loss of habitat and habitat conversion and subsequent disturbance and displacement impacts on terrestrial fauna	DD	BIO-2	Avoid sensitive areas, mapped during the Biodiversity assessment (Figure 11a to j, Document 3.3, Volume 3 of the ESIA), when finalising the locations of substations and their working areas, siting of access tracks, construction compounds, accommodation camps and any other infrastructure not yet defined by the feasibility study.	Contractor	3.2.1
	DD	BIO-4	Implementation of a change process for the environmental assessment of new substation locations if proposed to be located outside the assessment corridor of this study to be in line with the requirements of EBRD PR6.	Contractor	3.2.1
	DD	BIO-8	Tracks to be mapped prior to works taking place; in situ tracks to be used in preference to building new tracks.	Contractor	3.2.1
	DD	BIO-9	For areas which require new tracks, follow the implementation hierarchy (set out in the Biodiversity Assessment Document 3.3, Volume 3) to limit need for, and to justify requirement for new tracks.	Contractor	3.2.1
	DD	BIO-10	Provision of a construction plan for tracks which are to be newly created or upgraded that avoids the most sensitive areas (Figure 11a to j, Biodiversity Project Component Assessment , Document 3.3), minimises vegetation disturbance and provides measures for land slip and erosion control.	Contractor	3.2.1
Volume 3 Biodiversity – Substation – Component A - no component specific impacts identified					

Minimising cumulative project habitat loss	CO	BIO-35	GSE to ensure co-ordination between construction contractors (transmission line and substation) on Component A, Component C2, Tsalktubo Substation and the Tsalktubo – Jvari Transmission line on implementation of mitigation, stakeholder engagement and opportunities for shared usage of construction compounds and storage areas	GSE/Contractor	5.3.1/ 3.8.1
Volume 3 Biodiversity – Substation – Component B - no component specific impacts identified					
Volume 3 Biodiversity – Substation – Component C1					
Loss of Georgian Red List species	CO	BIO-44	Use Georgian Red List species such as sweet chestnut preferentially in the reinstatement/revegetation of the substation temporary construction working areas including access track sides, borrow pits, accommodation camps and landscaping of substations.	Contractor	4.4.1
Volume 3 Biodiversity – Substation – Component C2					
Loss of Georgian Red List species	CO	BIO-59	Use Georgian Red List species such as sweet chestnut preferentially in the Revegetation Management Plan for restoration of the substation temporary construction working areas including access track sides, borrow pits, accommodation camps and landscaping of substations.	Contractor	4.5.1
Impacts on stakeholders and cumulative construction compounds	CO	BIO-69	GSE to ensure co-ordination between construction contractors (transmission line and substation on Component A, C2 and the Tsalktubo – Jvari Transmission line, including Tskaltubo substation, on implementation of mitigation, stakeholder engagement and opportunities for shared usage of construction compounds and storage areas	GSE	5.3.1/ 3.8.1.
Volume 3 Biodiversity – Substation – Component D					
Loss of Georgian Red List species	CO	BIO-78	Use of two Red List species (<i>elm Ulmus glabra</i> and walnut <i>Juglans regia</i>) for reinstatement where practicable in areas impacted by the substation temporary construction working areas and for landscaping of substations.	Contractor	4.6.2
Loss of the most sensitive habitats and	DD	BIO-79	Minimise tree removal around the Gurjaani substation. Tree removal areas should be identified prior to removal with the support of a biodiversity specialist who will determine the most sensitive areas to be avoided.	Contractor	4.6.1

habitats which are important for fauna					
Volume 4 Social – All Substations					
Land acquisition leading to physical and economic displacement	DD	SOC-3	Selection of non-used lands for sitting of substation working areas and all temporary land needs, where possible.	Contractor	3.2.1
	DD	SOC-5	Reuse of existing paths and tracks for line access and substation access, as much as possible.	Contractor	3.2.1
	DD	SOC-6	Consultation with local communities to select access tracks and temporary land needs to avoid as much as possible impacts on productive lands.	Contractor	3.7.1
Traffic impacts due to increased traffic flows, abnormal loads and construction works in vicinity of public roads	DD	SOC-13	Consult and work closely with traffic authorities and neighbouring communities, before construction, to establish a works calendar and determine the optimal timeline for such works, especially the delivery of abnormal loads (e.g. transformers).	Contractor	3.5.1
Volume 4 Social – Substation – Component A- no component specific impacts identified					
Volume 4 Social – Substation – Component B					
Traffic impacts due to delivery of abnormal loads to Ozurgeti Substation	CO	SOC-2-2	Engage the road authorities, the Ozurgeti Municipality, local communities' authorities regarding the four abnormal loads to be delivered to the Ozurgeti substation.	Contractor	3.5.1
Volume 4 Social – Substation – Component C1 – no component specific impacts identified					
Volume 4 Social – Substation – Component C2					
Traffic impacts due to delivery of abnormal load to Lajanuri Substation	CO	SOC-4-1	Engage the road authorities, the Tsageri Municipality and local communities' authorities regarding the eight abnormal loads to be delivered to Lajanuri Substation.	Contractor	3.5.1

