Contractor's Environmental and Social Management Plan

For Proposed 150 Bedded New District Hospital in Kaliabor

District - Nagaon, Assam

Under

ASSAM STATE SECONDARY HEALTHCARE INITIATIVE FOR SERVICE DELIVERY TRANSFORMATION (ASSIST) PROJECT

Submitted to:

World Bank Funded Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST) Project

Assam Health Infrastructure Development and Management Society (AHIDMS),

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ABBREVIATIONS

ADC	**Autonomous District Council**
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
BMW	Bio-Medical Waste
CBWTF	Common Biomedical Waste Treatment Facility
CERC	Contingent Emergency Response Component
CHC	Community Health Care
BPHC	Bureau of Primary Health Care
CMO	Chief Medical Officer
DH	District Hospital
DOHFW	Department of Health and Family Welfare
E&S	Environmental and Social
ESF	Environmental and Social Framework of World Bank
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FPIC	Free, Prior, and Informed Consent
FRU	First Referral Unit
GBV	Gender Based Violence
GoI	Government of India
GoA	Government of Assam
GRM	Grievance Redressal Mechanism
GRIHA	Green Rating for Integrated Habitat Assessment
HCF	Health Care Facility
HR	Human Resource
HWC	Health and Wellness Centre
ICT	Information and communication technology
IEC	Information, Education, and Communication
IPA	Internal performance agreement
IPF	Investment Project Financing
IPM	Internal Performance Management
IT	Information Technology
MMR	Maternal Mortality Rate
MO	Medical Officer
MoEF&CC	Ministry of Environment Forest and Climate Change
MOHFW	Ministry of Health and Family Welfare
NCD	Non-Communicable Diseases
NGO	Non-Governmental Organization
NHM	National Health Mission
NQAS	National Quality Assurance Standards
OHS	Occupation and Health Safety
OOPE	Out-of-pocket expenditure
OSC	One Stop Centre
PCBA	Pollution Control Board Assam
PDO	Project Development Objective
PHC	Primary Health Centre
PMU	Project Management Unit
PPE	Personal Protective Equipment
PPP	Public Private Partnership
RKS	Rogi Kalyan Samiti
SBCC	Social and Behaviour Change Communication
SC	Sub-Centre
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedure
WCD	Women and Child Development

EXECUTIVE SUMMARY

The Government of Assam (GoA) is implementing "Assam State Secondary Health Care Initiative for Service Delivery Transformation (ASSIST) Project" under Assam Health Infrastructure Development & Management Society (AHIDMS), Medical Education and Research Department (MERD) with financial assistance from the World Bank. Major objective of the project is to initiate improvement in the quality and delivery of secondary health care system in the state. Under this project, 9 (Nine) new 100 to 200 bedded District Hospitals are going to be constructed in 9 districts of the state.

One of the proposed sites is in Kaliabor, within the Nagaon district of the state, where a new 150-bedded District Hospital (DH) is planned to be constructed within the premises of the existing Jakhlabandha (CHC) FRU and Sub Divisional Civil Hospital which is located centrally in the heart of Kaliabor. The SDCH will be functional during the construction of DH. District Hospital will be developed under the EPC (Engineering, Procurement, and Construction) mode, and the contract for the Kaliabor project has been awarded by AHIDMS to Globalzone Sanitary Infrastructure Pvt. Ltd., located at 1/6 Vikrant Khand, Gomti Nagar, Lucknow – 226010.

There is a significant shortage of public healthcare services in this region and across the district. The existing facilities are inadequate, primarily offering only basic primary care, preventive services, and maternity care. The proposed District Hospital at Kaliabor, equipped with modern infrastructure and advanced medical facilities, is a critical necessity for the local population. It will greatly improve access to specialized and advanced healthcare services, addressing the growing demand in the region. The establishment of this hospital will play a vital role in bridging the existing gap in secondary healthcare services, ultimately benefiting all sections of society.

World Bank Environmental and Social Standards (ESS)-1: "Assessment and Management of Environmental and Social Risks and Impacts" sets out the requirement of identification and assessment of Environmental and social risks and impacts associated with construction of DH at Kaliabor under ASSIST Project; and subsequent mitigation management plans. The objective is to prevent and mitigate undue harm to people and the environment in the construction process.

In view of the above, ASSIST commits to adopting the site-specific Contractor's Environmental and Social Management Plan (C-ESMP) for the proposed District Hospital at Kaliabor. Once adopted, the C-ESMP will be implemented by Globalzone Sanitory Infrastructure Pvt. Ltd. throughout the pre-construction and construction phases. The contractor will be fully responsible for ensuring compliance with the environmental and social safeguard requirements of the project. The C-ESMP will be updated as necessary, particularly in the event of any new activities that fall outside the scope of the current plan.

The baseline environmental and social attributes of the proposed DH site and the vicinity have been assessed to identify possible impacts of construction of DH on the same. The screening of Environmental parameters showed that all the results are within norms and thereby it can be derived that impacts arising during the construction works of the proposed project are not likely to have any major impact on the environment. However, anticipated site issues include disturbance to topsoil and existing green cover of the site, soil erosion and contamination, flooding due to surface runoff and water contamination, air pollution due to dust and smoke, noise pollution due to vibrations and noise coming out of construction activity.

Likewise social issues may occur at site which includes risks related to community health and safety, public inconveniences and disruption of medical service at Kaliabor SDCH due to construction activity, conflict between migrant workforce and local, risks of Gender based violence and SEA/SH at site and its vicinity and occupational health and safety of labours at site.

The C-ESMP has been prepared considering the identified risks and impacts of construction of proposed DH at Kaliabor for taking up the responsibility for respective mitigation actions in a specified period starting from the pre-construction period to construction period.

As a part of regulatory requirements, there is a need to obtain Consent/ Permit/ Clearance/ No Objection Certificate (NOC), etc. for establishment of new DH, RMC/ Batching Plant, Labour Camp, supply and storage for construction materials, tree cutting/relocation, use of construction vehicles and equipment, connections of water supply, electricity etc.

The mitigation measures are planned against the identified environmental and social risks of the pre- construction and construction period of proposed project at Kaliabor. Proposed mitigation measures aim to protect, prevent and minimize Environmental issues of disturbance of land, water, oil and air arising out of construction activity at site and surrounding areas. Further, the mitigation measures addressing the social issues will minimize and prevent risks to community health and safety, occupational health and safety of labours, and inconveniences and disturbance to public. The measures will also address road safety, stakeholder engagement for awareness and

involvement in the project and prevent or mitigate risks of GBV/SEA/SH to community members, particularly women and children by contractors' workers during construction period, workplace sexual harassment at project site (consultants and contractors' staff & labourers)

World Bank's ESS10 recognises that effective engagement with the stakeholders can significantly improve the project outcomes and their sustainability through better community acceptance and ownership, enhance the Environmental and social sustainability of the project, and hence make a significant contribution to successful project implementation.

In view of the above, Stakeholder engagement activities like consultation and meetings will be conducted to make the community and hospital staff aware of the proposed DH, facilities to be provided through the proposed DH and making them aware of the possible public inconveniences during the construction of the proposed DH. Suggestions and inputs from stakeholders were also considered while preparing the C-ESMP.

The DH design and construction materials will conform to the seismicity of the region as it falls under seismic Zone (v). Further, environmentally friendly building materials and technologies that are appropriate for the project site and surrounding Environment will be used in the project. The proposed DH will be equipped with necessary contemporary healthcare facilities as per IPHS, 2022 norms and the building will be human centric and GRIHA V.2019 compliant.

Details of Project

Assignment Title:	Design & Construction of 150 Bedded New District Hospital in Kaliabor, Assam in EPC Mode
Name of Contractor (EPC)	GLOBALZONE SANITORY INFRASTRUCTURE PVT. LTD 1/6 VIKRANT KHAND, GOMTI NAGAR, LUCKNOW – 226010
Project Name:	Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST)
Financial Assistance:	World Bank
Name of (PMU):	Assam Health Infrastructure Development and Management Society (AHIDMS), Government of Assam.
Name of Project Management Consultant (PCCMC):	Mott MacDonald Pvt. Ltd.
Contract Number:	IN-AHIDMS-345993-CW-Kaliabor

[1]ESMF Document of World Bank ASSIST Project.

CHAPTER I: INTRODUCTION

1.1 Project Background

The state of Assam is interwoven by mountains, valleys and two major river systems viz. Brahmaputra and Barak are situated in the eastern most part of India. It is the largest north-eastern state in terms of population while second in terms of area. Assam covers an area of 78,438 km^2. The state is bordered by Bhutan and Arunachal Pradesh to the north; Nagaland, Arunachal Pradesh, and Manipur to the east; Meghalaya, Tripura, Mizoram, and Bangladesh to the south; and West Bengal to the west. At present, Assam has 35 administrative districts which are further divided into five regions namely Barak Valley, Central Assam, Lower Assam, North Assam and Upper Assam.

As per the Census 2011, the total population of Assam is 31,205,576 of which 15,939,443 are males while females are 15,266,133. Thus, the population of Assam forms 2.58 percent of India in 2011. And the population density stands at 398 per square km which is higher than the national average of 382 per square km.

Assam is continuously working towards development of the health sector. During 2017-19 Assam was one of the states with highest maternal mortality rates (MMR), with around 205 deaths per 100000 live births. However, NHFS data of (NFHS 2019-2021, and 2005-2006) indicates an improvement in other health outcomes, with 87 percent of women giving birth in a facility now as compared to 24 percent in 2005. Antenatal care has also improved from 66 to 85 percent. These improvements in the indicators can be attributed to several interventions of the Govt. of Assam in the health sector.

However, at the district hospital (DH) level bed availability is lower in the state compared to national average: at present, DHs in Assam have 18 beds/100,000 population compared to the national average of 24 beds. The proportion of communicable, maternal, neonatal, and nutritional diseases (CMNND) contribute to 34.06% of total disease burden. Diarrheal diseases, lower respiratory tract infections, neonatal pre-term birth and tuberculosis are the leading causes of deaths due to CMNND in the State.

In order to have enhanced access to quality of secondary health care, Assam Health Infrastructure Development & Management Society (AHIDMS), Medical Education and Research Department, Govt. of Assam is implementing "Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST)" Project with financial assistance from the World Bank. Under the project 9 new 100-200 Bedded District Hospital will come up in 9 districts of the state.

One of the proposed locations is in Kaliabor, Nagaon district where 150 bedded District Hospital is proposed in the premises of existing SDCH, Kaliabor. It has been envisioned that the proposed DH at Kaliabor will come a long way in fulfilling the gap in providing secondary health care services not only to the vicinity and nearby locations but also to the entire district. Benefitting all section of people of the district, proposed DH will not only save lives but also provide access to important health facilities that were not available in around 30 km area.

The project Contract has been assigned to Globalzone Sanitory Infrastructure Pvt. Ltd. by AHIDMS. To address Environmental and Social Issues during implementation of the project, Globanzone Sanitory Infrastructure Pvt. Ltd. is responsible for conducting ESIA of the specific sites of proposed DH and prepare the site-specific Contractor's Environmental and Social Management Plan (C-ESMP) for the proposed DH at Kaliabor which is also a part of contract obligation. Throughout the project implementation process, Global zone Sanitory Infrastructure Pvt. Ltd. will be responsible to adhere to this C-ESMP for compliance of Environmental and social safeguards. The C-ESMP will be updated as and when required or in case addition of any activity which is not a part of this C-ESMP.

[1]ESMF Document of World Bank ASSIST Project.

1.2 Objectives of the ESIA and C-ESMP:

1.2.1 Environmental & Social Impact Assessment (ESIA):

The major objectives of ESIA are:

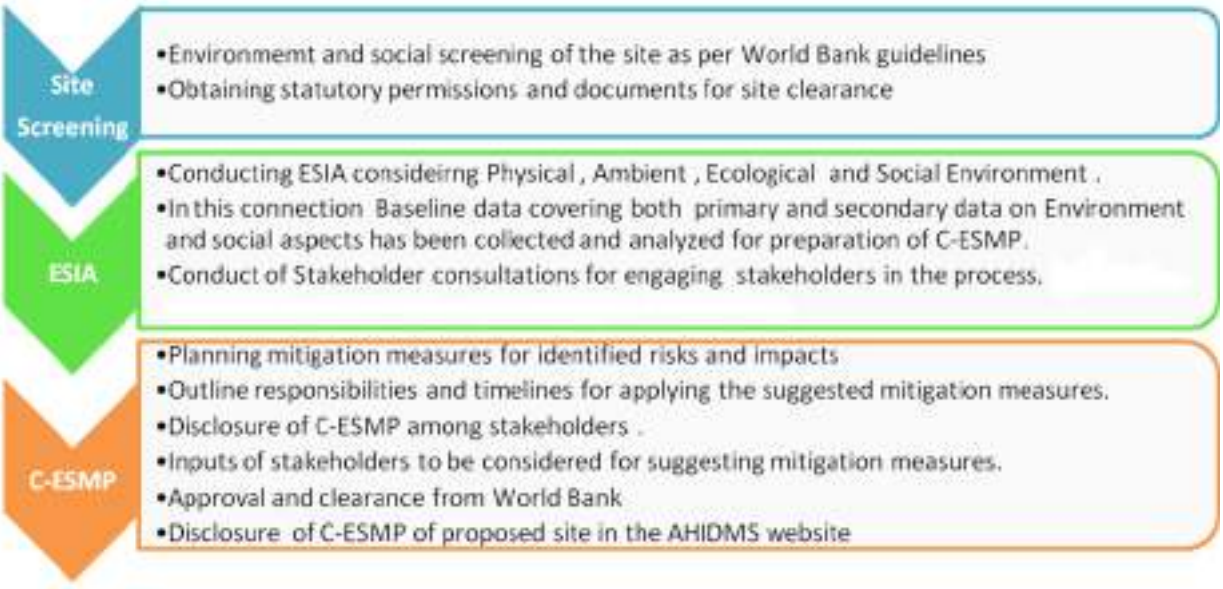
a) Assessment and collection of primary and secondary data on physical, ambient, ecological, social and environment of the proposed site.
b) Review of existing National and State level policies, legislations and regulations along with that of policies and frameworks of World Bank and examine applicability of the relevant one in implementing the project at the proposed site.
c) Assessment and identification of environmental, social risks and impacts of the proposed site.
d) Identification of Stakeholders of the project in the district and implementing Stakeholder engagement programme at the proposed site to involve all stakeholders in the project implementation process and to generate awareness for the local community.

C-ESMP: The major objectives of C-ESMP are:

a) To manage all identified Environmental and social impacts, risks and liabilities during pre-construction, construction and maintenance and operation of the project
b) To plan and implement strategies for Environmental, social, health, and safety (ESHS) safe guard elements
c) To comply with all applicable regulations and standards related to Environmental, Social and Labour management and safeguards
d) To avoid, mitigate and manage negative impacts on heritage and cultural properties
e) To plan and provide better living environment to labours at labour camps and work sites and maintain Water, Sanitation and Hygiene (WHO, WASH) standards
f) To prevent as well as redress grievances on possible risks of Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) and Gender-Based Violence (GBV), of workers and community and sensitization of both on the same
g) Disclosure of C-ESMP

1.3 Methodology:

The methodology for conducting ESIA and preparation of C-ESMP is broadly categorized in the 3 parts as given below:



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CHAPTER II: PROJECT DESCRIPTION

2.1 Location

The project district Nagaon is situated at the middle of the state of Assam. The proposed location of the District Hospital is in the premise of Kaliabor situated at Kaliabor Revenue Circle of the Nagaon District of Assam as shown in Figure 1. The district covers an area of 3,973 Sq. Km out of the State total areas of 78,438 Sq. Km The rank of the district in term of area is 4th among the district of Assam. The Geographical coordinate of the site is 26°35'15.0"N latitude and 92°58'30.0"E longitude. In the North it is bounded by –Sunari village, in the East is Silghat-Jakhalabandha road, in the South is the 37 National Highway and in the West Jakhalabandha Higher Secondary school is located. The Total land area covered by the proposed project site is 8 Bigha, 2 katha (11249.739 sq. m).

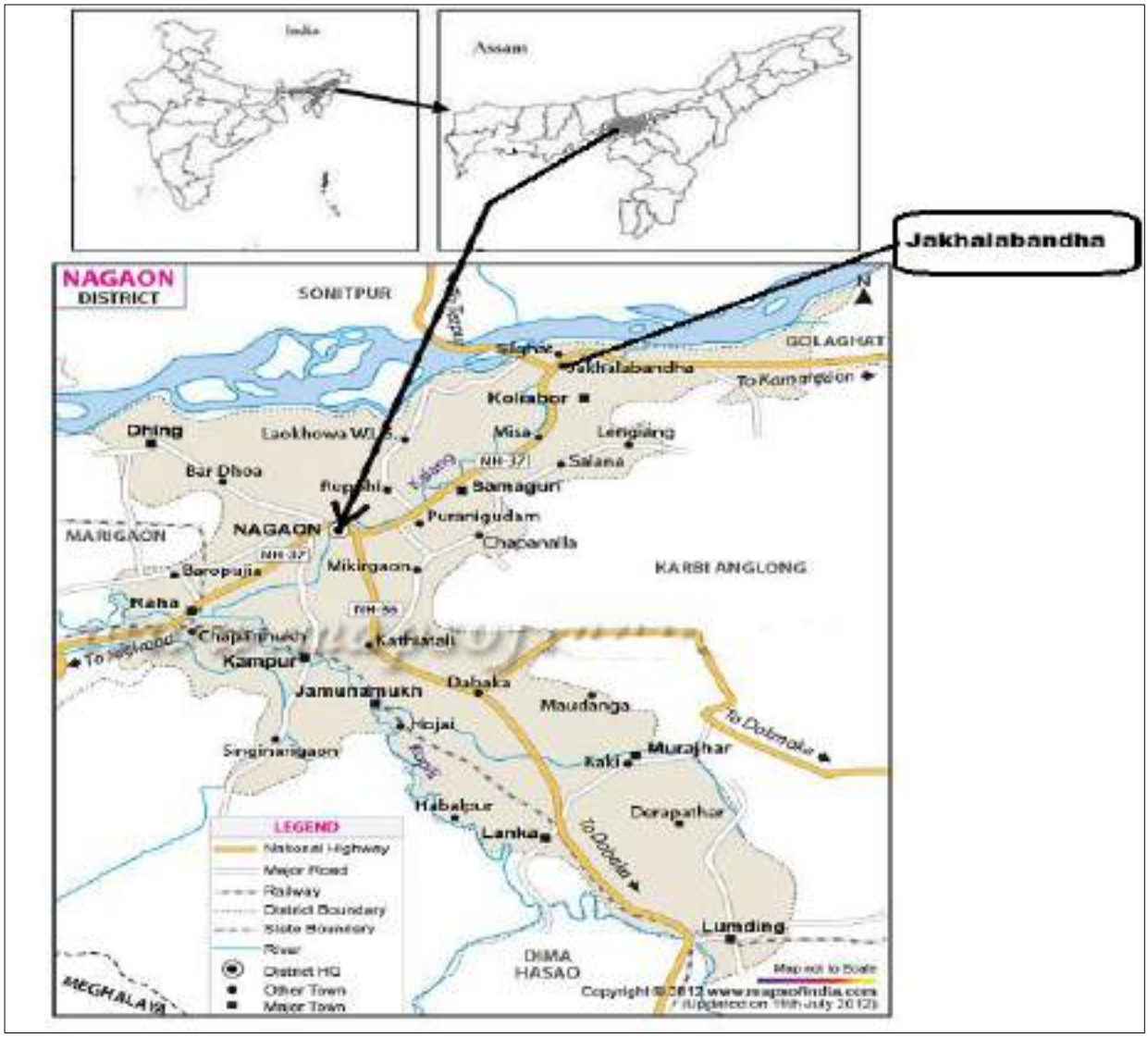

Figure 1: Location of the site of proposed Kaliabor District Hospital

2.2 Introduction to the proposed Project Site

The proposed project involves a 150-bedded District Hospital (DH) designed to be human-centric, user-friendly, and compliant with GRIHA standards, aiming for a 3-star rating. The site development includes

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dismantling existing structures and relocating utilities, with all necessary permissions obtained from relevant government departments. The building design features a G+5 structure, housing the Main District Hospital Mortuary, Gas Manifold, and BMW and ESS Blocks. The project encompasses a development area of 7,860.70 sqm within a total campus area of 11,249 sqm, including a boundary wall of 490 meters. Site plan of the existing Jakhlabandha (CHC) FRU & SDCH showing the existing structures and proposed location is enclosed as **Annexure 1.**

Table 1: Details of infrastructure at the premise of Kaliabor SDCH & FRU

Sl. No	Building Details	Area of the Building (sq. meter)	To be Demolished/ to be retained
1	Existing Jakhlabandha (CHC) FRU Block	2140.1	To be Demolished
2	Staff Quarters-1	192.5	To be Demolished
3	Staff Quarters-2	66.5	To be Demolished
4	Staff Quarters-3	227.5	To be Demolished
5	Staff Quarters-4	256.6	To be Demolished
6	Staff Quarters-5	189.5	To be Demolished
7	Parking Area	66.9	To be Demolished
8	Incinerator	48.2	To be decided by Hospital Authority
9	Oxygen Plant and ETP	100.8	To be Demolished
10	Laboratory	340.0	To be Demolished
11	Storeroom	97.03	To be Demolished
12	Doctors Quarters-1	322.4	To be Demolished
13	Doctors Quarters-2	87.0	To be Demolished
14	Superintendent Quarters	302.4	To be Demolished
15	D.G. Rooms	36.2	To be Demolished
16	SDCH	1395	No Demolition
17	BPHU	112	No Demolition

Photographs

Figure 2: Existing Jakhlabandha (CHC) FRU

Figure 3: Existing Jakhlabandha (CHC) FRU

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Figure 4: Houses Inside the Campus

Figure 5: Oxygen Plant & ETP

Figure 6: Medical waste incinerator

Figure 7: DH adjacent road area

The design of the proposed 150 bedded DH design will be human centric and user friendly as well as GRIHA compliant. Project envisages achieving 3-star GRIHA rating for the DH. Planned building design and summary of specification for construction is given in **Annexure -2.2.3 Proposed Components for the Project Site**

The proposed 150-bedded District Hospital (DH) will be designed to be human-centric, user-friendly, and compliant with GRIHA standards, with the objective of achieving a 3-Star GRIHA rating. The building will incorporate universal access features such as ramps, handrails, and appropriate fixtures on all floors. Fire safety provisions, including an additional staircase or ramp for emergency evacuation, will also be integrated into the design. The project will include an Effluent Treatment Plant (ETP) with a capacity of 30 KLD and a Sewage Treatment Plant (STP) with a capacity of 100 KLD. A dedicated biomedical waste storage facility has also been incorporated into the design.

Ground Floor: The ground floor will accommodate the Emergency Care Unit and the Outpatient Department (OPD), ensuring easy accessibility for patients requiring immediate medical attention and routine consultations.

First Floor: The first floor will house the Outpatient Department (OPD) and the Administrative Unit, facilitating efficient hospital management and coordination of outpatient services.

Second Floor: The second floor will be dedicated to the Mother and Child Hospital, providing specialized facilities for maternal and paediatric healthcare services.

Third Floor: The third floor will include a waiting area with public toilets, lift lobby, and staircase, along with supporting facilities such as the Doctor's Lounge, Nurse's Lounge, Pantry, and Nurse's Station to enhance staff comfort and operational efficiency.

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Fourth Floor: The fourth floor will comprise the Burn Unit, General Ward Complex, and ANC and PNC Wards, catering to specialized treatment, inpatient care, and maternal health services.

Fifth Floor: The fifth floor will accommodate the Blood Bank, High Dependency Unit (HDU) Ward, and Operation Theatre (OT) Complex, providing critical care and advanced medical treatment facilities.

In addition to the above, the hospital will be equipped with a comprehensive biomedical waste management system, including three categories of BMW rooms and collection areas on each floor. Supporting infrastructure will include an Effluent Treatment Plant (ETP) of 30 KLD capacity, a Sewage Treatment Plant (STP) of 100 KLD capacity, and a dedicated biomedical waste storage area. Other supporting facilities will include waiting and reception areas, body viewing and cold storage facilities, post-mortem and embalming rooms, instrument and storerooms, X-ray and supervisor rooms, changing rooms, and adequate toilet facilities to ensure smooth, hygienic, and environmentally compliant hospital operations. The details of the proposed site design and project components are provided in Annexure 2.

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CHAPTER III: ENVIRONMENTAL AND SOCIAL BASELINE

3.1 Introduction

The Environmental and Social data have been collected for assessment of quality of environment and know about actual environmental and social condition of proposed project area. Environmental quality management parameters for monitoring of air, water, noise and soil were conducted in the proposed construction area through a NABL accredited laboratory. The samples were collected considering study area of 5 km radius from the proposed DH location. The results of monitoring parameters in the project area were analysed to assess the impacts of proposed construction activities on the environment.

3.2 Physical Environment:

3.2.1 The institutions that exist in and around the proposed DH site

Hospital	• Kaliabor Sub Divisional Civil Hospital (SDCH) inside of Proposed DH • Nagaon Medical College and distance 50 KM from the proposed site
Market	• Daily market at Jakhalabandha town 2 KM from site.
Police station	• Kaliabor Police station is approx. 3KM away from the proposed site
Educational institutions	• Higher Secondary School is approx. 500 m away from the proposed site. • Kaliabor College is approx. 4 km away from the proposed site.
Temple	• Historic Kamakhya temple is located 8 KM away from the proposed site. • Narasingha temple is located approx. 1 km away from the proposed site. • Madhava Dewalori temple is located approx. 1.2 km away from the proposed site.

3.2.2 Environmental Baseline Survey

The baseline data survey was conducted during March to May 2024. Air, water, soil and noise samples were collected from the locations as tabulated below in Table-2 to examine the baseline environment quality.

Figure 8: Environmental Baseline data collection location

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Table 2: Details of locations for collection of Baseline Environmental data

Sl. No.	Sampling Location	Distance from DH site	Direction from the DH site
Location 1	Jakhalabandha, Project Site	--	--
Location 2	Jakhalabandha Bajhjan	Approx. 4.7 km	North
Location 3	Mikir Gaon Hatbor Sukmuti	Approx. 3.5 km	South
Location 4	Borabhakati	Approx. 3.0 km	East
Location 5	Sunari Gaon Hatbor Miri Bheti Niz Kaliabor	Approx. 2.4 km	West

3.2.3 Ambient Air Quality Monitoring

Methodology: To establish the baseline air quality, Ambient Air Quality (AAQ) monitoring was carried out during February to May 2024 and air quality monitoring stations along with weather station were set up at the data collections locations.

For assessing the air quality, Particulate Matter PM10, PM2.5, SO_2 and NO_2 were monitored in the ambient air at identified locations to establish baseline for air quality prior to the start of the construction activity. The air quality parameters were monitored in accordance with the National Ambient Air Quality Standards as given in Table-3.

Table 3: Ambient Air Quality Baseline Data

Sl No	Pollutant	Methods of Measurement	Time Weighted Average	NAAQ (2009) Standards (µg/m³)	Ambient Air Quality Baseline Results (µg/m³)				
					Locations				
					1	2	3	4	5
1	PM 10	IS 5182 (23)	24 hours	100	68	60	64	65	57
2	PM 2.5	GEEC/SOP/01 USEPA FRM 40 CFR	24 hours	60	30	28	29	34	32
3	Sulphur Dioxide (SO_2)	IS 5182 (2)	24 hours	80	<5	8	<5	<5	7
4	Nitrogen Dioxide (NO_2)	IS 5182 (6)	24 hours	80	11	14	12	9	11

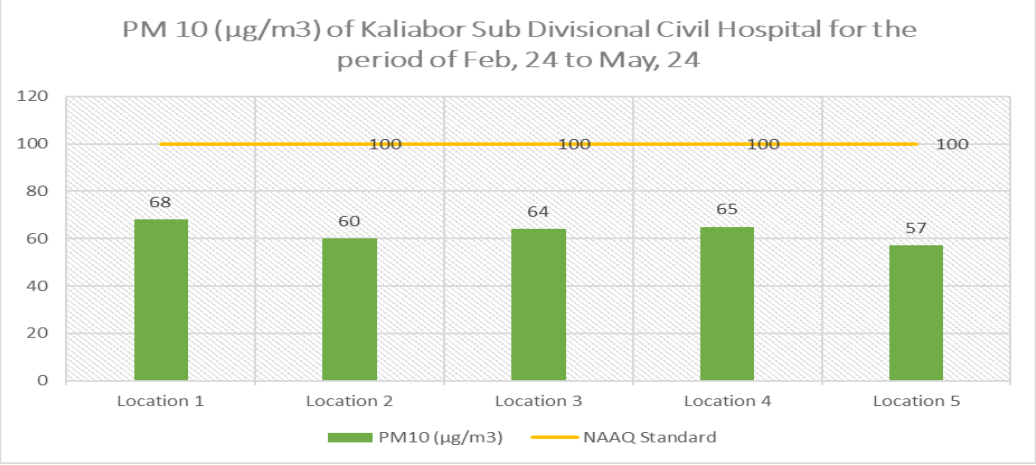

Figure 9: Graphical representation of PM10 (µg/m3) of Kaliabor Sub Divisional Civil Hospital area

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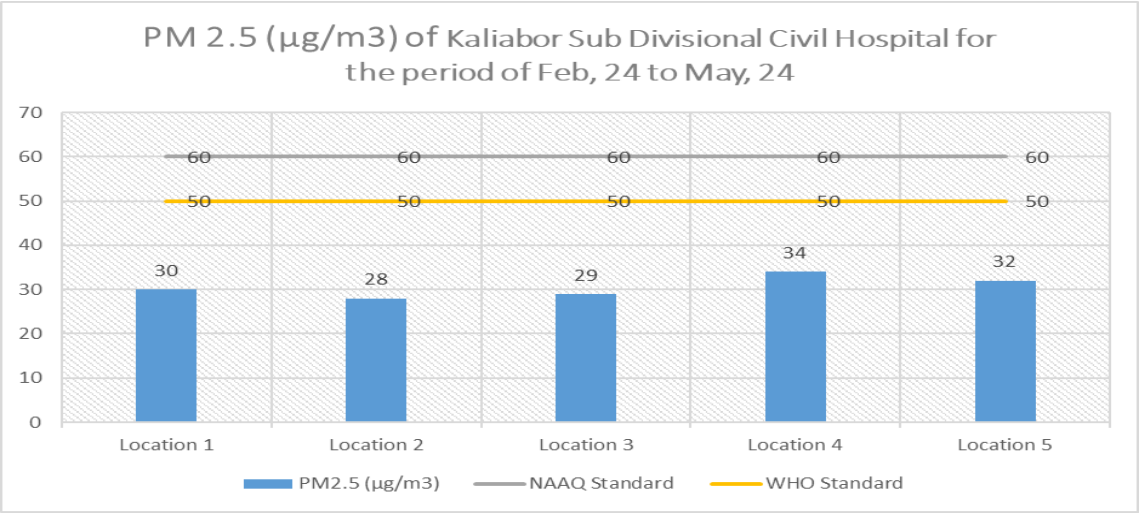


Figure 10: Graphical representation of PM2.5 (µg/m3) of Kaliabor Sub Divisional Civil Hospital area

The monitored values are compared with National Ambient Air Quality Standards prescribed by Central Pollution Control Board (CPCB) and International Finance Corporation (IFC) Environmental, Health, and Safety (EHS) for residential and rural areas. The Ambient air quality levels meet the National air quality standards for rural and residential area along the proposed construction locations. Overall, the air quality in the proposed construction areas is well within the National Ambient Air Quality Standards (NAAQS) prescribed by MoEF&CC. However, the concentration values for PM10 and PM2.5 are slightly higher than the IFC EHS standards.

3.2.4 Noise Quality Monitoring

A preliminary noise level monitoring was undertaken to establish the baseline of noise level and to identify the major noise generating sources in the project area. To assess prevailing noise levels in the surroundings of the project area, an ambient noise monitoring was carried out. Noise in the project area was assessed using the GoI and IFC EHS noise guide values which are similar for day and nighttime residential and nighttime industrial land uses.
Locations identified for noise level measurement are depicted in **Table-4.** The selected monitoring location is representative of residential cum rural area. The background noise level at the monitoring location is generated from normal activities, congested marketplaces and traffic on the road section in the rural area.

Methodology: Sound Pressure Level (SPL) measurement was taken at an interval of 1 minute using a sound level meter of Lutron make Digital Sound Level Meter. At the monitoring locations, daytime noise levels were monitored during the period 6 am to 9 pm and night-time noise levels during the period 9 pm to 6 am. The readings were analysed and a frequency distribution table prepared from which 24-hour and average noise levels were calculated.
It can be seen from the results that at proposed construction location, the ambient noise levels are within the permissible limits for residential areas prescribed by CPCB and by IFC EHS standards of <65dB(A) and <55dB(A) for daytime and night-time respectively.

Table 4: Noise Level Baseline Data

Sl. No	Location	Ambient Noise Standards (CPCB) for commercial area		Average Noise Level in dBA	
				Day time	Night Time
		Day time	Night Time	Leq	Leq
01	Location 1	<65dBA	<55dBA	63.1	44.1
02	Location 2	<65dBA	<55dBA	53.1	42.6
03	Location 3	<65dBA	<55dBA	52.6	40.1
04	Location 4	<65dBA	<55dBA	50.6	41.6
05	Location 5	<65dBA	<55dBA	54.1	43.4

[1]ESMF Document of World Bank ASSIST Project.

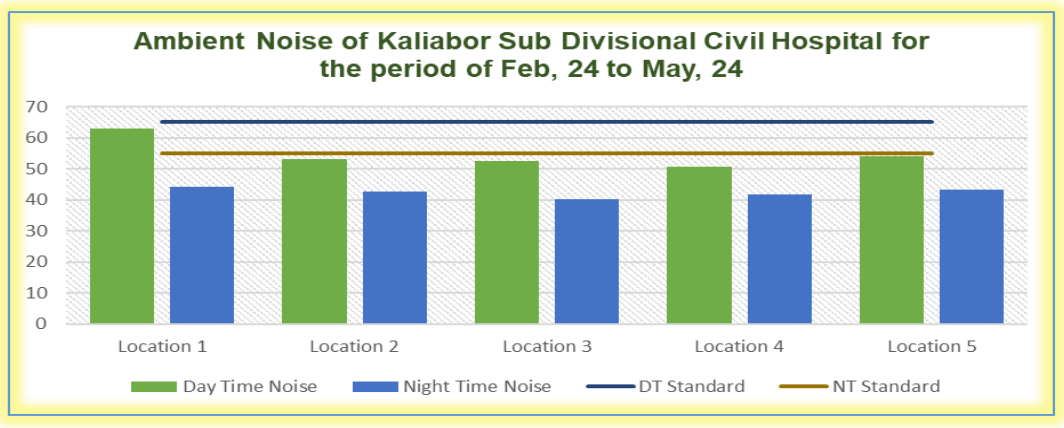


Figure 11: Graphical representation of Ambient noise level of Kaliabor Sub Divisional Civil Hospital area

It is found that the recorded noise level is lower than the permissible limits for commercial area prescribed by CPCB standards of 65 dB(A) and 55 dB(A) for daytime and nighttime respectively.

3.2.5 Ground Water Quality Monitoring

Five locations were identified for groundwater sampling to establish baseline of water quality in the area. The sampling locations are detailed in the Table- 2:

Methodology: Samples were collected as per IS- 2488 (Part I-V). Sample was analysed as per IS: 10500-1991. Grab sample was collected from water source and was analysed for various physio- chemical parameters as per the procedures laid down in the APHA and BIS. Atomic Absorption Spectrophotometer and UV/VIS Spectrophotometer were used for analysis of water samples according to the necessity.
The analysis result of the collected water sample shows that the quality of ground water in the project meets the IS: 10500-1991 standards for drinking water. The baseline results of water quality are given in Table-5.

3.2.6 Soil Quality Monitoring

To establish soil quality baseline in the proposed Construction areas, five samples of soil were collected from the construction location and analysed for 7 parameters. The result of soil quality at the construction area is given in Table-6 below.

Methodology: Samples were collected as per IS- 2488 (Part I-V). Soil samples were collected from February to May,2024 from the location as shown in Table 2. Samples were analyzed as per IS-2720, IS-14767, IS-15106.

[1]ESMF Document of World Bank ASSIST Project.

Table 5: Baseline Ground Water Quality data

Sl. No	Description	Method	Unit	Results					IS- 10500:2012	
				Location 1	Location 2	Location 3	Location 4	Location 5	Requirement (Acceptable Limit)	Permissible Limit in the absence of alternate source
1	pH	IS 3025 Part 112022	-	6.53	6.52	6.55	6.82	6.70	6.5-8.5	No relaxation
2	Conductivity	IS 3025 Part 14 1984 (RA:2019)	ms/ cm	0.0255	0.03	0.231	0.333	0.308	-	-
3	Colour	IS 3025 Part 4 2021	Haze n	Colorless	Colorless	Colorless	Colorless	Colorless	5	15
4	Total Dissolved Solids	IS 3025 Part 16 1984 (RA:2017) s	Mg/l	154	120	93	128	120	500	2000
5	Total Suspended Solids	IS 3025 Part 17 1984 (RA:2017)	Mg/l	<10	<10	<10	<10	<10	-	-
6	Turbidity	IS 3025 Part 10 1984 (RA:2017)	NTU	0.15	0.1	<1	0.15	0.15	1	5
7	Dissolved Oxygen	IS 3025 Part 38 1989 (RA:2019)	Mg/l	4.3	3.8	3.5	3.7	4.3	-	-
8	Chlorides	IS 3025 Part 32 1988 (RA:2019)	Mg/l	15.88	13.9	<1	<1	15.88	250	1000
9	Fluoride	IS 3025 Part 60 2008 (RA:2019)	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	1	1.5
10	Hardness	IS 3025 Part 21 2009 (RA:2019)	Mg/l	92.8	76.8	72	112	76.8	200	600
11	Iron	IS 3025 Part 53 2003 (RA:2019)	Mg/l	0.11	0.34	0.11	0.11	0.11	0.30	No relaxation
12	Odour	IS 3025 Part 5 1983 (RA:2017)	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable

[1]ESMF Document of World Bank ASSIST Project.

