

Social Due Diligence Report- Tranche-1: (Lakwa Replacement Power plant-70-MW)

Document Stage: Draft for Consultation
Project Number: 47101 (IND)
September 2013

India: Assam Power Sector Investment Program

Prepared by
Assam Power Generation Corporation Limited (APGCL)
Government of Assam.

The Social Due Diligence Report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature. In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area

ACRONYMS AND ABBREVIATIONS

APs	Asian Development Bank
APGCL	Affected Persons
CPS	Assam Power Generation Corporation Limited
EA	Country Partnership Strategy
EIA	Executing Agency
FGD	Environment Impact Assessment
FYP	Focus Group Discussions
GAIL	Five Year Plan
GOA	Gas Authority of India Limited
GOI	Government of Assam
IA	Government of India
IP	Implementing Agency
IPPF	Indigenous Peoples
IR	Indigenous Peoples Planning Framework
LA	Involuntary Resettlement
LRPP	Land Acquisition
LTPS	Lakwa Replacement Power Plant
MFF	Lakwa Thermal Power Station
NGO	Multi-Tranche Financing Facility
ONGC	Non-Government Organization
RF	Oil & Natural Gas Corporation
RP	Resettlement Framework
SPS	Resettlement Plan
STs	Safeguard Policy Statement, 2009
	Scheduled Tribes

TABLE OF CONTENTS

I.	INTRODUCTION.....	
	A. Overview.....	
	B. Benefits of the Project.....	
	C. Scope and Methodology	
II.	PROJECT DESCRIPTIONS.....	
III.	LAND ACQUISITION AND INVOLUNTARY RESETTLEMENT.....	
IV.	INDIGENEOUS PEOPLES AND SCHEDULED TRIBES.....	
V.	GENDER ISSUES.....	
VI.	OTHER SOCIAL ISSUES.....	
VII.	PUBLIC CONSULTATIONS.....	
	APPENDIX-1: Photographs of Project Components	
	APPENDIX-2: Copy of Land Possession Letter	
	APPENDIX-3: Summary of Gender Consultations	
	APPENDIX-4: Summary Details of Public Consultations.....	
	APPENDIX-5: Photographs During Consultations.....	

LAKWA REPLACEMENT POWER PLANT (70 MW)

SOCIAL SAFEGUARDS - DUE DILIGENCE REPORT

I. INTRODUCTION

A. Overview

1. The Assam Power Sector Investment Program (the Investment Program) is intended to finance a series of investments in the state of Assam, India including generation capacity enhancement to transmission and distribution infrastructure development. The Investment Program will also finance a number of “softer” activities, including improvements of power utility companies in operational and financial capacity, and training. The funding will be extended via a Multi-tranche Financing Facility (MFF). The objectives of the investment will be to achieve increased adequacy and efficiency of power system, including renewable energy in Assam. The state does not have enough electricity supplies, system efficiency and electrification rates are low and the power utility companies are not in the best financial shape.

2. Providing reliable, adequate, and affordable electricity remains a major challenge. This can be achieved only by expanding the state’s own generation portfolio, improving the efficiency of existing generation plants, reducing the transmission and distribution losses, and improving the institutional capacities. The government has prepared a transmission and distribution investment plan for the 12th Five Year Plan (FYP) for 2012 – 2017. The Government’s power sector roadmap also aims to achieve 100% village electrification by the end of the 12th FYP; and attain 100% system access by 2020. ADB’s India Country Partnership Strategy (CPS) for 2009 - 2012 targets low-carbon investments. ADB’s CPS for 2013 - 2017 continues with the same approach. First, by strengthening transmission and distribution networks to reduce technical and commercial losses and improve the financial health of state utilities; and second, by focusing on capacity issues. The new Investment Program is consistent with the government’s policies and strategies. It is also consistent with ADB’s ongoing CPS. Additionally, sustained partnerships between ADB and Assam utilities will help sector reforms to be on track.

3. The size of the MFF is \$300 million. Funding will be structured into three tranches. The first tranche will support the replacement of an old and inefficient gas plant. It will also be used to fund institutional capacity development, project preparation and project implementation help to the Executing Agencies (EAs) and Implementing Agencies (IAs). This support includes actions to advance project readiness under future tranches, reporting and monitoring. The second tranche will finance the construction of a 120 MW hydropower plant, including all associated transmission lines. The third tranche will finance distribution system improvements and additional “soft” components. The Investment Program will be implemented during 2013 – 2020.

4. The 70 MW Lakwa Replacement Power Plant (LRPP) project is proposed to be financed by Asian Development Bank (ADB) through its MFF modality under the Second Assam Power Sector Investment Program - Tranche 1. The subproject is located in village Mybella of Lakwa tehsil in Sivasagar district of Assam. The existing 60 MW gas plant at Lakwa Thermal Power Station (LTPS) Phase- I is over 30 years old and needs replacement on account of low efficiency and non-compliance to existing emission norms. The proposed project is to replace the existing 4 x 15 MW gas based units with proposed 10x7 MW Open Cycle Gas engines, as they were in operation for more than 30 years and out lived their useful life. Assam Power Generation Corporation Ltd. (APGCL) will be the Executing Agency cum Implementing Agency. The tranche will support the replacement of an old and inefficient gas plant. It will also be used to fund institutional capacity development, project preparation and project implementation help to the IAs. This support includes actions to advance project readiness under future tranches, reporting and monitoring.

B. Benefits of the Project

5. The impact of the Investment Program will be increased access to energy in Assam. This will increase economic opportunities, including temporary jobs during project implementation and construction. The outcome will be increased adequacy and efficiency of power system, including clean energy development in Assam. The outputs include (i) increased generation capacity and efficiency; (ii) improved transmission and distribution network efficiency in selected urban Assam; and (iii) institutional capacity development and project implementation supports. The benefits of improving the power sector are manifold. Technical improvements and reforms that lead to sector sustainability can free up resources for other pro-poor initiatives. Improved power supply and reliability contributes to improved social services, as hospitals, schools and other social utilities are often hardest hit by inadequate power supply, load shedding, and poor power quality. Socially, regular and efficient power supply increases access to electronic media such as TV and radio, enabling more informed, meaningful choices and an enhanced understanding of civic affairs and duties. For the economy of India, power sector development could support greater farm mechanization leading to greater agricultural yields, and could benefit the commercial and industrial sectors by promoting access to markets, skills training, entrepreneurship, and an increase in employment opportunities. With regular electrification, there would also be an increase and improvement in household and cottage industries. All these factors have a positive impact on alleviating and reducing poverty.