Volume 4 Social – Substation – Component D					
Traffic impacts due to delivery of abnormal loads to Gurjaani Substation and Telavi Substation	CO	SOC-5-2	Engage the road authorities, the municipal authorities and local communities' authorities regarding the abnormal loads to be delivered to Gurjaani Substation and Telavi Substation.	Contractor	3.5.1
Occupational and community health and safety impacts due to asbestos	CO	SOC_5-6	The substations to be rehabilitated or extended will be surveyed to establish the presence of asbestos. If asbestos is identified, an Asbestos Management Plan will be prepared and implemented.	Contractor	4.6.4
Volume 5 Physical Environment – All Substations					
Increase in landscape and visual impact due to changes to Project during detail design	DD	L&V-1	Adherence to design principles during refinement of the substations.	Contractor	3.2.1
	DD	L&V-2	Inclusion of the landscape and visual design principles in a management of change process for the environmental assessment of new substation locations proposed to be located outside the assessment corridor of this study	Contractor	3.3.1
Landscape and visual impacts of substations/substation extensions	DD	L&V-3	Consideration of design principles, such as the selection of materials and finishes, during detailed design of the substations/substation extensions	Contractor	3.6.1
	CO	L&V-4	Reinstatement of vegetation and soils complementing surrounding landscapes must be undertaken to ensure that the substation fits in to its surrounding landscape.	Contractor	3.6.1
Impacts on local residents from substation noise	DD	NOI-3	The substation Contractor will undertake noise modelling as required for substations, and in particular Telavi and Akhmeta substations, to ensure that designs are able to meet the specified standards. Mitigation measures such as layout, acoustic screening and enclosures will be considered where necessary.	Contractor	3.2.1 & 4.6.4
Increase in hydrology, geology and natural hazard impacts due to		HYD-2	Implementation of a management of change process for the environmental assessment of substation locations proposed to be located outside the assessment corridor of this study.	Contractor	3.3.1

changes to Project during detail design					
Disturbance of contaminated land impacting the water environment or causing a health risk to construction workers	DD	HYD-10	Development and implementation of a protocol (to be agreed with the Implementation Consultant) for dealing with any unexpected contamination identified during construction to ensure that its immediate effect is minimised and that appropriate mitigation is undertaken.	Contractor	3.4.1
Geohazard impacts	DD	HYD-11	Use of geohazard studies and specific slope-erosion and slope-stability studies to inform detailed design.	Contractor	3.2.1
Volume 5 Physical Environment – Substation – Component A					
Occupational and community health and safety impacts due to PCBs and risks of impacting the soil and water environment	DD	HYD-9	A desk study to identify, characterise, and assess the potential for disturbance of contaminated land at Akhaltsikhe Substation, followed by the subsequent identification and implementation of appropriate mitigation measures if contamination is suspected and confirmed by site investigation.	Contractor	4.2.1
Landslip and erosion impacts	CO	HYD-1-3	All construction works to avoid the unstable slopes of the deep ravine adjacent to the Akhaltsikhe Substation	Contractor	4.2.2
Impact of construction areas	CO	L&V-11	GSE to ensure co-ordination between construction contractors (transmission lines and substation contractors) on Component A, Component C2 and the Tsalktubo – Jvari Transmission line, including Tskaltubo substation, on implementation of mitigation for the reinstatement of construction areas	GSE	5.3.1/ 3.8.1
Volume 5 Physical Environment – Substation – Components B - no component specific impacts identified					
Volume 5 Physical Environment – Substation – Components C1					
Visual impact on the Nenskra valley	CO	L&V-15	The Nenskra substation as part of the site reinstatement works of the substation perimeter would be subject to landscape screening of the substation infrastructure to minimise its visual impact within the Nenskra valley.	Contractor	4.4.1