Sl. No	Description	Method	Unit	Results					IS- 10500:2012	
				Location 1	Location 2	Location 3	Location 4	Location 5	Requirement (Acceptable Limit)	Permissible Limit in the absence of alternate source
13	Oil & Grease	IS 3025 Part 39 2021	Mg/l	<2	<2	<2	<2	<2	-	-
14	Sulphates	IS 3025 Part 24 1986 (RA:2019)	Mg/l	3.6	<1	<1	<1	<1	200	400
15	Nitrate	IS 3025 Part 34 1988 (RA:2019)	Mg/l	<5	<5	<5	<5	<5	45	No relaxation
16	E. Coli	Hi Media Kit,	Present/Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
17	Total Coliform	APHA 23rd Edition 2017	Present/Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

[1]ESMF Document of World Bank ASSIST Project.

Table 6: Baseline Soil Quality data

Sl. No	Parameters	Unit	Result as per IS-2720, IS-14767, IS-15106 standards				
			Location 1	Location 2	Location 3	Location 4	Location 5
1	pH Value (1:2.5)	-	6.1	4.57	5.1	4.51	4.65
2	Water Soluble salts as EC(1:2.5)	mS/cm	4.16	0.9	0.281	0.9	0.7
3	Moisture Content	%	19	22.3	20	21.5	22.2
4	Sulphite as SO3	%	5.6	2.2	4.8	2.8	2.4
5	Chloride	mg/kg	7.8	4.3	6.9	4.6	4.4
6	ORP	mV	431	456	386	459	475
7	Organic Matter	%	2.1	2.6	1.6	2.3	2.1

pH value (1:2.5) refers to the ratio of soil to water used in the analysis of the soil sample to determine its pH level

3.2.7 Weather Data

Table 7: Weather (average temperatures) data of Nagaon district during 2020 to 2023

Year	Average Temperature	
	Min (^{0}C)	Max (^{0}C)
2020	9.1(Jan)	39.0 (June-Aug)
2021	9.6 (Jan)	40.00 (June-Aug)
2022	10.0 (Jan)	38.0 (June-Aug)
2023	10.0 (Jan)	41.0 (June-Aug)

(Data Source: https://www.visualcrossing.com/weather-history/Nagaon/metric/2020-01-01/2020-12-31)

3.2.8 Rainfall Data of Nagaon District:

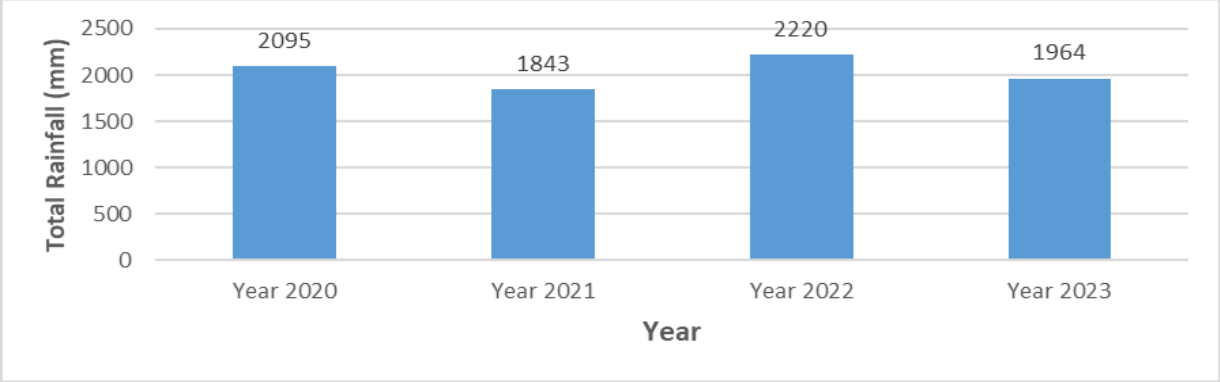


Figure 12: Rainfall data of last four years
Source: DM Plan, Nagaon, 2024

3.2.9 Flood History in the District:

Table 8: Flood Records of Nagaon District

Year	Water level of Nagaon River
2017	Brahmaputra River WL 68.19 m. (13/08/2017)
	HFL Silghat Town: 68.38 m.
2022	River Kopilli at Kampur WL 61.24 m.

Considering the HFL, the Finished Floor Level at Ground Floor which will be 69.155 metre. of the proposed DH is considered as 0.775 metre. above HFL. Considering the latest water level from the flood that occurred on August 8, 2024, the Finished Floor Level (FFL) at the Ground Floor of the proposed DH is set at 69.155 meters, which is 0.500 meters above the flood water level measured on-site.

3.2.10 Earthquake History in the District:

Assam fall under the seismic zone V making the entire State prone to earthquakes of moderate to very high intensity. The major earthquakes recorded from 2015 to till date are as follows:

Table 9: Earthquake Records of Nagaon District

Year	Earthquakes	Magnitude				
		M0	M3	M4	M5	M6
2015	Yes			Yes		
2016	Yes			Yes		
2017	Data not available					
2018	Data not available					
2019	Data not available					
2020	Data not available					
2021	Yes			Yes		
2022	Yes			Yes		
2023	Yes			Yes		

(Source: DM Plan of Nagaon District)

3.3 Biological Environment:

This area is neither coming under any type of Protected Forest nor Reserve Forest. There is no Protected Area (National Park, Wildlife Sanctuary and Biosphere Reserve) located within 5 km radius of the project site.

3.3.1 Rare or Endangered Species

The SDCH campus has many trees and green cover. The local forest department has been consulted to know the presence of any endangered and protected species of flora and fauna within the formation width. It is confirmed by the forest department officials that there are no endangered species that are likely to be affected by the current project.

During the construction period, if any endangered and or protected species of flora found within the surrounding project site, necessary mitigation measures will be adopted to protect such species. Also based on the joint inspection, a suitable compensatory afforestation plan will be prepared to mitigate the loss of vegetative cover due to the project activities.

3.3.2 Flora and Fauna

The Kaliabor Revenue Circle was endowed with natural beauty, fauna and archaeological treasures. However, the Flora and fauna of the area are not disturbed, and Natural drainage pattern is not obstructed. The data of flora and fauna is collected from secondary sources is as given in Annexure 3.

3.4 Social Environment

3.4.1 Socio-Economic Characteristics of Nagaon District

The socio-economic data of the district has been collected from different secondary sources viz. Census of India 2011, District Census Handbook: Nagaon District, 2011, Directorate of Health, District Administration, Nagaon and so on. The socio-economic data of the district as well as in the context of revenue circle is analysed below.

3.4.1.1 Population and Households

The total population of Nagaon District as per Census 2011 is 2,823,768. Male comprises 143,9112 while female consists of 1384656. Out of the total population of the district, 2454234 falls under rural and 369,534 are under urban areas of the district. In rural areas 1,250,985 and 1,203,249 are males and female respectively. Accordingly, 188,127 and 117,595 are males and females respectively in urban area of the district. The percentage of urban population in the district is only 12% So it can be clearly seen that most of the population dwell in the rural areas of the district. b). The decadal growth rate of the district comes to 22% Nagaon is a quite densely populated district. The density of the district is 711 persons per sq. kms. The sex ratio is the number of females per 1000 males in the population. The district has a

Sex Ratio of 962 as against 958 in the State. c) The literacy rate of Nagaon district is 72.4 % of which 76.5 % is for males and 68.1% is for females. d) Considering the distribution of Scheduled Castes (SC) and Scheduled Tribes (ST) population in the district, we find that there are 266,350 SC persons comprising of 136,473 males and 129,877 females. The percentage of Schedules Castes population to total population is 9.4%. The total Scheduled Tribes population in the district is 115,153 comprising of 57,759 males and 57,394 females. The percentage of ST population to total population in the district is only 4.1 %.

At present the district Nagaon comprises two civil sub-divisions namely Kaliabor and Nagaon. The district consists of 10 revenue circles. All the Revenue circles comprise a total of 1412 villages. The names of Revenue Circles are: Kaliabor, Samaguri, Rupahi, Dhing, Nagaon, Raha, Kampur, Hojai, Doboka and Lanka. The district possesses 20 Community Development Blocks. The district has 17 towns. Out of which 4 towns are MBs, 4 are TCs and 9 are CTs.

The proposed DH site is in the Kaliabor Circle. Kaliabor is a historic place by the side of the Kalang river of the district. It was initially the headquarters of Barphukan during the Ahom days and was the scene of several battles against Muslims. There are a few ancient temples in Kaliabor area such as Sanbhagya Madhab, (built about 1730 A.D. by Kadamba Sarma), Dulal Madhab (built about 1730 A.D. by Kalia Thakur) and Gopal Madhab. These temples were built by the Ahom king Siva Singha. There is another temple named Basudev Bari Devalaya near Kaliabor but the year of construction of it is not known. The table below provides the population details for the various Revenue Circles within the district:

Table 10: Nos. of Villages and Population data of Nagaon District and across its Revenue Circles (As per Census of India, 2011)

Revenue Circle/ Sub-District	No. of Villages	Population (in nos.)	Sex Ratio (in nos.)	% of Children (0-6 Yr)	% of SC Population	% of ST Population	Literacy Rate (in %)
Nagaon	1431	2823768	962	16.29	9.4	4.7	72.37
Dhing	102	2,57,929	948	16.4	4.3	25.2	72.2
Doboka	115	2,38,315	953	15.5	2.35	0.68	72.09
Hojai	106	1,86,163	956	16.3	17.09	2.25	78.93
Kaliabor	224	1,74,008	974	11.4	10.38	2.68	69.69
Kampur	144	1,85,087	969	17.1	12.24	7.26	68.48
Lanka	188	3,20,313	955	14.5	15.86	5.4	75.06
Nagaon	166	3,50,274	966	15.6	8.47	3.59	83.43
Raha	128	1,48,670	999	15.6	16.65	20.86	74.7
Rupahi	64	1,78,887	951	13.02	4.3	0.75	64.55
Samaguri	194	2,74,983	970	15.2	10.38	2.68	6.83

Population Growth:

Fig-2 below shows the decadal growth of population in the district during 1901-2011 and the variation of population from 2001-2011 is 22.64% in total population.

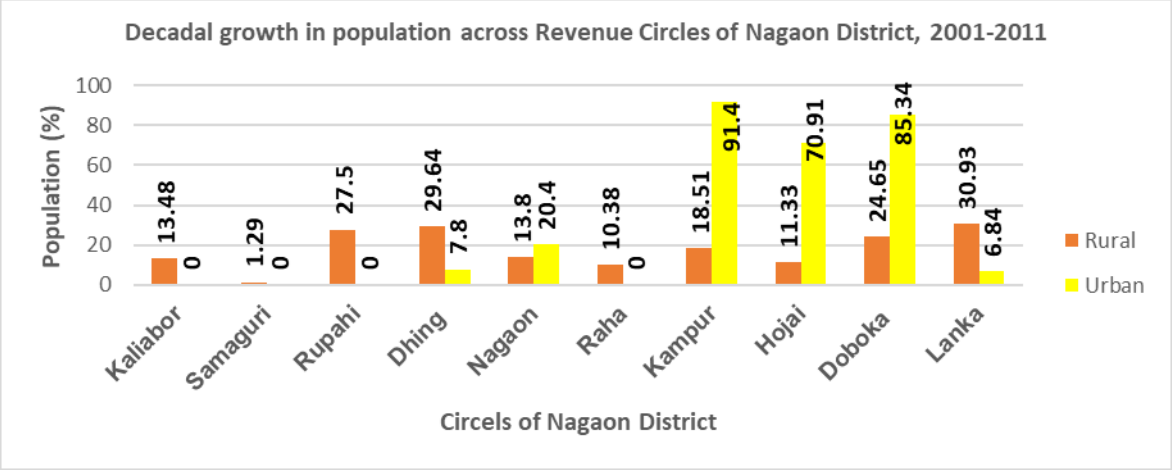


Figure 13: Decadal growth in population in Nagaon District, 2001-2011

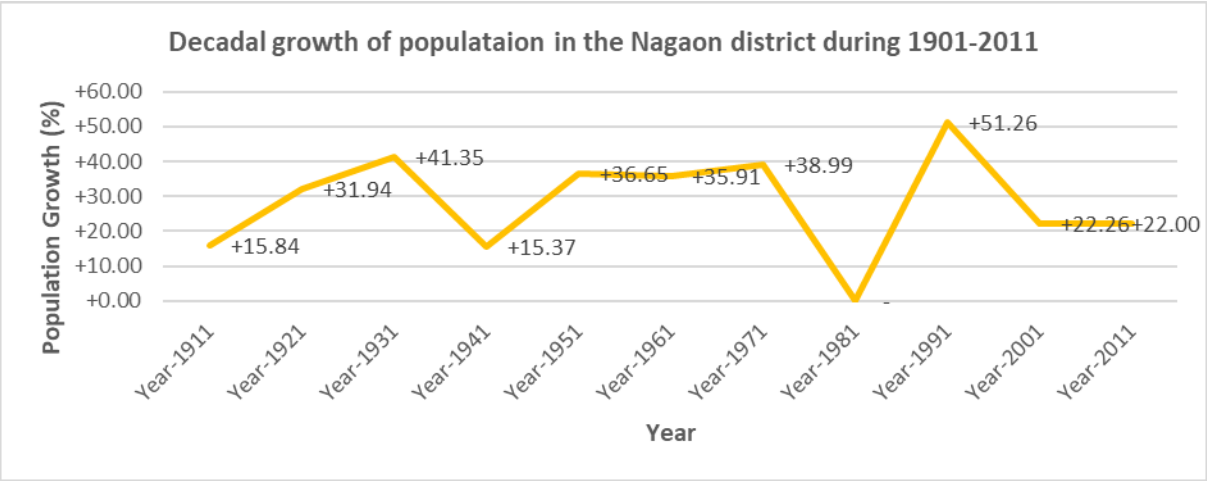


Figure 14: Decadal growth in population across Revenue Circles of Nagaon District, 1911-2011

(Source https://censusindia.gov.in/nada/index.php/catalog/43351)

The Fig.6 contains the decadal change in population of Revenue Circles by Residence, 2001-2011. There are 10 tehsils in Nagaon district, viz Kaliabor, Samaguri, Rupahi, Dhing, Nagaon, Raha, Kampur, Hojai, Doboka and Lanka. As per Census 2011, total population of the district is 28,23,768 of which 24,54,234 are in Rural and 3,69,534 are in Urban. Percentage of decadal variation from 2001-2011 is 22% with 20.52% in Rural and 32.79% in Urban. It is seen from the table that the Urban Population has increased from 12.02% in 2001 to 13.09% in 2011. The Revenue Circle having the highest decadal growth rate in total population is Dhing with 28.13% whereas lowest is in Kaliabor Revenue Circle with 13.48%. Likewise, in rural, the highest growth rate is observed in Lanka with 30.93% and lowest in Lanka with 10.38%. For Urban, the percentage of Decadal Growth is highest in Kampur with 91.74% and lowest in Lanka with 6.84% whereas there is no urban population under Kaliabor, Samaguri, Rupahi and Raha Revenue Circles.

3.4.1.2 Community Groups

The district is inhabited by mainly Assamese, Bodo-Kachari, Karbi, Tiwa, Rabha, Koch, Adibashi (Tea Tribe), and Nepali, Bengali, Garo and religious minorities. The main tribes (plains tribe) are Tiwa, Bodo Kachari and Karbi. Major language spoken is Assamese, Karbi, Boro, Bengali, Garo and Sylhetia.

3.4.1.3 Population Density

Nagaon is a quite densely populated district. The density of the district is 400 persons per sq. kms.

3.4.1.4 Sex Ratio

An important indicator of gender equality is the number of females per thousand males. As per the census 2011, Nagaon district has sex-ratio of 962 females per 1000 males, as against 958 in the State. Revenue Circle wise Sex-ratio as given in Fig 15. Show sex ratio of Kaliabor.

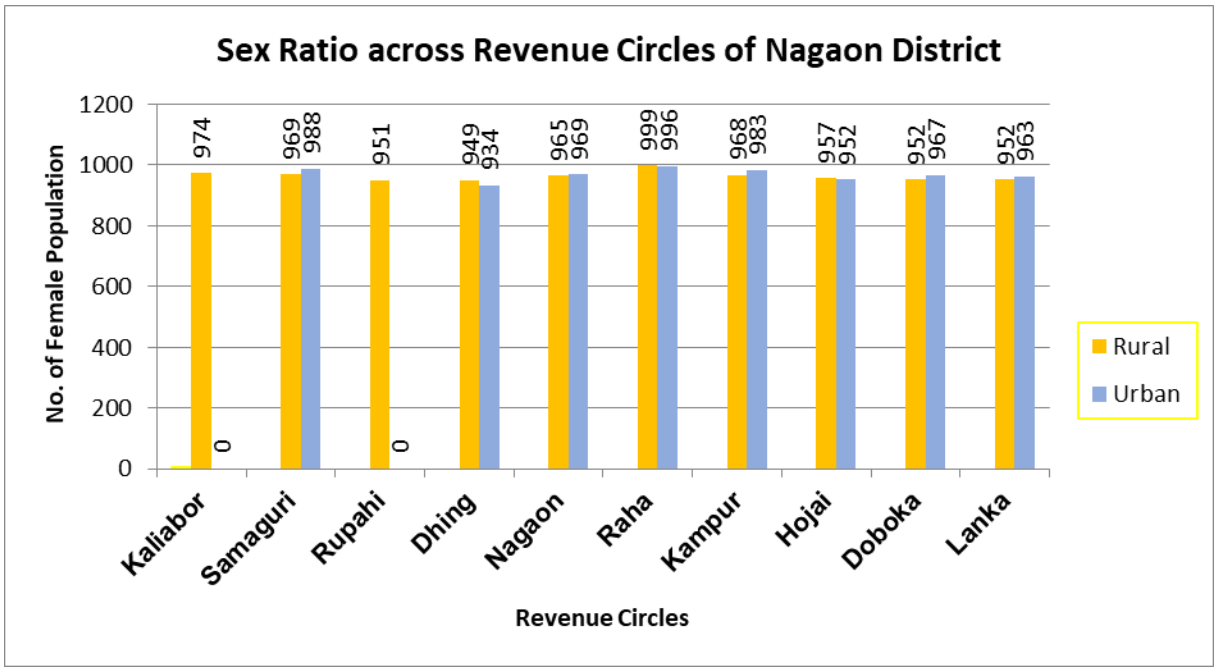


Figure 15: Sex Ratio across Revenue Circles of Nagaon District

3.4.1.5 Literacy

Literacy is another important indicator of human development. And the size and proportion of literate population gender wise has significant bearing on the socio-economic development of district. The female literacy rate is more intrinsically linked to health and social development of the family.

Literacy Rate of the district is 72.37 and the Gap in male-female literacy rate is 8.44. The highest literacy rate recorded is 83.43 in Nagaon and the lowest for the district is 62.84 against Dhing. Male Literacy Rate is highest in Nagaon with 86.48 and Female Literacy Rate is also the highest in Nagaon with a rate of 80.27.

3.4.2 Land use land cover pattern

Agriculture is the pre-dominant occupation of the people of the district. The area of the government wasteland was very large in the past but with the inflow of immigrants, large char areas of the virgin soil has been upturned. At the same time, large areas of wasteland such as forest area have been taken up for habitation. A large tract of wastelands has also been brought under tea cultivation.

[2]A census town is one which is not statutorily notified and administered as a town, but nevertheless whose population has attained urban characteristics. Census towns are governed by gram panchayats, unlike statutory town

Land use Pattern in Nagaon District, 2010-2011

Sl. No.	Land put to different uses	Area in hectares
1	Total Geographical area	4,11,030
2	Forest area	88,024
3	Land not available for cultivation	64,540
A	Land put to non-agricultural uses	42,881
B	Barren and un-cultural land	21,659
4	Other non-cultivated land excluding fallow land	18,457
A	Permanent pastures and other grazing land	5,966
B	Land under mise, trees, groves etc. not included in net area	8,968
C	Cultivable waste land	3,523
5	Fallow land	4,383
A	Fallow other than current fallow	1,985
B	Current fallow	2,398
6	Net area sown	2,35,626
7	Total cropped area	2,89,212
8	Area sown more than once	53,586

Source: Statistical Handbook Assam, 2012

3.4.3 Occupational Pattern

The occupational pattern of the district shows that; main worker force consists of about 26.03% of the workforce. The district has cultivator of 35.32%; Agricultural labourer 20.02%; Industrial workers 3.89 % and other workers of 40.77 % of the total workforce.

The following figure gives information about the number and percentage of main workers, marginal workers and non-workers by sex in sub-districts. Total Main Worker is 7,34,993 which is 26.03% of the total population. Male Main Worker is 6,36,533 which is 44.23% of the total male population and Female Main Worker is 98,460 which is 7.11% of the total female population in the district. Total Marginal Worker is 2,45,005 with a percentage of 8.68%, Male Marginal Worker is 1,30,195 with a percentage of 9.05 and Female Marginal Worker is 1,14,810 with a percentage of 8.29. Total Worker in the district including Main & Marginal workers is 9,79,998 with a percentage of 34.71, Total Male Worker is 7,66,728 with a percentage of 53.28 and Total Female Worker is 2,13,270 with a percentage of 15.40 only Total Non-Worker Population for all the10 Sub Districts is 18,43,770 which is 65.29%, Male Non Worker Population is 6,72,384 with 46.72% and Female Non Worker Population is 11,71,386 with 84.60%. Total workers are highest in Sub-District Nagaon with 1,47,651.

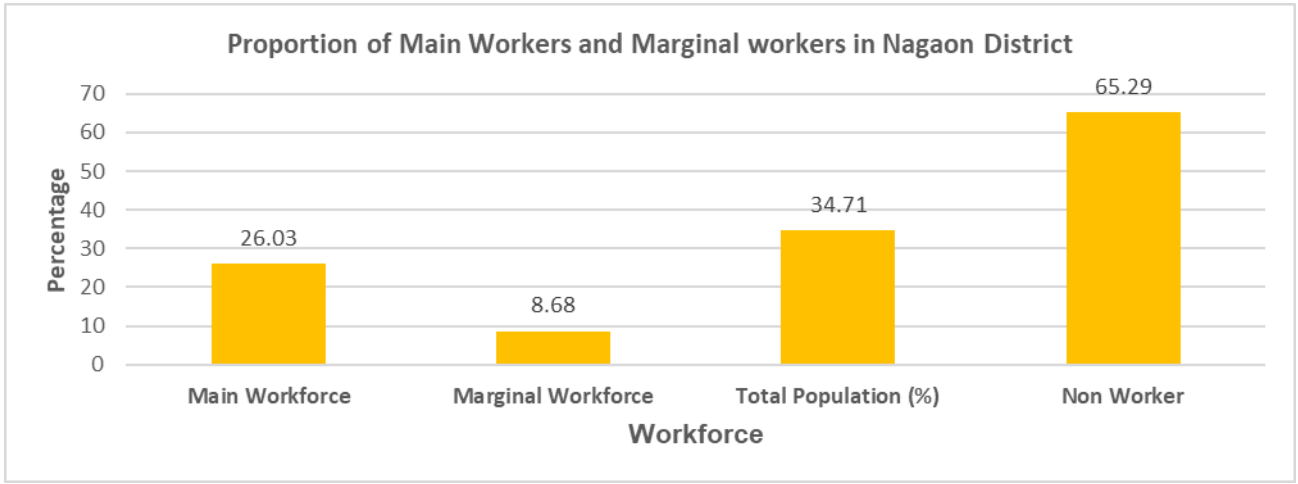


Figure 16: Proportion of Main Workers and Marginal Workers in Nagaon District

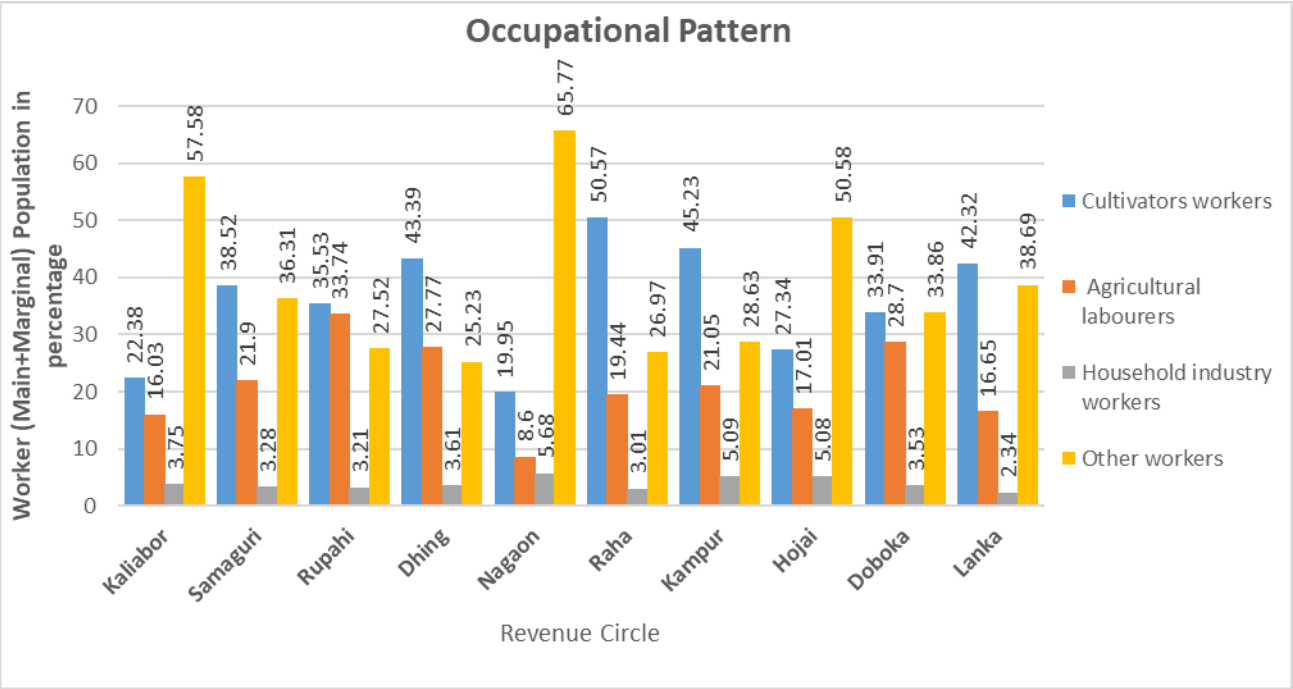


Figure 17: Occupational pattern across Revenue Circles of Nagaon district

Occupational pattern across the Revenue Circles of the district shows that Nagaon Revenue circle has 28.55 percent of the workforce involved either as cultivators or as agriculture labourers and only a small portion of workers is involved in household industry works and about 65.77 percent of workers are in involved in works other than agriculture and household industry works.

3.4.4 Education and Health Institutions

There are only 55 Higher Secondary schools and 25 colleges in the district besides one polytechnic institute and one fishery college. So basically, Nagaon district is not in much developed stage.

The Educational amenities available in the district are 1582 Lower Primary Schools, 285 Upper Primary Schools, 122 High Schools, 55 Higher Secondary Schools, 25 Degree Colleges.

The district has a high shortage of public healthcare services. Primary Health Centres (PHC), State Dispensaries, Sub-centres, and Sub Divisional Civil Hospital (SDCH) are available in the district at a distance of 50–55 km, but the facilities provided by those are not sufficient. The services offer primary care, preventive services, and maternity care (including normal delivery). Services at the public health facilities are staffed by doctors, nurses, midwives (usually responsible for primary maternity care, including antenatal care (ANC) and normal delivery), medical assistants, and pharmacists. The proposed DH at Kaliabor with advanced facilities and infrastructure is very much needed in the district so that the people in the region and those in the nearby areas could have an easy accessibility to the ever-growing demand for healthcare facilities.

The district hospital performance report by NITI Aayog, 2021, indicates that the state has lower bed strength (18 beds) at the district level compared to the National average (24 beds) per 100,000 population regarding healthcare facilities under Govt. of Assam, Table-11 gives the details as follows:

Table 11: Healthcare facilities in the Nagaon District under Govt. of Asaam

District	No. of Sub- Centres	No. of PHC's	No. of CHCs	No. of SDCH	No. of District Hospitals
Nagaon	354	80	15	0	1

Jakhlabandha (CHC) FRU which is the proposed DH site of the district is situated in the heart of Kaliabor near the Jakhalabandha town.

3.4.5 Connectivity

The district mostly relies upon road transport. The National Highway-37 passes through the district and runs through the south of the proposed site. Water transport is not available in the area. Air transport system has not been developed in the district. The nearest airport is the Tezpur Airport having limited flight connectivity however Lokpriya Gopinath Bordoloi International Airport (GAU), Borjhar Guwahati located at around 174 kilometers from Kaliabor. Nagaon district is connected to the Indian Railways network. There are two railway stations in Nagaon town, one at Haibargaon (Dhing gate) and another at Nagaon. The nearest railway junction is at Jakhalabandha which is around 2 km from the Project site.

CHAPTER IV: LEGAL AND INSTITUTIONAL FRAME WORK

This Chapter outlines existing National and State level policies, legislations, and regulations that are relevant to the project (Table-12). Further World Bank Environmental and Social Standards are set out to prevent and mitigate undue harm to people and their Environmental in the project implementation process (Table-13). There must be harmony between both sets of frameworks, but should there be any discrepancies between these, the guidelines of the World Bank shall supersede those of the country.

Table 12: Applicable National &State Laws and Policies

Sl. No	National and State Legislations/Policies/Regulations	Regulatory Bodies
1	The Constitution of India (especially, Articles 15, 16 and 46)	Govt. of India/Govt. of Assam
2	Biomedical Waste (Management and Handling) Rules 2016, and subsequent amendments	Ministry of Environment, Forest and Climate Change (MoEF & CC) / Central Pollution Control Board (CPCB) / Assam State Pollution Control Board
3	E-Waste (Management and Handling) Rules 2011 as Amendment up to 2018	MoEF &CC/CPCB/Assam State Pollution Control Board
4	• Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008 • Hazardous and Other Wastes (Management and Tran's boundary Movement) Amendment • Rules, 2016.	MoEF &CC/CPCB/Assam State Pollution Control Board
5	Plastic Waste Management Rules 2016	MoEF &CC/CPCB/Assam State Pollution Control Board
6	• The Epidemic Diseases Act 1897 • The Epidemic Diseases (Amendment) Ordinance, 2020	Parliament of India Ministry of Law and Justice
7	• The Water (Prevention & Control of Pollution) Act 1974. • The Air (Prevention & Control of Pollution) Act 1981. • Environmental Protection Act (and Rules), 1986 and 1996 Environmental (Protection) Second • Amendment Rules 2002	MoEF &CC/CPCB/Assam State Pollution Control Board
8	The Water (Prevention and Control of Pollution) Cess Act, 1977 Rules framed under the water (Prevention & Control of Pollution) Act, 1974 (Assam Rules 1977	MoEF &CC/CPCB/Assam State Pollution Control Board
9	Environmental Impact Assessment (EIA) Notification 2006 & and subsequent amendments	MoEF &CC/CPCB/Assam State Pollution Control Board
10	• Central Pollution Control Board Guidelines: CPCB Guidelines for CBWTFs (2003). • CPCB Guidelines for BMW Incinerators (2003). Revised Guidelines for Biomedical Waste Incinerator, 2017 • Revised guidelines for Common Biomedical Waste Treatment Facilities (2016). • Guidelines for Bar Code System for Effective Management of Biomedical Waste • Standards for treatment and disposal of Bio medical waste by Incineration • Environmentally Sound Management of Mercury Waste Generated from Health Care	MoEF &CC/CPCB/Assam State Pollution Control Board

Sl. No	National and State Legislations/Policies/Regulations	Regulatory Bodies
	Facilities.	
11	The Assam Air (Prevention and Control of Pollution) (Amendment) Rules, 2010	MoEF &CC/CPCB/Assam State Pollution Control Board
12	Noise (Regulation and Control) Rules 2000 amended in 2010	MoEF &CC/CPCB/Assam State Pollution Control Board
13	National Disaster Management Act 2005	National Disaster Management Authority, State Disaster Management Authority & District Disaster Management Authority
14	Solid waste management rules, 2016	MoEF &CC/CPCB/Assam State Pollution Control Board
15	Construction and demolition waste management rules, 2016	MoEF &CC/CPCB/Assam State Pollution Control Board
16	Guidance note on Liquid Medical Oxygen (LMO) Storage Tanks, April 2021	Assam State Pollution Control Board/ DoHFW
17	Maternity Benefit Act, 1961 and Assam Rules, 1965	Ministry of Labour & Employment/ Commissionerate of Labour , GOA
18	Child Labour (Prohibition and Regulation) Act 1986 and Assam (Amendment) Rules, 2017	Ministry of Labour & Employment /Commissionerate of Labour, GoA
19	Contract Labour (Regulation and Abolition) Act, 1970 and Assam Rules 1971	Ministry of Labour & Employment /Commissionerate of Labour, GoA
20	Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and Assam Rules, 2007	Ministry of Labour & Employment /Commissionerate of Labour, GoA
21	Inter-State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979 and Assam Rules 1981	Ministry of Labour & Employment /Commissionerate of Labour GoA
22	Equal Remuneration Act, 1976 Minimum Wages Act, 1948 and Assam Rules, 1952	Ministry of Labour & Employment /Commissionerate of Labour, GoA
23	Payment of Wages Act, 1936 and Assam Rules, 1937	Ministry of Labour & Employment /Commissionerate of Labour, GoA
24	Employees' Compensation Act, 1923	Ministry of Labour & Employment /Commissionerate of Labour, GoA
25	National Policy on Tribal Development, 1999	Ministry of Tribal Affairs (MoTA)/ Department for Welfare of Plain Tribes and Backward Classes, GoA
26	Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 and Rules, 1995	Department of Social Justice, GoI/ Department for Welfare of Plain Tribes and Backward Classes, GoA
27	Rights of Persons with Disabilities (PwD) Act, 2016	Commissioner for Persons with Disabilities, GoA
28	Sexual Harassment of Women at Workplace Prevention, Prohibition, and Redressal Act 2013	Ministry of Women and Child Development /Directorate of Women and Child Development, GoA/ DOHFW, GoA

Sl. No	National and State Legislations/Policies/Regulations	Regulatory Bodies
29	Right to Information Act, 2005	Ministry of Law and Justice/DoHFW, GOA

Table 13: World Bank Environmental and Social Standards (ESS) applicable to the Project

Sl. No	Environmental and Social Standards (ESS)	Applicability to the Project	References of relevance of ESS to the Project
1	ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant	Establishment of new 150 bedded DH infrastructure require C-ESMP
2	ESS 2: Labour and Working Conditions	Relevant	Labour force will be required for construction activities
3	ESS 3: Resource Efficiency & Pollution Prevention and Management	Relevant	Protection of the natural resources and efficient utilization of the resources during construction
4	ESS 4: Community Health and Safety	Relevant	Establishment of 150 bedded DH may cause discomfort to the community
5	ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Relevant	Not Relevant. Proposed DH site belongs to Health Department.
6	ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Relevant	Not Relevant.
7	ESS7: Indigenous peoples	Relevant	IPPF not Triggered as the site is not in Six Scheduled Area
8	ESS 8 Cultural Heritage	Not Relevant	No ASI identified heritage observed.
9	ESS 9 Financial Intermediaries	Not Relevant	Not Relevant.
10	ESS 10 Stakeholder engagement and information disclosure	Relevant	Stakeholders will be consulted during the construction phase whenever required.

Table 14: A comparison between existing Legislation and WB Policies relevance to Project

Sl. No	Government Laws	World Bank Policy	Relevance to the proposed DH under project
1	o Construction and demolition wastes management rules, 2016 o Biomedical Waste (Management and Handling) Rules 2016, as amended up to 2019 o Biomedical Waste Management (Amendment) Rules, 2018 o E-Waste (Management and Handling) Rules 2011 as Amendment up to 2018 o Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008 o Hazardous and Other Wastes (Management and Tran's boundary Movement) Amendment Rules, 2016. o Plastic Waste Management Rules 2016	ESS 1 Assessment and Management of Environmental and Social Risks and Impacts	o All existing structures will be demolished as site clearing measure. At present there is no use of asbestos in the existing structures. o Bio medical waste will not be generated as a part of construction activities. However, the BMW generated at the existing SDCH will be taken care of by the HCF. If any BMW generated through first aid at site, it will be disposed off at the existing SDCH BMW Disposal facility. o No major e-waste generation is anticipated during construction activities. o Hazardous waste may be generated through leakage or spills from fuel, lubricants, oil, paint, etc. containers. o Plastic waste may be majorly generated from the packaging material. However, C-ESMP will be designed considering the magnitude of impact and mitigation measures to avoid any damages to the society and the environment.
2	o Contract Labour (Regulation and Abolition) Act, 1970 and Assam Rules 1971 o Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and Assam Rules, 2007 o Inter-State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979 and Assam Rules 1981 o Equal Remuneration Act, 1976 Minimum Wages Act, 1948 and Assam Rules, 1952 o Payment of Wages Act, 1936 and Assam Rules, 1937 Employees' Compensation Act, 1923	ESS 2: Labour and Working Conditions	o Construction activities will require labour force in large number. o Protecting their rights and providing comfortable Environment to the labour may be a challenge for the contractor. o Labour Management Procedures will address and take care of the labour comfort and their rights.
3	o The Water (Prevention & Control of Pollution) Act 1974. o The Air (Prevention & Control of Pollution) Act 1981. o Environmental Protection Act (and Rules), 1986 and 1996 Environmental (Protection) Second Amendment Rules 2002 o Environmental Impact Assessment (EIA) Notification 2006 & and subsequent amendments	ESS 3: Resource Efficiency & Pollution Prevention and Management	o Construction activities are a major cause for Environmental pollution and degradation of the natural resources. o To assess the extent of impacts, baseline survey is required. However, a well-designed C-ESMP will anticipate the impacts and mitigation measures.