6. Project beneficiaries are those that will directly benefit from an increased supply and access to electricity. The beneficiaries in tranche-1 components are general and no specific intervention is involved. The power produced from the new plant would be put in to the grid which will be used by the distribution companies to supply to people in general and other beneficiaries. Therefore, no specific beneficiaries have been identified; however, it would have general positive impact of the people in Assam and local people in terms of providing some temporary job opportunities during project construction. The project has the capacity to indirectly improve the quality of life and well being of beneficiaries in the project area by providing these with opportunities to increase their incomes through employment and alternative livelihoods. Development of the power sector is connected to poverty reduction. Clean power development ensures that the poor will benefit, as they bear a larger share of the adverse impacts of pollution and environmental degradation. Also, stable electricity supplies promote business expansion and increase employment opportunities, which can have a positive impact on reducing poverty. The investment program will bring direct and indirect positive social impacts. This will specifically benefit the people living in the remote areas through improved frequency and voltage levels for various uses which will ultimately result in socio-economic growth including possible job opportunities or employment for skilled and unskilled labour during the construction.

C. Scope and Methodology

7. The scope and objective of this due diligence¹ study is to assess the status on land acquisition for the Lakwa Power Plant and to know how the land was acquired by the EA/IA including other social and safeguard issues prior to the possible funding under the investment program. The report is based on review of available documents at EA/IA and site assessment through project site visits and conducting small scale surveys in the surrounding villages of the proposed plant. The review of documents included detailed engineering project report, Environment Impact Assessment (EIA) Report as prepared and approved, land details from the office of APGCL and other documents. Consultations were carried out with the APGCL official

¹ A due diligence is usually prepared when the land is already acquired and in possession of the EA/IA prior to start of ADB's intervention for possible financing to any investment program or project.

to collect the data on the entire process of land acquisition. Consultations with local people were carried out to know about people's acceptance to the new enhanced project and to create awareness about the new investment program. Additionally, consultations were carried out among the women group in the surrounding villages with an objective to make the women aware about the project development and to include them as part of stakeholders. Site visits were made to all the project components area such as plant area, pipe line, water diversion, disposal area and switchyard etc.

II. PROJECT DETAILS

8. To meet the ever increasing demand of the reliable and sustainable power in Assam State and Northern Region, APGCL is proposing the replace its existing 4 x 15 MW (60 MW) Gas Turbine Units with 10 x 7 MW (70 MW) capacity of Gas Engines at Phase I plant at the Lakwa Thermal Power Station (LTPS), Mybella Village, Sivasagar district, Assam. Adequate land within the LTPS complex is available, and no rehabilitation and resettlement (R&R) issues is involved. The project site does not affect any biodiversity rich area, or any forest area and is situated within the LTPS complex therefore there are no land acquisition and change of land use involved.

9. The Lakwa Replacement power project is proposed to be implemented within the boundary of the LTPS complex situated at Mybella Village, Lakwa Taluk, Sivasagar district, Assam. The Latitude and Longitude of the proposed site lies in between 26°59'09" N and 94°55'52" E. The nearest town to the proposed site is Sonari 12 km NE. The site is located about 12 km from Sonari town the head quarter of Charaideo sub division, and 26 KM from National Highway no. 37. The LTPS is approachable by main road to the LRPP site. The nearest railway station Suffry is 5 km from site. Dibrugarh airport is 100 km away from the project site and Jorhat airport is 90 km. The proposed project is setting up of 10x7 MW (70 MW) capacity of Gas Engines and three gas compressors which are envisaged as a replacement of the existing 4x15 MW (60 MW) capacity of Open Cycle Gas Turbine Units.

10. Water requirement has been assessed as 0.9 m³/hr (21.6 m³/day) for gas engine based power plant. The available water allocation from Water Resource Department, Govt. of Assam of 300 m³/hr from Desang River for the Lakwa TPS which is at a distance of 5.5 km from the site. Desang River water is pumped through pipe line to raw water reservoir located within plant boundary to meet the plant water requirement.

11. Lakwa Thermal Power Station was commissioned in the year 1981. The main fuel for the project is Natural Gas. It was the second gas based thermal power station with an initial gas commitment of 0.23 Metric Million Standard Cubic Metre per Day (MMSCMD) from Oil & Natural Gas Corporation (ONGC) in the year 1977. Currently, APGCL has supply agreement with Oil India Limited (OIL) and Gas Authority of India Limited (GAIL) for the supply of 0.4 and 0.5 MMSCMD of gas respectively. The total gas availability is about 0.9 MMSCMD - of this 0.54 MMSCMD will be used for the existing/ongoing (3x20 MW GT+37MW ST) CCGT and 0.36 MMSCMD for the replacement project. The composition of natural gas is expected to change on commissioning of BCPL gas cracker plant in near future. The natural gas required for the LRPP would be received at the plant boundary from the suppliers OIL and GAIL through 12 inch pipeline. The gas supply system would be provided with separate metering arrangement, filtration and moisture separation facilities.

12. Salient features of the proposed project site are given in **Table-1**. Photographs of various project components are provided in **Appendix-1**. Project features are shown in figures as below.