Geohazard risks	DD	HYD-11	Undertake geohazard studies and specific slope-erosion and slope-stability studies to inform detailed design at the Nenskra substation. In particular there is a need to protect the site from flood risk, avalanches and slope instability.	Contractor	4.4.2
Volume 5 Physical Environment – Substation – Components C2					
Visual impact on residential receptors	CO	L&V-20	The Lajanuri substation as part of the site reinstatement works of the substation perimeter would be subject to landscape screening of the substation infrastructure to minimise its visual impact to nearby residential receptors	Contractor	4.5.1
Volume 5 Physical Environment – Substation – Component D					
Visual impact on residential receptors	CO	L&V-21	The Telavi substation western and southern boundaries are to be screened using landscape planting to minimise the substation visual impact to nearby residential receptors.	Contractor	4.6.2
Occupational health impacts	DD	HYD-19	GSE will provide details of PCBs in transformer oil or undertake tests of any transformer oil to be removed from transformers.	GSE	5.2.1
Occupational and community health and safety impacts due to PCBs and risks of impacting the soil and water environment	DD	HYD-20	Undertake a site investigation to determine the presence of PCB contamination (e.g. spills or leaks) and asbestos and to investigate the presence of other contaminants to determine any required remedial works	Contractor	4.6.3
	CO	HYD-21	Removal of any contaminated soil (including PCBs and asbestos) and disposal to be via a contractor licensed to take hazardous waste. Where PCBs exist, the disposal is to be done in accordance with the Stockholm Convention on Persistent Organic Pollutants and the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal.	Contractor	4.6.5

3.0 General Measures under the responsibility of the Substation Contractor

3.1 Introduction

This section outlines the **general** measures that must be adopted by all **substation contractors** employed to deliver the Project or any part of the Project as main contractor. In conjunction with the obligations defined under the Contract, the Contractor will plan, execute and document construction works pursuant to the Environment, Social, Health and Safety (ESHS) specifications set out in this Section 3 and Section 4 of this document.

The Contractor must also plan, execute and document construction works pursuant to the ESHS set out in Section 5 of the **Project-wide ESMP (Document 8.1, Volume 8)**.

3.2 Detailed Design

Those criteria that apply to the detailed design of the substations/substation extensions throughout the Project are set out in Section 3.2.1. In addition, those criteria set out on a Project-wide basis in Volume 8.1 of the ESMP should also be taken into consideration.

3.2.1 Planning Requirement

General requirements

- [SCC-1] The final detailed design shall be submitted to the Implementation Consultant and GSE for approval prior to construction starting. The Contractor shall document how the criteria set out in this specification have been met to the satisfaction of GSE/Implementation Consultant.
- [SCC-2] The Contractor will design the substations as close as possible to the locations set out in the feasibility studies and make every effort to keep the works within the ESIA corridor, which is a corridor of 50m around the substation locations found in the feasibility study.
- [SCC-3] Where the detailed design of the substation is to be located outside of the ESIA corridor, the contractor must apply the specifications outlined in this Section 3.3 (Management of Change Procedure) of this document.
- [SCC-4] The detailed design shall include the location of working areas to be used during the construction works, including Workers' Accommodation, compounds and laydown areas, borrow pits and any other working sites.
- [SCC-5] The Contractor shall demonstrate that the location of construction infrastructure and working areas is located outside the most sensitive biodiversity areas, as defined by the ESIA and shown in Figures 11a to 11j (Document 3.3, Volume 3 Biodiversity) and that it meets the requirements of Section 5.3.1 of the **Project-wide ESMP (Document 8.1)**.

Substation detailed design

- [SCC-6] The Contractor shall take into account the following design criteria with respect to substations and substation extensions:
 - Use of non-productive land as much as possible;
 - Use of screening provided by local features such as landform and vegetation and also internal screening with a substation;

- Materials selection should contribute to a reduction in the level of landscape and visual impacts. Recessive colours and non-reflective materials (including fencing) should be used where practicable;
- Temporary construction infrastructure to be located within the substation boundary where practicable;
- Compliance with Georgian, WHO, IFC/World Bank EHS Guidelines with respect to construction and operational noise;
- Avoidance of barren slopes or areas showing signs of instability or erosion;
- Minimises nuisances to community due to noise, vibration, light, dust or obstruction to local traffic; and
- Minimises hydrology, geology and natural hazard impacts.

Access tracks

- [SCC-7] Details of new and existing access tracks, meeting the specification set out in this Section 3.2, are to be mapped and set out in an Access Track Management Plan and provided to GSE/Implementation Consultant for approval prior to construction starting.
- [SCC-8] Existing paths and access tracks should be re-used as much as possible and lengths of new access tracks should be minimised.
- [SCC-9] New access tracks should avoid sensitive areas, where practicable, including:
 - Key sensitive landscapes;
 - Wetlands, rivers, or areas of biodiversity value;
 - Barren slopes or areas showing signs of instability or erosion
 - On identified cultural heritage elements;
- [SCC-10] Access tracks in forests should be designed as follows:
 - Only the required tree and vegetation cutting necessary for the construction of the track is permitted.
 - Where possible access tracks are routed around trees and forests;
 - Access tracks should be kept to areas that have previously been affected by logging or other activities; and
 - Access tracks are not built on slopes above 12% in steepness.
- [SCC-11] If new tracks are required, then biodiversity surveys will be undertaken and the least impacting practical route taken;

Operational noise

- [SCC-12] The Contractor will carry out detailed noise modelling of substations if nearby sensitive receptors are present unless otherwise the need for noise modelling has been identified in Section 4 of this **Substation ESMP**. The Contractor will agree with GSE/Implementation Consultant the need or otherwise for noise modelling in order to demonstrate the ability of the substation design to comply with the specified noise standards (night time limit of 45dB(A) based on IFC and Georgian standards), outlined in the noise assessment in **Physical Environment**, Document 5.1, Volume5.