Sl. No	Government Laws	World Bank Policy	Relevance to the proposed DH under project
	o The Assam Air (Prevention and Control of Pollution) (Amendment) Rules, 2010 o Noise (Regulation and Control) Rules 2000 amended in 2010 Solid waste management rules, 2016		
4	o Child Labour (Prohibition and Regulation) Act 1986 and Assam (Amendment) Rules, 2017 Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 and Rules, 1995 o Rights of Persons with Disabilities (PwD) Act, 2016 o Sexual Harassment of Women at Workplace Prevention, Prohibition, and Redressal Act 2013	ESS 4 Community Health and Safety	o The labour may include child labour also. Protection of rights of the vulnerable can be challenging during construction activities. o To avoid any mismanagement, stringent policies will be required from the project side and effective GRM need to be in place.
5	o Assam Scheduled Castes and Scheduled Tribes (Reservation of Posts in Services) Act, 1978 o Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 and Rules, 1995 o National Policy on Tribal Development, 1999	ESS7: Indigenous peoples	o Protection of rights of the vulnerable can be challenging during construction activities. o To avoid any mismanagement, stringent policies will be required from the project side and effective GRM need to be in place.
6	o The Ancient Monuments and Archaeological Sites and Remains Act (or AMASR Act), 1958	ESS 8 Cultural Heritage	There are some ancient monuments, such as the statue of Unsung Hero of the Ahom Kingdom, Lachit Borphukan, Freedom Fighter Guneswari Devi and the Indian Singer Bhupen Hazarika within a 5 km radius of the proposed site but not ASI-identified heritage observed in near vicinity of the proposed site.
7	o The Constitution of India (especially, Articles 15, 16 and 46)	ESS 10 Stakeholder engagement and information disclosure	Stakeholder engagement with all the stakeholders to be a continuous process to build transparency during the construction activities.

Table 15: Environmental Statutory clearance and approval pre-construction phase

National and State Statutory Clearance	Regulatory Bodies	Salient Points
Consent to Establish for Project	PCBA, Assam	• The unit shall install a Display Board as per the Boards notification No.PCBA/LGL-95/2021/Notification/01 dated 11.11.2021 • Proper housekeeping shall be maintained • Burning of any waste within the premises is prohibited.

		• The project proponent shall develop a greenbelt/plantation area with native trees only at least 33% of the total plot area. • As per the provisions of the Water (Prevention and Control of Pollution) Act, 1974 as amended and the Air (Prevention and Control of Pollution) Act, 1981, as amended, any Officer empowered by the Board on its behalf shall have without interruption, the right at any reasonable time to enter the unit for inspection, collection of sample for analysis and may call for any information as deemed necessary. Denial of this right will cause withdrawal of the CTE
Ground Water Abstraction	GoI, Department of Water Resources CGWA	• Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their Installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate. • Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year. • Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to GWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines. • Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells/dug wells shall be collected during April/May every year and analysed in NABL • The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon • In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.
Consent to Establish for Batching Plant	PCBA, Assam	• The unit shall install a Display Board as per the Boards notification No. PCBA/LGL-95/2021/Notification/01dtd 11.11.2021 • The project proponent shall develop a greenbelt/plantation area with native trees only at least 33% of the total plot area. • The unit shall install permanent boundary line/ partition wall of minimum 10 ft height with tin/asbestos sheet or other non-porous partition material with installation of permanent boundary posts. • The Project Proponent must obtain NOC from CGWA within one month from the date of

		issue of CTO unless falling in exempted category as per MoJS Guidelines dated 24.09.2020 and amendments dated 29.03.2023 thereto
Consolidated Consent and Authorization for Batching Plant (Consent to Operate)	PCBA, Assam	• The project authority shall install a Display Board as per the Boards notification no. PCBA/LGL-95/2021/Notification/01 dated 11.11.2021 • The project proponent shall develop a greenbelt/plantation area with native trees covering at least 33% of the total plot area. • As per the provisions of the Water (Prevention and Control of Pollution) Act, 1974 as amended and the Air (Prevention and Control of Pollution) Act, 1981, as amended, any Officer empowered by the Board on its behalf shall have without interruption, the right at any reasonable time to enter the unit for inspection, collection of sample for analysis and may call for any information as deemed necessary. Denial of this right will cause withdrawal of the CTO • The unit shall not discharge any untreated effluent outside its premises. • Proper housekeeping shall be maintained. The unit shall not burn any waste inside the factory premises. • The unit shall install Screening machine, if any, with proper enclosure and dust extraction mechanism.
FIRE NOC	FIRE and Emergency Services Assam	• Construction permission from the concerned authority • Approved Drawings / Site Plan/ Layout from concerned government authority • Installation of portable fire extinguisher as per IS 15683:2006 • Good housekeeping should be maintained • Electrical wiring of the building should be either conduit or concealed type • Signage for emergency exit/entry shall be provided • Display of directional sign like entry and exit point shall be provided • Emergency lights shall be provided in the corridor/stairway

CHAPTER V: ENVIRONMENTAL & SOCIAL RISK AND IMPACTS

Construction related Environmental and Social risks and impacts with suggestive mitigation approach are discussed here. The risks, impacts and mitigation approach for design and preconstruction phase are discussed in Table 15. The risks, impacts and mitigation approach for construction phase are discussed in Table 16.

Table 16: Anticipated Impacts and Mitigation Approach – Design & Preconstruction Phase

Project Activity	Possible Impacts	Mitigation Approach
DESIGN & PRE-CONSTRUCTION PHASE		
1. Design and layout of proposed DH 2. Obtaining Consents/ Permits/ Clearances/ No Objection Certificate (NOC), etc. for establishment of new DH, RMC/ Batching Plants, Labour Camps, Storage for construction materials, tree felling, use of vehicles and equipment, connections of water supply, electricity	Anticipated no negative impacts on Physical, Ambient, Ecological and Social Environment during Design & Pre-construction phase. a) The proposed DH is planned to be constructed at the site of existing Jakhalabandha (CHC) FRU. The existing Jakhalabandha (CHC) FRU will be shifted to the Sub-Divisional Civil Hospital that co-exist in the same premise. The old structures of the Jakhalabandha (CHC) FRU will be demolished for construction of the proposed DH at the site The list of structures of the old CHC FRU to be demolished is mentioned in Table 1. b) The preliminary screening of the site reveals that the project does not require any additional land and so do not anticipate any land acquisition/ resettlement.	• The design of proposed DH will follow relevant National/State and design guidelines. • The proposed DH will be GRIHA compliant, human centric & based on IPHS guidelines. • The hospital design will focus on measures for universal access such as ramps, handrails and other fixtures etc. For comfort of the patients • Emergency exit such as second staircase/ ramp for evacuation etc. Will be included in the hospital design • Stakeholder engagement to be carried out. Display of boards and signages informing shifting of existing facility at proper and visible location
3. Tree cutting/shifting	• Total 27 numbers of trees need to be removed for clearing the site for infrastructure development • Disturbance to existing green cover	• Identification if any endangered flora from Forest Department • Permission for tree cutting/shifting from Forest Department. • Compensatory afforestation plan will be required. According to GRIHA mandate, compensatory plantation should be at least in the ratio of 1:3.
Debris disposal of demolition activities of structures including laboratories, ETP etc	• Dumping of debris of demolition activities in a unplanned manner may lead to contamination of land and water bodies in the site as well as nearby the site and inconveniences to the community. • Air and noise pollution • Public resistance for the project anticipating negative impacts of the unplanned dumping of debris • Health and safety impacts	• Prior to the commencement of works, contractor shall identify a debris disposal site (possibly near to project site) in consultation with local body and implementing agency. <u>Wastewater Contamination Control</u>

Project Activity	Possible Impacts	Mitigation Approach
		• No discharge of untreated wastewater into drains/water bodies • Use temporary storage tanks or bypass system • Sludge to be handled as per Hazardous waste management rules 2016 • Prevent runoff from demolition site <u>Dust & Air Quality Control</u> • Regular water sprinkling • Use of barricades and dust screens • Covered transport of debris <u>Noise Control</u> • Restrict demolition activities to designated hours • Use low-noise equipment near sensitive hospital areas Always ensure the use of appropriate PPE Demolition Waste Management Plan to be prepared and implemented
4. Stakeholder Engagement	• Lack of awareness on shifting of the existing Jakhalabandha (CHC) FRU may cause resistance from the public for the project. • Lack of awareness among community may restrict public participation in decision making • Lack of knowledge on the facilities to be provided by the proposed DH at their own • neighbourhood will prevent them from availing the facilities. • Lack of prior intimation of the demolition and construction activities may lead to health hazards caused by probable air, water and noise pollution.	• Stakeholder engagement to be carried out involving nearby community members and staff from existing CHC FRU. And proper and visible display of boards and signages informing shifting of existing facility to be done • Awareness on proposed DH and facilities to be provided among the community. • Prior intimation to the local community about the schedules of construction a activities. • Stakeholder consultations at specific intervals represented by all sections of the community including women.

Project Activity	Possible Impacts	Mitigation Approach
5. Grievance Redressal Mechanism for community grievances	• Public resistance anticipating negative impacts of the project like tree felling for site clearance, air and land and water pollution due to heavy construction activities • Accessibility issues of public • Land demarcation issues.	• Proper GRM Mechanism to be developed at site with a protocol to address the grievances of community.

Table 17: Anticipated Impacts and Mitigation Approach – Construction Phase

Project Activity	Possible Impacts	Mitigation Approach
CONSTRUCTION PHASE		
A. Physical Environment		
Location and design	Disturbance to the adjacent lands and the people due to overall construction activities.	• Use of the approved construction design and drawing of building construction facility and other structures. • Implementation of mitigation measures such as setting up of the hospital boundary, hard barricading, on site mitigation measures for controlling Environmental pollution etc. will minimize the impacts.
Interference with drainage patterns	Temporary flooding at site and nearby areas and contamination of the nearby water bodies (River Kolong flows in the Southeast direction at 0.750 km from DH site) due to construction activities of proposed DH	• Use of contour plan and design drawing prepared considering Highest Flood level (HFL) data of that area. • On site mitigation measures such as provision of septic tank/soak pit with the toilets so that the wastewater will not be discharged into the drainage system, • Proper drainage system for controlling runoff, • Spill control plan, etc will minimize the impacts.
Site clearance	• Disturbance to topsoil • Disturbance to existing green cover • Soil erosion and surface runoff	• Conservation of the topsoil • Compensatory afforestation • Construction to be avoided in heavy rain days • Provision and maintenance of drains and retention ponds.
Resource Efficiency Strategies (Energy, Water, Materials)	• High energy use • Excess potable water demand • High embodied materials impact • Construction waste generation	• Reduce energy consumption through design optimization, efficient systems, and renewable energy • Reduce potable water demand, treat and reuse wastewater, harvest rainwater. • Minimize embodied energy, use sustainable and local materials, and reduce construction waste. • Comply with Energy Conservation Building Code (ECBC) in HVAC, envelope, lighting controls. • Capture roof runoff and recharge groundwater or credit toward non-potable demand.
B. Ambient Environment		
Surplus earth work/soil	Runoff to cause water pollution, solid waste /debris disposal.	• Keeping record of soil quantity excavated from the site and reused in filling the foundation. • Proper disposal of excessive soil from the project at approved designated areas. • Proper bunding at the soil storage area will prevent the soil from loosening at getting carried away with runoff. • Disposal of solid waste /debris in scientific manner
Topsoil removal	• Loss of topsoil • Siltation of stacked soil	• Preservation of topsoil • Keeping record of soil quantity excavated from the site and reused in filling the foundation. • Construction of appropriate drainage system. • Removal of silt and trash choking the drainage

Project Activity	Possible Impacts	Mitigation Approach
		from the construction land.
Construction works and machine operations	• Air pollution due to airborne dust in the area causing dusty conditions. • Smoke from the DG Set, operation of machinery • Smoke from the transportation of construction vehicles • Release of finer particulate matter from sand, cement etc. during transportation of construction vehicles	• Sprinkling of water within the work area and stack the loose soil and contain it with covers to control air pollution. • Maintenance of construction equipment and machines. • Provide required PPE to workers. • Reporting and recording of incidents and accidents at project site. • Proper maintenance & active PUC Certification vehicles and machinery to be used at project site. • Proper Covering of the material during transportation • Avoid transportation during busy traffic hours and scheduling of time for transportation of construction materials in consultation with the • authorities concerned
	• Noise and vibrations from the construction activities. • Nuisance caused by noise to neighbouring areas. • Exposure to noise level from the civil work construction causing nuisance to properties • Noise, vibration, equipment wears and tear. • Injury and sicknessof workers and locals. • Accidents including electrocution may occur due to lack of proper awareness among the workers.	• The existing HCF will be segregated through hard barricading • Construction activities undertaken during the daytime as per scheduled timings for construction. • Avoid transportation during busy traffic hours • Following noise control regulations • Implementation of approved health and safety plan. • Provide required PPE to workers. Proper training to the workers and to ensure the use of PPE and safety gears/ harness etc • Reporting and recording of incidents and accidents at project site. • Prepare the Traffic Management Plan. • Installation of adequate cautionary signage
	• Excessive Ground water extraction • Pollution/contamination to water resources	• Non potable water to be used for dust suppression, curing etc. • Water requirement during peak construction activities will be met through the local water supplier. • Measures to avoid excessive water usage to be adopted • Direct discharge of wastewater into the water stream to be avoided • The hazardous material to be kept leak proof; spills to be collected and recycled
Storage of construction materials	Contamination of land, water, air	• Storage of fuel and other materials on paved surface with spill control and limited access; spills to be collected and recycled. • Record of spill control during the project with details of type and quantities of chemical spilled.
Storage of construction waste	Contamination of land, water, air	• Construction waste to be stored in a segregated manner at a designated area only. • Burning of plastic and rubber to be prohibited

Project Activity	Possible Impacts	Mitigation Approach
• **Environment Health and Safety**		
Emergency preparedness and response	• Temporary flooding may happen during monsoons in the site. Proposed site also located in earthquake Zone V also. • Fire and explosion (due to fuel storage, welding, electrical faults) • Structural collapse or excavation failure Extreme weather events (heavy rainfall, flooding, cyclones)	• An Emergency Response Team shall be formed, including trained personnel for firefighting, first aid, evacuation, and communication. • Emergency contact details (hospital, fire station, police, District Disaster Management Authority – DDMA) will be displayed prominently at the site. Temporary structures shall comply with earthquake-resistant design practices. • Immediate evacuation to open safe areas after shaking stops. • No re-entry into structures until safety clearance is provided. • Inspection of scaffolding, cranes, excavations, and formwork before resumption. • Monitoring of weather forecasts during monsoon season. • Temporary stoppage of work during heavy rainfall or storm warnings. • Safe collection and disposal of contaminated materials as per Hazardous Waste Rules. • Mandatory induction training for all workers on emergency procedures. • Periodic mock drills for fire and earthquake scenarios (at least once every six months). • Specialized training for Emergency Response Team members. Toolbox talks focusing on seasonal risks (monsoon, heat stress).
• **C. Ecological Environment**		
Felling of Trees for site clearance	Loss of native flora as well as fauna. The proposed project is likely to require the removal of 28 trees during site development activities.	• Proper marking of vegetation to be cleared, and strict control on clearing activities. Details on trees to fell for construction will be provided after completion of field survey and processing tree cutting approval from forest department. • Site survey to be done with Forest Department for identification of any endangered flora or fauna; if found, conservation plan to be implemented • Developing strategies for compensatory afforestation. • Prior permission for tree cutting has already been obtained from the Forest Department. Compensatory plantation will be carried out as per the approved conditions, using indigenous species. The planted saplings will be maintained to ensure healthy growth and survival, and efforts will be made to minimize tree removal wherever feasible.

Project Activity	Possible Impacts	Mitigation Approach
Labour Camp	• Loss of vegetation and deforestation. • Effect on fauna (including avifauna). • Loss of native flora as well as fauna Contamination of land, water, air	• Trees not to be cut/felled for construction of labour camp or any other related activities • Preventing workforce from using and disturbing the flora, fauna including tree felling for fuel; hunting of animals and fishing in water bodies to be prohibited.
D. Social Environment		
Involuntary resettlement or land acquisition	The proposed DH is planned to be constructed at the site of existing Jakhalabandha (CHC) FRU. The existing Jakhalabandha (CHC) FRU will be shifted to the Sub-Divisional Civil Hospital that co-exist in the same premise. The old structures of the Jakhalabandha (CHC) FRU will be demolished for construction of the proposed DH at the site	As the proposed DH is planned to be constructed in the land/premise of SDCH that co-exist at proposed site, the project does not anticipate any land acquisition/resettlement.
Encroachment into farmland/ rented land (Batching plant installation)	Disputes, Environmental degradation, and social unrest.	Land use of specific land will be taken into consideration to avoid impact on productivity of the same. Work will be started on the sites with client approval and prior consultation with authority.
Interference with drainage patterns/ Irrigation channels/ rivers	• Flooding hazards, Contamination of water, loss of crop production • Human and Animal interference in Construction area. • Potential conflict between migrant workforce and local may took place. • Chances of finding archaeological /cultural artefacts. • Loss of agricultural productivity. • Road safety	• Construction of appropriate drainage system at the site as per approved design drawing and field verification considering existing natural drainage and slope. Waste management plan to be in place as well as the possible unavoidable discomfort at site • Proper safety signage at appropriate locations; adequate hard barricading and green netting; and provision of security services round the clock will ensure community health and safety during construction phase. • Scheduling of fixed time for movement of vehicles carrying construction machineries and materials in consultation with the authorities concerned of existing SDCH to ensure safe movement of the patients as well as passers-by.
Disturbance to public utility services- Water supply, sanitation	• Public inconveniences to avail services/medical treatment from the existing health care facility • Disruption of supply of power, water or sanitation facilities	• Prior intimation to the community regarding the schedule, scope of construction as well as the possible unavoidable discomfort at site Ensuring restoration of utilities immediately after project activity • Alternative accessibility or provision of utilities during construction without any disruption and hindrances. • In case, any utility to be shifted (for example bore well etc.), Contractor to make arrangements for hard barricading, safety signage and 24 x 7 security in the newly installed site to avoid any inconveniences to the facility, patients and staff.

Project Activity	Possible Impacts	Mitigation Approach
		• Provision of Signage, boards at appropriate locations indicating direction to shifted utility or interim arrangements. Scheduling fixed time for movement of vehicles carrying construction machineries and materials to ensure safe movement of people.
Engagement of Contractors staff and Labours in the proposed project	• Potential conflict between a) local labour and expats or interstate Labours b) community and labours c) contractor staff and labour	• Signing of Code of Conduct by Contractor, Contractor's Staff and labourers engaged in implementation of proposed DH at Azara. • Regular trainings on Code of Conduct • 24×7 security in and around project area. • Provision of basic amenities at Labour camps and site
	• Risks of GBV/SEA/SH to community members, particularly women and children by contractors' workers during construction period • Risks of workplace sexual harassment at project site (consultants and contractors' staff & labourers)	• Sensitization of all staff and labourers of project site of Azara on prevention of Gender Based Violence (GBV) and SEA/SH incidents and POSH Act. • Awareness on Local Complaints Committee for submission of complaints on GBV/SEA/SH. • Provision of separate toilets for women and men in both project site and labour camps. • Proper lighting facilities at site & labour camp
	• Occupational Health and Safety (OHS)	• Regular Training and orientations on OH&S • Installation of important signage's like entry /no entry, exit, diversion, danger signs at appropriate locations • Following labour management procedures and provision of basic amenities to labourers as guided by Labour Management Procedures under ASSIST Project. • Sensitization of workforce on good health and hygiene practices; use of PPE and safety gears/ harness etc, • occupational health and safety • Clearance of migratory labour under Interstate Migrant Workmen.
	Grievances from community as well as labours	Development of GRM system at site. Registering of grievances of contractor's staff, labourers, local community and redress the same following Grievance Redressal Mechanism under the Project.
Stakeholder Engagement	• Lack of prior intimation of the construction activities may lead to health hazards caused by probable air, water and noise pollution, accidents at site. • Disruption of existing utilities of the SDCH may hamper in proper functioning of the same. Consultation with the authorities of SDCH to decide on the alternative facilities to	• Awareness among the community on the proposed DH and the facilities to be provided there. • Prior intimation to the community regarding the schedule, scope of construction as well as the possible unavoidable discomfort at site • Stakeholder consultations at specific intervals represented by all sections of the community including women • Provision of proper barricading, signage etc. at the proposed site for ensuring safety of local community.

Project Activity	Possible Impacts	Mitigation Approach
	be provided and plan and schedule of providing the same.	

CHAPTER VI. STAKEHOLDER ENGAGEMENT

Stakeholder engagement in the project aims to achieve inclusive and effective participation of all stakeholders especially the poor and vulnerable groups. Meaningful, relevant, and ongoing consultations with the important stakeholders coupled with proper and timely disclosure of information are critical success factors in maintaining public support and mitigating grievances. All relevant information, in a medium easily understood by the target groups, regarding the intent, design, schedule, impacts, and overall benefits of the project need to be disseminated to the stakeholders in time.

6.1 Key Stakeholder

Stakeholder mapping has been carried out as guided by Stakeholder Engagement Plan (SEP) of the Project and thereby mapping has been done for the proposed DH site at Kaliabor.

Table 18: Identified key stakeholders for the proposed project at Kaliabor

Sl.No.	Categories	Key Stakeholders
A	Directly affected personnel/ community of proposed DH site where Kaliabor SDCH is located	• All staff of the existing Kaliabor SDCH including Doctors, Nurses, ANM, and Non- Medical staff etc. • Patients availing services/treatment at Kaliabor SDCH • Contractor and Contractors' workers • Vendors of the marketplace in and around proposed DH site • Community customers who come to the marketplace regularly
B	Parties or communities of the locality of Kaliabor and the District who can have potential impact on the project	• Community-based organizations (CBOs) and non-govt. Organizations (NGOs) of the district • Social & cultural groups functioning at Kaliabor. • Media including print and electronic media. • Vendor associations and labour union federations • Community leaders and local public representatives (PRI Members) Women groups working on gender-related activities and Self-Help Groups • Line Departments: o Department of Forest, Wildlife, Ministry of Environment, o Department of Water Resources, o Archaeological Survey of India o Women and Child Development Department o Commissionerate of Labour o Police & Traffic Control Department o Fire and Emergency Service o District Administration (O/o Revenue Circle)
C	Vulnerable Groups to be included for their inclusion in the implementation of the project to ensure equal representation.	• Poor people living below poverty line • Flood affected people • Elderly, persons with disabilities, female and minor patients • Scheduled tribes (ST), scheduled castes (SC), and communities living in remote and hilly locations

6.2 Stakeholder engagement approach and methodology

World Bank's ESS10 recognises that effective engagement with the stakeholders can significantly improve the project outcomes and their sustainability through better community acceptance and ownership, enhance the Environmental and social sustainability of the project, and hence make a significant contribution to successful project implementation.

The approach and methodology for stakeholder engagement is detailed with the Figure 10 below.

The stakeholder engagement process starts in the preconstruction phase with identification of the stakeholders. Table 17 gives a glimpse into the identified key stakeholders for the proposed project at Kaliabor. To make the process more

inclusive, several tools like conducting Consultations, using IEC tools of pamphlets, Public Information Boards, installing Cautionary signs at the site using Print and electronic media for dissemination of information and awareness generation on the project is planned to be adopted during the entire process of implementation of the proposed project at Kaliabor. Recording of the key outcomes of the interaction forms an integral part which completes the process

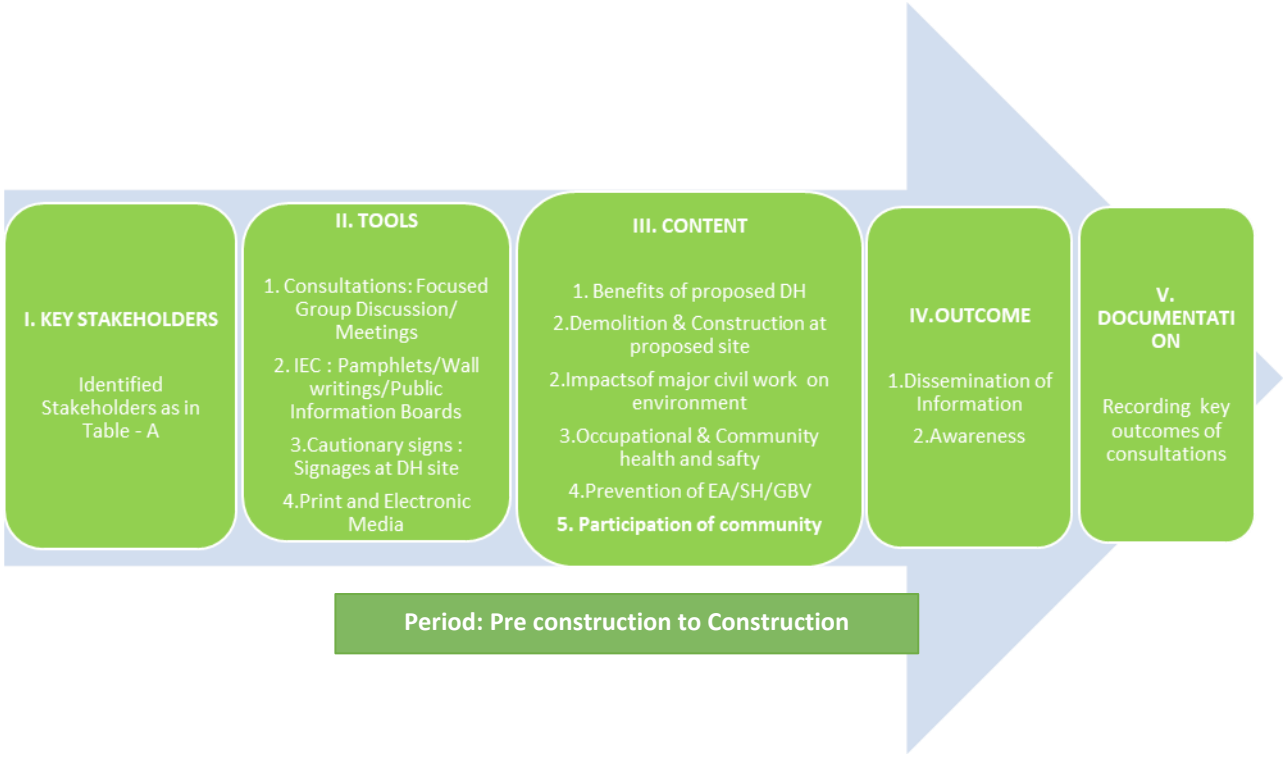


Figure 18: Approach and Methodology for Stakeholder Engagement

6.3 Stakeholder Engagement conducted for proposed DH at Kaliabor and key outcomes:

One (1) number of stakeholder consultations have been conducted since commencement of the project with an aim to disseminate information and awareness of the project. The consultations helped in comprehending their expectations from the project and finding ways to enhance community participation for addressing social aspects

6.3.1 1st Stakeholder Consultation:

The engagement of stakeholders in the project has been commenced with the conduct of 1st Stakeholder Consultation meeting held on 12-07-2023 at Kaliabor S.D.C.H. premise.

The consultation meeting was attended by officials and staff of the officials, hospital, PRI members, NGO members, Social workers, business owners, nearby community, student organizations etc. A total of 34 participants attended the meeting organized by PMU, ASSIST with the support of Kaliabor Sub Divisional Civil Hospital.

The key points of the interactions with the stakeholders are as follows:

I. The stakeholders were made aware of the following:
   a. Project objectives, duration and institutional arrangement for the project,
   b. Modern facilities and infrastructure that will be provided in the proposed DH
   c. 14 nos. of essential health care facilities to be provided in the proposed DH
   d. Separate services in the proposed DH will be manned with required staffing for providing the respective services.
   e. Safety norms, facilities and staffing that will be provided will conform to IPHS 2022 norms
   f. Local community raised concerns about water logging during monsoon in the existing hospital premises. Mitigation measures are being taken by improving the drainage system through collective efforts of the Hospital Administration, Zila Parishad, Anchalik Panchayat, and concerned Government Departments.

II. The local community expressed happiness to have a DH in their own place as such a facility had been an utter requirement for the people of the place since a long time.

Figure 19: 1st Stakeholder Consultation meeting held on 12-07-2023 at Kaliabor S.D.C.H. premise.

CHAPTER VII: CONTRACTOR'S ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (C-ESMP)

The construction EMP is intended for use during the construction phase of the DH. Construction related activities including Surveying of the site; Setting up of labour camp; Storage of construction materials and equipment in laydown areas; Excavation; Sourcing and storage of materials; batching plant operations; Construction of buildings/sub-station, traffic management etc. Looking at the baseline data, it is evident that the Environmental situation at Kaliabor is very good. No major significant impacts are foreseen during the construction period, and the minor impacts will be mitigated at source only. Positive Social impacts are foreseen once the facility is functional as the community in the nearby area can avail the healthcare facility in their own vicinity.

However, the C-ESMP is developed to avoid, reduce, and minimize any impact which can harm the Environmental as well as the community. The C-ESMP gives an account of the risks and impacts that have been identified and its mitigation measures to avoid or minimize the impacts. The C-ESMP also outlines the responsibilities and timelines for complying the suggested mitigation measures.

7.1 C-ESMP for proposed DH at Kaliabor

Table 19: Contractor's Environmental & Social Management Plan

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Pre-Construction Phase				
Site Clearance	• Shifting of existing health facility to SDCH to avoid disruption of services • Public resistance for lack of information or anticipation of negative impacts	• The proposed DH is planned to be constructed at the site of existing Jakhalabandha (CHC) FRU. The existing Jakhalabandha (CHC) FRU will be shifted to the Sub-Divisional Civil Hospital that co-exist in the same premise. The old structures of the Jakhalabandha (CHC) FRU will be demolished for construction of the proposed DH at the site. To make the community aware of the project and shifting of the old CHC to SDCH, stakeholder engagement is to be carried out prior to shifting. • Further, proper and visible display of boards and signages are to be installed at the old CHC site informing community about shifting of Azara CHC. • The site selected for the proposed DH at Kaliabor comprises both Assam-type and RCC structures. Development of Plan to demolish the existing facility is required.	Jakhalabandha CHC Authority, Contractor, PMC	Pre-Construction

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Regulatory Compliances	• Environmental pollution & degradation • Tree cutting/shifting • Use of Ground Water • Inconvenience to public	• Consent to Establish will be obtained from Pollution Control Board Assam prior to initiating the construction and related activities under Air & Water Act as well as BMW Rules 2016 • Permission for tree cutting/shifting from Forest Department will be obtained • Permission will be sought from Central Ground Water Authority for use of ground water for construction purposes • NOC from local Panchayat will be obtained prior to initiating the construction and related activities • Source approval of borrow areas, sand, aggregate, mining etc	Contractor, Project Manager & EHS Officer	Pre-Construction as well as construction phase
Biodiversity related	• Loss of trees and loss to biodiversity. • Disturbance to existing green cover, Loss of vegetation and deforestation. • Effect on fauna (including avifauna). • 27 numbers of trees need to be removed for clearing the site for infrastructure development • Exploitation of Resources for establishment of Labour Camp	• Identification of any endangered flora from Forest Department • Permission for tree cutting/shifting from Forest Department will be obtained • Marking of vegetation to be cleared and strict control on clearing activities to ensure minimal clearance. • Construction workers will be prohibited from felling and burning wood in the project area during their employment. • Construction workers should be provided gas cylinders for cooking. • Penalty on workforce from disturbing the flora, fauna including hunting of animals and fishing in water bodies. • GRIHA v. 2019 to be complied for preservation and plantation of native vegetation • Compensatory afforestation in the ratio of 1:3 will be done on site during the course of construction, and its survival will be monitored.	Contractor, Project Manager/EHS Staff	Pre-Construction phase to 1 year