- **Figure-1:** Project location map
- **Figure 2:** Location of Plant, Waste Disposal site on internet picture
- **Figure 3:** LTPS Plant Layout
- **Figure 4:** LRPP layout
- **Figure 5:** 10 km Radius (from boundary) Topographical Map
- **Figure 6:** 10 km Radius (from project boundary) Base Map

Table 1: Salient Features of the Proposed Project Site

SNo	Item	Details
1	Location	Mybella (Village), Lakwa Taluk, Sivasagar (District), Assam
2	Geographical Coordinates	Latitude: 26° 59' 07" N Longitude: 94° 55' 52" E
3	Elevation above MSL	103 - 121 m
4	Topo sheet no's (1:50,000 Scale)	83 I/16, 83 M/4, 83 J13, 83 N/1
5a	Proposed Replacement plant area required	7 acres (28,328 sq.m.)-Gas Engines, Compressors etc.
5b.	Total plant area including replacement area	25.94 acres (105,000 sq.m.)-All phases
5c.	Total LTPS area	211.8 acres (857,150 sq.m.) Total plant area consists of plant area, roads, residential buildings, schools, guest house, vacant area and dug out lakes
6	Water Requirement	21 .6 KLD
7	Project Cost	263.3 crores
8	Nearest Railway Station	Suffry Railway Station ~5 Km, NE
9	Nearest Airport	Rowriah Airport (Jorhat) ~75Km, SW
10	Nearest National Highway	NH 37 – 26 km (NW)
11	Nearest major town	Sonari – 12 km (NE)
12	Sensitive Areas	Chala Reserve Forest - 1.6 km NW Abhaypur Reserve Forest - 3.6km S A stream is flowing adjacent the boundary of the project site in E.
13	Protected Areas	None in 4 km radius study area
14.	Procurement of Land Required	No additional land required. However, the original plant land was procured during the years 1976-1977.