- [SCC-13] Where noise sensitive receptors are within proximity of the substation, background noise monitoring will be undertaken to be used in noise modelling.
- [SCC-14] Noise mitigation measures shall be incorporated into the design of the substation so that the specified noise standards (night time limit of 45dB(A) based on IFC and Georgian standards) are met.

3.3 Management of Change Procedure (MCP)

As described in Section 2.4 of the **Project-wide ESMP** (Document 8.1), the MCP will be implemented for any changes to design of the **substations** which occurs outside of the ESIA assessment area as defined in Section 1.4.3 of **Volume 2 Project Definition**. This procedure is also to be applied for associated construction infrastructure not previously defined in the Feasibility Studies which is to be located outside of the ESIA assessment corridors defined in the ESIA Report. The measures to be considered for **substations** are set out herewith.

3.3.1 Planning Requirements

Identification and consideration of design changes

- [SCC-15] Design changes proposed by the Contractor that would result in proposed development beyond the ESIA assessment corridors shall be notified to GSE/Implementation Consultant.
- [SCC-16] Design changes must respect the criteria set out with respect to detailed design (section 3.2).

Notification of Design Change and Screening by Contractor

- [SCC-17] The Contractor will develop a screening tool (to be agreed with GSE/Implementation Consultant prior to any changes being brought forward) to provide a preliminary opinion to GSE/Implementation Contractor of the category of design changes, as per the categories defined in section 2.4 of the **Project-wide ESMP** (Document 8.1).
- [SCC-18] The contractor must demonstrate that it has considered alternative designs prior to the notification of the proposed design change.

Environmental and Social Studies for Category 2 and 3

- [SCC-19] Where appropriate and as instructed by GSE/Implementation Consultant, the Contractor undertakes to produce the E&S study 'scope of works' for Category 2 and 3 design changes. The scope of works shall be proportional to the design change's category (2 or 3) and the nature, size, location, proximity to sensitive areas, as well as the extent and likelihood of potential impacts and risks. The scope of works shall be submitted to GSE/Implementation Consultant for approval.
- [SCC-20] Where appropriate and particularly for Category 3 E&S studies, an assessment of alternatives shall be included. A stakeholder strategy and plans for public disclosure shall also be proposed for all Category 3 design changes.
- [SCC-21] The Contractor shall adopt the mitigation hierarchy approach to address adverse environmental or social impacts and issues to workers, affected communities, and the environment due to design changes. The mitigation hierarchy comprises measures taken to avoid creating environmental or social impacts from the outset of development activities, and where this is not possible, to implement additional measures that would minimise, mitigate and, as a last resort, offset and/or compensate any potential residual adverse impacts.
- [SCC-22] All E&S studies shall be undertaken in accordance with the methods used in the 2019 ESIA and be compliant with Lender's policies, Georgian legislation and GIP.
- [SCC-23] Where relevant, E&S studies shall be supported by relevant site-specific investigations to establish the baseline on ecosystems and protected species, as well as the baseline on land ownership and land use of areas affected by the project and associated facilities. An avian risk assessment and biodiversity surveys, to identify habitats and protected species, potentially affected by the design changes shall also be carried out, unless otherwise agreed with the Implementation Consultant.
- [SCC-24] The biodiversity surveys must be done to the EUNIS level, to a scale of 50 metres, or less where appropriate. For each habitat type a list of species and abundance shall be made. This type of survey must be undertaken by a suitably qualified botanist employed by the Contractor.
- [SCC-25] The E&S Study shall be submitted to GSE/Implementation Consultant for approval. All Category 3 design changes shall be reviewed by the Project Lender's.
- [SCC-26] Where requested, the Contractor shall make corrective changes to the E&S study as directed by GSE/Implementation Consultant.
- [SCC-27] Where the need has been identified during the definition of the E&S study scope of works, the contractor shall undertake stakeholder consultation and also prepare the appropriate documents

needed for public disclosure. The Contractor shall work with GSE/Implementation through the public disclosure process.