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Demolition waste management including demolishing of existing ETP	• Accidents with the workers involved in the demolition activities • Air, Water, Soil, Noise pollution • Disturbance to public visiting the SDCH	<u>Wastewater & Contamination Control</u> • No discharge of untreated wastewater into drains/water bodies • Use temporary storage tanks or bypass system • Sludge to be handled as per Hazardous waste management rules 2016 • Prevent runoff from demolition site <u>Dust & Air Quality Control</u> • Regular water sprinkling • Use of barricades and dust screens around the structure to be demolished • Covered transport of debris for protection of spillage <u>Noise Control</u> • Restrict demolition activities to designated hours • Use low-noise equipment near sensitive hospital areas <u>Health and Safety</u> For safety reasons, wearing PPE will be made mandatory such as Helmets, Glasses, Nose mask, Gloves, Safety shoes, ear plugs etc. For worker safety awareness will be conducted with the toolbox talk regularly • Underage/overage screening process will be followed. • Warning signage will be provided at appropriate locations Detailed Demolition waste management plan is enclosed as **Annexure-5**	Contractor, Project Manager & EHS Officer, Hospital Authority	During demolition as and when required
Labour Management	• Selection of proper site for Labour Camp • Provision of basic facilities and amenities for the	• GI sheets with MS pipes will be utilized for construction of Labour Camp. Ply sheets with MS pipes will be provided for beds, the camp floor will be PCC floor, overhead water tank will be provided with toilets to minimize dependency on the natural resources.	Contractor, Project Manager & EHS Officer	Throughout pre as well as construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
	labour camp • Statutory Clearances	• Detailed Labour management plan is enclosed as **Annexure-6**		
Grievances of community	• Public resistance for the project anticipating negative impacts of the project like tree felling for site clearance, air and land and water pollution due to heavy construction activities • Accessibility issues of public	• Public consultation to gather data on the proposed site while also raising awareness about the potential impacts and benefits of the project. • Installation of Drop Boxes with proper signages at entry gate so that it is visible to community to drop grievances. • Display of contact number and e-mail dedicated for GRM at entry gate • Developing of Grievance Redressal Protocol to address the grievances received at site (Annexure:10) • Designation of manpower to register the grievances at site • Developing of proper formats to capture all the relevant details of complainant for registering grievances of Community (Annexure-10)		
Construction Phase				
Resource Efficiency Strategies (Energy, Water, Materials)	• Elevated GHG emissions and high operating cost for high energy use • Inefficient HVAC & lighting • High embodied materials impact • Construction waste generation	• ECBC compliance; passive design; LED lighting; BMS controls; renewables • Reduced building end-use energy and lower grid electricity demand and smaller cooling loads and improved occupant comfort. • Capture roof runoff and recharge groundwater or credit toward non-potable demand. • Low-flow fixtures; rainwater harvesting; STP reuse • Use of fly ash bricks, AAC blocks, PPC cement with recycled content. • Procure materials locally to reduce transport emissions. • Use of low-VOC paints, sealants, and adhesives to improve indoor air quality • Building will be GRIHA v.2019 compliant	Contractor, Project Manager & EHS Officer	Throughout pre as well as construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Soil fertility and pollution	• Loss of topsoil • Soil erosion due to surface runoff	• Preservation of topsoil • Excess fill from foundation excavation will be reused on site where earth filling is required. • Keeping record of soil quantity excavated from the site and reused in filling the foundation. • Construction of appropriate drainage system. • Removal of silt and trash choking the drainage from the construction land. • Proper storage of excessive excavated soil at approved locations. • Permission, NOC through local authority (Gram panchayat/municipality) for collection and disposal at designated sites of solid waste generated from the project works and labour camp. • Compliance to GRIHA V. 2019 in soil management.	Contractor, Project Manager& EHS Officer	Pre-Construction phase to 1 year
Water pollution/ discharge in natural resources	• Temporary flooding at site and nearby areas • Wastewater disposal and construction water runoff • Contamination of existing water bodies • Sewage water from the Labour Camp	• A sedimentation tank has been constructed at the lowest elevation of the site to facilitate the discharge of treated runoff into the natural drainage channel. Additionally, the Gaon Panchayat drainage system is currently under construction, and the hospital's drainage network will be connected to this system for final discharge once completed. • Adequate drainage will be provided and maintained for disposal of surface runoff • The spills or leakages of the fuel, lubricants etc. will be handled at source only and care will be taken that it should not reach the water stream/drainage. • Septic tank with soak pit will be provided with the toilet blocks at labour camp. • Compliance to GRIHA v. 2019 in water management.	Contractor, Project Manager & EHS Officer	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Ground water exploitation	• Excessive extraction of ground water for construction activities • Depletion in the ground water table	• Optimum use of resources will be ensured • Non potable water will be utilized during construction for dust suppression, curing etc. • Water requirement during peak construction activities will be met through outsourcing to minimize the load on ground water resources. • Maintain proper record of resources utilization. • Ground water will be used for construction purpose, and the required permission will be obtained from the competent authorities. • Regular monitoring of water consumption as well as ground water level. • Review the monitoring reports and take corrective measures as required. • Ensure the submission of monitoring reports to the concerned authority as per the norms.	Contractor, Project Manager & EHS Officer	All throughout construction phase
Air Pollution	• Demolition of existing structures for Site Clearance • Airborne dust due to drilling, excavation, etc. • Airborne cement, sand particles at batching plant • Fugitive emissions during various construction activities	• Suppression of dust by sprinkling of non-potable water within the work area twice daily and stack the loose soil and contain it with covers, if required. • Hard Barricading around the site as well as the hotspots where dust generation can be maximum. • Provision of green net wherever required. • PUC certified construction machinery and vehicle will be availed. • All the material will be covered properly during transportation to avoid spillage. • Required air pollution control equipment will be provided at batching plant • Necessary PPE's will be provided to construction workers as well as at batching plant mandatorily as per requirement. • It will be ensured that the Labours and staff is wearing the PPE	Contractor, Project Manager & EHS Officer	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Noise Pollution	• Demolition of existing structures for Site Clearance • Noise and vibrations from the construction activities. • Noise and vibrations from the batching plant	• The existing HCF will be segregated through hard barricading • Acoustic enclosures will be provided to the machinery, wherever required. • Construction activities for the project work will not be performed during the night. • Construction as per scheduled timings only. • Selection of construction techniques and machinery to minimize ground disturbance. • Regular maintenance of all vehicles, machinery and equipment will be conducted, and fitness certificate will be submitted to PCCMC & SPMU from time to time. • Necessary PPE's will be provided to construction workers mandatorily as per requirement and training will be provided for use of PPE and safety gears/ harness etc. • It will be ensured that the Labours and staff is wearing the PPE	Contractor, Project Manager/EHS Staff	All throughout construction phase
Community Health & Safety	• Risks to community health and safety due to air pollution and increase in noise level • Nuisance in the neighbouring areas.	• Periodic monitoring of ambient air quality, noise level has been conducted as guided by ESMF • Any accidents or incidents will be recorded and reported to PMU. • 24x7 security will be provided at high-risk area such as bore holes, excavation sites etc. • Implementation of effective traffic management plan will be ensured on site as well as during transportation of construction material from its source to site. Scheduling of fixed time for movement of vehicles carrying construction machineries and materials in consultation with the authority of existing SDCH to ensure safe movement of the patients as well as passers-by. • Construction area to be properly hard barricaded and safety signages viz. "No entry for public" ; "Construction Work is going on, be careful"; "Child Labour is Prohibited", "Fabrication Yard ", "Site safety Rules", "CTE and CTO" with NO and Date, GRIHA logo", etc and also important signage indicating diversion, danger signs at appropriate locations are to be installed during construction.	Contractor, Project Manager/EHS Staff	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
		• Compliance to GRIHA V. 2019 in preventing or addressing air and noise pollution		
Construction site establishment	• Fire due to electrical faults, fuel oil, and chemical storage, welding works • Fire and explosion	• ABC-type fire extinguishers at fuel storage, electrical panels, and work fronts will be provided • Prohibit smoking near fuel storage • Proper earthing and periodic inspection of electrical installations • Maintain sand buckets and fire blankets • Store fuels in designated, ventilated, and bunded areas • Limit storage quantity as per NBC norms • Maintain MSDS and spill kits onsite	Contractor, Project Manager/EHS Staff	All throughout construction phase
All construction activities including Excavation and structural works	• Earthquake (Seismic Zone V) and Collapse, serious accidents	• Follow NBC and seismic-resistant construction practices. Considering Kaliabor's location in Seismic Zone V, earthquake preparedness measures has been included clearly marked evacuation routes, designated safe assembly points, periodic mock drills, and awareness training for workers and site staff • Secure scaffolding, formwork, cranes, and temporary structures • Identify open evacuation areas • Provide shoring and slope stabilization for excavations • Restrict access to deep excavations • Continuous supervision by safety officer • Maintain first-aid kits and stretchers and Tie-up with nearby hospitals for emergency treatment	Contractor, Project Manager/EHS Staff	All throughout construction phase
Monsoon Season activities	• Flooding, waterlogging, extreme rainfall	• Monitor weather forecasts • Suspend work during heavy rainfall warnings • Proper drainage around the site will be ensured • Mitigation plan for monsoon to be prepared	Contractor, Project Manager/EHS Staff	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Training	• Lack of emergency awareness	• Site-specific Emergency Preparedness and Response Plan has been prepared and implemented prior to commencement of construction, in accordance with ESS4 requirements. (Refer to Annexure 11) • Induction training on emergency procedures • Conduct mock drills for fire, natural disasters such as floods, earthquakes and storms earthquake, accidents, fatalities, , disease / pandemic outbreaks etc. Toolbox talks on seasonal risks • Coordination will be maintained with local fire services, police, health facilities, and District Disaster Management Authority (DDMA) for emergency response and support.	Contractor, Project Manager/EHS Staff	All throughout construction phase
Utility Shifting	• As per baseline study one number of electric poles need to shift for the construction work.	• Shifting and relocating utilities like electric poles to a safe place before the commencement of the construction / strengthening work. Concerned department will be consulted before hand for this purpose and the project will bear all the cost involved in shifting / relocating these utilities. • The scheduling of the construction works will be shared with the line department (electricity) for ensuring uninterrupted services during construction. • The community structures, affected in the process, will be duly compensated for reconstruction / rehabilitation.	Contractor, Project Manager/EHS Staff	All throughout construction phase
Emergency Response Plan	• Construction accident (fall, hit by object, machinery injury) • Fire outbreak at site or labour camp • Flooding / heavy rainfall / water logging • Earthquake, Storm / high wind / cyclone • Disease outbreak / pandemic	• Mandatory PPE, work permits for height and lifting, regular toolbox talks, proper barricading, and deployment of trained operators are ensured. • Fire extinguishers will be provided, safe electrical wiring maintained, no-smoking zones enforced, and fuel stored safely • Sedimentation tanks and temporary drainage are provided, materials are stored at raised levels, and a monsoon preparedness plan is in place. • Earthquake-resistant design is adopted, awareness signage is displayed, and mock drills are conducted. • Loose materials are secured, temporary structures are properly	Contractor, Project Manager/EHS Staff	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
		anchored, and weather conditions will be regularly monitored. • Confirm that clean drinking water and sanitation facilities are provided, hygiene awareness is promoted, PPE such as masks and gloves is supplied, and a designated isolation space is maintained at site. • To prevent electric shock, proper earthing is ensured, insulated cables are used, and routine inspections are carried out. • To prevent collapse, proper shoring and slope stabilization are ensured, entry without adequate support is prohibited, and inspections are conducted after rainfall. • Site-specific Emergency Response Plan has been provided in Annexure 11		
Hazardous material handling and disposal	• Air, water and soil contamination • Injury and sickness of workers and locals. • Accidents including electrocution may occur due to lack of proper training and awareness among the workers.	• Leakage proof container will be used. • Storage of fuel and hazardous materials on paved surface with spill control and limited access. • Record of spill control during the project with details of type and quantities of chemical spilled. • The storage area will be protected from animal or other live species. • Proper use personal protective handling and disposal of hazardous material. • Displayed safety data sheet so that workers working around the storage area with precaution. • Scheduled maintenance of construction equipment and machines. • Provide required PPE to workers. • It will be ensured that the Labours and staff is wearing the PPE • Reporting and recording of incidents and accidents at project site. • Instruction to drivers of construction vehicles to strictly follow road regulations. • Installation of adequate signage and barriers around charged components • Clearly visible warning signs -danger signs, detour, cross here,	Contractor, Project Manager/EHS Staff	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
		works in progress, people at work, etc. at designated sites.		
Construction material storage	• Contamination of land, water, air.	• Prohibition of storage of construction materials beside road, around water bodies, residential or CPR. • Construction materials will be covered with tarpaulin, if required. • Water sprinkling to minimize the dust. • Proper maintenance of construction machinery. • Prepare the Traffic Management Plan for the project works. • Instruction to the workers not to remove such articles (if found any) and immediately inform to the Supervisor of the EPC and further to Environmental Specialist of PMU. • Regular monitoring of material in -out data. • All the material will be covered properly during transportation to avoid spillage. • Hard barricading of material storage area. • Installation of proper cautionary signages to avoid accidents and prevent damage to stored materials. • Hard barricading of construction area to avoid any such type of accident and injury. • Orientation and training to the workforce to properly handle and store construction materials and maintain safety of themselves in handling these.	Contractor, Project Manager/EHS Staff	All throughout construction phase
Construction waste	• Air, Water, Soil pollution • Inconvenience to neighbouring people	• Construction waste will be stored in a segregated manner at a designated area only. • Disposal will be according to the Solid Waste Management Rules 2016, E-waste Management Rules 2016, Hazardous Waste Management Rules or Batteries Rules as applicable • Records on wastes generated and disposed shall be maintained on site • Onsite composting of organic waste will be undertaken	Contractor, Project Manager/EHS Staff	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
		• The inorganic waste will be disposed off to the recyclers • Detailed Construction waste management plan is enclosed as **Annexure – 7.**		
C&D waste management	• Impact on solid and water quality	• The generated C&D wastes will be stored at a designated area inside the existing premises. • The waste shall be covered with tarpaulin to avoid emission from the dumping and runoff from the dumping to prevent water contamination. Reuse of C&D waste to the maximum extent within the site for other construction works. • The remaining C&D waste will be disposed as per the C&D waste rules 2016 and after consultation and approval of PMU; Prepare C&D waste management plan with clear scheduling on storage, transfer, recycling, disposal • Check for contamination and adopt appropriate cleaning, storage and transport • A site-specific C & D Waste management plan attached in **Annexure 5**	Contractor, Project Manager/EHS Staff	All throughout construction phase
Tree cutting	• Impact on flora and fauna	• A total of 28 trees were identified on site and marked for removal to facilitate construction of the proposed hospital and labour colony. Tree removal will be minimized through appropriate layout planning, alignment adjustments, and adaptation to site conditions. • Prior approval shall be obtained from the Forest Department and/or other competent authorities, as applicable, before undertaking any tree cutting activities. • For every tree removed, ten (10) indigenous saplings shall be planted and maintained for a minimum period of three (03) years to ensure successful survival and growth. • The tree inventory, along with the corresponding tree-felling permissions, is provided in **Annexure 3.**	Contractor, Project Manager/EHS Staff	All throughout construction phase

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
Stakeholder Engagement	• Project indirectly or directly, positively or negatively impacts community. • Public inconveniences to avail medical treatment from the existing SDCH at the site due to project execution activities, disruption of supply of power, water or sanitation facilities for site clearance • Hazards of flooding in the site and nearby areas due to construction activity • community health and safety • Loss of agricultural productivity.	• Prior intimation to the public about the time and the duration of the utility disruption through concerned agency. • Restoring the utilities immediately after project activity completion or end duration declared for disruption of supply of power, water or sanitation facilities at the existing SDCH or provision of alternate facilities till the new DH comes up. • Alternative access (road) to the existing health facility so that people can avail services/ medical treatment without any disruption and hindrances. • Store and workshops will be established within construction site premises • Installation of adequate and clearly visible warning signs such as danger, detour, cross here, works in progress, people at work, etc. will be posted at designated sites while scaffolding will be placed over road crossing points. • GRM developed for submission of grievances of community • Maintaining road regulations as per Traffic Management Plan developed as a part of C-ESMP • Stakeholder engagement activities for the Stakeholders as identified (6.1. Key Stakeholders) under the project will be guided by the Stakeholder Engagement Plan of ASSIST Project in Link[1] below. • Stakeholder engagement at specific intervals with representation from all the sections of the community in and around the proposed site including women members of the community. Stakeholder engagement to include: • responding to the queries of community regarding, proposed DH, construction activity etc. • making community aware that all safety measures in terms of air pollution, noise pollution, water pollution, community health and safety will be undertaken in the construction phase.	Contractor, Project Manager/EHS Staff	All throughout construction phase

[1] https://ahidms.assam.gov.in/sites/default/files/public_utility/Revised%20Stakeholder%20Engagement%20Plan.pdf

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
		• Site specific mitigation measures as per Plan of Stakeholder engagement activities under the Project at Kaliabor detailed at **Table 19**.		
Traffic Movement and Road safety	• Inconveniences and disturbance to public due to • movement of heavy vehicles for carting and mobilization of construction materials and manpower. • Road safety concern in and around proposed site.	• Scheduling fixed time for movement of vehicles carrying construction machineries and materials to ensure safe • movement of people. • Safety signage's/messages for proper entry/exit/diversion etc. to be used all throughout construction phase. • Vehicles carrying construction materials must be covered properly • Regular Water sprinkling for in and around the construction site. • Detailed Traffic Management Plan in **Annexure - 8**	Contractor's Project Manager/EHS Staff	All throughout construction phase
Labour Management	• Risks of occupational health and safety • Lack of knowledge on operation of equipment's, machines, work procedures and processes • Conflict between migrant workforce and locals • Maintenance of health and hygiene • Grievances of workers	• Labour management plan of Kaliabor enclosed as **Annexure-6** details to be implemented at site • Labour Management Procedures under ASSIST Project as in the Link below[2] to be followed for Labour management providing amenities and facilities to labourers • Occupational Health & Safety Policy of the company will be applicable to labour and staff of employed at the Construction site which is enclosed as **Annexure – 9** • Grievances of the workers to be addressed following GRM at **Annexure 10**	Contractor's Project Manager/EHS Staff	All throughout construction phase
SEA/SH/GBV	• Risks of SEA/SH to community members, particularly women and children by contractors' workers during construction period	• EHS Officer of PCCMC to be designated as the Nodal Officer for POSH at the construction site • Assessment of the GBV/SEA/SH risks at respective site • Develop GRM responsive to GBV/SEA/SH complaints • Sensitization of all staff and labourers of project site on occurrence/ prevention of GBV/SEA/SH incidents and POSH Act.	Contractor, EHS Staff	All throughout the project

[2] https://ahidms.assam.gov.in/sites/default/files/public_utility/Revised%20%20Labor%20Management%20Procedures%20%20%281%29.pdf

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
	• Risks of workplace sexual harassment at project site (consultants and contractors' staff & labourers)	• Awareness to workers on: (a) CoC. (b) GRM responsive to GBV/SEA/SH complaints for workers. (c) Local Complaints Committee (LCC) notified under POSH Act by District Commissioner to receive complains on GBV/SEA/SH from establishments where Internal Committee has not been constituted; and (d) referral services. • To prevent SEA/SH at site, Contractors are to: o provide a safe secure working environment for workers like provision of lighting around project sites and labour camps, including around latrines and access routes, separate and lockable toilets for female construction workers etc., o 24X7 security services at site o display of the following at the sites: ✓ CoC ✓ warnings which say "Respect the dignity of women"; "Project site is an area where GBV/SEA/SH is prohibited" alike at conspicuous positions in site premises ✓ order constituting the Local Complaints Committee (LCC) ✓ available referral services viz. District Social Welfare Officer; District Hub for Empowerment of Women; Women Helpline -181; Childline – 1098 (For Girls upto 18 years of old); One Stop Centre; Police – 100; IC/LCC • organize regular training on: o CoC – all clauses o prevention of GBV/SEA/SH to all workers, including contractors, subcontractors, core suppliers, and relevant consultants and clients o sensitization on Local Committee (LCC)		

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
		• ensuring all employees attend regular training programs on the prevention of GBV/SEA/SH in the workplace, including training for new workers/employees maintaining attendance sheets and documenting photographs. • treat Sexual harassment as misconduct and initiate action for such misconduct. • Facilitating complainants by providing referral services/ linkages with the following: o District Social Welfare Officer o District Hub for Empowerment of Women o Women Helpline -181 o Childline – 1098 (For Girls upto 18 years of old) o One Stop Centre o Police – 100 o IC/LCC		
Grievance Redressal Mechanism	• Major civil work of construction of DH at Kaliabor may have direct or indirect, positive or negative impacts on Labours as well as Public. • People may have grievances or enquiry for any information on the project. • Provision of information or Redressal of grievances will ensure transparency and accountability under the project. • GRM sensitive to GBV/SEA/SH cases	**GRM at proposed DH Site (Manual):** • Submission of grievances by workers and community • Installation of Drop Boxes with proper signages at workers camp and entry gate so that it is visible to workers and community to drop grievances in person at site. • Display of contact number and e-mail dedicated for GRM at workers camp and entry gate for submission of grievances by workers and community. • Designation of manpower to register grievances at site • Developing of proper formats to capture all the relevant details of complainant for registering grievances of Labours and Community received at the site physically. • Developing a Grievance Redressal Protocol to address the grievances physically received at site (till the time the online platform is operationalised) • Sensitization of workers on the existing physical GRM	Contractor, EHS Staff	All throughout the project

Aspect/ Issue	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
	•	mechanism at site. Grievance Redressal Mechanism is detailed at **Annexure 10.** **GRM Portal (Online)** • An online GRM Portal to be developed for grievance online submission and redressal of the grievances of the workers and community. The grievances received through drop boxes, email, online entry, mobile phone will be registered on the online portal, and the redressal will be done following a protocol developed for the purpose. The stakeholder departments will have the credentials to redress and escalate the grievances. The complainant will be communicated receipt and final redressal of the grievances with SMSs. **GRM sensitive to SEA/SH complaints** • GRM sensitive to SEA/SH complaints is a part of the Grievance Redressal Mechanism detailed at **Annexure 10.**		

Table 20: Construction Phase Environmental Monitoring Plan (EMoP)

Monitoring field	Monitoring location	Monitoring parameters	Frequency	Responsibility
Ambient air quality	2 locations (1 in construction site,1 near batching plant)	SO_2, NOx, PM10, PM2.5, CO,	Once before start of construction. (Baseline)	Globalzone Sanitory

Monitoring field	Monitoring location	Monitoring parameters	Frequency	Responsibility
			Quarterly (except monsoon) during construction	Infrastructure Private Limited
Surface water	1 location (Kolong River)	**Physical parameters:** Colour, Odor, Temp, pH, turbidity, Total Hardness (Mg & Ca), TSS, TDS, **Chemical parameters:** Total alkalinity, Chloride, Total Residual Chlorine, Sulphate, Nitrate, Fluoride, Na, K, Salinity, Total Nitrogen, Total Phosphorus, DO, BOD, COD, Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Free Ammonia, Phenol, Oil &Grease, Heavy metals (Copper, Nickel, Lead, Zinc, Manganese, Cadmium, Hexavalent Chromium, Total Chromium, Mercury, Cobalt, Arsenic, Cyanide, Iron) **Biological Parameters:** Total Coliform, Faecal Coliform, Phytoplankton and zooplankton	Once before start of construction. Quarterly (except monsoon) during construction	Globalzone Sanitory Infrastructure Private Limited
Ambient noise	2 locations (1 in construction site,1 near Batching plant)	Day time and night-time	Once before start of construction. Quarterly (except monsoon) during construction	Globalzone Sanitory Infrastructure Private Limited

Monitoring field	Monitoring location	Monitoring parameters	Frequency	Responsibility
Ground water quality	1 location in project site (Tubewell)	**Physical parameters:** Colour, Odor, Temp, pH, turbidity, Total Hardness (Mg & Ca), TSS, TDS, **Chemical parameters:** Total alkalinity, Chloride, Total Residual Chlorine, Sulphate, Nitrate, Fluoride, Na, K, Salinity, Total Nitrogen, Total Phosphorus, DO, BOD, COD, Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Free Ammonia, phenol, Oil &Grease, Heavy metals (Copper, Nickel, Lead, Zinc, Manganese, Cadmium, Hexavalent Chromium, Total Chromium, Mercury, Cobalt, Arsenic, Cyanide, Iron) **Biological Parameters:** Total Coliform, Faecal Coliform, Phytoplankton and zooplankton,	Once before start of construction. Quarterly (except monsoon) during construction	Globalzone Sanitory Infrastructure Private Limited
Soil quality	1 location at site	**Physical parameters:** Bulk density, Salinity, Porosity, Texture Class (Percentwise silt, clay & sand), **Chemical parameters:** pH, Sodium, Potassium, Nitrogen, Magnesium, Phosphorous	Once before start of construction. Quarterly (except monsoon) during construction	Globalzone Sanitory Infrastructure Private Limited

7.2 Plan of Stakeholder engagement activities under the Project at Kaliabor :

Contractor has to undertake stakeholder engagement activities as detailed in the Table 21 below

Table 21: Plan of Stakeholder engagement activities under the Project at Kaliabor

Category	Key Stakeholders	Stakeholder Engagement Tools	Content	Periodicity	Responsibility
Group A	• All staff of the existing Kaliabor SDCH including Doctors, Nurses, AMN, and Non- Medical staff etc. • Patients availing services /Treatment at Kaliabor SDCH • Contractor and Contractors' workers • Vendors of the marketplace in and around proposed DH site • Community customers who come to the marketplace regularly	• Consultations: Focused Group Discussion/ Meetings • IEC: Pamphlets/Wall writings/Public Information Boards • Installation of adequate and clearly visible • Cautionary signage's such as danger, detour, cross here, works in progress, people at work, etc. will be posted at designated sites while scaffolding to be placed over road crossing points.	• Benefits of the Project • Demolition & Construction at proposed site • Impacts of major civil work on Environmental • Occupational Health and Safety • Community Health and Safety • Prevention and Redressal of Sexual Exploitation & Abuse (SEA)/Sexual Harassment (SH)/Gender based violence (GBV) • Participation of Community in implementation of project	2 (Twice) a year	Contractor with support from Kaliabor SDCH, Jt,DHS, PWD, PMU
Group B	Community-based organizations (CBOs) and Non-Govt Organizations (NGOs) of the district Social & cultural groups functioning at Kaliabor. Media including print and electronic media. Vendor associations and labour union federations Community leaders and local public representatives (PRI Members) Women groups working on gender-related activities and Self-Help Groups	• Consultations: Focused Group Discussion/ Meetings • IEC: Pamphlets/Wall writings/Public Information Boards • Print and Electronic Media	• Benefits of the Project • Community Health and Safety • Participation of Community in implementation of project	Once a year	Contractor with support from Kaliabor SDCH, DHS, PMU

Category	Key Stakeholders	Stakeholder Engagement Tools	Content	Periodicity	Responsibility
	Line Departments viz. Forest & Wildlife, Environment, Water Resources, Archaeological Survey of India, Women and Child Development Department, Labour, Police & Traffic Control, Fire and Emergency Service and District Administration/ O/o Revenue Circle				
Group C	• Poor people living below poverty line • Flood affected people • Elderly, persons with disabilities, female and minor patients • ST, SC, and communities • living in remote and hilly locations	• Consultations: Focused Group Discussion/ Meetings • IEC: Pamphlets/Wall writings/Public Information Boards • Print and Electronic Media	• Benefits of the Project • Community Health and Safety • Participation of Community in implementation of project	2(Twice) a year	Contractor with support from Kaliabor SDCH

CHAPTER VIII: ANALYSIS OF ALTERNATIVE

8.1 Overview

The project design is enhanced as it addresses Environmental and social risks on one hand, and enhancement opportunities on the other. The purpose of the analysis of alternatives (AoA) is to assess the effectiveness, cost, and risks of alternatives that have potential to close or mitigate the capability gaps and subsequent process analyses.

The Impact criteria are mainly categorized into five groups as given below.

a) Natural Resource Impacts
b) Ecological impacts
c) Socio-Economic Impacts
d) Political Impacts
e) Financial & Economic Impacts

8.2 Without Project Alternatives:

When a project consists of a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, the "no project" consequence should be discussed. The No Project Alternative assumes no development on the Project site. The site would remain an undeveloped open space area and the local community will be deprived of the secondary healthcare facilities including 14 departments in their own vicinity.

8.3 Alternative Analysis during Detailed Design

Study of Alternative Alignment – Site Level

Based on soil testing results, the use of bentonite or polymer for piling work is not required. However, as a general practice, bentonite solution is commonly used for piling, though it is not environmentally friendly. In this project, polymer would have been preferred over bentonite due to its higher pile bearing capacity, lower environmental impact, and reduced equipment requirements for mixing and pumping. Additionally, the overall cost of using polymer is lower compared to bentonite.

Selection of Design and Construction Standard

As per seismic zone (v), the design and construction standards of the project has been maintained. No change in design and construction standards will be done. However, some changes in the design, architectural part and construction material will be anticipated based on achievement of GRIHA V.2019 three-star rating to the new construction. The changes will be environment friendly only to make the infrastructure sustainable.

CHAPTER IX : CHANCE FIND PROCEDURE

The Environmental and Social Management Framework (ESMF) for the project in accordance with the World Bank Environmental and Social Framework (ESF), establishes relevance with all the Environmental and Social Standards (ESSs) that are applicable to the project, including **ESS-8: Cultural Heritage**.

ESS-8: Cultural Heritage recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.

In line with ESS-8, the ESMF recognizes that **chance finds of physical cultural heritage** may occur during excavation or construction, particularly in greenfield or previously developed sites. And it mandates that **all subprojects and contractors** implement a **Chance Finds Procedure (CFP)**. The Chance Finds Procedure shall be included in:

- ESIA / ESMP
- Contractor's ESMP (C-ESMP)
- Bidding and contract documents

1. OBJECTIVES

- To protect cultural heritage from the adverse impacts of project activities and support its preservation.
- To address cultural heritage as an integral aspect of sustainable development.
- To promote meaningful consultation with stakeholders regarding cultural heritage.
- To promote the equitable sharing of benefits from the use of cultural heritage.

2. SCOPE OF APPLICATION

a) The applicability of ESS-8 is established during the environmental and social assessment described in ESS1.
b) The term 'cultural heritage' encompasses tangible and intangible heritage, which may be recognized and valued at a local, regional, national or global level, as follows:
   i) Tangible cultural heritage, which includes movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings and may be above or below land or under the water.
   ii) Intangible cultural heritage, which includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts and cultural spaces associated therewith— that communities and groups recognize as part of their cultural heritage, as transmitted from generation to generation and constantly recreated by them in response to their environment, their interaction with nature and their history
c) The requirements of this ESS8 will apply to all projects that are likely to have risks or impacts on cultural heritage. This will include a project which:
   i) Involves excavations, demolition, movement of earth, flooding or other changes in the physical environment.
   ii) Is located within a legally protected area or a legally defined buffer zone.
   iii) Is located in, or in the vicinity of, a recognized cultural heritage site; or
   iv) Is specifically designed to support the conservation, management and use of cultural heritage.
   v) The requirements of ESS8 apply to cultural heritage regardless of whether it has been legally protected or previously identified or disturbed.
d) The requirements of ESS8 apply to intangible cultural heritage only if a physical component of a project will have a material impact on such cultural heritage or if a project intends to use such cultural heritage for commercial purposes.

3. STAKEHOLDER CONSULTATION AND IDENTIFICATION OF CULTURAL HERITAGE

The Project will carry out meaningful consultations with stakeholders in accordance with ESS10 in order to identify cultural heritage that may be affected by the potential project; consider the significance of the cultural heritage affected by the project; assess the potential risks and impacts; and explore avoidance and mitigation options.

In case project site contains cultural heritage or prevents access to previously accessible cultural heritage sites, based on consultations with users of the site, the project will allow continued access to the cultural site, or will provide an alternative access route, subject to overriding health, safety and security considerations.

4. PROTECTION OF CULTURAL HERITAGE AREAS, ARCHAEOLOGICAL SITES & MATERIALS, BUILT HERITAGE and NATURAL FEATURES WITH CULTURAL SIGNIFICANCE

a) **Legally protected cultural heritage areas**: If the proposed project is located within a legally protected area or a legally defined buffer zone, the project will take necessary action to
   - comply with local, national, regional or international cultural heritage regulations and the protected area management plans
   - consult the relevant stakeholders of the protected area
   - implement appropriate programs to promote and enhance conservation aims of the protected area.

b) **Archaeological sites and material:** If any archaeological sites and materials are discovered during the project life cycle, the project will map, investigate and document the location and characteristics of the same and provide the documentation to the national or subnational cultural heritage authorities .If discovered, the project in consultation with cultural heritage experts will determine whether archaeological material discovered during the project life cycle requires: (a) documentation only; (b) excavation and documentation: or (c) conservation in place, and will manage the archaeological material accordingly. The project will determine ownership and custodial responsibility for archaeological material in accordance with national and subnational law, and until such time as custody has been transferred, will arrange for identification, conservation, labelling, and secure storage and accessibility to enable future study and analysis.

c) **Built heritage:** The project will identify appropriate mitigation measures to address the impacts on Built Heritage, which includes groups of buildings, structures and open spaces constituting past or contemporary human settlements that are recognized as cohesive and valuable from an architectural, aesthetic, spiritual or sociocultural perspective. The measures may include:
   - Documentation
   - conservation or rehabilitation *in situ;* and
   - relocation and conservation or rehabilitation.

   During any rehabilitation or restoration of cultural heritage structures, the project will maintain the authenticity of form, construction materials and techniques of the structure(s).

d) **Natural features with cultural significance**: The project in consultation with project-affected parties will identify Natural features with cultural significance which include sacred hills, mountains, landscapes, streams, rivers, waterfalls, caves and rocks; sacred trees or plants, groves and forests; carvings or paintings on exposed rock faces or in caves; and paleontological deposits of early human, animal or fossilized remains. The significance of such heritage may be localized in small community groups or minority populations. Most natural features with cultural heritage significance are best protected by preservation *in situ*. If it is not possible to preserve the natural features in their existing location, the transfer of the cultural heritage to another location will be conducted in consultation with project-affected parties, in accordance with GIIP.

e) **Movable** *cultural heritage which includes* historic or rare books and manuscripts; paintings, drawings, sculptures, statuettes and carvings; modern or historic religious items; historic costumes, jewellery and textiles; fragments of monuments or historic buildings; archaeological material; and natural history collections such as shells, flora, or minerals. The project in consultation with relevant cultural heritage authorities will identify movable cultural heritage objects that may be endangered by the project and make provisions for their protection throughout the project life cycle. The project will inform religious or secular authorities or other custodians with responsibility for overseeing and protecting the movable cultural

heritage objects of the schedule for project activities and alert them regarding the potential vulnerability of such items. Proper measures to be undertaken to guard against theft and illegal trafficking of movable cultural heritage items affected by the project and will notify relevant authorities of any such activity.

5. THE CONTEXT: ASSIST PROJECT

The state of Assam contains a large number of sites and natural heritage with significant religious, cultural, archaeological and historical importance. Although the sites for upgradation of district hospitals are already known and most of them are existing public health care facilities, the project will also be investing renewable energy systems and water supply systems to make these facilities fully operational. The operations of these hospitals will involve increase in the generation of waste and wastewater streams which need to be treated and disposed in order not to have any indirect or downstream impacts on built or natural heritage.

The construction works in the project will generate demolition and construction wastes as well as exhausts and emissions that may pose risks to the nearby heritage structures. These will be managed by incorporating appropriate provisions in the construction contracts for prevention of such emissions and discharges and wastes management as well as awareness of contract workers.

6. CHANCE FINDS PROCEDURE

In accordance with the World Bank Environmental and Social Framework (ESF), ESS-8 on Cultural Heritage, and applicable national and state legislation, the following Chance Finds Procedure shall be followed during hospital construction or renovation works in Assam:

Step-1: Immediate Stop of Work

In the event of discovery of any archaeological, historical, religious, or cultural remains, artifacts, or structures, all construction activities in the vicinity of the find shall be immediately suspended.

Step-2: Protection of the Find

The Contractor shall secure and cordon off the area to prevent damage, disturbance, theft, or vandalism, and restrict access to authorized personnel only.

Step-3: Notification

The Contractor shall immediately inform the Project Engineer/PMU. The PMU shall notify the Directorate of Archaeology, Government of Assam, and where applicable, the Archaeological Survey of India (ASI) in accordance with the AMASR Act, 1958.

Step-4: Inspection and Guidance

No works shall recommence in the affected area until the competent authority has inspected the site and issued written clearance or instructions on the appropriate course of action.

Step-5: Management of Finds

Based on guidance from the competent authority and cultural heritage experts, the finds shall be managed through documentation, excavation and documentation, or conservation in situ, as required.

Step-6: Resumption of Work

Construction activities shall resume only after formal approval from the competent authority and implementation of all prescribed mitigation measures.

Step-7: Awareness and Training

The Contractor shall ensure that all site personnel are briefed and trained on the Chance Finds Procedure prior to and during the execution of works.

7. INSTITUTIONAL RESPONSIBILITIES FOR EXERCISING CHANCE FIND PROCEDURE

Entity	**Responsibility**
Contractor	Stop work, protect site, notify

Entity	Responsibility
PCCMC	Monitor implementation and supervise ESMF compliance
PWD	Support in undertaking regulatory compliance
PMU	Regulatory liaison, WB reporting
World Bank	Review and clearance

6. CAPACITY BUILDING

- Workers shall receive training on chance finds procedure. The training will cover:
  - Need of Chance Find Procedure (CEP) at site
  - Significance of the cultural heritage; assessment of potential risks and impacts; and explore avoidance with mitigation options.
  - CEP to adopt at Site
- Simplified instructions shall be displayed at construction sites

Source:

1. *Environment & Social Framework for IPF Operations, ESS8: Cultural Heritage, World Bank*
2. *The WORLD BANK Environmental and Social Framework*

ANNEXURES

ANNEXURE 1: SITE PLAN *OF PROPOSED DH AT KALIABOR*

ANNEXURE 2: PLANNED BUILDING DESIGN AND SUMMARY OF SPECIFICATION FOR CONSTRUCTION

The design and construction of the proposed 150 bedded DH will be human centric and user friendly as well as GRIHA compliant. All the facilities in each of the floors to have universal access e.g. ramps, handrails and other fixtures etc. as recommended and fire safety e.g. second staircase/ ramp for evacuation etc. Project envisages achieving 3-star GRIHA rating for the DH. Planned building design and summary of specification for construction is given below.

<table>
<tr><th colspan="2">A. GROUND FLOOR:</th></tr>
<tr><td>Emergency care Unit
• Emergency Entrance Lobby, Emergency Help Desk/ Reception
Police Post
• Triage Room with 3 No. Yellow zone beds, 2 No. Paediatrics beds, 1 Isolation bed, Toilet, Nurse's station, Cu & DU.
• Plaster and Plaster Cutting room.
Trolley wash area/Decontamination area.
3 No. Red zone beds with Nurse's Station
• Examination/Treatment Room.
• Doctor's Room
•CCMO Room with attached toilet and Medico-Legal Case
•Duty Doctor Room
•3 No. Pre- & Post-Operative beds.
•Change rooms.
•Emergency OT Lobby, Patient Holding Area, Emergency TSSU, OT Pharmacy, Sterile store,
•Dirty Utility
•1 No. Emergency Operation theatre
•AHU Room</td><td>Outpatient Department
• OPD & MCH Entrance Lobby (Double Height)
• OPD & MCH Registration (3 Counters)
• Pharmacy with 3 counters and Pharmacy store
• General Public toilet, Lift Lobby and Staircase
• Radiology with 1 X-ray, ECG, Mobile X-ray, Dark room Printing, Dental Room, USG with colour doppler, Reporting Room and Radiology Waiting Area
• Laboratory with Sample Collection Area, Clinical pathology Lab, Pathology lab, BSC Room, lab In-charge room with toilet.
• OPD consultation rooms: Ortho, Psychiatry, Wellness clinic, Family Medicine, Immunisation /Cold chain room and patient waiting hall.
Support Services (Dietary): Cold storage, dry store, washing area, toilet and cooking area
• Effluent Treatment Plant-30 KLD
• Sewage Treatment Plant-100KLD
• Water treatment plant
• R.O for Drinking water</td></tr>
<tr><th colspan="2">B. FIRST FLOOR</th></tr>
<tr><td>Outpatient Department:
Out-Patient Department
• Waiting Area with Lift Lobby, public toilets, staircase
• OPD consultation rooms: Counselling room, NCD, Adolescent clinic, Dermatology, ENT, PAC Room, Surgery, Speciality clinics, Physiotherapy, Tele-consultation room, Wellness clinic, PFT/ECG Room.
• District Early Intervention Centre: Examination room, Nourishing nutrition, Psych, lang, Laboratory, RCG, Play Area, Hearing assessment room, soundproof audiometry, Dental examination room, Vision Assessment room, Early Interventional occupational therapy, Sensory Integration, Anthropometry room</td><td>Administrative unit:
Waiting area, Medical Superintendent room with attached toilet, Nursing-in-charge room, Hospital manager room, Office Area with supervisors' cabins, meeting hall.
Ward Complex
6 beds Day care ward, Nutrition Rehabilitation Centre, Treatment room, Nurse's station, CU & DU.
Dialysis Complex: change rooms with toilets, Dialysis ward with 4 beds and nurses' station, Isolation room, Wash Area, RO Room, toilets.</td></tr>
<tr><th colspan="2">C. SECOND FLOOR</th></tr>
<tr><td colspan="2">Mother & Child Hospital
• MCH Triage 2 beds, change rooms, Doctor's room with toilet, Delivery complex
reception and Lobby, MW Room, change rooms, MW LDR Complex-3 Nos with NBCC and toilet, Isolation LDR with NBCC and toilet, Minor OT, AHU Room.
• Obstetrics Critical Care unit: Air lock, patient changing area, Change room, Obstetrics HDU-6 Nos., Obstetrics ICU, Isolation Room, CU room, Linen room, Toilet, Critical Equipment room, Nurse-in-charge, Therapeutic diet prep.
• OPD Consultation room: Paediatrics 2 Nos., Child Play Area, OBS & Gynae-2 nos., USG Room, waiting area.
• Mother's & new born Ward: 12 bedded mothers & new born ward, Nurse's Lounge, Duty doctor with toilet, Nurse's Station, patient toilet.</td></tr>
</table>

• **SNCU & NICU:** Triage + Radiant warmer Area, Doctor's Lounge with toilet, dirty Linen & Sluice room, pantry, out born (06 beds), In born (06 beds), 04 beds ventilator NICU,
Isolation-2 Nos., Nurses station, feeding room, Point of care, AHU Room.

D. THIRD FLOOR

Waiting area with public toilet, lift lobby and staircase.

•**Private Rooms:** 32 rooms with attached toilet, almirah and attendant's sleeping couch.

•Doctor's Lounge, Nurse's Lounge, Pantry. Nurse's station, Treatment room, CU & DU, toilets

E. FOURTH FLOOR

Waiting area with public toilet, lift lobby and staircase.