Source: EIA study

Figure 1: Project Location Map

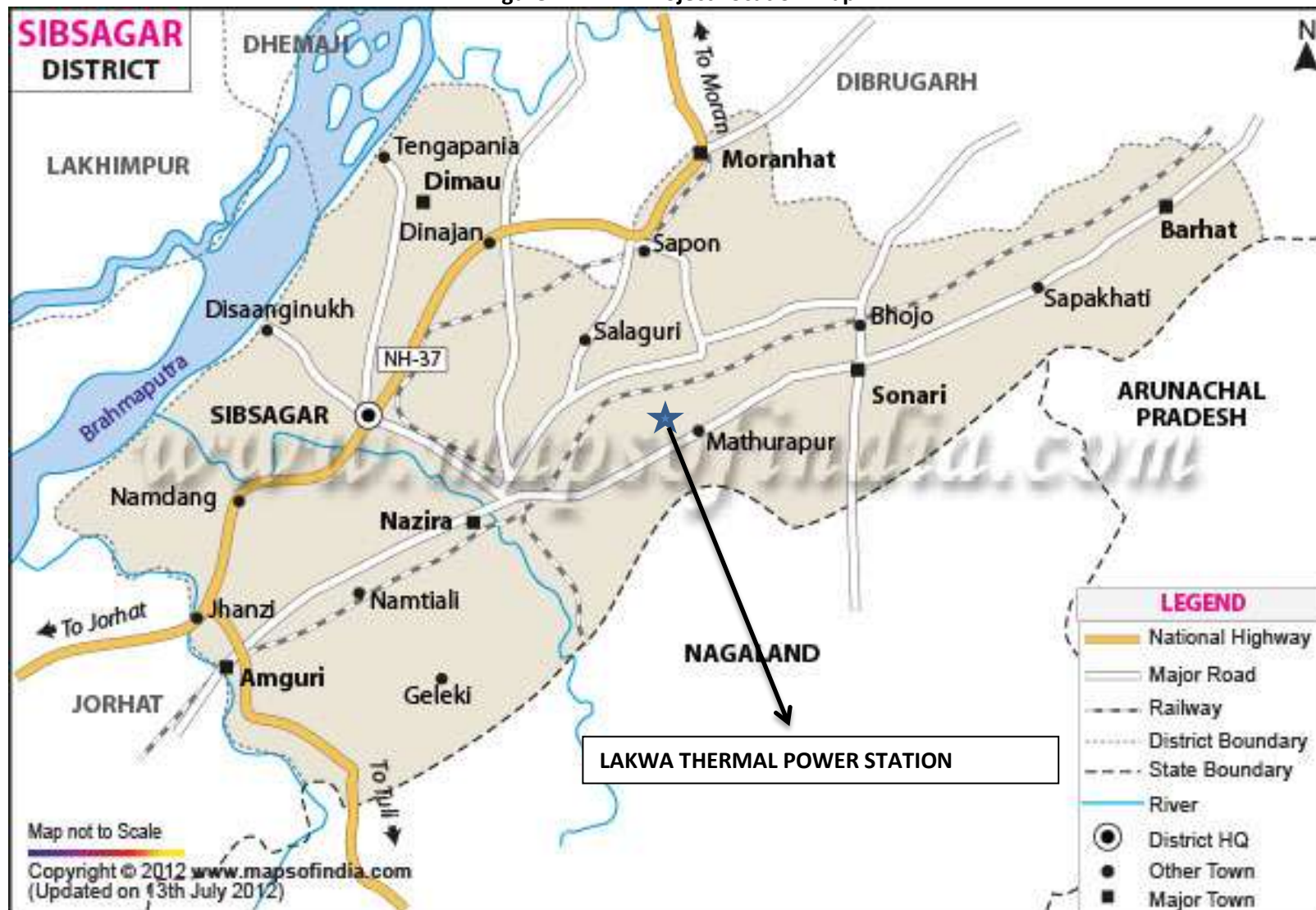


Figure 2: Location of Plant, Waste Disposal site on internet picture



Figure 3: LTPS Plant Layout

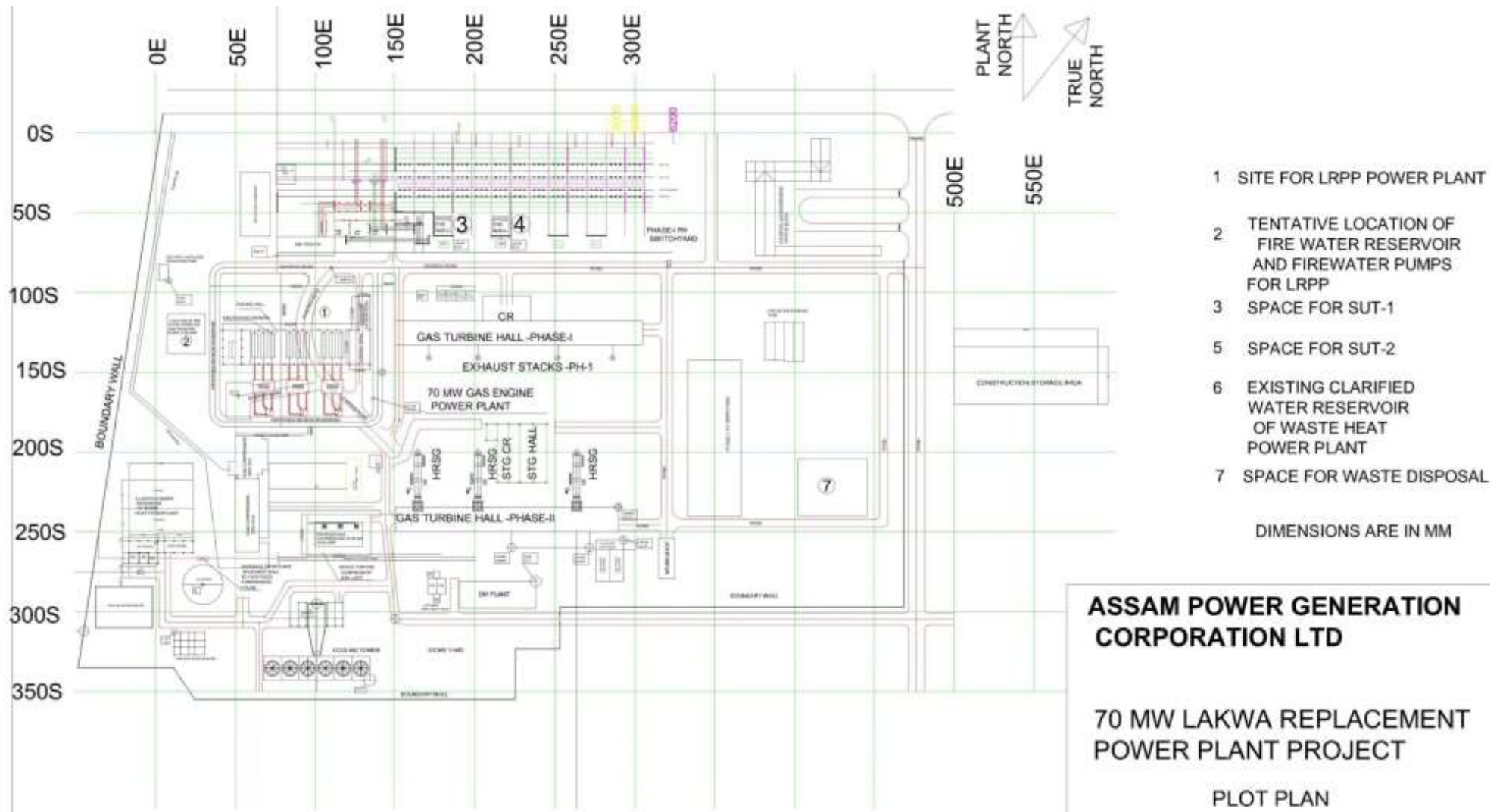