Addenda to ESMP

- [SCC-28] If an approved design change requires environmental and social measures which are not covered by the present ESMP, the Contractor shall prepare an addendum to the Contractor's ESMP and any specific management plans and protocols to address specific mitigation measures. The addenda shall be submitted to GSE/Implementation Consultant and the Lender's (for Category 3 changes) and disclosed on the Project website.

Addenda to Resettlement Action Plans

- [SCC-29] For each approved design change, the Contractor shall provide to GSE/Implementation Consultant details of the land required by the proposed change in design.

Implementation of local permits

- [SCC-30] The Contractor shall implement any changes or new requirements which results from new permits obtained by GSE as a result of any changes. Such changes may be additional to the changes prescribed by the process described in this specification.

3.4 Soil Management

The specifications outlined in this section are to be read in conjunction with Section 4 of this document.

3.4.1 Planning Requirements

Soil Contamination

- [SCC-31] The Contractor shall develop and implement a protocol for dealing with any unexpected contamination identified during construction to ensure that its immediate effect is minimised, and that appropriate mitigation is undertaken.
- [SCC-32] The Contractor shall discuss and agree the protocol with the Implementation Consultant.

3.5 Traffic Management

The specifications outlined in this section are to be read in conjunction with Section 5.4.8 of the **Project-wide ESMP**.

3.5.1 Planning Requirement

Construction Traffic

- [SCC-33] The Contractor shall consult and work closely with road authorities and municipalities, before construction, to establish a works calendar and determine the optimal timeline for construction traffic including deliveries and workforce movements to substation construction sites.
- [SSC-34] The Contractor shall apply good international practice such as the measures outline in Section 1.3 of the IFC Environmental, Health, and Safety Guidelines for Toll Roads.

Abnormal Loads

- [SCC-35] The Contractor will engage with the road authorities, the relevant municipalities, and the local communities' authorities regarding the abnormal loads to be delivered to substation sites.
- [SCC-36] Details of any necessary amendments to the public highways are to be evaluated and discussed with GSE/Implementation Consultant. Where changes are necessary the MCP procedure (Section 3.3.1) may apply, the details of which shall be discussed with GSE/Implementation Consultant. Where the MCP procedure is relevant, this is to be applied prior to any traffic movements or construction works on the public highway.
- [SCC-37] A Swept path analysis is performed and available to demonstrate that the planned itineraries can accommodate the movement of the largest and longest vehicles intended to be mobilised by the Contractor, without damages to assets and property, particularly for sites where room for vehicle manoeuvres is limited
- [SCC-38] Details of routes, timings of movements, details of traffic controls required shall be added to the Traffic Management Plan, for approval by GSE/Implementation Consultant.

3.5.2 Management Action

- [SCC-39] The Contractor shall use flagmen at all public highway crossings, junctions and locations where abnormal loads shall require the temporary closure of roads or stopping of traffic.
- [SCC-40] The Contractor shall use warning vehicles ahead of and to the rear of abnormal loads to warn other road users of the large and slow-moving vehicles.

3.6 Landscaping and Site Reinstatement

These measures relate to the landscaping of substations on construction and/or rehabilitation works have been completed. These measures should be read in conjunction with the specifications on site reinstatement set out in Section 4 of this document and specifications set out in Section 5.3.10 of the **Project-wide ESMP**.

3.6.1 Planning Requirement

Landscape Strategy

- [SCC-41] The Contractor shall prepare and agree a general landscape strategy for the new substations/substation extensions. The design principles of the substation shall include consideration for the selection of materials and finishes to minimise landscape and visual impact. The strategy shall be submitted to GSE/Implementation Consultant for approval prior to construction. The strategy shall reinstate vegetation and soils to complement the surrounding landscapes, unless additional site-specific measures have been identified as specified in Section 4 of this **Substation ESMP**.

3.6.2 Management Action

Landscape Strategy

- [SCC-42] Implementation of the Landscape Strategy to be submitted to GSE/Implementation Consultant for approval prior to any landscaping works being commenced.

3.7 Community Interaction

The specifications outlined in this section are to be read in conjunction with Section 5.4.5 of the **Project-wide ESMP**.

3.7.1 Planning Requirement

- [SCC-43] The Contractor will consult local communities to identify those areas that comprise productive land and those that are not used in order to inform detailed design of substation temporary working areas, access tracks and other temporary construction infrastructure locations. This consultation should also request the location of areas of forest that have been felled or are about to be felled.
- [SCC-44] The Contractor will advise affected land users in advance of start of any temporary construction works, giving sufficient time to allow for the harvesting of any mature crops and to salvage any structures. If the work is to be done urgently, the compensation of agricultural crops must be paid, in accordance with the tariffs given in the resettlement action plan.