•Burn unit: 04 beds ward, 2 beds Isolation, treatment room, Nurse's Station, Duty doctor, CU & DU, Toilet complex

•General ward complex: 60 beds ward complex, Nurse's station, Treatment room, CU & DU, Duty doctor, toilets

•ANC & PNC Ward: 12 beds with Toilets, treatment room, Nurse's Station, CU & DU

F. FIFTH FLOOR

Waiting area with public toilet, lift lobby and staircase.
• Blood bank: Reception with waiting area, Testing & Counselling, Donor's room, refreshment area, laboratory, Doctor's room, Sterilization cum washing area, components separation room, blood storage room.
• HDU Ward: HDU Waiting, counselling room, patient change, change room with toilet, paediatrics HDU beds-2 Nos., general HDU beds-4 Nos., 1 No. isolation bed, duty doctor with attached toilet.
• OT Complex: Change rooms (Doctor's, nurse's and staff change), Trolley exchange area, 2 No. preoperative and post-Operative ward, Nurse's station, Toilet, Doctor's room, Nurse's room, Airlock, Sterile corridor, patient Holding area, Scrub Area, sterile store,
Operation Theatre-2 Nos., TSSU, AHU rooms, Dirty Corridor.

List of Other Facilities

List of Facilities (BMW Room)
• 3 categories of room for BMW. BM waste collection area to be provided on every floor
List of Facilities (Mortuary & Gas manifold Room).
• Waiting and reception.
• Body viewing area.
• Store
• Body cold storage area
• Change rooms, Post mortem room, Embalming room, Instrument room.
• X-ray room, Supervisor room, Toilets.

ANNEXURE 3: TREE CUTTING PERMISSION AND FLORA & FAUNA

a. Tree Cutting Permission

GOVERNMENT OF ASSAM

ASSAM HEALTH INFRASTRUCTURE DEVELOPMENT AND MANAGEMENT SOCIETY

4th Floor, Nayantara Supermarket, Sixmile, Guwahati-781022

No. WBProj/ESM/15/2023/348 Date :- 14 /11/2023

To,
The District Forest Officer (DFO) – Nagaon
District – Nagaon, Assam
Email : dfo.nagaonwl@gmail.com

Sub: Shifting/translocation/felling of trees from the site of proposed new 150 bedded district hospital under World Bank funded ASSIST Project at Jakhalabandha CHC (FRU).

Sir,
Assam Health Infrastructure Development & Management Society (AHIDMS), an apex body under Medical Education & Research Department, Govt. of Assam has taken up Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST) Project funded by World Bank to improve the district level healthcare services in Assam by improving quality, access and management capacity in selected district hospitals.

Under the ASSIST Project, construction of a 150 bedded District Hospital building has been initiated in the existing campus of Jakhalabandha CHC (FRU). As per our preliminary survey, it is noticed that around 28 numbers of trees are present within the campus of the Jakhalabandha CHC (FRU), out of the mentioned trees, 18 numbers of trees are in the earmarked construction zone. The earmarked 18 numbers of trees needs to be shifted/translocated/felling from the construction zone to outside of the campus area for smooth construction activities.

The locations of trees within construction area are shown on construction site plan & details of trees are enclosed for your kind reference and necessary actions. You are hereby requested to initiate the Shifting/translocating/felling of trees from the proposed new district hospital at Jakhalabandha CHC (FRU) at the earliest.

In view of the above, you are hereby requested to provide the estimate for shifting works at the earliest. For any enquires, Saumen Biswas -Mob.No- 97062 95791, representative from the on boarded contractor side may be contacted.

Enclosed :
1. Tree location Drawing (Annexure A)
2. Details of trees (Annexure B)

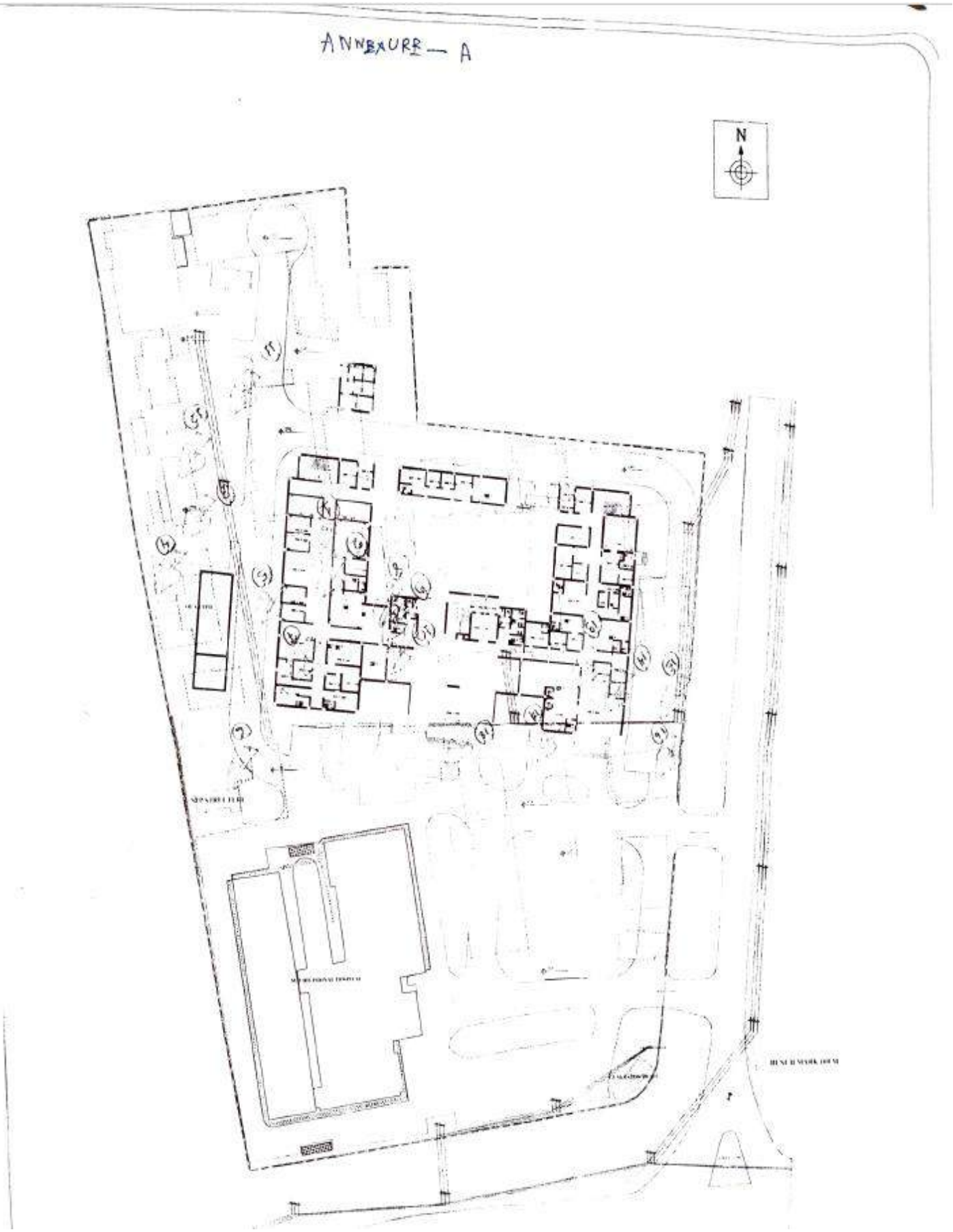
Yours Faithfully,

(Dr. Siddharth Singh, IAS)
Commissioner & Secretary to the Govt. of Assam,
MERD cum Project Director, AHIDMS

No. WBProj/ESM/15/2023/348-A Date :- 14 /11/2023

Copy to:
1. Sr. Project Manager, World Bank funded ASSIST Project, for kind information.
2. The Joint Director of Health Services, Nagaon, for kind information.
3. The SDM&HO cum Nodal Officer, ASSIST Project, for kind information.

(Dr. Siddharth Singh, IAS)
Commissioner & Secretary to the Govt. of Assam,
MERD cum Project Director, AHIDMS


ANNBAURR — A
N

ANNEXURE : B

CONSTRUCTION OF 150 BEDDED NEW HOSPITAL , KALIABOR, NAGON, ASSAM

DETAILS OF TREES

Sr.No.	TREE NO.	TREE NAME	PARAMETER (MM)	REMARKS
1	1	DEBDARU TREE	1400	Within New Hospital Building request for Cutting
2	2	MANGO TREE	1790	Within New Hospital Building request for Cutting
3	3	MANGO TREE	1200	Within New Hospital Building request for Cutting
4	4	MANGO TREE	1410	Within New Hospital Building request for Cutting
5	5	JUNGLI TREE	1600	Within New Hospital Building request for Cutting
6	6	KRISHNA CHURA TREE	880	Within New Hospital Building request for Cutting
7	7	NEEM TREE	535	Within New Hospital Building request for Cutting
8	8	SIRIS TREE	940	Within New Hospital Building request for Cutting
9	9	SIRIS TREE	1720	Within New Hospital Building request for Cutting
10	10	SIRIS TREE	1260	Within New Hospital Building request for Cutting
11	11	SIRIS TREE	660	Within New Hospital Building request for Cutting
12	12	NEEM TREE	1790	Adjacent to Proposed Road request for cutting
13	13	MANGO TREE	1980	At Proposed Mortuary request for cutting
14	14	MANGO TREE	1480	At Proposed Mortuary request for cutting
15	15	KRISHNA CHURA TREE	1400	At proposed DG Set request for cutting
16	16	KRISHNA CHURA TREE	940	At proposed DG Set request for cutting
17	17	MANGO TREE	1790	Proposed 6 mtr.width Road request for cutting
18	18	TREE	1290	Proposed 6 mtr.width Road request for cutting
19	19	KORONJA OR PONGAM T	1730	Proposed 6 mtr.width Road
20	20	TREE	880	Proposed 6 mtr.width Road
21	21	TREE	1200	Proposed 6 mtr.width Road
22	22	TREE	940	Proposed 6 mtr.width Road
23	23	JAMUN TREE	2300	Adjacent to Parking
24	24	EUCALYPTUS TREE	1980	Adjacent to Parking

b. Flora & Fauna on Site

Birds

There has been no major biodiversity found in the project area. However, as the area has been close to the Brahmaputra River and following common birds were observed.

Common Name	Scientific Name	IUCN Status
Barn Swallow	*Hirundo rustica*	LC
Common myna	*Acridotheres tristis*	LC
House Crow	*Corvus splendens*	LC
Scaly-breasted munia	*Lonchura punctulata*	LC

Spotted Dove	*Spilopelia chinensis*	LC
Eurasian Collared Dove	*Streptopelia decaocto*	LC
Asian openbill stork	*Anastomus oscitans*	LC
Cattle egret	*Bubulcus ibis*	LC
Red-whiskered Bulbul	*Pycnonotus jocosus*	LC
Stork billed kingfisher	*Pelargopsis capensis*	LC
Oriental magpie-robin	*Copsychus saularis*	LC
White Wagtail	*Motacilla alba*	LC
Asian pied starling	*Gracupica contra*	LC
Blue throated barbet	*Megalaima asiatica*	LC
House sparrow	*Passer domesticus*	LC
Blackhooded oriole	*Oriolus xanthornus*	LC

Mammals: In the project area no major mammals were observed during the period of survey. Squirrels and Mongoose, Fruit bat has been there as per the information from the villagers.

Flora: The area has been dominated by agricultural fields and jungle on the south side of the bridge location. The vegetation around the project area was dominated by the Cassia tora L., Cassia fistula L., Syzygium cumini, Lagerstroemia speciose, Anthocephalus chinensis, Eupatorium odoratum, Mikania micrantha, Calotropis gigantean, Amaranthus viridis,Ficus glomerata,, Ficus heterophylla, Ficus hispida,, Alpinia nigra, Eichhornia crassipes, Colocasia esculenta, Cyperus cephalotes, Cyperus compressus, Cyperus difformis, Cyperus diffuses, , Cyperus tenuispica, Eleocharis congesta, Eleocharis ochrostachys, Fimbristylis globulosa, Fimbristylis miliacea, Kyllinga brevifolia, Pycreus polystachyos, Schoenoplectus articulates, Saccharum arundinaceum, Sacciolepis interrupta, Pseudoraphis spinescens, Phragmites karka, Paspalum scrobiculatum, Paspalum paspaloides, Paspalum longifolium, Paspalum conjugatum, Paspalidium favidum, Panicum repens, Panicum paludosum, Imperata cylindrical, Hymenachne acutigluma, Hymenachne assamica, Hygroyza aristata,Solanum indicum L, Echinochloa colonus, Digitaria ciliaris, Dactyloctenium aegyptium, Cynodon dactylon, Coix lacryma-jobi, Brachiaria reptans, Brachiaria mutica, Axonopus compressus Lemna perpusilla, Commelina benghalensis etc. species.

Endangered Species: there has been no endangered species present in the closest vicinity of the project site.

Naturally Sensitive Location

There were no naturally sensitive locations present near the project site.

Protected Area: There was no protected area i.e. Wildlife Sanctuary or National Park within the radius of 5 Km from the project site.

Animal Migration Corridor: There was no migration corridor of animals like Asian Elephant through the project area of the proposed hospital

ANNEXURE 4:

ATTENDANCE SHEET OF PUBLIC CONSULTATION WITH STAKEHOLDERS

STAKEHOLDER CONSULTATION WORKSHOP

"অংশীদাৰ পৰামৰ্শ কৰ্মশালা"

For 150-bedded proposed District Hospital at Jakhalabandha, Nagaon

Organised by:

World Bank funded "Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST) Project" under AHIDMS, Govt. of Assam

Date: 12th July, 2023, Venue: Kaliabor Sub Divisional Civil Hospital, Kaliabor, Nagaon

ATTENDANCE SHEET

Sl.No	Name	Male/ Female	Designation	Address	Contact No.	Email ID	Signature
1	Dilip Kr Borah	M	Social Worker	Baniya	7896666999	-	
2	Barun Saikia	M	K. Teacher	Boddamati	000 0000000	-	
3	Pushpadeb Kurmi	M	Senior Officer, Dist. Supply Office	Bordoloni	9706430000		
4	Gautam Khound	M	Social Worker	Jakhalabandha	9871117995	gautamkhound1@gmail.com	
5	Hiranya Bayanika	M	Pharmacist	Jakhalabandha	9864892515		
6	Bikash Gowlak	M	Senior Lab Technician	Kaliabor TE	9854871150		
7	Rakib Kaamkar	M	Social worker (BA TISS)	Kaliabor TE	7636810658		

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Sl.No	Name	Male/ Female	Designation	Address	Contact No.	Email ID	Signature
8	Jiten Nath	M	Staff Nurse (GNM)	Kaliabor TE	7636810658		
9							
10	Gautam Kr Borah	M	Reporter	Jakhalabandha	9401000000		
11	Kabir Mahmed	M	Pharmacist Revised N.H.M. Pharmacist	Jakhalabandha	9854822803		
12	Mithumoni Saikia	F	Staff Nurse Mark Specimen	Nagaon	9854[illegible]		
13	Anowar Hussain	M	Civil Engineer	Jakhalabandha	9864[illegible]		
14	Amrit Bagri	M	Head Assistant	-DO-	9854[illegible]		
15	[illegible]	M	[illegible]	Jakhalabandha	9854[illegible]		
16	Kitu Konwar						
17	Bhaskarjyoti Nath	M	Senior Nursing Officer	Jakhalabandha	9854[illegible]		
18	Tarun Kr Das	M	Reporter	Jakhalabandha	7636[illegible]		
19	Narendra Nath Kalita	M	Staff Nurse (GNM)	Jakhalabandha	9854[illegible]		

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Sl.No	Name	Male/ Female	Designation	Address	Contact No.	Email ID	Signature
20	Dilip Kr Nath	Male		Jakhalabandha	9854[illegible]		
21	Rajib Sonowal	Male	[illegible]	Jakhalabandha	9864[illegible]		
22	Jahirul Hoq Barbhuiya	male	AP [illegible]	Kaliabor	9864[illegible]		
23	Tutisha Saikia	Female	Jakhalabandha	Jakhalabandha	8638[illegible]		
24	Prakash Jyoti Nath	Male		Jakhalabandha	9[illegible]		
25	Rajanikanta Kr Hazarika	"	ANM, Kaliabor				
26	Kanghan Jyoti Baruah	"	ANM, Kaliabor		9706[illegible]		
27	Chinmoy Hazarika	"	ANM, Kaliabor		9706[illegible]		
28	Mangal Bahadur Basnet	"	ANM, Kaliabor		8638[illegible]		
29	Dilip Borah	"					
30	Monika Nagendra Saikia	Female	Assistant Nurse Midwife	Nagendra Saikia	70[illegible]		
31	Krishna Hazarika Bordoloi	Female		Baniya	9707[illegible]		
32	Dibakar Nath Baruah	Male	B.P.M.	Jakhalabandha	8[illegible]		

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Sl.No	Name	Male/ Female	Designation	Address	Contact No.	Email ID	Signature
33							
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ANNEXURE 5:

DEMOLITION WASTE MANAGEMENT PLAN

As per C & D Waste Rules there should be no littering or deposition of construction and demolition waste so as to prevent obstruction to the traffic or the public or drains. There are several instances of environmental degradation caused in cities due to indiscriminate disposal of C & D waste. To avoid any such incidents, the demolition waste generated due to demolition of seven old structures which are in dilapidated condition will need to be demolished as a site clearance mechanism.

Composition of the C&D waste at proposed DH:

The C&D activity can vary depending on age of building being demolished depends largely on the type and nature of construction / demolition project activities. Majorly, composition of C&D waste from these structures will be cement, concrete, bricks, mortar, wood, bamboo, GI sheet etc.

Demolition waste management

Globalzone Sanitory Infrastructure Pvt. Ltd. will be responsible for collection, segregation of concrete, soil and others and storage of construction and demolition waste generated, as directed and approved by the project authority. Globalzone Sanitory Infrastructure Pvt. Ltd. will be responsible to:

1. Ensure that other waste (such as solid waste) does not get mixed with demolition waste and is stored and disposed separately.
2. Keep the concerned authorities informed regarding the relevant activities from the planning stage to the implementation stage.
3. Keep the construction and demolition waste within the premise or get the waste deposited at collection centre so made with the approval of Project Engineer or handover it to the authorized processing facilities/vendors of construction and demolition waste; and ensure that there is no littering or deposition of construction and demolition waste so as to prevent obstruction to the traffic or the public or drains.
4. Pay relevant charges for collection, transportation, processing and disposal as approved by the project authorities.

Demolition waste management plan

The demolition waste will be reused or recycled to minimize the load on the disposal facility. At present, there is no use of asbestos in the existing infrastructure which needs to be demolished. Inventory of the demolition waste and its disposal plan will be as detailed below:

Sr. No.	Material Details	Quantity (No/KG)	Reused/ Recycled/ Disposed off	Reused/Recycled/ Disposed off (to whom/where/how)
1	Bricks	21564 Nos.	Reused	Development and establishment of hutment, Batching plant, site office etc.
2	Timber and Timber Based Boards	2000 kg	Reused & Recycled	Hutment
3	Door And Window Frames and Shutters	246 Nos.	Reused & Recycled	Worker hutment
4	Tin Sheets	375 Nos.	Reused & Recycled	Worker Hutment boundary wall
5	Damaged PVC wire	85 kg	Sold to authorized vendor for disposal	
6	Debris	240 cum	To be used in construction	Temporary approach

Pollution Control Mitigation Measures:

Following mitigation measures will be adopted for control of the pollution and other related aspects that may be created during the demolition activities as well as its handling & disposal:

Aspect	Mitigation Measures
Water contamination	1)No discharge of untreated wastewater into drains/water bodies 2)Use temporary storage tanks or bypass system 3)Sludge to be handled as hazardous waste and disposed as per Hazardous Waste Management Rules 2016 4)Prevent runoff from demolition site
Air Pollution	1) Water will be sprinkled to avoid dust during activities such as drilling etc. 2) Green Net/dust screens will be provided around the infrastructure to be demolished. 3) Hard barricade will be provided surrounding the building wherever necessary. 4) Masks to be provided to workers
Noise Pollution	1) Vehicles and machinery involved will be regularly checked for maintenance. 2) Work schedule shall be in day time. 3) If required silencers will be provided to the machinery/vehicle. 4) Vehicle horn to be minimized. 5) PPE will be provided to the worker. 6)Use of low noise equipment in hospitals
Hazardous waste	Follow Hazardous Waste Management Rules 2016
Traffic Management	1) During work flagmen will be deployed. 2) Peak hours of traffic will be avoided for transporting the debris. 3) If required, the approach road will be used for the collection of debris. 4) Signage will be provided for public awareness. 5) Vehicle speed will be controlled in the premises. Speed limit signage will be provided.
Safety measures during demolition of building structures	1) Safety PPE will be provided to the workers. 2) It will be ensured that the labours and staff is wearing the PPE 3) During transporting of debris, the vehicle will be covered for protection of spillage. 4) One vehicle will be engaged for emergency. 5) Documentation for vehicle & machinery will be recorded and checked thoroughly. 6) Regular conducts of awareness with the toolbox talk for worker safety. 7) Underage/overage screening process to be followed. 8) Adequate equipment's will be provided to workers for height, such as harness, aluminium ladder.

ANNEXURE 6:
LABOUR MANAGEMENT PLAN FOR KALIABOR DISTRICT HOSPITAL SITE

1. PROJECT DESCRIPTION

The proposed project involves construction of a 150-bedded Kaliabor District Hospital (DH) which is designed to be human-centric, user-friendly, and compliant with GRIHA standards, aiming for a 3-star rating. The site development includes dismantling existing structures and relocating utilities, with all necessary permissions obtained from relevant government departments. The building design features a G+5 structure, housing the Main District Hospital Mortuary, Gas Manifold, and BMW and ESS Blocks. The project encompasses a development area of 7,860.70 sqm within a total campus area of 11,249 sqm, including a boundary wall of 490 meters.

Given the scale of civil works expected under the project, skilled, semi-skilled and unskilled workers will be hired by the contractors on a need basis/intermittently. The volume and diversified nature of the of construction works at the site demands for a large number of workers of different job roles. This necessitates developing and implementing **a site-specific Labour Management Plan** based on the ***Labour Management Procedures (LMP) of the Project***[3]***.***

2. KEY POTENTIAL LABOR RISKS

a) Selection of proper site for Labour Camp
b) Provision of basic facilities and amenities for the labour camp
c) Risks of occupational health and safety
d) Lack of knowledge on operation of equipment's, machines, work procedures and processes at sites including both DH site and Batching Plant site
e) Lack of knowledge on maintenance of health and hygiene
f) Potential conflict between local labour and expats or interstate Labours
g) Community and labours
h) Contractor staff and labour
i) Risks of GBV/SEA/SH to community members, particularly women and children by contractors' workers during construction period
j) Risks of workplace sexual harassment at project site (consultants and contractors' staff & labourers)
k) Grievances from labours

3. OBJECTIVES OF LABOUR MANGEMENT PLAN

a) To ensure fair and lawful employment practices by providing equal opportunity, fair wages, and decent working conditions in compliance with applicable labour laws and standards.

b) To maintain safe and healthy working conditions by identifying and mitigating occupational health and safety risks to prevent accidents, injuries, and work-related illnesses of the workers.

c) To prevent child labour, forced labour and discrimination by ensuring strict adherence to applicable labour laws and standards.
d) To manage labour-related GBV/SEA/SH risks by minimising these risks and promoting a respectful, harassment free work environment through Codes of Conduct and awareness measures.
e) To establish an effective worker grievance redress mechanism by providing accessible, and transparent channels for workers to raise concerns and obtain timely resolution.

4. LEGAL FRAMEWORK

[3] LMP disclosed at AHIDMS website:
https://ahidms.assam.gov.in/sites/default/files/public_utility/Revised%20%20Labor%20Management%20Procedures%20%20%281%29.pdf

The Contractor and its Subcontractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of Government and Government Instrumentality and any other labour law (including rules), regulations, byelaws that may be passed or notification that may be issued under any labour law in future either by the Government and Government Instrumentality.

(a) Employees Compensation Act 1923: The Act provides for compensation in case of injury, disease or death arising out of and during the course of employment.

(b) Payment of Gratuity Act 1972: gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death at the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.

(c) Employees P.F. and Miscellaneous Provision Act 1952 (*since amended*): The Act provides for monthly contribution by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:

(i) Pension or family pension on retirement or death, as the case may be.
(ii) Deposit linked insurance on the death in harness of the worker.
(iii) Payment of P.F. accumulation on retirement/death etc.

(d) Maternity Benefit Act 1961: The Act provides maternity leave, leave for illness arising out of pregnancy, delivery, premature birth of child or miscarriage and payment of maternity benefit to the women concerned as per laid down guidelines.

(e) Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act, 2013: This Act defines sexual harassment in the workplace, provides for an enquiry procedure in case of complaints and mandates the setting up of an Internal Complaints Committee or a Local Complaints Committee

(f) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by law. The Principal Employer is required to take Certificate of Registration, and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.

(g) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.

(h) Payment of Wages Act 1936: It lays down the mode, manner and by what date the wages are to be paid, what deductions can be made from the wages of the workers.

(i) Equal Remuneration Act 1976: The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

(j) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. Some of the State Governments have reduced this requirement from 20 to 10. The Act provides for payments of annual bonus subject to a minimum of 8.33% of the wages drawn in the relevant year. It applies to skilled or unskilled manual, supervisory, managerial, administrative, technical or clerical work for hire or reward to employees who draw a salary of ₹ 10,000/- per month or less. To be eligible for bonus, the employee should have worked in the establishment for not less than 30 working days in the relevant year. The Act does not apply to certain establishments.

(k) Industrial Disputes Act 1947: the Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations, a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

(l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.

(m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in the Building and Construction Industry.

(n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home up to the establishment and back, etc.

(o) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Building and Other Construction Workers Welfare Cess Act, 1996 (BOCWW Cess Act): All the establishments who carry on any building or other construction work and employ 10 or more workers are covered under these Acts. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be notified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as Canteens, First – Aid facilities, Ambulance, Housing accommodations for workers near the workplace etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

(p) Factories Act 1948: the Act lays down the procedure for approval of plans before setting up a factory engaged in manufacturing processes, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power.

(q) Weekly Holidays Act -1942

(r) Bonded Labour System (Abolition) Act, 1976: The Act provides for the abolition of bonded labour system with a view to preventing the economic and physical exploitation of weaker sections of society. Bonded labour covers all forms of forced labour, including that arising out of a loan, debt or advance.

(s) Employer's Liability Act, 1938: This Act protects workmen who bring suits for damages against employers in case of injuries endured in the course of employment. Such injuries could be on account of negligence on the part of the employer or persons employed by them in maintenance of all machinery, equipment etc. in healthy and sound condition.

(t) Employees State Insurance Act 1948: The Act provides for certain benefits to insured employees and their families in case of sickness, maternity and disablement arising out of an employment injury. The Act applies to all employees in factories (as defined) or establishments which may be so notified by the appropriate Government. The Act provides for the setting up of an Employees' State Insurance Fund, which is to be administered by the Employees State Insurance Corporation. Contributions to the Fund are paid by the employer and the employee at rates as prescribed by the Central Government. The Act also provides for benefits to dependents of insured persons in case of death as a result of an employment injury.

(u) The Personal Injuries (Compensation Insurance) Act, 1963: This Act provides for the employer's liability and responsibility to pay compensation to employees where workmen sustain personal injuries in the course of employment.

(v) Industrial Employment (Standing Order) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.

5. POLICY AND PROCEDURE FOR CONTRACT WORKERS FOR CIVIL WORK[4]

The key procedure at the construction site includes as follows:

- Equal pay/wage for men and women labors.
- No child labor and/or forced labor at construction site for all works
- All laborers to be provided with photo ID cards for accessing the construction site.
- Personal Protection Equipment (PPE) – safety helmet and shoes, secured harness when working at heights, electrical gloves, eye protection for welding etc., for all workers without which entry to the construction site shall not be allowed.
- Steps necessary to prevent SEA/SH and any discrimination based on religious, political and/or sexual orientation.
- Facilities to be provided at the labor camp:
    - Hygienic living conditions and safe drinking water
    - Segregated toilets for male and female workers
    - Use of fireproof wiring and good quality electricals
    - Cooking gas for labors
    - Monthly health checkup for all labors/family.
    - Awareness campaign for social distancing and general health and hygiene
    - Posters and signages at/around the site, with images and text in local languages relating to personal safety, health and hygiene
    - Security measures to be provided at the camps
    - Emergency response plan including availability of assembly points and mock drills.
    - The measures proposed in a site-specific Action Plan for managing construction related workplace occupational health and safety

Civil works contractors' workers will be managed by the contractors, and their terms and conditions must be consistent with the WB ESF (ESS2), GoI laws and regulations. As a minimum standard for workers under civil works contracts (including subcontractors) the provisions and codes of conduct outlined in the Contractors Environmental and Social Management Plan will provide the minimum standards required. OHS, GBV/SEA and SH and general worker behaviour are managed through the CESMPs.

[4] Labour Management Procedures (LMP) under ASSIST Project

6. ANTICIPATED RISKS AND IMPACTS IN IN TERMS OF LABOUR MANAGEMENT AND CORRESPONDING MITIGATION MEASURES, RESPONSIBILITY WITH THE TIMELINE

Sl.No.	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
1	Identification of site for accommodation of Labours	1. The location to be identified for establishment of labour camps to be encroachment free of suitable size with ease of access and no significant environmental features – o The site selected for the labour camp is a government land situated 0.4 km away from the construction site. o NoC from PWD Territorial Building Division, Jakhalabandha has been obtained for establishment of the labour camps. o The identified site is adequate for accommodating the peak labor volume (250 persons) with all amenities. o Separate entry/exit gates for the labor camp provided and is away from the construction site. o Few trees of local species exist on the site to be well conserved 2. 30 to 40 nos. of rooms will be constructed with 250 Wooden beds with mattresses will be provided. The camp floor will be PCC floor; overhead water tank will be provided with toilets for facilitating running water in the toilets and bathrooms. 3. Basic amenities to be provided in the labour camps.	EPC Contractor	Pre Construction to Construction phase
2	Maintenance of health and hygiene	a) Basic Labour Camp Amenities to be provided to the Labours • Individual Sleeping space along with bedding provision. • Separate Kitchen/ Cooking space along with fuel requirement for cooking • Supply of safe drinking water. The drinking water will be tested quarterly through a NABL accredited laboratory • Separate toilets for men and women and different than the ones used by the community • Bathing space with water provision for male and female workers separately • Sufficient lighting facility along with required numbers of fans. • Adequate solid & liquid waste disposal and management provisions/ system to be implemented in labour camp by providing adequate number of bins and collection/drainage system to avoid littering of wastes. • First aid facilities will be provided and accessible at all times	EHS Officers of EPC Contractor and PCCMC	Throughout the project period

Sl.No.	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
		b) Monthly health check-ups for workers and their families and for the purpose EPC Contractor to tie-up with a nearby Health Facility/Hospital. c) Training to workers: • Daily Tool-Box Training before start of works covering topics of the safety compliances. • Training on OHS to workers prior to commencement of work, consistent with the national/state laws and World Bank Health and Safety (EHS) Guidelines • Orientation on good health and hygiene practices, use of PPE to ensure that the labours and staff is wearing the PPE and safety gears/ harness etc. and, occupational health and safety • Good labour practices • No tobacco, smoking policy, and penalty. d) Labour Management Procedures under ASSIST Project as in the Link below5 to be followed at site		
2	Risks of occupational health and safety The key OHS risks during construction works include injuries due to accidents arising out of poor work conditions and unsafe practices e.g., working at heights, fall into deep excavations, injuries due to heavy machinery impacts, transportation of materials and slip, trips and falls due to spills and poor housekeeping in workplaces etc. In addition, exposure to hazardous chemicals and gases e.g., diesel exhausts, silica dust, and paints, corrosives and solvents etc. may	a. Adequate PPEs for the labours and periodic stock replenishment to maintain availability. b. Safe work practices, usage of engineering controls e.g., exhaust ventilation, isolation of hazardous work areas and administrative controls (e.g., access control, barricading the dangerous areas and work permit systems etc.) are key measures required to be implemented at the sites. c. Regular periodical monitoring of compliances at site and labour camps d. Occupational Health & Safety Policy of our company will be applicable to labour and staff of employed at the Construction site which is enclosed as **Annexure -9** of the C-ESMP	Project Manager and EHS Officer/Staff of PCCMC and EPC Contractor	During Construction period

[5] https://ahidms.assam.gov.in/sites/default/files/public_utility/Revised%20%20Labor%20Management%20Procedures%20%20%281%29.pdf

Sl.No.	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
	also happen.			
3	Lack of knowledge on operation of equipment's, machines, work procedures and processes at sites including both DH site and Batching Plant site	a) Periodical training of labours on operational procedures b) Safe work practices c) Daily inspection and reporting	Project Manager and EHS Officer/Staff of PCCMC and EPC Contractor	All throughout construction phase
4	Conflict between migrant workforce and locals	a) Signing of Code of Conducts (CoCs) by workers b) Orientation of the workers on the good conducts, conditions laid down in the CoCs and penalties for misconduct c) Provision of basic amenities at labour camps d) Declaring the construction site and labour camp as "No Smoking" and "No alcohol" zones e) Monitoring the construction site and labour camp on a daily basis by EHS Officer/Staff of Contractor. f) Stakeholder consultations on a periodical basis with representatives of the community residing in and around the DH site.	Project Manager and EHS Officer/Staff of PCCMC and EPC Contractor	All throughout construction phase
5	Statutory Clearances	Clearance of migratory labour under Inter-state Migrant Workmen.	Project Manager and EHS Officer/Staff of EPC Contractor	Pre-construction
6	GRM for workers	a) Submission of grievances by workers by following ways: o Direct reporting. EHS Officer of PMC to register the grievance will all details in registers with specific formats. o Submitting grievances in Drop Boxes installed at sites. Proper signages of Drop Boxes in local language at workers camp and at entry gate to be displayed so that it is visible to workers. o Calling in the Toll-Free Number of the project i.e. 1800 569 2952 b) Grievance Redressal Protocol to address the grievances physically received at site is attached at **Annexure 10** of the C-ESMP. c) Sensitization of workers on the existing physical GRM mechanism at site.	Project Manager and EHS Officer/Staff of PCCMC	Throughout the project period
7	Risks of SEA/SH a) Risks of SEA/SH to community members, particularly women and children by contractors' workers during construction period;	a) Contractors will be required to ensure all workers (including those of sub-contractors) sign a code of conduct (CoC) to mitigate the risks of SEA/SH, b) Awareness training on SEA/SH for workers. There are some risks associated with community health such as exposure of communities and beneficiaries to communicable diseases, and SEA/SH, however, these will be addressed through appropriate mitigation measures.	Project Manager and EHS Officer/Staff of PCCMC and EPC Contractor	Throughout the project period

Sl.No.	Risks and Impacts	Mitigation Actions/Measures	Responsibility	Timeline
	b) Risks of workplace SH at all establishments by co-workers under the project; and	c) GRM sensitive to SEA/SH complaints is detailed at **Annexure 10** of the C-ESMP		

7. RECORD MAINTENANCE AT SITE FOR LABOUR MANAGEMENT

It is mandatory on the part of the principal employer to seek registration under Contract Labour (regulation & abolition) Act 1970. The Act makes it obligatory on the part of every contractor not to undertake any work through contract labor without obtaining the valid license. The following registers and records are maintained:

(a) Muster roll (Gender wise)
(b) Register of wages (Equal wages as per Act 1976)
(c) Register of deductions
(d) Register of over time
(e) Register of fines
(f) Register of advances

8. LABOUR SCREENING COMPONENTS

Component	Details
Labor License	LL No.: Valid:
Labour screening	Aadhar No.
	Photo
	Blood group
	Emergency contact numbers
	Family Details
	Details of spouse
	Two References/ Known Persons
ID Cards to Laborers	ID Cards with details
Labour Insurance (ECA1923 and other insurances)	Number of Labour: Policy Number: Date of issuance: Policy effective from: Expiry Date:
Migrant Labour Screening	Aadhar-No , Blood group, State of domicile Emergency contact numbers Details of Family Members on site Details of spouse Two References/ Known Persons ID cards. Registration details of migrant labour

9. REPORTING FORMAT FOR WORKFORCE MANAGEMENT AND REPORTING

a) Reporting of EPC Contractor Details

Sr. No.	Project Details	Date of reporting
1	Name and address of the Contractor	M/S Globalzone Sanitory Infrastructure Private Limited. Address: Regd. Off.: 1/6 Vikrant Khand, Gomti Nagar, Lucknow – 226010 E-mail: kaliabortechnical@gmail.com
2	Contract Date and duration	
3	Status and completion of the project	

b) Site Details

Sr. No.	Category of work force	Workforce in the Previous Month (No.)	Workforce Added in the Reporting Month(No.)	Workforce Left in the Reporting Month (No.)	Total Workforce in the Reporting Month (No.)
1	Unskilled Labourers				
2	Skilled Labourers				
	Sub Total				
	Grand Total				

c) Categorization of Workforce

S. No.	Category of workforce	Male		Female		Employment Status		Residential Status	Accommodation Status		
		>18 Yrs.	>18 yrs.	<18 yrs.	>18 yrs.	Regular	Temporary	Migrant	Local	Staying in Labour camp/Quarters	others
1	Unskilled Labourers										
2	Skilled Labourer										
	Total										

d) Details of non- working migrated people, living in the labor camp/ Staff Quarters as part of work force

No of children (0-6 yrs.)			No of children (>6 yrs.)			No of adults			Grand total
Male	Female	Total	Male	Female	Total	Male	Female	Total	

e) Submission Details

Signature &Date		
Name	Rampada Acharjee	Saumen Biswas
Designation	EHS Officer	Project Manager
Remarks by engineer in Charge/ Project manager		

f) Registration format of Grievances received from Labours at sites under ASSIST project

DH Site	District	Name of Complainant	Gender	Phone Number	Date of registering Complaint	Complaint Submitted by		Nature & Type of Complaint (Related to : Sexual Exploitation and Abuse (SEA) & Sexual Harassment(SH)/ Non-receipt of facility at Labour Camp/ PPE related/ Non-Receipt of dues/ Workplace Distrimination/ Excessive Worklaod/any other) ***<u>Protocol of GRM Mechanism as provided by PMU, ASSIST to be followed for further actions</u>***	Complaint Description To include: Date, time and place of occurrence/ What actually happened/ Name of those involved etc.	Redressal			
										Redressed			Not Redressed
						Actual Complainant	Representative of Complainant In this case, please attach a copy of the representational authority signed by the complainant(s)			Yes /No	Nos. of Days for redressal Timeframe: First action to be taken by EPC Contractor in 24 hours.	If redressed, complainant satisfied or dissatisfied Complainant to be communicated about the action / measure/ redressal	Reason

g) **Accident Reporting Format**

No.	Details of Accident/incidence	Responses
1	Date & Time	
	Location	
	Type of incident (major accidents/minor injuries/ fatalities)	
	No. of Affected Persons	
	Category of affected person (Staff/Labour/Visitor/Passerby/Other)	
	Details of Treatment provided	
	Were the treatment expenses born by the employer? (Full/partial/no liability)	
	Number of rest days prescribed by the treating doctor	
	Whether the rest days were paid? (full payment/partial payment/no payment)	
	Did the affected person resume duty/work post treatment? (Yes/Not able to perform duties/relieved from duties by the employer)	
	Has the accident reported in Incidence Register at site?	
	Corrective and Preventive Actions (CAPA) Taken	
2	Date & Time	
	Location	
	Type of incident (major accidents/minor injuries/fatalities)	
	No. of Affected Persons	
	Category of affected person (Staff/Labour/Visitor/Passerby/Other)	
	Details of Treatment provided	
	Were the treatment expenses born by the employer? (Full/partial/no liability)	
	Number of rest days prescribed by the treating doctor	
	Whether the rest days were paid? (full payment/partial payment/no payment)	
	Did the affected person resume duty/work post treatment? (Yes/Not able to perform duties/relieved from duties by the employer)	
	Has the accident reported in Incidence Register at site?	
	Corrective and Preventive Actions (CAPA) Taken	
3	Date & Time	
	Location	
	Type of incident (major accidents/minor injuries/fatalities)	
	No. of Affected Persons	
	Category of affected person (Staff/Labour/Visitor/Passerby/Other)	
	Details of Treatment provided	
	Were the treatment expenses born by the employer? (Full/partial/no liability)	
	Number of rest days prescribed by the treating doctor	
	Whether the rest days were paid? (full payment/partial payment/no payment)	
	Did the affected person resume duty/work post treatment? (Yes/Not able to perform duties/relieved from duties by the employer)	
	Has the accident reported in Incidence Register at site?	
	Corrective and Preventive Actions (CAPA) Taken	

g) Monthly Progress Reporting (MPR)

Contractor to report prepare Monthly Progress Reports (MPR) with the support of **Project Management Consultancy (PMC) under the Project positioned at the site and** submit to PMU for onward submission to World Bank

Sl. No.	Parameter related to workers to be reported in the Monthly Progress Report		
1	Health and safety incidents, accidents, injuries that require treatment and all fatalities *(If Yes, specify in terms of nos, date, time, location and type of incidents - major accidents/minor injuries/fatalities*		
	Number of First Aid Injuries (No.)		
	Number of Near Miss reported (No.)		
2	Health and Safety Supervision	Average number of workers (no.)	
		Number of work hours (no.)	
		% of workers with Full personal protection equipment (PPE) (%)	
		% of workers with Partial personal protection equipment (PPE) (%)	
		Worker violations observed (%)	
3	Worker Accommodation/ Campsite	Number of expats labours housed in accommodation (migrated from foreign country) (No.)	
		Total number of Labours (No.)	
		Number of Local Labours (No.)	
		Number of Inter State Migrant Workers (No.)	
		Date of last inspection (dd/mm/yy)	
		Highlights of inspection	Sanitation maintained (Y/N)
			Waste disposal and management maintained (Y/N)
			Bedding and sleeping space provided (Y/N)
			Cooking space and fuel provided (Y/N)
			Supply of safe drinking water (Y/N)
			Bathing space with water provision (Y/N)
			Actions taken for improvement (Y/N), If Yes, Specify area of improvement
			Adoption of vector control measures (Y/N), If Yes, Specify areas/location
4	Health Services provided to workers	Tie-up with Hospital (Y/N)	
		Information & Training on Health Services provided (Y/N), *If Yes, specify topics/areas*	
		Monthly Health Checkup done (Y/N) If Y Mention dates in remarks	
		Location of clinic	
		Number of workers diagnosed and treated for non-safety diseases or illness *(Y/N) If yes, specify in terms of nos.*	
5	Gender Issues	For local workers	Number of female workers (No.)
			Percentage of work force (%)
			Number of Gender issues raised (No.)
			Number of Gender issues resolved (No.)
		Inter State Migrant Workers	Number of female workers (No.)
			Percentage of work force (%)
			Number of Gender issues raised (No.)
			Number of Gender issues resolved (No.)
6	Training	Number of new workers (No.)	
		Number of workers receiving Induction training (No.)	
		Number of Toolbox talks (No.)	
		Number of workers receiving Occupational Health and safety training (No.)	
		Number of workers receiving Environmental & Social Training (No.)	
		Number of sensitization programme/ training on Communicable diseases (including STDs) (No.)	
		Number of Gender sensitization training (No.)	