Figure 4: LRPP layout

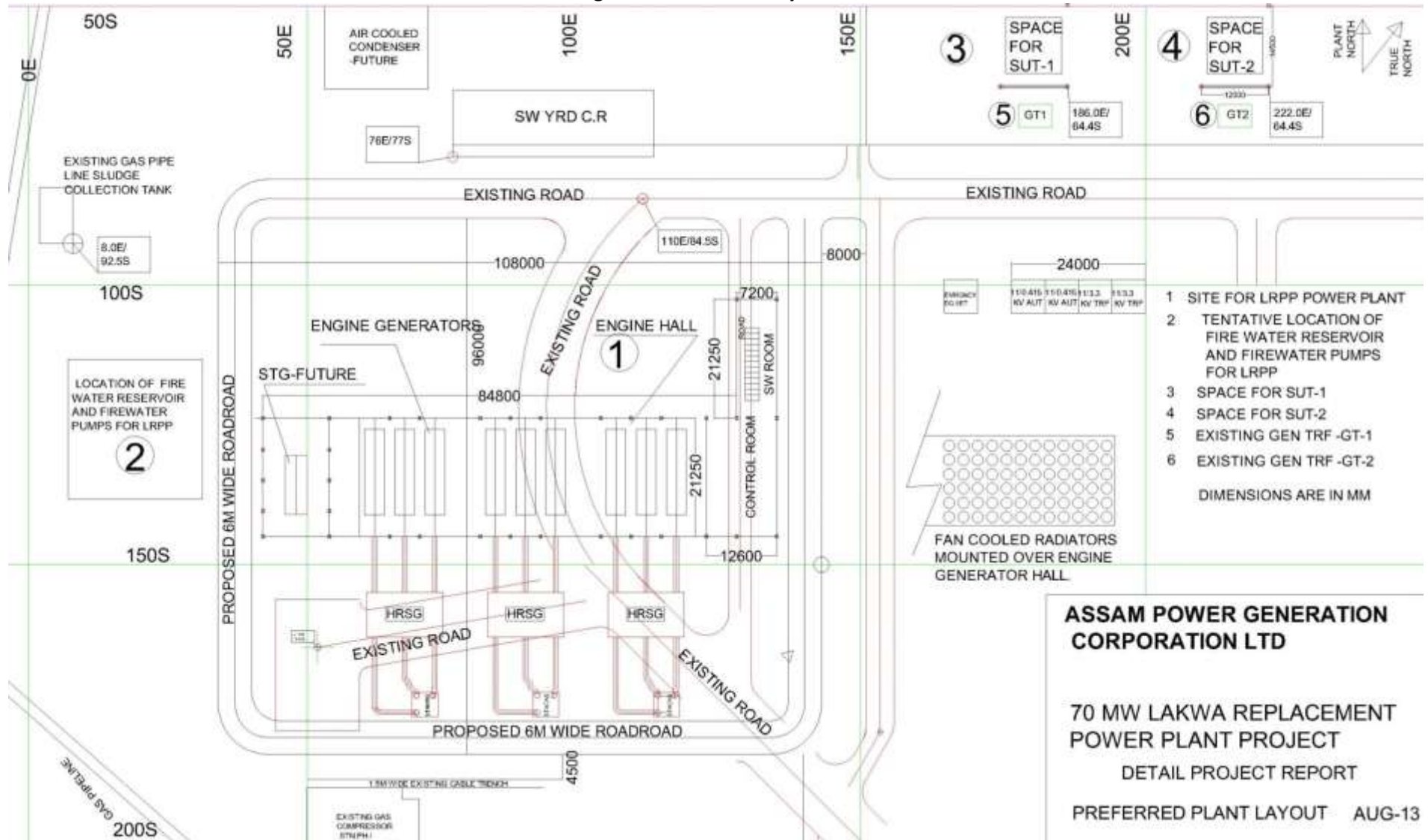


Figure 5: 10 km Radius (from boundary) Topographical Map

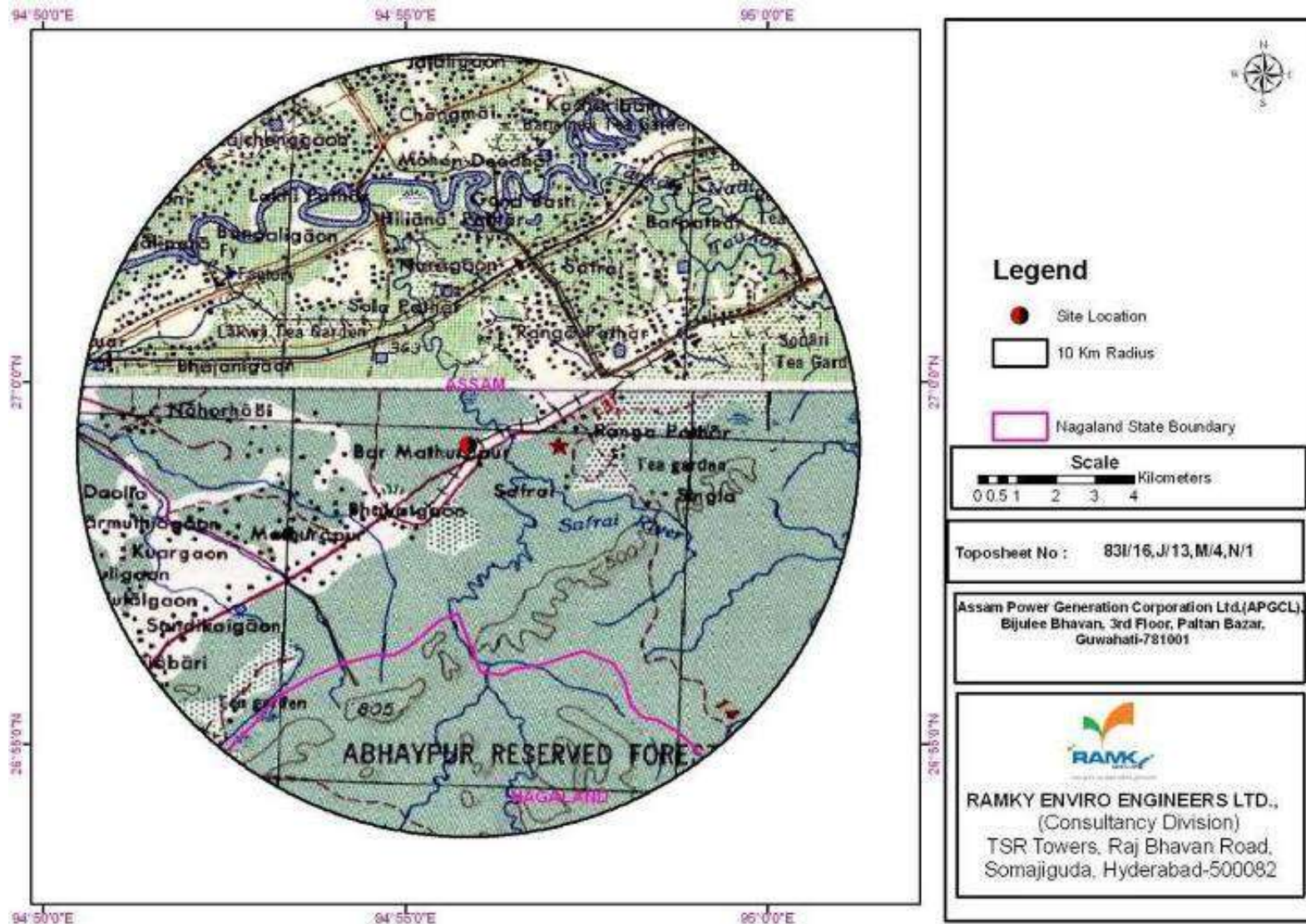
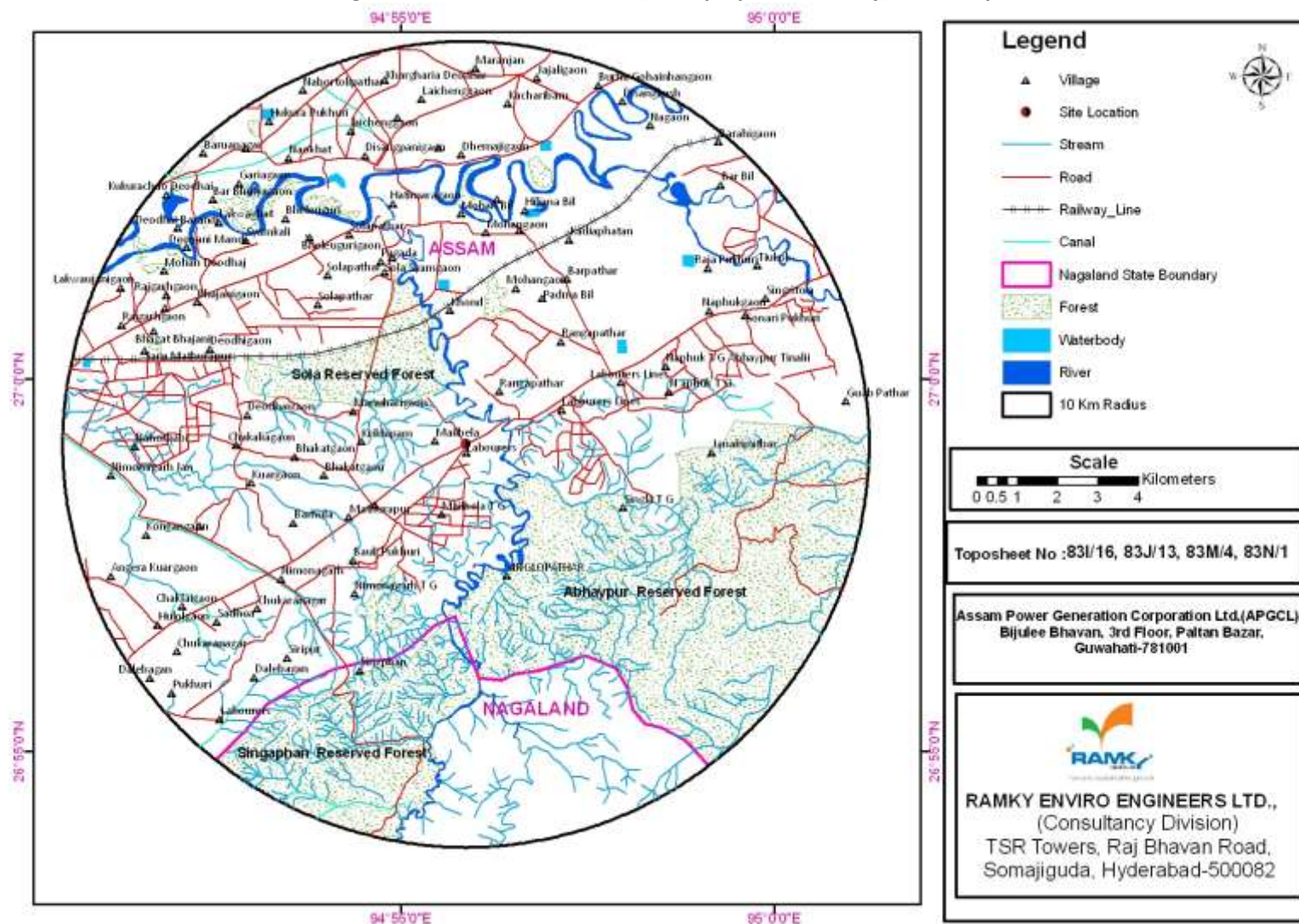