3.8 Cumulative projects

3.8.1 Planning Requirement

- [SSCC-45] Substation Contractors shall co-ordinate with GSE and transmission line contractors to ensure co-ordination on the interaction between project elements on Component A, Component C2, and Component D on implementation of environmental and social mitigation described in the ESMP, stakeholder engagement and opportunities for shared usage of construction compounds and storage areas

4.0 Project Component Specific Measures under the Responsibility of the Substation Contractor

4.1 Introduction

This section outlines the **Project Component specific** measures that must be adopted by all **substation contractors** employed to deliver the Project or any part of the Project as main contractor. In conjunction with the obligations defined under the Contract, the Contractor will plan, execute and document construction works pursuant to the (ESHS specifications set out in this Section 4 and the previous Section 3 of this document.

The Contractor must also plan, execute and document construction works pursuant to the ESHS specifications set out in Section 5 of the **Project-wide ESMP** (Document 8.1, Volume 8).

4.2 Component A – Akhaltsikhe Substation

This section outlines the Project Component specifications to be applied to the Akhaltsikhe substation. They should be read in conjunction with the specifications outlined in Section 3 General Measures of this document and Section 5 of the **Project-wide ESMP**.

4.2.1 Soil Management

The specifications outlined in this section are to be read in conjunction with Section 3.4 of this document.

Planning Requirement

Soil Contamination

- [SCC-46] For Akhaltsikhe Substation, the Contractor must first undertake a desk study and walkover to evaluate the likely contamination risks. The walkover survey must:
 - Identify visible areas of spills or leaks;
 - Observe and document any potentially contaminative materials stored on-site;
 - Interview any site workers about site practices, former site use, and decommissioned equipment;
 - The walkover and desk study must be undertaken by a qualified environmental scientist; and
 - The desk study must evaluate the presence of site contamination, identify the need for site investigation and potential remedial measures.
- [SCC-47] Based on the recommendations of the desk study and walkover, undertake the necessary site investigation to confirm the presence of soil contamination and to identify the types of contaminants. Contamination is deemed to be present where compounds are found at a concentration that is greater than the limit values recognised for that compound according to Georgian standards or the IFC EHS Guidelines, whichever is the strictest. If no recognised threshold exists, the Contractor will provide proof that the compounds found are harmless to human health and the environment.
- [SCC-48] Prepare a remedial plan, based on the results of the site investigation work, if required, for approval by GSE/Implementation Consultant.

- [SCC-49] The Contractor shall develop and implement a protocol for dealing with any unexpected contamination identified during construction to ensure that its immediate effect is minimised and that appropriate mitigation is undertaken.

4.2.2 Geohazards

The specifications outlined in this section are to be read in conjunctions with those specifications set out in Section 5.5.11 of the **Project-wide ESMP**.

Management Action

- [SCC-50] The Contractor shall avoid all construction works that may potentially impact upon the unstable slopes of the deep ravine adjacent to the Akhaltsikhe Substation.

4.3 Component B – Ozurgeti Substation

There are no Project Component specific specifications for the Ozurgeti Substation. The Contractor should refer to Section 3 General Measures in this document and Section 5 of the **Project-wide ESMP**.

4.4 Component C1 – Nenskra Substation

This section outlines the Project Component specifications to be applied to the Nenskra substation. They should be read in conjunction with the specifications outlined in Section 3 General Measures of this document and Section 5 of the **Project-wide ESMP**.

4.4.1 Site Reinstatement and visual screening

The specifications outlined in this section are to be read in conjunction with Section 3.6 of this document and the specifications set out in Section 5.3.10 of the **Project-wide ESMP**.

Management Action

Site Reinstatement Planting and visual screening

- [SCC-51] The Contractor shall reinstate temporary construction working areas with Georgian Red List species such as sweet chestnut in areas where trees have been removed eg adjacent to access tracks and substation temporary working and laydown areas.
- [SCC-52] The Nenskra substation, as part of the site reinstatement works of the substation perimeter, shall be subject to landscape screening of the substation infrastructure to minimise its visual impact within the Nenskra valley, where possible. Landscape screening shall be through the planting of species outlined in this specification. Planting shall be concentrated on those boundaries where the local community would mostly view the substation from eg the road and any nearby residential areas.
- [SCC-53] Visual screening plans shall be submitted to and agreed with GSE/Implementation prior to installation.
- [SCC-54] The Contractor shall source trees and seedlings from the National Forestry Agency national nursery or a similar standard of nursery which must be approved by the Implementation Consultant.

4.4.2 Hydrology and Geohazards

The specifications outlined in this section are to be read in conjunctions with those specifications set out in Section 5.5.11 of the **Project-wide ESMP**.