Sl. No.	Parameter related to workers to be reported in the Monthly Progress Report	
		Number of Flag person training (No.)
		Number of workers (under Contractor) receiving Code of Conduct training (No.)
		Other (Plz Specify) Training Name and (No.) of workers participated
7	Grievances	Worker's Grievances (No.)
		Worker's Unresolved Past Grievances (No.)
		Grievances resolved (No.)

ANNEXURE 7: CONSTRUCTION & OTHER WASTE MANAGEMENT PLAN (WMP)

Document No: GS/ EHS/ M-03

WASTE MANAGEMENT PLAN

Contract no.: IN-AHIDMS -345993-CW-Kaliabor
Name of Work: Construction of 150 Bedded New District Hospital in Kaliabor, Assam
Contractor: GLOBALZONE SANITORY INFRASTRUCTURE PVT. LTD
PMU: AHIDMS (ASSIST PROJECT)
PCCMC : MOTT MACDONALD PVT. LTD.

PREPARED BY: Rampada Acharjee

Date	Description of revision	Originator	Reviewer	Approver
07/07/2025	1st revision	Rampada Acharjee	Amit Kumar	P Suresh Babu
		EHS Officer (Contractor)	EHS Officer (PMC)	Project Manager (PMC)
	Seal & Signature			

Project Description & Introduction

The Construction of 150-Bedded New District Hospital at Kaliabor, Assam is a large-scale infrastructure project aimed at strengthening healthcare facilities in the region. The project is executed under the Assam Health Infrastructure Development & Management Society (AHIDMS) initiative, with strict adherence to environmental, health, and safety standards.

Construction activities will generate different types of waste, including Construction and Demolition (C&D) waste, hazardous waste, organic waste, packaging materials, and wastewater.
This Waste Management Plan (WMP) outlines measures to handle, segregate, store, reuse, recycle, and dispose of waste responsibly, ensuring minimal environmental impact and full compliance with applicable laws.

1. Overview

1.1 Purpose

The purpose of this WMP is to:

- Establish a systematic waste management framework for the project.
- Promote sustainable construction practices by reducing waste generation, encouraging reuse and recycling, and minimizing environmental hazards.
- Ensure compliance with C&D Waste Management Rules, 2016 and other applicable regulations.

1.2 Objectives

- Identify and categorize all waste types generated during construction.
- Minimize waste at the source through efficient planning and material handling.
- Provide proper facilities for segregation, storage, and disposal.
- Facilitate the reuse of materials wherever feasible.
- Prevent pollution of air, water, and soil.
- Assign responsibilities for waste management at every level of the project.

2. Sustainability Management

Sustainability is integrated into all aspects of the project's waste management system. The approach focuses on reducing landfill disposal, maximizing reuse, conserving water, and promoting environmentally friendly waste treatment methods.

2.1 Sustainability Category and Criteria Requirements

Sustainability Category	Criteria Requirement	Construction Strategies
Waste Reduction	Minimize generation of waste at source	Accurate material estimation, proper storage to prevent damage
Waste Reuse	Maximize reuse of materials	Reuse demolished bricks and debris for site leveling and road construction
Recycling	Ensure high recovery rate	Segregate and send scrap metal, paper, and plastics to authorized recyclers
Water Conservation	Reduce fresh water usage	Reuse RO reject water for cleaning, reuse batching plant wastewater after sedimentation
Organic Waste Management	Reduce biodegradable waste to landfill	Compost food waste in on-site natural pits for landscaping use

3. Environmental Impact and Sensitive Receptors

Construction waste, if not managed properly, can lead to **dust pollution, water contamination, soil degradation, and nuisance to surrounding communities**.

3.1 Environmental Impact and Sensitive Receptors Table

Location	Potential Environmental Impact	Sensitive Receptors
Site Boundary	Dust emissions, debris spillage, noise	Residential areas, roadside vendors
Batching Plant	Cement slurry discharge, sediment overflow	Nearby water bodies, on-site workers
Labour Camp	Organic waste, greywater discharge	Workers, soil, groundwater
Storage Yard	Scrap metal rusting, timber waste	Recycling vendors, soil quality
Waste Storage Area	Odour, pest breeding	Workers, visitors, nearby residents

4.Mitigation and Management Measures

Hierarchy of Waste Management Planning

1. **Prevention** – Avoid generating waste through better planning.
2. **Reduction** – Minimize volume and toxicity of waste produced.
3. **Reuse** – Repurpose materials without processing.
4. **Recycling** – Send materials to be processed into new products.
5. **Recovery** – Extract resources like energy or materials.
6. **Safe Disposal** – Final disposal in a legal, safe manner.

4.1 Hazardous Waste Management

- **Lead-Acid Batteries:** Store in leak-proof, labeled bins; return to suppliers or authorized recyclers.
- **Biomedical Waste:** From first-aid stations, stored in labeled bins and sent to authorized hospital biomedical waste bins.
- **Waste Oil & Lubricants:** Stored in sealed drums, disposed via authorized hazardous waste vendors.

4.2 Batching Plant Waste Management

Source: Batching plant washing operations, equipment cleaning.

Strategy:

- All batching plant washing water will be directed to a primary sedimentation tank.
- A secondary permeable sedimentation tank will be connected to the primary tank via a concrete/HDPE-lined channel for further settlement.
- Sediment from both tanks will be removed at required intervals and reused for site road development and leveling works.
- Segregation & Labeling: Tanks labeled "Batching Plant Wastewater – Sedimentation in Progress."
- Disposal: Clear water after sedimentation will be reused in construction activities; no discharge to natural drains.
- Legal Compliance: C&D Waste Management Rules, 2016 – Clause on wastewater containment.

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- Disposal: Clear water after sedimentation will be reused in construction activities; no discharge to natural drains.
- Legal Compliance: C&D Waste Management Rules, 2016 – Clause on wastewater containment.

- Optimize steel cutting schedules to minimize scrap.
- Order materials in accurate quantities to avoid surplus.
- Implement "Just-in-Time" material delivery to reduce storage waste.

4.8 Disposal of Surplus Materials Including Soil

- Reuse excavated soil for site backfilling and leveling.
- Surplus inert debris to be used in road base or ramp formation.
- Excess non-reusable soil to be transported to authorized disposal locations

4.9 Waste Skip and Bins – Color Coding

Waste Type	Bin/Skip Color
General Waste	Green
C&D Waste	Blue
Hazardous Waste	Red
Organic Waste	Brown
Recyclables (Metal, Paper, Plastic)	Yellow

5. Responsibility

- Project Manager: Overall compliance and resource allocation.
- EHS Officer: Implementation, monitoring, and reporting of WMP.
- Supervisors: Ensure segregation and collection on-site.
- Workers: Follow waste handling and segregation guidelines.

6. Legal Standard Requirements

- C&D Waste Management Rules, 2016
- Solid Waste Management Rules, 2016
- Hazardous and Other Wastes Rules, 2016
- Bio-Medical Waste Management Rules, 2016
- Local Gaon Panchayat Disposal Guidelines

7. Training Requirements

- Induction Training: All new workers briefed on waste segregation and handling.

- Toolbox Talks: Weekly reminders on specific waste management topics.
- Specialized Training: Hazardous waste handling for designated personnel.

8. Monitoring and Reporting

- Weekly waste audits and segregation checks.
- Monthly waste generation reports to the Project Manager and Client.
- Non-compliance incidents recorded with corrective actions.

9. Records Management

- Maintain logbooks for waste quantities, disposal locations, and vendor details.
- Keep copies of vendor authorization certificates.
- Store training records, audit findings, and disposal documentation for at least 3 years.

ANNEXURE 8: TRAFFIC MANAGEMENT PLAN

Traffic Management Plan for proposed DH at Kaliabor site has been prepared based on the anticipated traffic movement in and around the site. The carting of Mobilization of construction heavy vehicle movement will be done in a manner creating least inconvenience/ disturbance/ nuisance/ interference to the flow of vehicular and pedestrian traffic. The temporary diversions, where introduced, will for a minimum required duration and shall conform to standards/guidelines.

Following measures will be taken by Contractor during transportation of Mobilization of construction heavy vehicle.

- Obey the existing traffic management rules and signs of local Transport Authority (district Nagaon of Assam) as far as possible and take advance approval/permission of local Transport Authority/PWD/Police/concerned authority to work on roads. This could include Highways, PWD Roads, and Panchayat Roads, other major and minor roads, streets / lanes and roads in industrial, commercial and residential areas.
- If any changes are required to the existing traffic management system, advance approval/permission of local Transport Authority/PWD/ concerned authority will be taken to work/ transport material on the roads.
- Notify the road users and communities (through community consultations and project information display board) along the planned route clearly and sufficiently in advance, by providing them with the traffic management plans and creating awareness on the modification made.
- Guidance to road users by using signs, delimitates, barricades, cones, pylons, pavement markings and flashing lights etc. wherever required.
- Flag men to control and divert traffic.
- Adequate measures will be provided to control driver behavior through project's operational zones.
- Traffic cones of 500mm, 750mm and 1000mm high and 300mm to 500mm in diameter or in square shape at base and are often made of plastic or rubber and normally have retro-reflector red and white band will be used wherever required.
- Drums about 800mm to 1000mm high and 300mm in diameter can be used either as channelizing or warning devices. These are highly visible, give the appearance of being formidable objects and therefore command the respect of drivers.
- In the same way barricades protect the road users from the danger due to equipment and other temporary structures falling off from height
- All barricades shall be erected as per the design requirements of the Employer, numbered, painted and maintained in good condition and also maintain a barricade register on site.
- The vehicle transporting construction/ earth filling material will be fully covered; and also water the same to avoid flying dust.
- Loading and unloading will not be carried out at carriageways obstructing the free flow of vehicular traffic
- Cleanliness of roads and footpaths by deploying proper manpower will be ensured.
- Park the vehicles used for carting the earth only in designated areas at project site.
- Vehicles need to follow the speed limits i.e., 60kmh or mentioned road speed limits on highway. A register and logbook for each of the vehicles deployed will be maintained.
- No vehicle will be kept idling for more than 10 seconds; however, for not more than 30 seconds. Both at the material sourcing locations and at unloading locations, all construction workers should be provided with high visibility jackets with reflective tapes. The conspicuous of workmen at all times shall be increased so as to protect from speeding vehicular traffic. In addition to these the following shall be followed:
    a. Full height fence, barriers, barricades etc. shall be erected around the site in order to prevent the working area from the risk of accidents due to speedy vehicular movement.
    b. Provide safe and clearly marked work and buffer zones.
    c. All vehicles entering site shall meet the requirements prescribed.
    d. The contractor shall follow the speed limits as per site guidelines (maximum 20km/hr at village road).
- Proper Traffic Management & circulation with adequate lighting and signage system.
- Provision of adequate parking spaces as per Norms.
- Trained and qualified drivers/operators.
- Separate routes for the movement of machineries and vehicles away from the patients/visitor's route.
- Regular checks and inspections for the ambulances and other vehicles.

Traffic Management for Batching Plant to proposed DH site of Kaliabor

Route		Proposed mitigation approach	Responsibility	Monitoring
From	To			
Batching plant	Hospital construction	Follow traffic guidelines as given in the Traffic Management Plan in Annexure	Contractor	PCCMC and PMU

Map 2: Transportation route from Batching plant to Proposed DH Site, Kaliabor

MONITORING CHECKLIST FORMAT

Name of Project:
Location:
Location of batching plant:
Distance from Construction area to Batching plant: Date
of Monitoring:

Sl. No.	Particulars	Yes	No	Remarks
1.	Disclose and distribute the Traffic Management Plan on site			
2.	Working Hours per day as per TMP			
3.	Following the occupational and community health and safety guidelines given in the CESMP			
4.	Obey the existing traffic management rules and signs of local Transport Authority			
5.	Provided guidance to road users by using signs, barricades, temporary markings and flashing lights etc. wherever required			
6.	Provide adequate measures that control driver behavior through project's operational zones			
7.	Park the vehicles used for carting the earth only in designated areas			
8.	Crash Helmets must be made mandatory for both driver and pillion riders on the roads that are being used for transportation of concrete mixed material.			
9.	Maintain a register and logbook for each of the vehicles deployed			
10.	Both at the material sourcing locations and at unloading locations, all construction workers should be provided with high visibility jackets with reflective tapes			
11.	Contractors to conduct, weekly training on Traffic Safety and Barricading			
12.	The contractor shall follow the speed limits as per site guidelines			
13.	All vehicles entering site shall meet the requirements prescribed			
14.	Flag men to deploy at the hospital's construction site during peak construction activities such as excavation, slab casting, etc.			

ANNEXURE 9: OCCUPATIONAL HEALTH & SAFETY (OHS) POLICY, GLOBALZONE SANITORY INFRASTRUCTURE PRIVATE LIMITED

Rev.	Date	Description of revision	Originator	Reviewer	Approver
	01-02-2024				

Client: Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST) under Assam Health Infrastructure Development & Management Society (AHIDMS).

Contract no.: IN-AHIDMS -345993-CW-Kaliabor

Name of Work: 150 BEDDED NEW DISTRICT HOSPITAL IN KALIABOR, ASSAM

Contractor: GLOBALZONE SANITORY INFRASTRUCTURE PVT. LTD

PMU: AHIDMS (ASSIST PROJECT)

PCCMC : MOTT MACDONALD PVT. LTD.

Document title:

HEALTH, SAFETY AND ENVIRONMENT ACTION PLAN

Type of document: PLAN / PROCEDURE

Contractor's document number: GS /EHS/HSEAP-01

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GENERAL

Construction activity is totally different in natural from shop floor activity. It undergoes very frequent change with regard to man power, machinery and circumstances. It involves many discipline and many variables and hence it becomes hazardous.
Hazardous condition and unsafe actions are the direct causes of accident.
Hazard control is not the responsibility of just one individual or one department. It is the collaborative efforts between Planning, Design, Purchase, Construction and maintenance departments – Sharing the responsibility.
Remedial measures for unsafe Actions or human errors in observing safety lines in developing safety culture at the work site.
Supervisors, Foremen, Engineers who are in day today contact with the workers are in the best position to do it.

1. PURPOSE

The purpose of the Health, Safety and Environment Action Plan is to provide guidance on safe work practices and minimum requirement.
If any standards or guidance contradicts this plan, then the more stringent controls will be enforced.
This plan will be a live document, subject to on-going review and update as required.

2. OBJECTIVES & TARGETS

1. Our main objective is to follow a HSE system that prevents risks to employee's life, property and environment.
2. We shall also implement, sustain and continuously improve the HSE management system.
3. We also assure itself of its conformance to the HSE Policy of G S Infra and as well as compliance to the Philosophies, procedures and standards of G S Infra by committing to ensure that all practicable measures will be taken – To protect the health and safety of all persons engaged at the site.
4. To achieve excellent Health and Safety performance (including no LTI or LTA) during the construction operations.
5. To ensure that the Health and Safety of all persons is not affected by work.
6. To provide all personnel with adequate information, instruction training and supervision.

The Health, Safety & Environment targets for the Project are:

Fatalities and Lost Time Incidents	-	Nil
Fire Incidents	-	Nil
Accidental Explosions	-	Nil
Violation of Environmental Acts	-	Nil
Vehicle / Transport Incidents	-	Nil
Near-miss Reporting	-	Maximum

The activities for Health and Safety inspections shall be conducted as per checklists.

OCCUPATIONAL HEALTH AND SAFETY POLICY (OHS)

We, at G.S Infra, are committed to provide safe & healthy workplace and to take adequate measures to prevent any untoward incident / accident and ill-health to all employees, contractors and other stakeholders, G.S.Infra. top Management recognize H&S management as one of the top priority for sustainable organizational growth.

To achieve these the company will,

- Incorporate H&S consideration in all business decisions and operations of the organization
- Promote awareness among its employees & contractors to develop a positive H&S culture
- Provide information, impart training & instruction to its employees and contractors to ensure H&S requirements at job-sites including emergency & crisis management
- Maintain equipment, office & job- site condition through optimal utilization of resource that minimize or (and) eliminate occupational Health Safety risk
- Ensure contractors/suppliers are meeting the GS Infra health and safety standards
- Periodically review health and safety performance of the organization by business heads and ensure corrective actions are initiated.

All employees shall support the implementation of this management policy through – using the safety equipment issued to them, familiarizing them with the safety rules/ procedures of the organization and by enforcing appropriate corrective measures if violations are reported at site.

The company with the coordination of all employees will endeavor for continual improvement in implementing H&S management & performance.

G S Infra will implement this policy, in combination with Safety, Health Regulations, standards and codes of practice of our customers, in accordance with the applicable statutory requirements.

Date: 1st February' 2024

M/s. Globalzone Sanitory Infrastructure Pvt. Ltd. Lucknow

CIN : U74120UP2015PTC074026
GSTIN U.P : 09AAGCG1652H1ZM
GSTIN M.H : 27AAGCG1652H1ZO
GSTIN DELHI : 07AAGCG1652H1ZQ

ISO 9001

No. Q-20150211220

ENVIRONMENT & SOCIAL (ES) POLICY

We, at G S Infra Pvt. Ltd., recognize that high standards of environmental & social protection are integral for the growth of the organization and its people. We are committed to providing a healthy workplace for all employees, and preventing any untoward incidents, accidents, injury and/or ill-health of any employees, contractors, and other relevant stakeholders. We also aim to take adequate measures to protect the environment and prevent environmental pollution.

The company's senior management recognizes the importance of ES to achieve and sustain excellence in our businesses; therefore, with the co-operation of all employees, we endeavor to continually improve our ES Management System by committing to:

- Incorporating ES considerations in the business decisions and operations of the organization
- Adopting preventive measures in our business processes and practices
- Promoting awareness among employees, contractors, business partners and other stakeholders to develop a positive ES culture within the organization
- Providing information and imparting training to employees, contractors, and other relevant stakeholders to ensure ES requirements are met at job sites
- Striving to reduce our environmental impact through optimization of waste generation, preservation of natural resources and encouraging conservation and recycling
- Maintaining proper equipment, and office and job site conditions through optimum utilization of resources that minimize and/or eliminate occupational environmental risks
- Developing effective planning and monitoring systems to periodically review the organization's environmental and social performance and identify potential errors, and to ensure that corrective actions are initiated to reduce their impact

Communication, consultation, participation and collaboration among all employees and stakeholders will uphold the principles of this policy. Responsibility for compliance to this policy rests with all the employees of the company.

This ES Policy will be implemented in accordance with applicable statutory requirements, environmental and social regulations, and standards/ codes of practice of our customers. It shall be reviewed every three years. It will be displayed prominently on the office premises, and access to the detailed environment and social management plan manual will also be available for reference by site office.

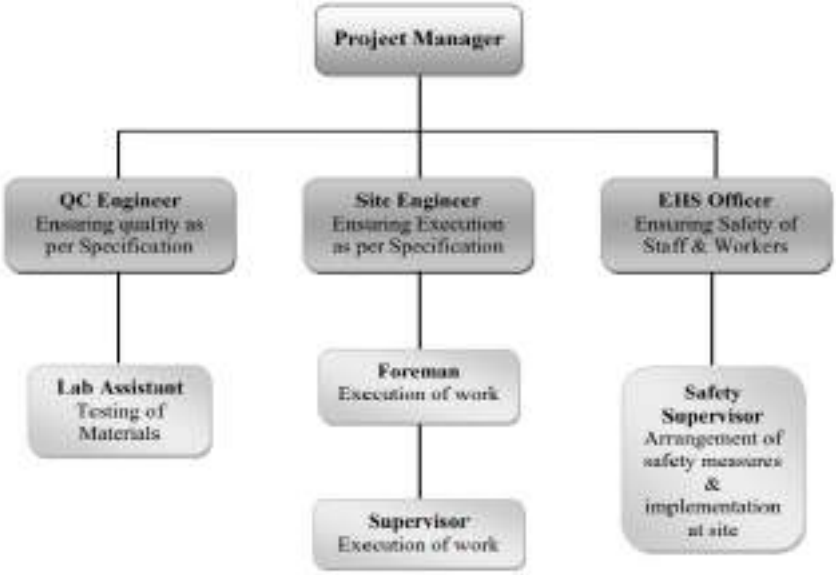
01-Feb-2024

M/s Gopalzone Sanitary Infrastructure Pvt. Ltd. Lucknow

Corporate Office : 1/6, Vikrant Khand, Gomti Nagar, Lucknow - 226010
+91 522 4330472 info@gsinfra.in www.gsinfra.in

SAFETY ORGANISATION

The safety organisation and the communication channel to the owner, and G S Infra and sub-contractors are indicated in "Safety Organisation" hereof.



SITE SAFETY COMMITTEE

The site management shall constitute a Site Safety Committee comprising of the following.

The Project In-charge or the designated person of the G S INFRA – Chairman.

The HSE In-charge of the G S INFRA – Secretory.

The Departmental In-charges of the G S INFRA - Member

The Site engineers of each activity of the G S INFRA – Member.

The Site In-charge of the Sub-contractor (if any) - Member.

The work site supervisors of the Sub-contractor (if any) – Member.

The chairman of the committee shall be the overall HSE controller of the project who shall direct all matters pertaining to HSE and welfare of the employees engaged at site under the guidance of the HSE personnel.

Safety Induction Training

All the employees and workmen should be given this introductory training at the first day of their entry in the site. No personnel will be allowed to work on site prior to this training. The following topics shall be covered while given Induction Training:

1. OHS & ES Policy
2. PPEs and Legal Requirements
3. Working at Height, Scaffolding, Ladders
4. Reporting accidents/near misses/unsafe condition and act
5. Electrical Safety
6. GBV, SEA/SH
7. GRM Mechanism
8. Code of Conduct

9. HIRA
10. Welding / Gas cutting Hot Work
11. Manual Handling, lifting
12. Hand and power tools safety
13. ERP, Fire, First Aid
14. Waste Management and housekeeping
15. Road and Traffic Management

HSE'S Training for Workers

All the Workers (G S Infra) shall be given this training at frequent interval.

Classroom training: Site HSE In-charge shall prepare Workers' HSE Training Plan. It shall include the following.

- Site OH&S Hazards / Environmental Aspects and Impacts
- Hazards control and mitigation methods.
- H&S, E&S Policy.
- On Site Emergency Plan.

TOOL BOX-TALK; - To conduct awareness among workers about his OH&S HAZARDS / ENVIRONMENTAL ASPECTS AND IMPACTS it important to create awareness about it. It will consist of the technical topics such as: - Electrical Safety, Excavation Hazards, Crane Safety, Environmental Pollution, Machine Guarding, Material handling etc.

ATTENDANCE: Proper attendance records of the training activities shall be maintained.

FEED BACK: The effective evaluation of the training shall be conducted at the end to evaluate the training performance.

BATCHING PLANT

- Prior to putting the machine into operation study the relevant safety regulations and installation instructions. These must be made clear to the operating personnel either by the owner, the plant manager or their representatives prior to operation of the plant.
- It is strictly forbidden to stay within the range of equipment. Under no circumstances reach into moving parts. Make sure that all safety guards and protection covers are provided and properly fitted.
- Ensure turn off main switch when operator leaves cabin.
- When service and maintenance work is carried out, the plant must be stopped, and steps must be taken to ensure that machine cannot be started by any authorized person. Remove main fuses for the purpose.
- Carry out all maintenance work under observance of the safety regulations. Hand tools should not be left on the platform after maintenance work is over.
- When finishing the daily work, cement screw conveyor must be cleaned. This is indispensable as due to condensation of water during the night, the cement might harden up. The inlet gate of the cement screw conveyor has as well to be closed after finishing day-work.
- The connection cables may not be mechanically loaded nor cracked. When a cable is torn out of a gland it has immediately to be refitted and sealed off.
- Ensure in your own interest regular maintenance and lubrication of the machine.
- Protect electrical parts against dust & moisture.
- For faults, which cannot be repaired by yourselves, notify the concerned department.
- Good housekeeping shall be maintained at each work front for the plant.

- Smoking should be strictly prohibited in areas where solvents are used. Solvent passing through a cigarette can break down into even more harmful substances.
- Workmen are often drink chemicals thinking it to water / by mistake. To prevent such incident the following remedial measures will be adopted
- Chemical will be kept under lock & key and not kept in the open.
- Operator's room of batching plant or wherever the chemicals are used will be locked and unauthorized entry banned.
- All chemical bottles whether in laboratory or outside will be clearly and boldly marked with caution wards like 'DANGER', 'DO NOT DRINK' etc.
- Explain the danger while drinking chemical and warn the workmen of these hazards.
- Ensure use of PPE depending upon the job concerned, like safety shoes, aprons, gloves, Nose mask, goggles, safety helmet, Safety harness etc.
- Workmen should wash their hands before eating, drinking, smoking and before going to the toilet.
- A First Aid Box, complete with all the stipulated items should be kept at site for readily available.
- Fire extinguishing equipment should be provided depending on type and potential of fire hazards.
- Toolbox Talks shall be delivered to the personnel engaged in the batching plant prior to start work

WORKING AT HEIGHT

Following are the precautions to be followed at the time of working at height.

- Workers engaged in height work shall be experienced in such work.
- Area below will be suitable fenced or barricaded to avoid injuries to passerby. Warning sign also shall be put up.
- A rope shall be used for lowering & lifting materials, tools etc.
- All workmen shall wear necessary PPEs for working at height. Worker shall use full body harness with double lanyards and secure their lanyards to strong scaffolding or structural members when working at height.
- For vertical climbing workmen must use full body harness (with chest D ring / loop) with fall arrester.
- Risk involving work shall be carried out under supervision.
- The tools and other accessories used during the work at height shall be brought down after its completion, as letter on they will fall other persons.
- Ladders provided as access shall be secured at both top & bottom.
- Stairs with greater than 15 steps will have landings at every 15 steps.
- Safety Helmet with chin strap, Safety Shoes and other specific PPEs for the job concerned should be used by the workmen.

PROCEDURE:

The following points to be taken care during working at height:

- All workers working at a height 2mt. or more must undergo the height work training. Prior to start of the activity.
- All the workers will be explained safe work execution plan and related safety precaution to be adopted.
- Proper usage of PPEs (full body harness with proper anchorage; Safety Helmet with chin strap in place) shall be ensured at the time of working.
- A communication system has been established and explained to the workers.
- Adequate illumination has been ensured in case of night work.
- Work-area inspected prior to starting of the job.
- Area below the workplace shall be barricaded as per the site rules, especially below hot works.
- Workmen provided with bag/ box to carry bolt, nuts and hand tools.
- All work platforms to be of adequate strength and ergonomically suitable (i.e. if 32 mm Wooden board is used for platform, adequate support to be provided in every 1mt., for 38mm. board maximum span length should not exceed 1.5 mt.)
- Fabricated makeshift arrangements are checked for quality and type of material welding, anchoring etc.

- Workmen are instructed to strictly compliance to anchor the safety belt during higher elevation (more than 2 meter) job.
- Proper arrangement made (lifeline etc.) for anchoring the safety belt.
- Fall protection device (Fall arrestor) to be used for height work wherever required

PERSONAL PROTECTIVE EQUIPMENTS

In order to have the best utilization of personal protective appliances, we shall have the basic knowledge and information on following.

- Nature of hazards against which particular equipment is required to be used.
- Standards and occupational safety & health requirement on various hazards in the work area.
- Selection and procurement of different equipment's as per the required quantity and inspection/ issue practices in the organization.
- Effective methods of tanning and motivation of employees so that they use as and when required.

Personal protective equipment mainly divided into two main categories.

- Non – respiratory personal protective equipment.
- Respiratory personal protective equipment's. The following personal protective equipment's are to be used for protecting the body parts such as

1. **Safety helmets** (IS 2925)– protects head
   These helmets are impact resistance, electrical shock proof and comparatively light.

2. **Safety goggles (IS 5983) (for dust)** – protection for eyes.
   Dust goggles are recommended to use for extremely fine dust and particles.

3. **Chipping goggles** (IS 5983) – protection for eyes.
   Chipping goggles are used for chipping, fitting, grinding, riveting and other fabrication work, using of power tools, machine shop operation, wood cutting, spot & butt welding, dusts, etc.

4. **Welding goggles** (IS 5983/IS 1179)– protection for eyes.
   These goggles are recommended for use in case of glare, furnace operation, infra ray & ultraviolet radiation, melted and red-hot metal, gas welding and cutting etc.

5. **Eye screens & Face shields** (IS 8521) – protection for eyes and face.
   These PPEs are recommended to use for chemicals & furnace operation, spot & butt welding, fines particles, frontal splash, glare, melted metals etc

6. **Hand gloves** (IS 6994) – protecting hands against following hazards.
   Sustained heat, sparks, hot metal splash, sharp objects, abrasion, cuts, electric circuits, moisture, acids, alkalis and other chemicals, petroleum products.

7. **Safety shoe (IS 15298 part 2)** – protecting feet against following hazards:
   Risk of crushing by heavy objects, penetration by sharp object, penetration by chemicals or harm full liquids, weld spatters.

8. **Dust mask (IS 9473 / IS 15323)** - it is recommended to use in the atmosphere where lime, asbestos, silica, carbon, etc are present which block the respiratory track depositing foreign particles in the lungs.
9. **Self-contain breathing apparatus (IS 10245 (Part 2): –** it shall generally be used in emergency situation, toxic / poisons gas e.g. Cl, H2S, NH3, Cyanides, Hydrocarbon which react with blood an accidentally.
10. **Full Body harness with shock observer and double lanyards(IS 3521 / IS 3521 (Part 1 & 2) –** it is recommended for use against falling from height (more than 1.8 meter), working over water (if required).**Ear plug / Earmuff –** hearing protection shall be worn by personnel in works in areas of high noise levels or when working with equipment's that generating high noise level more than 65-75 dBA.
11. **Reflective Safety Jacket / High Visibility Vest (IS 15809):** for traffic and low visibility work areas.

12. **Shoulder Pad (for Manual Handling):** As per ergonomic safety practice and relevant IS guidelines for manual material handling.

WELFARE FACILITY

1. Camp Management & Security

- A designated Camp Supervisor / Camp In-charge shall be appointed for overall management, discipline, housekeeping, and welfare monitoring.
- Security personnel shall be deployed round the clock for surveillance, access control, and emergency response.
- Visitor entry shall be controlled through a register and identification system.
- Emergency contact numbers and reporting procedures should be displayed at common locations.
- Assembly points, emergency exits, and fire points shall be clearly marked and accessible at all times.

2. Accommodation & General Welfare

- Adequate ventilated rooms with proper lighting, fans, and safe electrical connections should be provided.
- Workers shall be provided with bedding arrangements and shelves or lockers for personal belongings.
- Dedicated cooking and dining areas shall be provided with hygienic conditions.
- LPG cylinders shall be stored upright with regulators, leak protection, and fire extinguishers nearby.
- Adequate covered dust bins shall be provided and waste disposed regularly.
- Dishwashing and utensil cleaning areas shall be arranged with proper drainage.

3. Sanitation & Toilet Facilities

- Sufficient temporary toilets shall be provided, protected from weather and external view.
- Separate toilet facilities shall be provided for labour and staff.
- Daily cleaning and disinfection shall be carried out.
- Periodic septic tank cleaning and drainage maintenance shall be ensured.
- Bleaching powder or approved disinfectant shall be used regularly.

4. Drinking Water & Health Protection

- Safe potable drinking water should be available at all times.
- Quarterly laboratory testing of drinking water shall be conducted.
- Water storage tanks shall be cleaned periodically.
- Awareness shall be provided on hygiene and prevention of waterborne diseases.

5. Rest Shelter & Welfare Area

- Dedicated rest sheds with seating, shade, and drinking water shall be provided.
- Rest areas shall be kept clean, ventilated, and obstruction free.

SITE FIRST AID FACILITY

A FULL-FLAGED FIRST-AID FACILITY WILL BE PROVIDED AT SITE WITH NECESSARY EQUIPMENTS.

FIRST AID PROCEDURES

First Aid is the help given to a person for any injury or sudden illness before the arrival of an ambulance or qualified medical expert.

ACTION: -

- Assess the situation without endangering yourself or others.
- Identify the injury and condition from which the casualty is suffering.
- Give immediate, appropriate and adequate treatment, keeping in mind that there can be more injuries and that some casualties require more urgent help than others.