Figure 6: 10 km Radius (from project boundary) Base Map



III. LAND ACQUISITION AND INVOLUNTARY RESETTLEMENT

13. The Tranche-1 project is categorized as “C” for involuntary resettlement (IR) as per ADB’s Safeguard Policy Statement (SPS-2009). The proposed 70 MW project, being a replacement and modernization project, will be installed within the existing boundary complex of Lakwa Thermal Power Station (LTPS) of Assam Power Generation Company Limited (APGCL). Therefore, no additional land will be required resulting no impact on land acquisition and involuntary resettlement. The project will be installed within the existing premises of LTPS/APGCL complex utilizing the unused land of 7 acres which is already available within the boundary. Other associated facilities such as water network, effluent treatment facilities, gas pipeline and switchyard etc. already exist and the same will be used for the proposed project. Land had already been acquired long back in two phases. The first phase of land acquisition (approximately 617 bigha) was done in the year 1976-1977 and the second phase of land was acquired in the year 1987 (approximately 300 bigha). The land was barren which belonged to government revenue department during the time of acquisition. Therefore, there was no affected household found. The land was acquired through departmental transfer. Site visit during the social due diligence work also revealed that the project site is well demarcated and boundary has already been placed and there are no encroachments or squatters. Therefore, no action is required as far as preparation of Resettlement Plan (RP) is concerned. However, a Resettlement Framework (RF) has been prepared for the entire investment program. Copy of possession letter for the second phase is attached in **Appendix-2**.

IV. INDIGENEOUS PEOPLES AND SCHEDULED TRIBES

14. According to the Census of India 2011, 8.61 percent of the Indian population is classified as ST. In comparison to the national figure, Assam has 12.45 percent of its populations classified as ST. According to census survey of India, 2011, The STs in Assam comprised 3.88 million of the total State population of 31.21 million. The tranche-1 project belongs to Sivasagar district. The total population of Sivasagar district is 1.15 million out of which 0.05 million (4.26% of total district population) are scheduled tribes (STs). There will be no impact on Indigenous peoples (IPs). The subproject site is well defined and boundary has been placed. Villages are surrounded at a minimum distance of 1 to 2 kilometers from the subproject site. Construction activities will not have any impact on IPs or STs since it is well confined within the stipulated boundary. Land acquisition will not be required for the subproject since the land for the proposed replacement/modernization project is available within the LTPS project site. All the proposed construction activities will be done within the existing premise. This is categorized as “C” for Indigenous Peoples. No Indigenous peoples Plan will be needed for this Tranche. However, the MFF has an Indigenous Peoples Framework (IPPF) for the entire facility and for its subsequent tranches.

V. GENDER ISSUES

15. Tranche-1 subproject being a replacement project does not have any scope for promoting gender equality. The project will not have any such impact on women except some potential employment scope. However, as a part of social due diligence, focused group discussions were carried out among the women group in the surrounding villages of the project to create awareness among the upcoming

development activities. Women will be able to benefit from the project through improved access to electricity which will subsequently result in availing better services such as health, education and clean environment. Women have been consulted during the project preparation and the necessary mitigations have been suggested in order to avoid any discrimination against women during the project implementation. For better inclusion of women as stakeholders, consultations among the women group were carried out in the project surrounding villages such as Singlo Pather, Sola Pathar, Mybella, Suffry, Mohan Gaon/Bar Pathar and Mathura Pur/Bhakat Gaon. Summary findings of gender consultations are given in **Appendix- 3.**

VI. OTHER SOCIAL ISSUES

16. The project is expected to generate employment opportunities for local communities semi skilled and unskilled during the construction and maintenance phase. The subproject is unlikely to result in increased prices of goods and services accessed by the poor. The investments will support the Government's goal of affordable and sustainable power which is considered a pro poor initiative. Considering the possible presence of laborers from outside in the project area for construction work, EA/IA will take proper care during construction supervision to conduct information and education campaigns on the risks of HIV/AIDS and human trafficking, targeting construction workers at campsites. Also, EA/IA will ensure that the contracts for civil works require contractors: (i) not to employ or use children for labor; (ii) to disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction; and (iii) to follow and implement legally mandated provisions on labor (including equal pay for equal work), health, safety, sanitation, and working conditions.