Planning Requirement

Geohazard studies and planning

- [SCC-55] The Contractor shall undertake geotechnical studies and any other study required to establish the risks associated with flooding and geohazards at the Nenskra substation.
- [SCC-56] The contractor shall include in the design of the Nenskra substation adequate protection from floods, avalanches and rock falls
- [SCC-57] The Contractor shall take into account the likely potential impacts of climate change and HPP development from the Nenskra HPP project on the Nenskra River with respect to flood risk
- [SCC-58] The design of any flood protection measure shall not result in impacts on the river downstream or increase flood risk elsewhere, unless this can be demonstrated by the Contractor to be acceptable and impacting only unproductive lands and land not privately held.

4.5 Component C2 – Lajanuri Substation

This section outlines the Project Component specifications to be applied to the Lajanuri substation. They should be read in conjunction with the specifications outlined in Section 3 General Measures of this document and Section 5 of the **Project-wide ESMP**.

4.5.1 Site Reinstatement and visual screening

The specifications outlined in this section are to be read in conjunction with Section 3.6 of this document and the specifications set out in Section 5.3.10 of the **Project-wide ESMP**.

Management Action

Site Reinstatement Planting and visual screening

- [SCC-59] The Contractor shall reinstate temporary construction working areas with Georgian Red List species such as sweet chestnut in areas where trees have been removed e.g. adjacent to access tracks and substation temporary working and laydown areas.
- [SCC-60] The Lajanuri Substation, as part of the site reinstatement works of the substation perimeter, shall be subject to landscape screening of the substation infrastructure to minimise its visual impact on nearby receptors, if screening due to landform is insufficient, as agreed with GSE/the Implementation Consultant. Landscape screening shall be through the planting of species outlined in this specification. Planting shall be concentrated on those boundaries where the local community would mostly view the substation from e.g. nearby residential areas.
- [SCC-61] Visual screening plans shall be submitted to and agreed with GSE/Implementation Consultant prior to installation.

4.6 Component D – Telavi, Gurjaani, Akhmeta, Mukuzani and Tsinandali Substations

This section outlines the Project Component specifications to be applied to the Telavi, Gurjaani, Akhmeta, Mukuzani and Tsinandali substation. They should be read in conjunction with the specifications outlined in Section 3 General Measures of this document and Section 5 of the **Project-wide ESMP**.

4.6.1 Biodiversity

The specifications outlined in this section are to be read in conjunction with Section 5.3.3 of the **Project-wide ESMP**.

Planning Requirements

Tree removal and habitat protection

- [SCC-62] As part of the detailed design stage, the Contractor shall undertake a biodiversity survey the areas surrounding the Gurjaani substation required for the upgrade and rehabilitation of the substation. The survey shall be undertaken by an experienced Biodiversity expert, as defined in Section 5.2.4 of the **Project-wide ESMP**.
- [SCC-63] The results of biodiversity survey shall be used to inform the design of the temporary construction working areas, whereby the most sensitive habitats or tree species are to be avoided and retained, subject to construction needs.
- [SCC-64] The Contractor shall provide details of the biodiversity survey and how the findings have influenced the location of the temporary construction working areas to GSE/Implementation Consultant for approval prior to any construction works commencing.

4.6.2 Site Reinstatement and visual screening

The specifications outlined in this section are to be read in conjunction with Section 3.6 of this document and the specifications set out in Section 5.3.10 of the **Project-wide ESMP**.

Management Action

Site Reinstatement Planting and visual screening

- [SCC-65] The Contractor shall reinstate temporary construction working areas with Georgian Red List species such as elm (*Ulmus glabra*) and walnut (*uglans regia*) in areas where trees have been removed e.g., adjacent to access tracks and tower working and laydown areas.
- [SCC-66] The Telavi substation western and southern boundaries shall be screened using landscape planting, based on the species quoted in this specification or to replicate those growing locally, to minimise the substation visual impact to nearby residential receptors. Alternative forms of screening could be utilised such as fencing with some planting to break up the appearance of the fence.
- [SCC-67] Visual screening plans shall be submitted to and agreed with GSE/Implementation prior to installation.

4.6.3 Soil Management

The specifications outlined in this section are to be read in conjunction with Section 3.4 of this document.