The essence and most important thing of first aid are diagnosed:

The most common causes of partial consciousness or unconsciousness are:

a. Head / skull injury
b. Asphyxia
c. Heart attack
d. Epilepsy
e. Stroke
f. Diabetes
g. High & low temperatures
h. Poisoning
i. Shock
j. Fainting

STATUS	SYMPTOMS	ACTION
Unconsciousness	No response to sound (partial) or no response to pain	After A- Airway, B- Breathing, C-Circulation measures use recovery position alert medical attention
Obstructed Breathing	Blueness of lips, ears or face Gasping for air	Clear Airway, Firm hits between shoulder blades, Mouth to mouth ventilation
No Respiration	Deep unconscious, No respiration	Open tight clothing. Alert medical attention
C.P.R.	Deep unconscious, No breathing, No circulation	Start CPR, Alert medical attention, Loosen constrictive clothing.
Wounds & Bleedings	External wound, Severe loss of blood, Pumping or steaming	Lay casualty down/ or sitting position, Stop bleeding, Injured part of body elevated, Sterile dressing pad, Wound pressure bandage, Refer to medical attention
Amputation	Bloody stump, Pain	Lay casualty down, Apply pressure bandage, Amputated part sterile covered in a plastic bag and packed in a plastic bag with water and ice, Alert Medical attention,
Burns and Scalds	1st degree- Redness, swelling 2nd degree – Blisters, which might be open 3rd degree – Black burned or white cooked skin,	-Immediate cooling: 15 minutes under slowly running cold water Covered Sterile. Arrange urgent medical attention Do not apply any lotions ointments or fat to the injury
Shock	Casualty looks pale, Sick impression,	Lay casualty down, Stop severe bleeding, Alert medical attention, No drinking, smoking or eating, Protect against cooling down
Closed Fracture	Pain,	Immobilize the fractured bone,

STATUS	SYMPTOMS	ACTION
	Loss of normal movement, Swelling,	Support and reassure: Forearm, wrist and hand a sling, For lower limbs a rolled-up blanket
Open Fracture	Pain, Loss of normal movement, Swelling, External wound,	Immobilize the fracture, Reassure, Steady and support, Visible wound must be covered sterile
Foreign Bodies in the Eye	Pain and itches, Watering eye, sometimes impaired vision, Redness of eye and eyelid	Advise not to rub in the eye, Reassure, Seek medical aid

ANNEXURE 10: GRIEVANCE REDRESSAL MANAGEMENT

1. **Grievances under the Project:** The possible grievances of the community as envisaged, and which could be addressed through this project include:

Grievances of workers

- The workers at the construction site may have grievances due to non-receipt of basic facilities, PPE related, non- Receipt of dues, workplace discrimination, excessive workload etc
- Potential conflict between migrant workforce and local may take place
- Complaints related to SEA/SH

Grievances of Community

- Tree felling for site clearance.
- Inconveniences caused to community by construction activities like dust, water source contamination, noise, water logging, etc
- Community health and safety concerns
- Community residing nearby site or passers-by may have grievances related to non-disclosure of project information
- Public resistance for the project anticipating negative impacts of the project like tree felling for site clearance
- Accessibility issues of public
- Land demarcation issues.
- Complaints related to SEA/SH
-

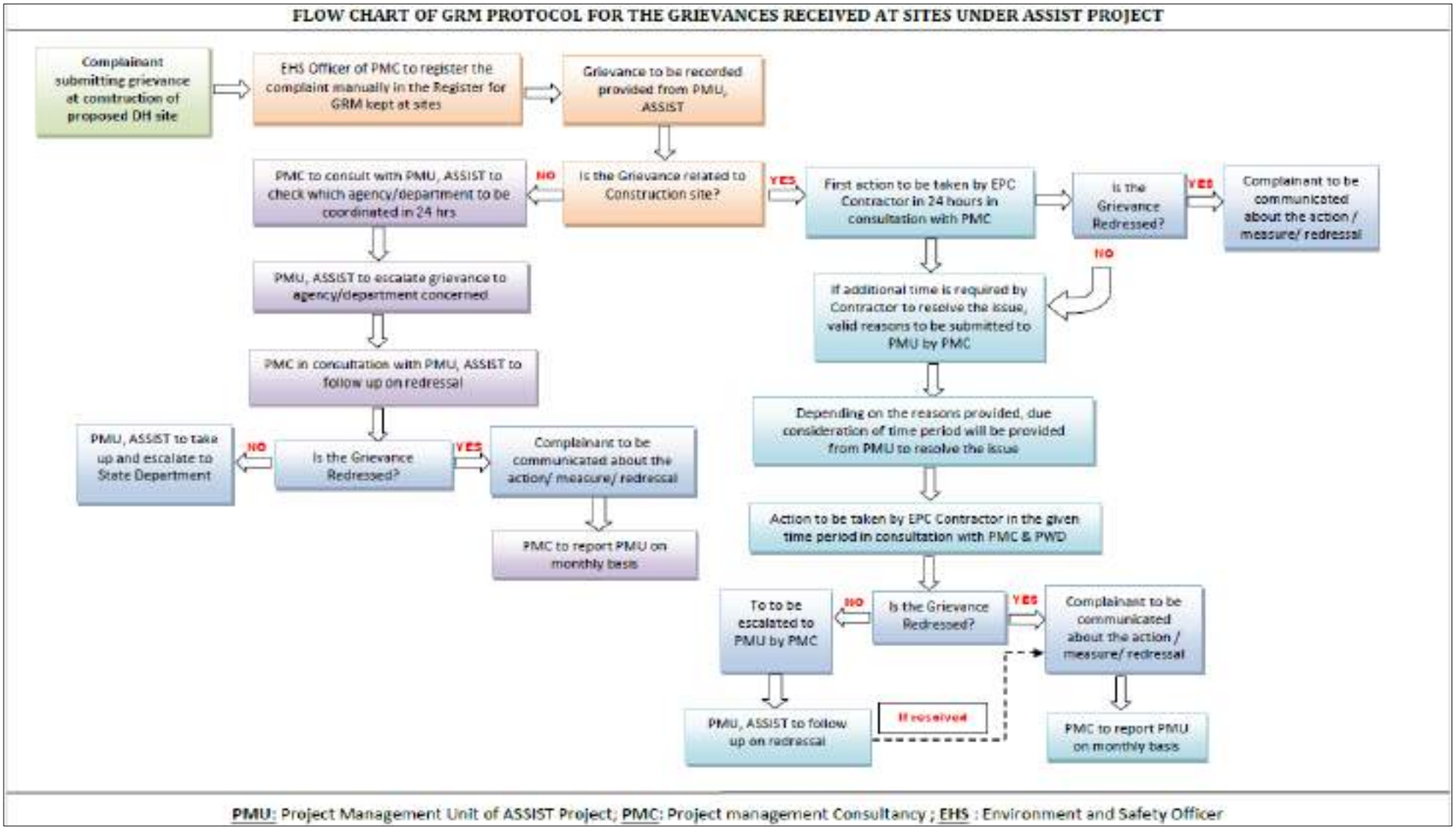
2. **Functioning of GRM**

All complaints and concerns will be addressed through a transparent, gender responsive, culturally appropriate process through a GRM protocol developed under the project. The following channels are established to receive inquiries/comments and concerns /grievances of the citizens/complainant:

1. Calling in the GRM toll free number /phone number of ASSIST
2. Physically registering complaint at sites in person & sending by posts or submission in the drop box installed at sites
3. Sending in GRM email of ASSIST
4. Online Submission in the ASSIST GRM Portal (to be developed)

The EPC Contractor at site will be monitored by a Project Management Consultancy (PMC) and the Environment and Safety Officer of PMC will be responsible to register the grievances received from the community as well as workers of the site. The protocol for Grievance Redressal Management is shown with the help of the flow chart below:

2.1. The protocol for Grievance Redressal Management is shown with the help of the flow chart below:



2.2. Grievances Registration Format

2.2.1. For registering complaints of Community

Sl. No.	Name	Gender	Phone Number	Email Address	Date of registering Complaint	Complaint Submitted by		Nature & Type of Complaint	Complaint Description	Redressal			
						Actual Complainant	Representative of Complainant In this case, please attach a copy of the representational authority signed by the complainant(s)	(Related to : land/permits & clearances/non-disclosure of project infromation/construction induced issues like pollution, water logging etc. / Sexual Exploitation and Abuse /Sexual Harassment(SH)/ Comments & suggestions/ seeking information on porposed DH)	To include: Date, time and place of occurannce/ What actually happened/Name of those involved etc.	Redressed			Not Redressed
										Yes/No	Nos. of Days for redressal Timeframe: First action to be taken by EPC Contractor in 24 hours. *Protocol of GRM Mechanism (Flow Chart) as provided by PMU, ASSIST to be followed for further actions.*	If redressed, complainant satisfied or dissatisfied *Complainant to be communicated about the action / measure/ redressal*	Reason
A	B	C	D	E	F	G	H	I	J	K	L	M	N

2.2.2. For registering complaints of Workers

Sl. No.	Name	Gender	Phone Number	Date of registering Complaint	Complaint Submitted by		Nature & Type of Complaint	Complaint Description	Redressal			
					Actual Complainant	Representative of Complainant In this case, please attach a copy of the representational authority signed by the complainant(s)	(Related to : Sexual Exploitation and Abuse (SEA) & Sexual Harassment(SH)/ Non-receipt of facility at Labour Camp/ PPE related/ Non-Receipt of dues/ Workplace Distrimination/ Excessive Workload/any other)	To include: Date, time and place of occurance/ What actually happened/Name of those involved etc.	Redressed			Not Redressed
									Yes/No	Nos. of Days for redressal Timeframe: First action to be taken by EPC Contractor in 24 hours. *Protocol of GRM Mechanism (Flow Chart) as provided by PMU, ASSIST to be followed for further actions.*	If redressed, complainant satisfied or dissatisfied *Complainant to be communicated about the action / measure/ redressal*	Reason
A	B	C	D	E	F	G	H	I	J	K	L	M

3. Contractor Grievance Redress Committee

Sr. No	Name and details	Designation	Status in the GRC (Convener/ Member)	Contact Details
1	Mr. Saumen Biswas	Project Manager	Chairperson (Contractor Representative)	9706295791
2	Mr. Biswadeep Das	Senior Project Manager	Member (AHIDMS Client Representative–Senior project manager for the package)	03613501033
3	Mr. Amit Kumar	EHS Officer	Member (PMC Engineer)	9599032082
4	Mr. Pallikala Suresh Babu	Project Manager	Member (PMC Engineer)	8919788120
5	Mr. Joydeep Kakati	Community Member	Member (Community Member)	7002826148
5	Mr. Subrata Dutta	Admin	Member (Contractor's representative)	9864080622
6	Mr. Rampada Acharjee	Contractors EHS Officer	Convener (Contractors EHS Manager)	6000369670

4. GRIEVANCE REDRESSAL MECHANISM (GRM) RESPONSIVE TO GBV/SEA/SH UNDER THE PROJECT

A. Available options for lodging GBV sensitive complaint:

1) Calling in the GRM toll free number/phone number of ASSIST
Female operator to be engaged and trained to receive GBV sensitive complaints

2) Physically registering complaint at HCFs, Project Intervention sites and Entities and at O/o AHIDMS in person, by posts, call or email
Designated trained focal persons at each of the entities to register GBV sensitive complaints

3) Sending in the GRM email of ASSIST
Designated trained focal persons to open email and take necessary action for the GBV sensitive complaints

4) Online Submission in the ASSIST GRM Portal

A separate section will be created in the GRM portal to handle GBV-sensitive grievances. Such complaints will be addressed through a survivor-centred approach and, where applicable, referred to the Internal Committee (IC) or Local Complaints Committee (LCC) in accordance with the POSH Act. Safe and confidential channels for submitting GBV grievances will also be identified and established.

B. To approach the reporting channels that exists in the State as stated below for submission of grievances safely and confidentially. In the process, to **r**espect and acknowledge complainant's right to approach any reporting channel.

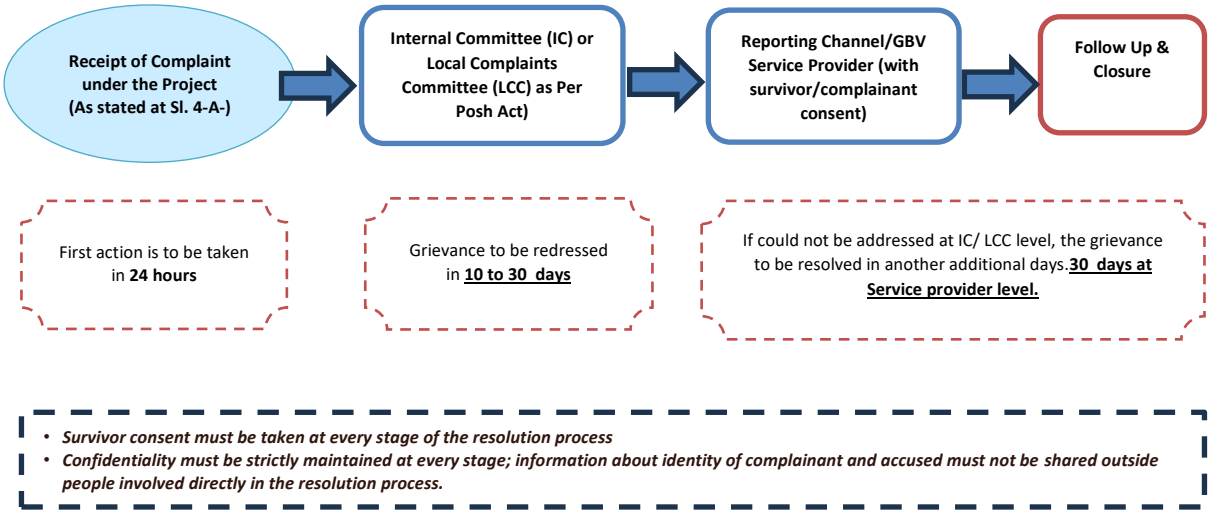
Reporting Channels for the Project

a) District Social Welfare Officer (DSWO)
b) District Hub for Empowerment of Women (DHEW)
c) Women Helpline -181
d) Childline – 1098 (For Girls upto 18 years of old)
e) One Stop Centres (OSCs)
f) Police – 100
g) Internal Committee/ Local Complaints Committee

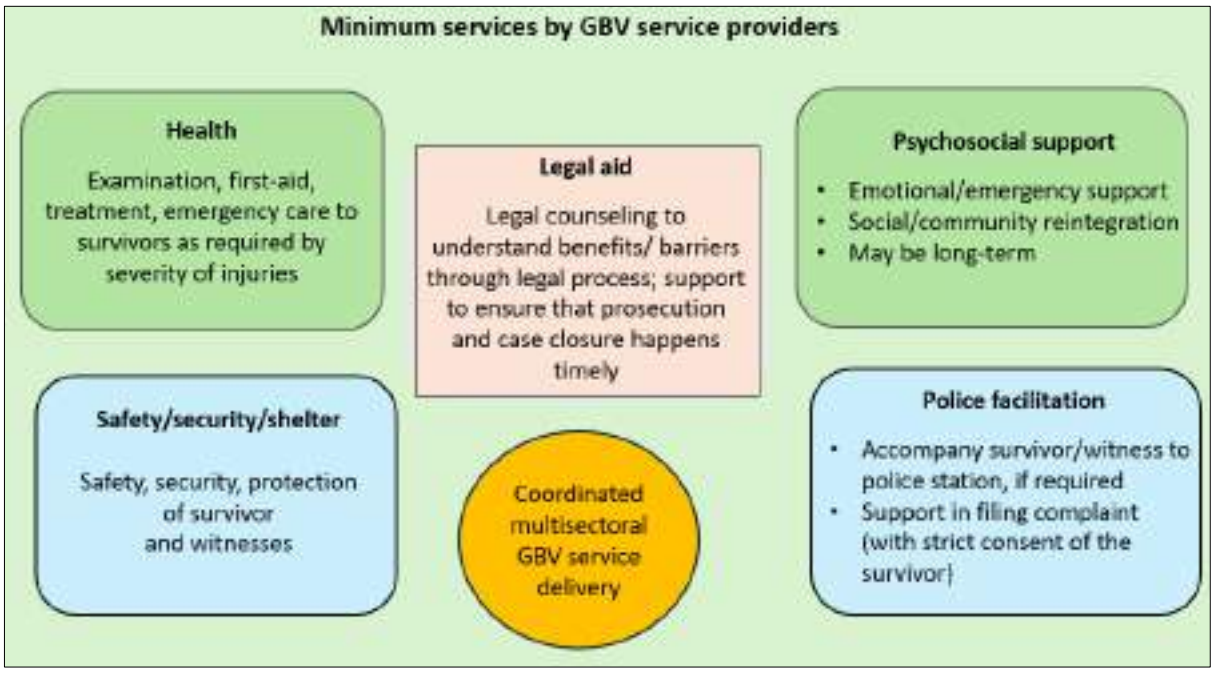
h) Project GRM mechanisms:
   i. Project GRM Portal
   ii. Drop Boxes at construction site, Complaints Boxes at existing Hospitals, Nursing Institutes/CoE
   iii. GRM Toll Free Number and Email

C. Display information on all uptake channels at all Program sites and offices.

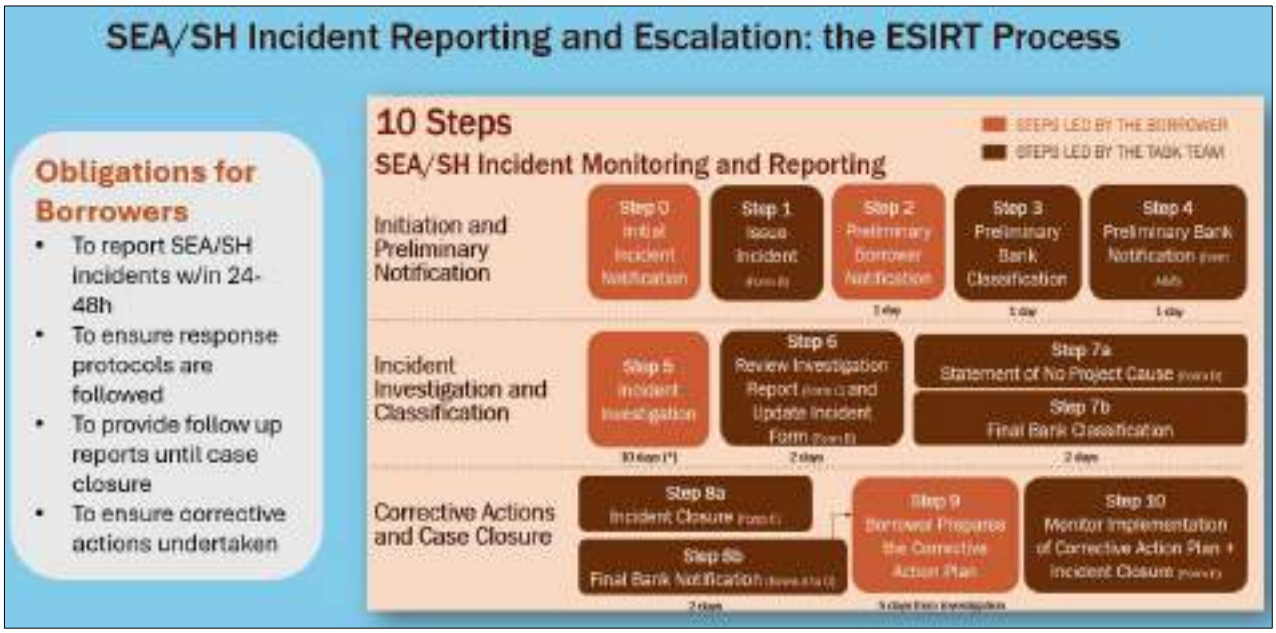
D. Process Flow



E. Minimum services to be provided by the service providers



F. World Bank ESIRT (Environmental and Social Incident Response Toolkit) Process: SEA/SH incidents reporting and escalation



G. Details of District Social Welfare Officer (DSWO), District Hub for Empowerment of Women (DHEW) and One Stop Centres (OSC) Officials, Women & Child Development Department, Assam

Sl No	Name of the Districts	Name of the DSWO/ (I/c) DSWO	Contact No.	Email ID	Contact person of DHEW for referal services	Contact No.	Contact personof the OSC for support services	Contact No.
1	Bajali	Jyoti Kumar Das	9401821333	dswobajali@gmail.com	BHAGYASHREE DAS	9706123668	Popi Devi	9706491268
2	Baksa	Simanta Pradip Choudhury	9435123527	dswobas2017@gmail.com	Santosh Ramchiary	7002361507	LEELA BRAHMA	9613981356
3	Barpeta	Bodiozzaman Ahmed	7002717992	dswobar2017@gmail.com	SUNAYANA DAS	9365956982	Nazma Heptullah	7002972227
4	Biswanath	Mainul Hoque Choudhury	7002616102	dswobiswanath@gmail.com	Monali Beriya	8134826921	Manoshi Dowka	7578046687
5	Bongaigaon	Jayanta Kr. Das	9435023320	dswobon2017@gmail.com	Barsha Ray	9387306586	Puja Konwar	7002395134
6	Cachar	Deepa Das, ACS	9582379341	dswocac2017@gmail.com	Bonani Bhattacharjee	9706701254	Rupali Akura	9957990026/
7	Charaideo	Smti. Jyotsna Biswas	9707403318	dswocharaideo2019@gmail.com	HERUSIKHA HATIMURIA	7576868367	HERUSIKHA HATIMUR	7576868367
8	Chirang	Shyameswar Mushahary	7636609511	dswochi2017@gmail.com	Srai Srai Wary	8133025927	ANSUMAI DAIMARY	6003858929
9	Darrang	Kukheswar Borah	8638010484	dswodar2017@gmail.com	Dhirukalpa Saikia	9678093103	Jayashree Kalita	6000673645
10	Dhemaji	Sukanya Das	9435143322	dswodmj2017@gmail.com	Hudipta Borgohain	8876775781	Jyotshna Dowarah	6009964110
11	Dhubri	Pronamika Phukan	7896599527		Meghali Roy	9954365658	HIRAMANI PATHAK	8011055713
12	Dibrugarh	Prasanta Bora	8011443022	dswodibrugarh@gmail.com	Mousumi Manki	9957985006	Trishna Devi	8638515471
13	Dima Hasao	Jyoti Bikash Dutta	7896854196	dswodim2017@gmail.com	Sarada Langthasa	8134836268	Desmadi Hagjer	9127162656
14	Goalpara	Abu Mostafa Arsad Hussain	9954323707	dswogoa2017@gmail.com	Himashree Sinha	9101116735	FARHIN NASIBA ISLAN	8638874808
15	Golaghat	Sri Dadu Dutta	7002713324	dswogol2017@gmail.com	JUPI SAIKIA	8399957089	Monjulika Gogoi Sing	8752878553
16	Hailakandi	Manjeet Das	7099104821	dswohai2017@gmail.com	Amit Kumar Das	9707251447	Nasrin Sultana Mazu	7896867710 / 7002269009
17	Hojai	Nileswar Rey	9365182833	hojaidswo@gmail.com	Tina Bhattacharjee	8133970839	MONI BEGUM	8638522864
18	Jorhat	Sri Jatish Baruah	9954111635	dswojor2017@gmail.com	Sanjukta Bhuyan	8486455983	Leena Chakravarty	9706227040
19	Kamrup	Bhupen Bhattacharyya	9435073084	dswokamr2017@gmail.com	Gulashmi Rekha Borah	7637845575	JAYSHREE DEKA	8486067980
20	Kamrup (Metro)	Santosh Kutum	7636804618	dswokamrupmetro@gmail.com dswokamrupmetro@gmail.com	Anamika Sarma	9613064776	ILUSMITA KONWAR Cimmi Sarma	9864012581 8133966724
21	Karbi Anglong	Syed Nasiur Rahman	8638960682	dswo.karbianglong2019@gmail.com	Ms. Romali Terongpi	8837482338	ISHITA TERANGPI	9954299724
22	Karimganj	Syed Ahdul Islam	9854080014	dswokgan2023@gmail.com	Roopkatha Chakraborty	9101386213	BAISHALI NATH	9101306812
23	Kokrajhar	Jintu Moni Phukan	9435063432	dswokok2017@gmail.com	Doji Basumatary	8876020894	Khwir Brahma	7002814890
24	Lakhimpur	Anjana Brahma	9864074662	dswolak2011@gmail.com	PRANGANA BORAH	8761058130	Priyanka Borah	9101254327
25	Majuli	Uttam Adhikari	9101762224	dswomajuli12@gmail.com	Kuki Boruah	6000927152	Kakali Baruah	7086955354
26	Morigaon	Manika Borthakur	9365690739	dswomor2017@gmail.com	Pinki Moni Devi	8638670421	Sowansini Das	9957996236
27	Nagaon	Bholanath Pegu	9435879432	dswonag2017@gmail.com	Antariksha Parashar	6001251902	Porimoni Borah	8638127912
28	Nalbari	Manoj Das	83768 32333	dswonal2017@gmail.com	Dikshita Barman	8638265070	Bhanita Deka	6000827184
29	Sivsagar	Upama Saikia	9678743665	Dswosiv2017@gmail.com	Bidisha Dutta	8721985968	PUJA KONWAR	7002314783
30	Sonitpur	Rubi Kalita	8876502873	dswoson2017@gmail.com	SHILPI SAIKIA	9864438593	Nirmali Bezbaruah	6000649207

H.

Sl No	Name of the Districts	Name of the DSWO/ (i/c) DSWO	Contact No.	Email ID	Contact person of DHEW for referal services	Contact No.	Contact personof the OSC for support services	Contact No.
31	South Salmara Mankachar	Nandita Saharia	8638230565	dswo.ssm@gmail.com	Mizanur Rahman	9101209835	Nasima Khatun	6001676069
32	Tamulpur	Irani Thakuria	9365969590	dswotamulpur22@gmail.com	Anupa Basumatary	9864430656	Saya Basumatary	7896741153
33	Tinsukia	Monika Kakoty Bharali	7670007893	dswotin2017@gmail.com	Jayashree Gogoi	7002386106	Baraska Kalita	8473817559
34	Udalguri	Dhiraj Kumar Talukdar	7002174660	dswouda2017@gmail.com	Mainaoshri Boro	7086486646	Monita Daimari	9394367879
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Source: Women & Child Development Department, Assam

ANNEXURE 11: Emergency Preparedness and Response Plan

Emergency Preparedness and Response Plan

PROCEDURE FOR EMERGENCY PREPAREDNESS AND RESPONSE PLAN

Project: Construction of 150 Bedded New District Hospital at Kaliabor, Nagaon, Assam
Client: ASSIST under AHIDMS
Contract No: IN-AHIDMS-345993-CW-Kaliabor

OBJECTIVE:

This plan presents the actual scenarios of emergency that are potential to cause loss to man and project and hence a preparedness is necessary to avoid any major losses. This plan is to be used by all members of the G.S.INFRA Project Management Team supervisors and subcontractors who have a duty of care to protect and assist all members of the workforce in the event of any emergency. This will be followed at both the project Site, as well as personnel accommodations, where applicable.

IDENTIFIED EMERGENCIES

Below are the identified potential emergencies arising at project sites

- Explosions / Fire
- Plant Failures
- Chemical / Fuel Spillage
- Vehicle Accidents
- Bomb Threat
- Heavy Wind
- Natural hazards – Earthquake and Flooding
- Food Poisoning
- Snake Bite
- Scorpion Bites
- Wild Animal Sighted
- Strikes/ Violence / Communal Disturbance

PROCEDURE:

RESPONSIBILITY

Project Managers

Will Support this procedure in the following manner:

Emergency Preparedness and Response Plan

- Provision of adequate resources in terms of personnel, time and finance for implementation of the requirements for providing an emergency response service on site.
- Active participation in the scheduling and enactment of drills and exercises.
- Shall monitor the arrangements through the Site HSE in-charge to satisfy himself that the services are satisfactory and adequate for the needs of the project.
- After an emergency and before activities continue, the Project Manager shall direct all Managers and line Supervisors to check damage, loss, and facilities and take measures to rectify any unsafe conditions.

Site HSE In-charge

Is responsible for ensuring that provisions are in place for emergency response, including:

- Assembly Points
- Arrangement, through site management for the resources for conducting head counts.
- Identification and Mobilization of Emergency Response Teams
- Training of Emergency Response Teams. And keep records
- Setting up drills and exercises in co-ordination with the local emergency services. And keep records
- Advise on procurement of fire and medical equipment.
- Assigning wardens for each office, accommodation, and construction zone.

In the event of any emergency, the site HSE in-charge will take the following actions with full assistance from other members of the project team.

- Evaluate the scale of the incident and decide whether additional resources are required to adequately deal with it.
- Liaison with site supervisors for withdrawing any permits
- Give direction to the Site Emergency Response Teams
- Liaise with site supervision for the mobilization of any plant and equipment necessary for dealing with the emergency
- Make safe the area by setting barriers or other means of preventing unauthorized access

- Prepare a full report.

Project Engineers

- attend the site of an incident, assess the situation and issue direction to the concerned parties and supervision of the emergency response team.
- ensure that messages have been communicated to the outside local authorities and concerned parties and supervision of the emergency response team.
- account for all personnel and assign search/rescue teams in the event of a missing person; and
- Shall ensure that any mutual aid agreements are followed and assistance is sought in time.

Informing the Accommodation Camp in-charge and site HS In-charge of the emergency at the earliest opportunity.

Firefighting Teams

- All the members of the fire team shall report to the fire team leader and shall work per his direction. Firefighting procedures should place an emphasis on personnel protection over saving equipment.
- Participate in training held by the HSE supervisors given at regular intervals.
- An electrician/instrument technician will also be included as a member of the fire squad with responsibility for the isolation of electrical power if necessary.

Search Party

Search parties will be established ad hoc under the direction of the Project Manager. Responsibilities include:

- As soon as the evacuation is announced on the speakers, check all areas to confirm that all the persons have left the premises
- If they find a victim, inform the leader of the rescue team.

Rescue Team/First Aid Team,

- Rescue teams shall be fully trained in different rescue techniques and procedures e.g. removing a victim from electrical sources, different types of handling techniques, first aid etc.

Emergency Preparedness and Response Plan

- The team shall be responsible for recovering a casualty and getting them for further Medical Care without aggravating injuries.
- The team will be identified with separate stickers on the helmets.
- The first-aid team shall provide assistance under the direction of the physician/paramedic on duty in rendering medical aid to injured parties. If medical staff are not available, the first aid-team shall take charge by administering first-aid and sending injured or sick person(s) for further treatment to the local emergency hospital.

All Personnel

All personnel should familiarize themselves with the locations of ALL emergency exits from their work area and the location of their nearest Assembly Point.

DEFINITIONS

Emergency

- An unexpected operational incident which results in fire and/or explosion
- Forces of Nature such as severe windstorm or flooring.
- Any incident which could affect community relations such as accidental release of toxic into the atmosphere, soil or local sewers.
- Any insect bite that are poisonous in nature.

Emergency Team:

A structured organisation of staff that organises and supervises the response and safe movement of staff in an emergency

Evacuation:

Evacuation is the movement of people from immediate danger to safety in a quick and safe manner

Evacuation Route

The designated route to the final place of safety. To be maintained clear at all times

Safe Assembly Area

Emergency Preparedness and Response Plan

A place of safety outside the facilities where people evacuating the working area re expected to assemble under the Emergency Response Plan. This area is established to check that persons are accounted for, to brief persons evacuated on future action, and to prevent re-entry.

WORK FLOW

Emergency Scenario

The types of incidents and the level of seriousness, which would constitute an emergency scenario are focused on in this plan and shall be dealt with by G.S.INFRA management, would typically include:

Related to people:	- Fatal and Medical Emergencies (serious personal injuries/health calamity or fatalities) - Traffic accidents
Related to security:	- Strikes with violence
Related to environment:	- Environmental Impact - Extreme weather / natural disasters / Floods
Related to properties:	- Fire or explosion emergencies - Material Damage: For leak, fire and/or explosion in neighbouring areas, damages in construction site, buildings, equipment and materials. - gas explosion. - Power outage or loss

Evacuation Procedures

The objective of evacuating personal from work areas is to ensure that in case of an incident, the effects of the incident do not affect them. Therefore, when there is no risk of more dangerous developments or the incident can be controlled, the site evacuation will not be necessary. In the event of a fire, major plant failure, explosion, bomb threat or the need to evacuate the Site, offices, or accommodations, the actions listed below should be followed.

- On the continuous announcement on the speakers, STOP all activities and vacate the building or area without delay, by the nearest exit.

Emergency Preparedness and Response Plan

- Plant operators to initiate appropriate Emergency Operating Procedures, and where possible, confirm plant is in safe state (like Stop all machinery, included electric engines and combustion, cranes, generators, etc., Put out blowtorches and close gas cylinders, disconnect electric panels swching off all power supply) prior to vacating buildings.
- Move quickly, but do not run.
- Do not return to a work area to collect belongings
- Keep right in corridors and stairs. The accesses and pathways should be free from any obstructions.
- Do not overtake others along the route If there are any running vehicles, when the alarm was raised will be immediately parked, engines stopped and the keys ready to use as required, leaving the roads just for emergency traffic
- Assemble in the designated Assembly Point
- At Assembly Point report to the responsible warden.
- Do not enter the building or work area under any circumstances until the all clear is given.

All new staff, as part of their induction, shall be given instructions on the evacuation procedures for the site.

All visitors and contractors are to be advised of how to evacuate the site and the location of Assembly Point when they are admitted to the site.

All evacuation routes will be displayed around work area.

INSTRUCTIONS

Planning

The basic and essential features of any emergency response procedures are to analyze and plan for the potential risks. This includes:

- Establish and maintain effective communications.
- Assessment of the risk by analyzing the size and nature of the foreseen hazards and the probability of their occurrence. The events can be;

Emergency Preparedness and Response Plan

- ✓ Fire hazard causing serious burns to personnel or resulting in collapse of structures.
- ✓ Gas leakage's causing toxic and fire hazards
- ✓ Electrical or electric shocks
- ✓ Medical Emergency
- ✓ Strike / violence

- Liaison with local emergency services and authorities.
- Procedures
  - ✓ Raising the alarm
  - ✓ Communication both from within and outside the facility.
- Appointment of key personnel and specifying their duties and responsibility.
  - ✓ Project Manager
  - ✓ HSE In-charge
  - ✓ Project Engineers
  - ✓ Fire-fighting party
  - ✓ Search Party
  - ✓ Rescue and first aid team
  - ✓ Other members of the workforce
- Training and rehearsal
- Review and update

Emergency communication

Communication is a critical factor in handling an emergency. G.S.INFRA will ensure that effective communications are the natural outcome when complying with the contents of this Emergency Response Plan. In case of emergency communication will generally be in English and other relevant languages and will be achieved by means of mobile or fixed telephony. Project Manager /HSE site In-charge will lead this communication. To control the situation by the earliest possible action, any employees must be able to act and raise an emergency alarm. The speakers provided at different locations shall be used to communicate the emergency.

Emergency Preparedness and Response Plan

The Safe assembly points will be clearly indicated in the accommodation areas and Site offices with fire instructions and plot plans

On Hearing an alarm at an office or accommodation:

- ✓ All personnel shall vacate the building or working area. Before leaving, the individuals concerned shall leave area as safe as possible e.g. switching off welding machines, gas cylinders, running machines gas burners, any electrical light or appliances in their rooms, as applicable.
- ✓ All personnel shall assemble at the designated assembly point. Wardens shall provide guidance and assistance for mustering at the correct assembly point.
- ✓ While responding to a fire alarm in residences, kitchen staff shall ensure that all burners and other fire hazards have been turned off as applicable. Similarly, other personnel in residence shall ensue that they leave everything in their rooms in safe condition.
- ✓ All the members of respective teams shall report to their leaders.
- ✓ The leaders shall take direction from the Project Manager.

On Hearing an alarm at out in the Site:

- ✓ All personnel shall stop work. Before leaving, the individuals concerned shall leave area as safe as possible e.g. switching off welding machines, gas cylinders, running machines gas burners, any electrical light or appliances, as applicable.
- ✓ All personnel shall assemble at the designated assembly point. Wardens shall provide guidance and assistance for mustering at the correct assembly point.
- ✓ All the members of respective teams shall report to their leaders.

Assembly Points

Designated Assembly Areas will be marked on site layout maps, and be displayed on Notice boards throughout the Site next.

Emergency Preparedness and Response Plan

Incident Completion

- All clear signals shall be sounded by the Project Manager following a thorough examination of the area.
- The Project Management & Site HSE In-charge shall visit all locations to ensure that the duties assigned as follow-up to the emergency are understood and adhered to.

Training and Mock Drills

- In order to ensure that all personnel are competent to comply in an effective and safe manner with the responsibilities outlined in this procedure, it is necessary that they receive the adequate training.
- Exercise in site shall be conducted at least every 6 months and the observation shall be recorded. The report should be forwarded to the client also, if needed and any remedial action required shall be identified.
- Practical drills will be organized in different levels according to what scenario would be tested – for example: personnel response, office emergency, the response to an emergency in the construction area, rescue at height, etc
- The emergency procedure shall be updated from time to time depending on the observations made.
- Training shall be conducted on regular basis for the teams involved in the emergency procedure.
- Training and information via notices in relevant languages to be provided for all persons working on site and at camp accommodations.

Explosions/Fire

Firefighting equipment available on site in marked areas on the map (smoking area, modules, flammables storage area, welding stations, etc.)

In the event of an explosion at the site:

- Initiate evacuation of site.