VII. PUBLIC CONSULTATIONS

17. Public consultation and information disclosure is an integral part of the environmental and social assessment process. During the project formulation stage and during the preparation of EIA for Lakwa, APGCL carried out detailed physical surveys and conducted public hearings for availing the clearances. Considerable dialogue was held with the EA/IA during the due diligence process and this will continue throughout the construction and implementation process. In order to provide awareness about the new investment program, informal discussions and consultations were also carried out with the local people in surrounding villages including the village heads etc. These villages are Singlo Pather, Sola Pathar, Mybella, Suffry, Mohan Gaon/Bar Pathar and Mathura Pur/Bhakat Gaon. No major social issues were raised during the consultation process except for some safety issues related to garbage disposal and high voltage lines. People are supportive of the project and recognize that it will bring job opportunities to the area; improve infrastructure and reliable supply of electricity to the local area. Consultation will be continued with all stake holders including the civil society during the project implementation. Summary findings of public consultations are given in **Appendix- 4.**

APPENDIX-1: PHOTOGRAPHS OF PROJECT COMPONENTS



Existing Lakwa Plant



Boundary of Lakwa Existing Plant



Gas Pipe Line



Oil/Gas field



Switchyard for connecting to Grid for Evacuation of Power



Water Intake/Diversion for Supply of Power to the Plant

APPENDIX-2: COPY OF LAND POSSESSION LETTER

(2)

ASAM STATE ELECTRICITY BOARD
OFFICE OF THE PROJECT MANAGER::: LAKWA THERMAL POWER PROJECT
LTPP:::ASEB:::MAIBELLA.

NO. LTP/PA/86/G-6/189 Dated Maibella, the 21/1/87

To,

The Land Acquisition Officer,
ASEB, Narangi, Gauhati-26.

Sub:- Allotment of land to the ASEB possession thereof.

Ref:- Your letter No. ASEB/LTP/379/77/115 dt. 4.10.86

Sir,

With reference to the above I am to inform you that the possession of the Land is already taken on 9.1.87, a copy of the possession certificate is enclosed herewith for your disposal.

Encls:- As above.

Yours faithfully,

(H. N. Borgohain),
Project Manager,
Lakwa Thermal Power Project,
ASEB, Maibella.

Memd No. LTP/PA/86/G-6/189-23 Dated Maibella, the 21/1/87

Copy to:-

1. The Secy. ASEB, Narangi, Gauhati-26 for information.
2. The Chief Engineer (Generation), ASEB, Barunimaidan, Gauhati-21 for information.
3. The Member (Generation), ASEB, Narangi, Gauhati-26 for information.
4. The Chief Accounts Officer, ASEB, Narangi, Gauhati-26 for information.

(H. N. Borgohain),
Project Manager,
Lakwa Thermal Power Project
ASEB, Maibella.

01

RECEIVED

As the undersigned have handed over/received possession of the lands shown below this day of 5th January '07 with reference to D.O. No. 314/7/100 (a) dt. 2-4-06 and D.O. Charaldeo's letter No. 34/19/100/03 dt. 27/10/06.

[Signature]
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)

[Signature]
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)

[Signature]
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)
(D. H. Bhatnagar)

Receipt of land

Land ... (D. H. Bhatnagar)

Land ... (D. H. Bhatnagar)

Day (Date)	1-	2-	3-
23/14	1	nil	5
23/14	1	nil	nil
27/14	17	3	4
22/11	250	nil	nil
24/11	6	1	11
24/10	6	nil	0
25/14	17	4	12

Total = 300 nil nil

Remarks :-

Land ... (D. H. Bhatnagar)
Land ... (D. H. Bhatnagar)
Land ... (D. H. Bhatnagar)
Land ... (D. H. Bhatnagar)

APPENDIX-3: SUMMARY OF GENDER CONSULTATIONS

S.NO.	Issue Discussed	People's View and Perception
Introductory		
1	Open the discussion with an 'ice-breaker', a question which is easy to answer and begins to put people at ease. Ask each person: "Where do you live and how long have you lived there?"	The duration of the participants' stay in the village varies from 5 years to 50 years. Living in the village is conducive as it is located close to the main road and has a number of facilities such as a school, market, etc.
2	Ask a further question to warm up: "What do you like most about living in this area?"	<p>The response to the question was mixed as a lot of people found existence in the village conducive to everyday life as basic infrastructural facilities exist in the area. There are roads, electricity, opportunities for earning a decent livelihood, basic transportation, schools, and anganwadi centres. The participants also considered the area as largely peaceful and the people friendly.</p> <p>However, for a number of other people life in the village is mere existence because of regular floods, and insufficient opportunities for gaining education.</p>
3	Initiate the discussion by asking the group on their primary occupation?	<p>The primary occupations of participants were</p> <ul style="list-style-type: none"> - Farming - Housewife - Petty business <p>The primary occupation of men in the area is farming. Some of them also own petty businesses like tea shops, vegetable stalls, etc. There are very few men with government jobs.</p> <p>Most women are housewives. There are very few opportunities for women to work. The few SHGs that exist were also formed very long back and need strengthening. The women are willing to work if opportunities are provided. There are very few women who are employed as ASHA workers or teachers.</p>
4	Please tell us as to how you spend your time (daily routine)? (Try to probe whether they get leisure time and what are the activities they usually do during the leisure hours.	The women are involved in household chores for most part of the day and hardly ever get any leisure time. The little leisure time that they do get is spent in either watching television or sometimes in working on looms. Weaving and working on the loom is not an economic activity for these women.
Education:		
5	Opinion on the importance of education for the people and specifically of the girls and women in your area.	People are gradually realizing the importance of education, especially educating the girl child. The government has also helped in this regard by opening up various schemes for the educating the girl child. People have begun to realize how education is important for the day to day functioning of every living being.
6	Educational level of community people in your locality/area.	The average level of education varies from high school to 10+2. A lot of girls are also beginning to go out for graduate and postgraduate level studies. However, educational status largely depends on the economic condition of the family.
7	Types of education facilities (formal and non formal education, its distance) available in the village / neighbourhood and parent's perception on quality of education (pre-school, primary, elementary and secondary/higher secondary). Try to know access and services to the girls.	Although primary level education is available in most villages, attaining secondary and higher secondary level education is a struggle. People have to send their children to the town or larger neighbouring village for these facilities. Graduate and post graduate level education is only available in neighbouring cities. Only those who are economically able are thus able to send their children for higher education.
8	Reasons for non-enrolment and dropout	Non enrolment and drop outs are primarily for two major