Planning Requirement

Soil Contamination

- [SCC-68] For each substation in Kakheti where works are to be carried out, the Contractor must first undertake a desk study and walkover of each site to evaluate the likely contamination risks. The walkover survey must:

- Identify visible areas of spills or leaks and visible asbestos;
 - Observe and document any potentially contaminative materials stored on-site;
 - Interview any site workers about site practices, former site use, and decommissioned equipment;
 - The walkover and desk study must be undertaken by a qualified environmental scientist; and
 - The desk study must evaluate the presence of site contamination, identify the need for site investigation and potential remedial measures.
- [SCC-69] Based on the recommendations of the desk study and walkover, undertake the necessary site investigation to confirm the presence of soil contamination and to identify the types of contaminants. Contamination is deemed to be present where compounds are found at a concentration that is greater than the limit values recognised for that compound according to Georgian standards or the IFC EHS Guidelines, whichever is the strictest. If no recognised threshold exists, the Contractor will provide proof that the compounds found are harmless to human health and the environment.
 - [SCC-70] Prepare a remedial plan for each substation, based on the results of the site investigation work for approval by GSE/Implementation Consultant.
 - [SCC-71] The Contractor shall develop and implement a protocol for dealing with any unexpected contamination identified during construction to ensure that its immediate effect is minimised and that appropriate mitigation is undertaken.

Management Action

Soil Remediation

- [SCC-72] For each substation where soil remedial works are to be carried out, these works shall be supervised by a qualified environmental scientist, who will verify that the works have been carried out and that the contamination has been removed from or treated at the site.
- [SCC-73] The Contractor shall remove from substation sites any contaminated soil and dispose via a contractor licensed to take hazardous waste. Any contaminated materials found to contain PCBs must be recorded and must be disposed of in a facility that is licensed and able to receive such contaminated material in accordance with the requirements set out in Section 4.6.5 of this **Substation ESMP**.

4.6.4 Noise management

The specification in this section should be read in conjunction with that set out in Section 3.2.1 of this **Substation ESMP**

Planning Requirement

Noise modelling and mitigation

- [SCC-74] The Contractor will carry out detailed noise modelling of Telavi and Akhmeta substation, in order to demonstrate the ability of the substation design to comply with the specified noise standards (night time limit of 45dB(A) based on IFC and Georgian standards), outlined in the noise assessment in **Physical Environment**, Document 5.1, Volume5.

- [SCC-75] The scope of background noise monitoring and noise modelling shall be agreed with GSE/Implementation Consultant.
- [SCC-76] Background noise monitoring will be undertaken to be used in noise modelling.
- [SCC-77] Noise mitigation measures shall be incorporated into the design of the substation so that the specified noise standards (night time limit of 45dB(A) based on IFC and Georgian standards) are met.
- [SCC-78] The final design measures and any noise mitigation measures to meet the required noise limits shall be submitted to GSE/Implementation Consultant for approval prior to construction.

4.6.5 Disposal of Hazardous Substances

The specifications outlined in this section are to be read in conjunction with the specifications set out Section 5.3.7 of the **Project-wide ESMP**.

Planning Requirement

Asbestos

- [SCC-79] The Contractor will undertake a thorough survey of the substations to be rehabilitated or extended to establish the presence of asbestos. If asbestos is identified, an Asbestos Management Plan will be prepared in accordance with Good International Practices and agreed with GSE/Implementation Consultant which will form part of the Site Waste Management Plan.
- [SCC-80] The Asbestos Management Plan should identify a procedure for any unexpected discoveries of asbestos which might be found in buildings or in the ground during rehabilitation.
- [SCC-81] Construction workers should be briefed on the plan and also provided with training in how to identify asbestos and the procedure should any asbestos be discovered.

PCBs

- [SCC-82] Where the Contractor is informed by GSE that transformers which form part of the rehabilitation work are known to contain PCBs, the Contractor shall develop a plan for dealing with used oils, forming part of the Site Waste Management Plan, for its removal and safe transport and disposal.
- [SCC-83] The Contractor will provide details of the plan for disposal of PCB contaminated oil to GSE/Implementation Consultant for approval prior to construction.

Management Action

Asbestos

- [SCC-84] The Contractor will implement the Asbestos Management Plan(s).

Oil Contamination

- [SCC-85] The Contractor will remove any contaminated oils or soils for disposal via a contractor licensed to take hazardous waste.
- [SCC-86] The disposal outside of Georgia of oils contaminated with PCBs (>50ppm) is to be done so in accordance with the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal

5.0 Project Component Specific Measures under the Responsibility of GSE

5.1 Introduction

This section outlines the **Project Component specific** measures that must be adopted by GSE for substation related projects. GSE must also plan, execute and document these measures along and pursuant to the ESHS specifications set out in Section 6 of the **Project-wide ESMP** (Document 8.1, Volume 8).

5.2 PCBs in Transformers

5.2.1 Planning Requirement

- [SSOC-87] GSE will provide to substation contractors details of PCBs in transformer oil or undertake tests of any transformer oil to be removed from transformers.

5.3 Cumulative projects

5.3.1 Planning Requirement

- [SSOC-88] GSE to ensure co-ordination between transmission line and substation construction contractors on Component A, Component C2, and Component D on implementation of environmental and social mitigation described in the ESMP, stakeholder engagement and opportunities for shared usage of construction compounds and storage areas

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