- Locate the source of the incident
- Communicate the threat to other persons, if there is any, in order to evacuate the area
- Call the nearest plant operator/Firefighting team member/rescue team member
- If the fire is small try extinguish it using a fire extinguisher.
- Attention! Never try extinguishing a fire if not adequately trained to, or with an inadequate fire extinguisher or to take any other measure which puts the individual at risk.
- If the fire cannot be controlled, all the personnel must leave the facilities
- All staff to assemble in Assembly Area
- Account for all personnel, visitors, contractors
- Report the incident

Plant failures

In the event of a major plant failure:

- Initiate evacuation of site
- Account for personnel assembled in Assembly Area
- Determine the need for Rescue Team to perform a rescue.
- If fire, follow the Fire Prevention Procedure.
- Report the incident

Chemical / Fuel Spillage

The most common environmental emergency in construction site is the oil and chemical spill, which is a potential cause for ground contamination. Spills of hazardous materials may include, among others:

Fuel; Solvents; Lubricants; Resins and paints; Batteries; Waterproofing compounds; Adhesives; Clean-up materials (such as rags) contaminated with the items listed above; Drums, containers and tins with remains of hazardous substances, or Fluids inside PV panels or other components (e.g. inverter) that could get damaged.

Emergency Preparedness and Response Plan

The ERP must be prepared to cover any potential risks of accidents or spills and will be made known and available to all workers within the site. Key personnel will know and understand their responsibilities as well as coordinate their response actions with their subordinates.

This outline plan serves as a guideline to organize a prompt and effective response to oil spills affecting or likely to affect the area of the site and to ensure preparedness, response and reporting following an oil and chemical pollution incident. For this purpose the following specific actions are listed:

- Preparedness;
- Response; and
- Reporting.

PREPAREDNESS: Each individual will be introduced to their prospective Supervisor and Environment Coordinator within their introduction and training. Emergency services shall be notified as necessary by the Supervisor or Environment Coordinator. A variety of equipment and personal protective equipment may be needed to support a chemical or oil spill incident response. A list of equipment is detailed below:

- Sand;
- Sand bags;
- Buckets and shovels;
- Storage containers; and
- Spill kit.

Sand stocks will be dry and buckets and shovels readily available at appropriate locations (i.e. areas where hazardous materials are stored, transferred, handled, etc.). Mechanical loading shovels, excavators and dump trucks may also available for sand distribution and clean up. Storage containers for contaminated materials and earth will be bunded, located in the waste storage area, and labelled and treated as hazardous waste. All equipment will be stored in a safe location on site in close proximity to the storage and waste areas. This material is to be used to contain and clean up pollution/spills, care will be taken to dispose of

any absorbent materials properly. The Supervisor will keep stocks well maintained and replenished.

RESPONSE: In the event of a chemical or oil spill the following measures will be employed:

- Notify Supervisor;
- Only attempt containment and clean-up operations of spilt substances when it can be performed safely;
- If spilled material is flammable, eliminate sources of ignition near spill area;
- Evacuate personnel and neighbours if they are at risk; and
- Secure the area and establish perimeter control at a safe distance from the spill.

OIL SPILL RESPONSE OPTIONS: Remedial action to collect and remove all materials contaminated by the oil spillage or leakage event is to be taken immediately. The following actions are required:

- Any oil remaining on the ground is to be collected using oil spill kit. The spill is to be contained by the use of absorbent granules or pads and then the area of the spill is to be slowly reduced by enclosing the absorbent. The absorbent pads will be used to absorb the oil. Once all of the oil on the ground surface has been collected, the absorbent agents themselves are to be appropriately stored and disposed of as hazardous waste;
- All contaminated materials are to be handled as hazardous waste. The contaminated material shall be collected and appropriately stored. A licensed hazardous waste vendor will collect this;
- Contaminated materials will be stored in plastic barrels with tightly closing lids. These barrels are to be stored in a concrete lined bund if available. In absence of such a bund at the site as a short-term storage alternative, a double plastic lined bund will be used. Barrels will be placed on plastic or wooden pallets in the temporary double plastic lined bund and not directly on the plastic; and

- Conventional metal barrels will not be used, however if there are no alternatives the materials may be stored in them providing, they are covered with plastic sheet tightly fastened to prevent Aeolian distribution and again are stored in an appropriately bunded location to prevent leakage will the barrels suffer corrosion.

All contaminated materials that cannot be collected and disposed are to be cleaned in-situ. This cleaning is to be undertaken by an approved service provider.

CHEMICAL SPILL RESPONSE OPTIONS: The following actions are to be taken in case of a chemical spill:

- Only attempt containment and clean-up operations of spilt substances when it can be performed safely;
- If spilled material is flammable, eliminate sources of ignition near spill area;
- Liquid spills – If the spill is liquid its path will be blocked or diverted and then soaked up using an absorbent material such as sand;
- Gaseous spills/leaks – A gaseous leak must be stopped at the source as soon as possible and will then disperse in the air;
- No spills will be rinsed away;
- Contaminated soils and clean-up materials from spills will be handled properly using personal protective equipment, stored in a suitable container that is then labelled and stored in the appropriate location for subsequent disposal;
- Any stockpiles of remnant contaminated materials will be covered;
- Contaminated materials will be stored in plastic barrels with tightly closing lids. These barrels are to be stored in a concrete lined bund if available. In absence of such a bund at the site as a short-term storage alternative, a double plastic lined bund will be used;
- Barrels will be placed on plastic or wooden pallets in the temporary double plastic lined bund and not directly on the plastic; and

- Conventional metal barrels will not be used, however if there are no alternatives the materials may be stored in them providing, they are covered with plastic sheet tightly fastened to prevent Aeolian distribution and again are stored in an appropriately bunded location to prevent leakage will the barrels suffer corrosion.

All contaminated materials that cannot be collected and disposed are to be cleaned in-situ. This cleaning is to be undertaken by an approved service provider.

Vehicle Accident

In the event of a vehicle accident on Site, the actions listed below should be followed

- Try to prevent other accidents form happening by warning other vehicles of the vehicle accident by placing accident hazard warnings in the area.
- Administer first aid to injured person
- As soon as possible, record details of the accident
- Report accident to Project Manager as soon as possible.

In the event of a vehicle accident off Site, the actions listed below should be followed

- Try to prevent other accidents form happening by warning other vehicles of the vehicle accident by placing accident hazard warnings in the area.
- Administer first aid to injured person
- Report the incident to local authorities as appropriate

Bomb Threat.

- Treat all bomb threats seriously.
- Investigation may reveal a hoax, but until certain there is no risk, act with extreme caution.
- Telephone threat.
  - ✓ Keep calm. It is not possible to think clearly when panicking.
  - ✓ If possible, attract attention of another person, and have that person contact the police.

- ✓ Delay the caller. The more the caller talks, the more chance there is of obtaining useful information.
- ✓ Try to elicit as much information as possible
- ✓ Note: Any characteristics of the caller, e.g. sex, accent, speech (fast, soft, well-spoken, etc), background noises (music, street noises, aircraft, etc.)
- ✓ If caller hesitates for more than a few seconds, ask another question.

➢ When caller hangs up:

- ✓ Do not hang up, kept the line open
- ✓ Evacuate premises if there is only a short time until stated explosion time.

➢ Suspicious object found:

- ✓ Leave the object alone. Do not interfere with it in anyway.
- ✓ Do not touch, jar, or move the object.
- ✓ Do not cover it with water or put water on it.

Heavy Wind

In the event of heavy winds / adverse conditions, HSE Incharge will review the jobs planned for the day in consultation with Project Manager / Team, at the site:

➢ Special attention required for:

- o People that are in exposed positions – for example loadings materials, or next to hazardous locations.
- o Machinery and materials that are being used and could be affected by the adverse weather conditions.
- o -Parked equipment or stored material not utilized at the time but that could be also affected (during the day or outside of the working hours)

➢ If heavy winds are in the forecast, batten down or anchor all materials to minimize flying hazards

➢ If unexpected winds pick up in the area, secure all adjacent material

➢ Handling of material with large surface areas (multiple modules, crane activities, etc.) should be stopped until the heavy winds pass.

Emergency Preparedness and Response Plan

- When in a vehicle, motorists to drive with caution, with the latter reminding drivers to keep their car lights on and leave a safe distance between other cars. Drivers should slow their speed, drive with caution, keep vehicle lights on, and leave an extra distance between other vehicles. If visibility drops severely, pull over to the left side of the road, avoid stopping under trees, billboards, and laydown areas or other spots with high potential of flying debris.
- Subcontractor management should provide masks and protective eyewear.
  - ✓ If masks are not readily available, wrap a bandanna or some other piece of cloth around your nose and mouth. Moisten it a bit if you have enough water. Apply a small amount of petroleum jelly to the inside of your nostrils to prevent drying of your mucous membranes.
  - ✓ Airtight goggles are preferred over standard safety glasses.
- Adults with asthma or allergies to stay indoors. Workers with asthma should go indoors to seek additional protection.

Natural Hazards

While unlikely, consideration of certain natural hazards is important.

Earthquake

- When an earthquake starts:
  - Stay calm
  - If in an office or accommodations, take cover under a desk or brace yourself in a doorway (hold onto the door to prevent personal injury from the door slamming)
  - Alternatively, crouch behind a solid structure, e.g. wall
  - If under furniture which moves, move with it.
  - Stay away from glass door and windows, tall shelves, light fittings, or objects that might topple,
  - Do not leave the building or try to leave the immediate area.
  - If outdoors, take cover in a doorway or other safe place away from falling debris and electrical hazards.

Emergency Preparedness and Response Plan

- After an earthquake:
  - Stay calm, stay together. Account for everyone in the work area and immediate vicinity.
  - Area wardens take control and co-ordinate actions in areas of responsibility and:
    - ✓ Assess all persons for injury.
    - ✓ Check for hazards, fire gas or chemical leaks.
    - ✓ Move people away from windows and outside walls.
    - ✓ Leave doors to room open, pull curtains across broken windows.
    - ✓ Turn off and unplug all unnecessary electrical equipment
  - Do not evacuate unless the building has sustained major structural damage.
  - Put signs up identifying dangerous areas.
  - Conserve water.
  - Do not use the toilets. Make other arrangements that do not involve relying on the sewerage system
  - If communications system has failed, try to pass notes to rescue personnel.
  - Listen carefully to any announcements over loudhailers
  - If an evacuation is necessary
    - ✓ Proceed carefully, expect to find exit routes blocked or damaged
    - ✓ When outside, stay well away from buildings and power lines
    - ✓ Stay together in your work or floor group to assist with record keeping.
    - ✓ If it is safe to do, go to your designated Assembly Point.
- Remember, that there are usually aftershocks following a major earthquake sometimes quite significant. They can go on for weeks or even months. Be prepared for them to happen.

Flooding

DO's

- Turn off power and gas connection.
- Drain out excess water.

Emergency Preparedness and Response Plan

- Move to a higher ground

Don'ts

- Do not drink tap water
- Do not drive into flooded areas
- Do not enter deep, unknown waters.

Before the occurrence of Floods

- Ignore rumors, stay calm, don't panic; follow government notifications.
- Keep your mobile phones charged for emergency communication.
- Listen to radio, watch TV, read newspapers for weather updates.
- Keep cattle/animals untied to ensure their safety (guide local villagers)
- Prepare an emergency kit with essential items for safety and survival.
- Keep your documents and valuables in waterproof bags.
- Know the safe routes to nearest shelter/raised pucca house.
- Evacuate immediately to safe places when directed by government officials.
- Store enough ready-to-eat food and water for at least a week.
- Be aware of flash flood areas such as canals, streams, drainage channels.
- In the event of flooding the precautions listed below should be followed:

During Floods

- Don't enter floodwaters. In case you need to wear suitable footwear.
- Stay away from sewerage lines, gutters, drains, culverts, etc.
- Stay away from electric poles and fallen power lines to avoid electrocution.
- Mark any open drains or manholes with visible signs (red flags or barricades).
- Do not walk or drive in the flood waters. Remember, two feet of moving flood water can wash away big cars as well.
- Eat freshly cooked or dry food. Keep your food covered.
- Drink boiled/chlorinated water.
- Use disinfectants to keep your surroundings clean.
- Do not try to cross pollen rivers in vehicles or by foot

Emergency Preparedness and Response Plan

- Stay indoors, move up to higher building levels if flood levels rise.
- If working in valley with a stream, move up to higher ground, especially during period of heavy, sudden rain.
- Initial only operations that are needed in emergency not entire plant.
- Maintain communication where possible Listen to the instruction of the responsible warden

After floods

- Raise furniture, appliances on beds and tables.
- Put sandbags in the toilet bowl and cover all drain holes to prevent sewage backflow.
- Turn off power and gas connection.
- Take the emergency kit, first aid box, valuables, and important documents with you.
- Do not enter deep, unknown waters; use a stick to check water depth.
- Come back home only when officials ask you to do so.
- Make a staff/worker's communications plan.
- Clean and disinfect everything that got wet.

Food Poisoning

Food poisoning can be caused by several different bacteria, such as salmonella or botulism. Although certain types of food poisoning can be fatal, most cases run their course in a couple of days.

Symptoms of food poisoning are similar to those of the flu, except for fever, which is more likely to occur with the flu, and should be treated the same. They usually begin from two hours to two days after eating the tainted food and include:

- Headache
- Nausea
- Diarrhea and/or vomiting
- Stomach cramps or pain
- More serious symptoms can include blurred vision, fatigue and a dry mouth.

Procedure to be followed in case of a Food Poisoning

- Sip water or diluted juice as soon as vomiting has decreased.

- If symptoms continue for more than 24 hours, or if you are unable to tolerate any fluids, contact your primary care doctor or visit the emergency department.
- Seek emergency care if you become dehydrated.
- Most adults can handle one day without nutrition, but continued vomiting to the point of dehydration requires medical attention.
- Finally, be aware that adults can handle dehydration better than small children and that high fever also can indicate a more serious illness.

Snake Bite

There could be medical emergencies if the snake is poisonous. Snake bites could be deadly if not treated quickly. The right anti-venom can save a person's life. Getting to an emergency room as quickly as possible is very important. If properly treated, many snake bites will not have serious effects.

First Aid required for Snake Bite:

- Keep the person calm, reassuring them that bites can be effectively treated in an emergency room. Restrict movement, and keep the affected area below heart level to reduce the flow of venom.
- Remove any rings or constricting items because the affected area may G.S.Ifra ell. Create a loose splint to help restrict movement of the area.
- If the area of the bite begins to G.S.Ifra ell and change colour, the snake was probably poisonous.
- Monitor the person's vital signs – temperature, pulse, rate of breathing, and blood pressure – if possible. If there are signs of shock (such as paleness), lay the person flat, raise the feet about a foot, and cover the person with a blanket.
- Get medical help right away.

DO NOT:

- Do not allow the person to become over-exerted. If necessary, carry the person to safety.
- Do not apply a tourniquet.
- Do not apply cold compresses to a snake bite.
- Do not cut into a snake bite with a knife or razor.
- Do not try to suck out the venom by mouth.
- Do not give the person stimulants or pain medications unless a doctor tells you to do so.
- Do not give the person anything by mouth.
- Do not raise the site of the bite above the level of the person's heart

Prevention:

- Avoid areas where snakes may be hiding, such as under rocks and logs.
- Even though most snakes are not poisonous, avoid picking up or playing with any snake unless you have been properly trained.
- Do not provoke a snake. That is why serious snake bites occur.
- Tap ahead of you with a walking stick before entering an area where you can't see your feet.
- Snakes will try to avoid you if given enough warning.
- When going in an area known to have snakes, wear long pants and boots if possible.

Scorpions Bite or Stings

- Scorpions use their sting to capture prey and to defend themselves. They hunt at night and will not sting unless provoked or they feel threatened. One thing that all scorpions have in common is that the sting possesses venom, which usually is neurotoxic in nature.
- Scorpions don't bite – they only sting. Many people use the word "bite" to describe a sting.

First Aid required for Scorpion Bite or sting

Emergency Preparedness and Response Plan

- One must confirm that it is the scorpion sting that is caused the area of the injection of venom by the scorpion should be marked around. Marking this will help for the proper first aid and later in hospital treatment.
- Reassuring the patient or victim.
- Move the victim to an open space.
- Uncovering the clothes of victim.
- The sting site or the affected area must be immediately kept with the cold application.
- If the sting area is on hand or leg immerse them into water.
- If the victim is stung by scorpion in head, neck, chest and back keep those areas covered with moist towel or moist cloth. If there is any possibility getting ice cubes or cool water better go for it.
- Keep the other parts of body moistened by washing or bathing
- Give adequate amount of cool water or water if he/ she can G.S.Ifra allow it.
- After the first aid, some victims may need the help of a doctor.
- Commonly acute stage of sting will exist for 24 hours from the time of sting, so observe the victim carefully.
- Note – Trying to suck out blood from the injured area and cutting the injured point are useless and wasting time and effort only.

What to do? if a person has been bitten by a venomous spider or stung by a scorpion:

- Call to first aider.
- Continuously apply ice to the sting area.
- Wash the wound thoroughly.
- Apply an antibiotic ointment, if the person has no known allergies or sensitivities to the medication, to prevent infection.
- Bandage the wound.
- Apply an ice or cold pack to the site to reduce pain and Swelling.
- Encourage the person to seek medical attention. Children and older adults may need antivenin to block the effects of the scorpion venom.

- If you transport the person to a medical facility, keep the bitten area elevated and as still as possible.
- All but the mildest of symptoms require hospital admission for 24 hours of observation, especially for children.
- Consult a doctor about treatment with available medications if anti-venom is not available

Wild Animal Sighted Emergency

- Display awareness posters and signage at prominent locations about the presence of wild animals and emergency actions.
- Conduct periodic toolbox talks and training for workers on wild animal behavior, do's and don'ts, and emergency response.
- Restrict night-time movement near forest boundaries unless absolutely necessary.
- Provide boundary fencing/barricading where required
- Ensure proper lighting around the camp and work areas.
- Avoid food waste accumulation which may attract animals
- Maintain clean surroundings and proper waste management.
- Coordinate regularly with the Forest Department and local authorities for updates and guidance.
- Maintain an updated emergency contact list of Forest Department, local police, and site emergency coordinators.
- Train workers not to panic or attempt to handle animals

Emergency Response Procedure (If a Wild Animal Is Sighted)

Step 1: Immediate Alert

- Stop all work activities immediately.
- Inform the Site Emergency Coordinator and Camp In-charge.
- Use alarm, whistle, or public address system to alert all personnel.

Step 2: Safe Evacuation and Shelter

- Workers should move calmly to designated safe shelters or secure buildings.

Emergency Preparedness and Response Plan

- Do not run, shout, or provoke the animal.
- Ensure headcount of all workers at assembly points.

Step 3: Area Isolation

- Barricade and isolate the affected area.
- Stop movement of vehicles and personnel in and around the sighting zone.
- Maintain a safe distance from the animal at all times.

Step 4: Communication

- Immediately inform the Forest Department and local authorities.
- Share exact location, type of animal sighted, and movement direction.
- Follow instructions given by Forest Department officials strictly.

Actions Strictly Prohibited

- Do not attempt to chase, capture, or photograph the animal.
- Do not use loud noise, fire, or lights to scare the animal unless instructed by authorities.
- Do not approach injured or resting animals.

Medical Emergency (If Injury Occurs)

- Provide first aid only when it is safe to do so.
- Shift injured persons to the nearest medical facility.
- Inform site management and authorities immediately.
- Record and report the incident as per site emergency reporting procedures.

Post-Incident Actions

- Resume work only after clearance from the Forest Department and Site Management.
- Conduct an incident review to identify gaps and corrective actions.
- Update the Emergency Response Plan if required.
- Reinforce awareness training for all workers.

Emergency Preparedness and Response Plan

Strike/Violence / communal disturbance

In case of local strikes / violence / agitation, project manager and HSE In-charge will gather information and follow the below:

- Try to remain calm. Your actions may help calm a potentially violent situation, or they may escalate the problem
- Don't be in a hurry.
- Project Manager will be single designated speaker.
- Secure all personnel in the project by calling them to the safe assembly area.
- Once head count is done, move them slowly towards the accommodations
- If movement is not possible, stay in the site offices till safe.
- Reach out to local authorities like police and obtain their help.
- Try to have the other person and yourself sit down. Sitting is a less aggressive position.
- Have limited eye contact.
- Take notes.
- Avoid yelling or arguing.
- Do not joke or be sarcastic
- Give message to Security / police to control situations.

Pandemic / Disease Outbreak Preparedness

The most common health-related emergency at construction sites is the outbreak of communicable diseases (such as viral infections), which can spread rapidly among workers and affect site operations. Such outbreaks may lead to serious health risks, absenteeism, and disruption of work activities.

Disease outbreaks may include, among others: Fever; Cough and respiratory infections; Viral infections (such as coronavirus); Skin

Emergency Preparedness and Response Plan

infections; Waterborne diseases; Food contamination-related illness; and any communicable disease spreading through close contact, contaminated surfaces, or poor hygiene.

The ERP must be prepared to cover any potential risks of disease outbreak and shall be made known and available to all workers on site. Key personnel will understand their responsibilities and coordinate response actions effectively.

This outline plan serves as a guideline to organize a prompt and effective response to any disease outbreak affecting or likely to affect the site and to ensure preparedness, response, and reporting. For this purpose, the following actions are listed:

- Preparedness
- Response
- Reporting

PREPAREDNESS:

Each worker shall be made aware of health risks and introduced to the Site Supervisor and Health/Safety Officer during induction and training. Medical facilities and emergency contacts shall be identified in advance.

The following arrangements shall be ensured:

- Temperature screening at site entry points;
- Availability of handwashing facilities with soap and water;
- Provision of hand sanitizers at key locations;
- Use of masks and required PPE;
- Regular cleaning and disinfection of toilets, dining areas, and common touchpoints;
- Awareness programs and display of posters in local language;
- Tie-up with nearby hospitals and availability of isolation facilities;
- Periodic health check-ups and monitoring of workers;
- Maintaining proper ventilation in working and living areas;
- Availability of first aid and medical support.
- Follow the latest guidelines and advisories issued by the World Health Organization and Government health authorities;
- Circulate health alerts, newsletters, and updates to workers for awareness.

Emergency Preparedness and Response Plan

The Supervisor shall ensure all resources are maintained and replenished regularly.

RESPONSE:

In the event of a suspected or confirmed disease outbreak, the following measures shall be taken:

- Immediately inform the Supervisor and Health/Safety Officer;
- Isolate the suspected person from others;
- Arrange medical check-up and transfer to hospital if required;
- Identify and monitor close contacts;
- Restrict movement and avoid crowding at site;
- Ensure use of masks and hygiene practices;
- Disinfect affected work areas and common facilities;
- Provide awareness to workers to avoid panic and ensure cooperation;
- Stop work partially or fully if required based on severity.
- Follow instructions from health authorities strictly.

DISEASE OUTBREAK RESPONSE OPTIONS:

The following specific actions are required:

- Any infected or suspected individual shall be isolated immediately and provided medical attention;
- Close contacts shall be traced and monitored;
- Work areas, tools, and equipment shall be sanitized thoroughly;
- Common areas like dining halls, toilets, and rest areas shall be disinfected frequently;
- Workers shall be advised to maintain personal hygiene, including regular handwashing and use of masks;
- Avoid sharing of food, utensils, and personal items;
- Ensure social distancing at site and accommodation areas;
- If required, temporary suspension of work activities shall be implemented;

- Strictly follow updates, advisories, and newsletters issued by World Health Organization and local health departments.

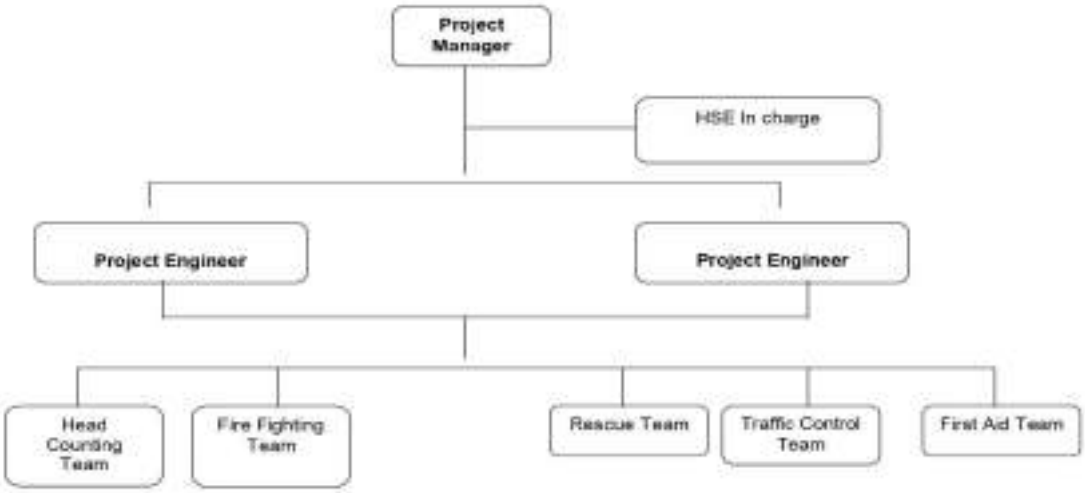
REPORTING:

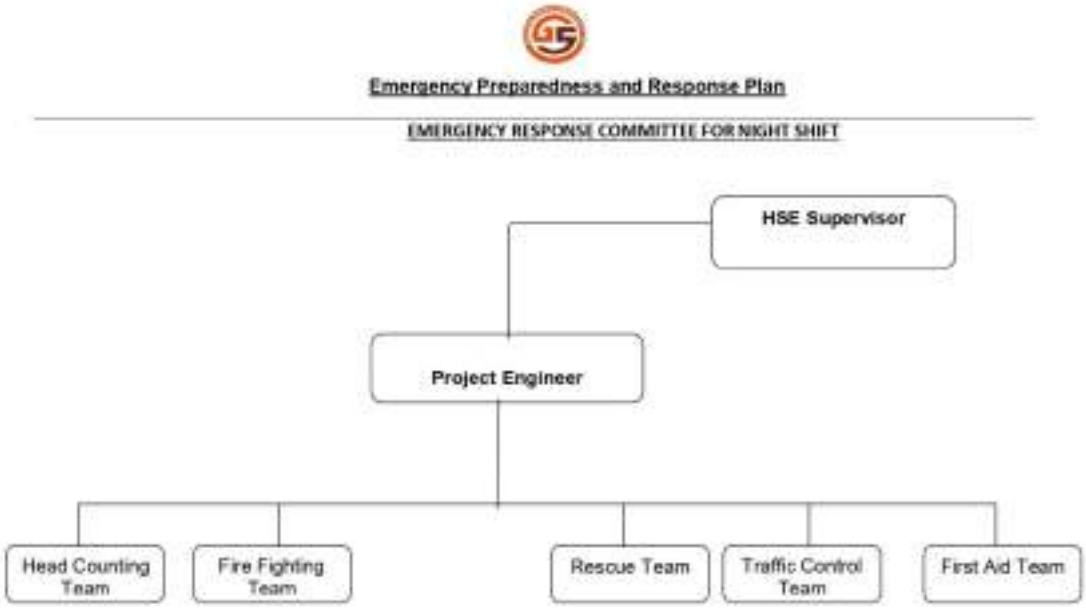
- All incidents of disease outbreak shall be reported immediately to management;
- Maintain records of affected persons and actions taken;
- Inform local health authorities if required;
- Conduct incident investigation and implement corrective measures;
- Review and update the Emergency Response Plan based on lessons learned.

Emergency Preparedness and Response Plan

1. EMERGENCY RESPONSE ORGANIZATION STRUCTURE

EMERGENCY RESPONSE COMMITTEE FOR DAY SHIFT




Emergency Preparedness and Response Plan
EMERGENCY RESPONSE COMMITTEE FOR NIGHT SHIFT
HSE Supervisor
Project Engineer
Head Counting Team
Fire Fighting Team
Rescue Team
Traffic Control Team
First Aid Team

Emergency Preparedness and Response Plan

FIRST AID

Injured people will be classified into three categories:

- Those that do not need additional medical assistance
- Those that need medical assistance and can be taken to the hospital by site personnel.
- Those that need medical assistance and who should be assisted for doctors and/or should be transferred to a hospital.
- Various personnel on site will be trained in first aid, including security forces and site First Aider. First aiders will be assigned on site on full time basis.
- All work-related injuries/illness will be immediately reported to the HSE In-charge who records the treatment provided on the Accident/Incident Report.
- In cases beyond that of first aid, the first aider will assess the need to refer the injured person to a professional medical care center for additional treatment.
- Should it be necessary, an injured person will be transported to an approved medical centre, accompanied by a responsible company representative, e.g. first aider, HSE In-charge, Project Manager.
- All work-related injuries and illnesses will be investigated, with the level of investigation determined by the potential severity of the injury/illness. Refer to the HSE Plan for the Incidence and Near Misses reporting procedure.
- Injured people will not be moved under any circumstances, except in obvious cases of immediate high-risk – for example a fire that threatens the person or when safety personnel authorize the movement on the injured.
- The first aider will reassure and keep warm the injured person; then will inquire about what happened to him/her.
- If there is not any risk of worsening the situation, the first aider will examine the injured person and will decide what kind of attention is needed and if necessary, how the injured would be transferred to the site medical canter on site or the nearest hospital (this task will be carried out by the first aid team on site).

Emergency Preparedness and Response Plan

- In case of being obvious that injured need the intervention of a doctor and / or to be transferred to a hospital, the medical team of the Site will be immediately contacted.

First Aid Facility

- The standard of the first aid facilities will be determined by risk assessment for the potential severity of injuries/illnesses likely to occur.
- The facilities include one first aid kit.
- The First Aider is responsible to ensure that the first aid room is maintained and kept in a clean and hygienic condition, appropriate first aid kit is available, maintained in good condition, supplies and medication in sufficient quantities, stored correctly and within the manufacturer's recommended expiry date.
- It is noted that site will be provided with 1 First aid Facilities. In case further assistance is needed, casualty will be shifted to Nearest Hospital.

MEDICAL FACILITIES & NEAREST HOSPITAL

Site first aid stations should include first aid kits, and other equipment as recommended by the physician/paramedic and authorities. Any cases beyond first aid will be taken to nearest hospital. The Site Admin is responsible to ensure that appropriate medical emergency transportation is always available.

1	FIRE Brigade (ফায়াৰ ব্ৰিগেড)	101/03672-276603
2	Police Station (থানা)	100/03672-276624
3	Hospital (চিকিৎসালয়)	108
4	Ambulance (এম্বুলেন্স)	102
5	Women Help Line (মহিলা হেল্প লাইন)	181
6	Child-line (শিশু হেল্প লাইন)	1098
7	Animals Help (জীৱ-জন্তুৰ সহায় লাইন)	1800 345 3570
8	Grievance Register(অভিযোগ পঞ্জীয়ন)	1800 569 2952

Emergency Details:

Emergency equipment inspection

Emergency Preparedness and Response Plan

TEST TYPE	INSPECTION	FREQUENCY
1.- Emergency Telephone System	Check that the assigned emergency team's phone numbers matches with the general list of the company.	Monthly
2.- Emergency speakers	Choose a different part of the modules	Fortnight
3.- Lighting in Modules	Test emergency lighting for about ten minutes, checking that it remains lit and shows no sign of failure, such as flickering or dimming.	Monthly
4.- Exit lights in Modules / Assembly point		
5.- First aid kits	- Verify that first aid kit is in its assigned location. - Check to see if it has been used without any notification. (All first aid kit use should be reported) - Ensure that there are no items that are beyond their expiration date. - Restock any items that have been used or damaged. - No over-the-counter pain relievers or medicine should be stored in the first aid kit.	Monthly
6.- Emergency eyewash and shower equipment (ONLY IF APPLICABLE)	Look for leaks or pipe damage and proper placement of protective covers. Ensure that the unit is free of any obstructions.	Weekly
	Ensure that the water flow is continuous, evaluate that the unit can maintain flow for 15 minutes, and is not injurious to the user's eye or face. Valve actuator must activate water flow in one second or less.	Monthly
7. Fire extinguishers	Checking the accessibility, apparent good condition, lock, seals, inscriptions, hose, etc. - Checking the charge status (weight and pressure) fire extinguisher and drive gas bottle (if any). - Checking the mechanical parts status (nozzle, valves, hose, etc.).	Quarterly

Emergency Preparedness and Response Plan

A. EMERGENCY CONTACT NUMBERS

Description	Company	Name	Mob
Project Manager	G.S. Ifra	Saumen Biswas	9706295791
Site Manager	G.S. Ifra	Ajit Majumder	9401547795
Project Engineer	G.S. Ifra	Sandip Metya	8967577450
HSE In-charge	G.S. Infra	Rampada Acharjee	6000369670
Project Manager	MM	P Suresh Babu	8919788120
HSE Representative	MM	Amit Kumar	9599032082
Project Engineer	MM	Anjan Kaliata	9954942870

B. FIRST AIDER LIST

Sl. no	Name	Designation	Mobile no
1.	Dr. Jaydeb Kakuti	Dy. Superintendent of JSDCH	9101743030
2.	Rampada Acharjee	HSE Officer	6382457991

C. FIRE WARDEN

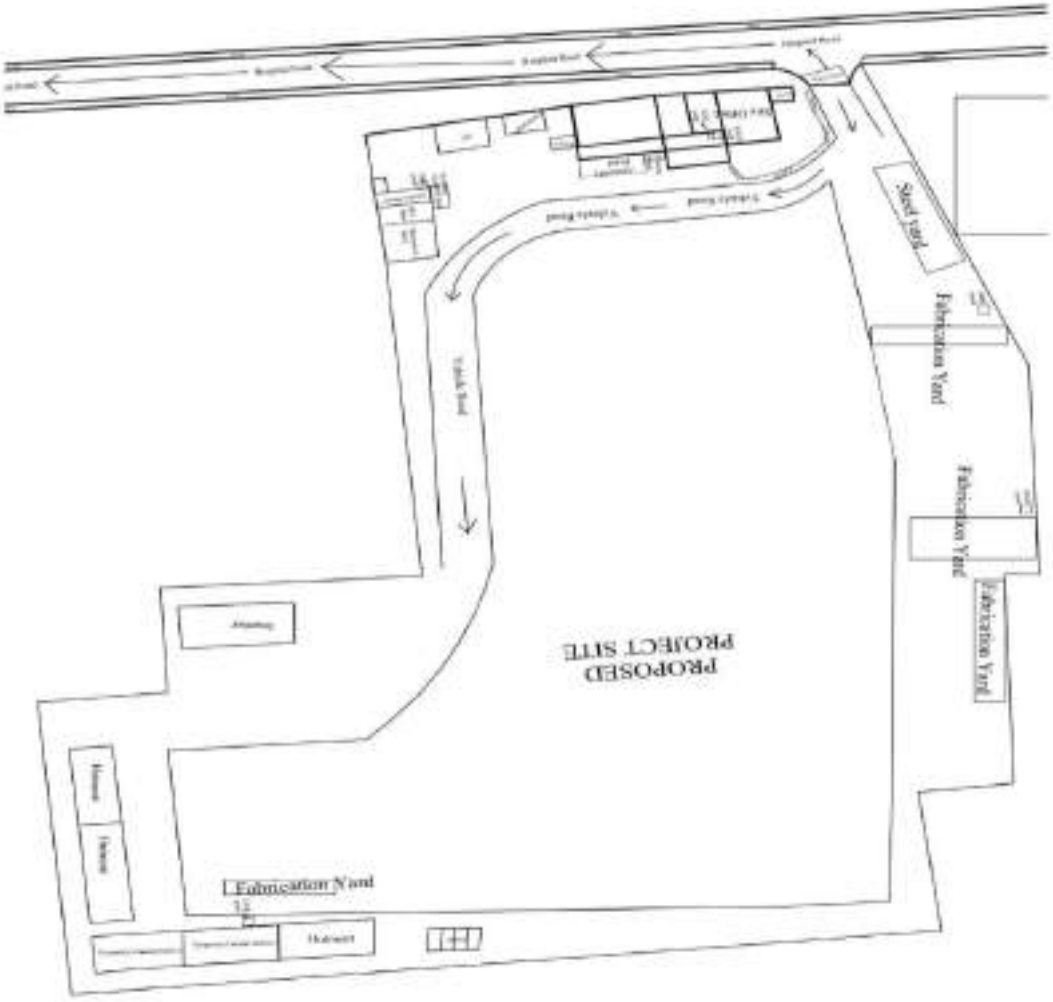
Sl.no.	Name	Designation	Mobile no
1.	Rajjoy Das	Safety Supervisor	9706547242
2.	Deep Bora	Supervisor	6901151491
3.	Arpan Das	Supervisor	6382457991
4.	Ramash Das	Security	9864963145

SCHEDULE FOR EMERGENCY RESPONSE TRAINING

Description	Schedule	Location
Emergency Response-Mock Drill (Health & Safety)	Every Six month Interval	Project Site
Emergency Response-Mock Drill (Environmental)	Every Six month Interval	Project site

Emergency Preparedness and Response Plan

EMERGENCY ESCAPE ROUTE



Emergency Preparedness and Response Plan

FORMATS/RECORDS/CHECKLISTS:

1	Hazard Identification and Risk Assessment (HIRA)	GS /HSE/HIRA/01
2	Mock Drill Report	GS /HSE/MD/01
3	Accident/Incident report format	GS /HSE/IAI/01

ANNEXURE 12: Photograph of Environmental Monitoring at site

AMBIENT AIR QUALITY MONITORING

Date of Sampling: 01/02/2024-02/02/2024
N:26°35'17", E:92°58'27"

Construction site of 150 Bedded New Hospital Kaliabor, Nagaon

NOISE LEVEL MONITORING

Date of Sampling: 09/05/2024
Borbhakati
N:26°34'51", E:92°58'05"

Construction site of 150 Bedded New Hospital Kaliabor, Nagaon

SOIL SAMPLING

Date of Sampling: 09/05/2024
Sakmuthi
N:26°34'06", E:92°58'34"

Construction site of 150 Bedded New Hospital Kaliabor, Nagaon

WATER SAMPLING

Date of Sampling: 08/05/2024
Miri Bheti Nizkaliabor
N:26°35'39", E:92°58'24"

Construction site of 150 Bedded New Hospital Kaliabor, Nagaon