S.NO.	Issue Discussed	People's View and Perception
	amongst children & youth. (Male & Female)	reasons <ul style="list-style-type: none"> - Poverty - Distance from home
9	Perceived importance of girls education reasons for sending/not sending girls to school	Even as people understand the need for women to be independent, the government is helping the process of girls' education by introducing schemes. There are scholarships, cycles, etc. being given to girls willing to study further. However, as institutions of higher education are really far away, a number of girls are not able to study beyond the +2 level.
10	Type of engagement of children in household activities (try to know about the girls) for the (type) and extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Girls are usually engaged in household chores post the age of 10. Children are also engaged as labour in tea gardens depending on the economic condition of the families.
Vocational Education:		
11	Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged. (Try to probe the skills those are economically productive for the women).	Farming (especially in tea gardens) and weaving are the primary skill sets of people in this area.
12	What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also probe for the barriers from the family side, (like lack of time, etc)	There are no opportunities of vocational skill building in the area. There is also no opportunity of strengthening existing skills or adding value to existing produce.
13	Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area. (Probe for the agencies, nature of vocational trades providing, women's participation and livelihood opportunities).	There are no NGOs working in this area.
Economic Activities:		
14	Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc. probe for the reasons for having or not having ownership rights.	Under various schemes introduced by the government there are no issues of the lack of ownership of property by women. Land holdings are also in the names of women. Some women also own petty business enterprises.
15	Please tell us what are the natures of jobs mainly performed by the women of your community? (Try to probe for besides household work their engagement in government / private sectors, small scale business, agriculture, animal husbandry).	Women who are not engaged in full time household activities are also engaged in farming activities, especially in tea gardens. Some of them are also employed as teachers or anganwaadi workers. A few women also own petty businesses.
16	Referring to the group ask if there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform. (Try to understand the nature of inequalities prevailing). What are the underlying factors for this prevalence of inequalities?	There is no visible inequality in terms of payments made to men and women. However, on further probing it was revealed that women are usually paid less than men when they work as labour on the pretext of doing less work. It is assumed that women carry less load, therefore, they ought to be paid less.
17	Are the woman who are working and	Although working women seem to have more stake in the

S.NO.	Issue Discussed	People's View and Perception
	earning have the ultimate decision on the use of their money? (Try to probe the pattern of using the money earned, part saved, used for them, etc.)	decision making process, in terms of spending their money, even women who do not work participate in decision making regarding money. However, on probing further it was understood that although women were almost always included in the decision making process, it was ultimately always the man's decision.
Decision Making & community Participation		
18	What role do the women of the household have in the decision making process of the household? Do you feel you have equal share along with the male counterpart any household decisions? Does it vary among the earning and non earning women? (How).	Although working women seem to have more stake in the decision making process, even women who do not work participate in decision making regarding money. However, on probing further it was understood that although women were almost always included in the decision making process, it was ultimately always the man's decision.
19	Is there any form of inequality or the cases of male dominating the women in the decision making process at the household level? Please try to probe for the different household decisions and the role of the women (Decisions may be financial matters, education & health care of the child, purchase of assets, day to day activities, on social functions and marriages).	Decision making as a process is shared equally by men and women.
20	Is there any community based organization (like NGO's, SHGs, etc) for the women of your community? If yes, probe what are the activities those organizations are performing, what is the role of the women, is there any positions that they possess, like president, secretary, etc).	There are no NGOs working on the issues of women in this area. However, there are a few SHGs that are running for about a decade now. However, the NGOs too are now quite defunct.
21	Do the women of your community are members of any political bodies, like Pradeshiya Sabhas, Provincial Councils etc. what role actually played by them in terms of their involvement and participation. Also probe what prevent women from engaging in political process.	Although women's participation insured on paper, there are hardly any women who involve themselves in politics. This is primarily a male zone.
Health		
22	General health facilities available and the perceived satisfaction on the quality of services (government and private) & affordability	There are no satisfactory healthcare facilities available in the area. Some of the villages have general healthcare facilities however, these are also not satisfactory. People have to go to neighbouring towns and cities to avail healthcare services.
23	Types of commonly prevalent diseases among the community, is there any specific ailments affecting the women of your community? Probe for the problems and the facilities available for the treatment.	Tuberculosis, Malaria, Diabetes and High blood pressure are common ailments in this area. Healthcare services particular to women are not available in this area. However, women commonly complain of white discharge.
24	Is there any provision of special health care services available near to your village/ neighbourhood? Probe for the nearest maternity and child health care facilities available, problems faced and the perception on the quality of care.	108 is the number of the emergency ambulance service. However, bad roads often hinder the service delivery. There are very few villages that are able to provide quality healthcare service to its residents.
Social and Physical Security		
25	Do the women feel safe in going outside in the neighborhood during day time?	There is some fear due to the presence of the UIF in certain villages. The tea gardens are also deemed unsafe in some

S.NO.	Issue Discussed	People's View and Perception
	Also probe for the situation during the night time? What are the problems or fears they perceived for their movements?	villages. In others however, women feel completely safe in going into public spaces at any time of the day.
26	Do the women in the community face any kind of domestic violence at their home? If yes probe for the reasons.	There are no major reported instances of domestic violence in these areas especially among the educated classes. There are rare instances of domestic violence in certain villages amongst the impoverished classes.
27	Is the system of dowry is prevalent among your community. Do the women of your community feel insecure for getting their girls married due to the reasons of dowry? What are the problems and challenges they perceive for this system?	There is no prevalence of the dowry system in these villages.
28	General Remarks if any	Women realize the importance of education and basic healthcare facilities and are demanding the same. They feel hindrance in terms of mobility because of limitations in the basic public transportation systems. They are also demanding value addition in terms of vocational skills so that they can add to the economic capacities of their families.

DETAILS ON THE LIST OF PARTICIPANTS

S.NO	Name of the Participants	Relation to the Head of the Households	Occupation
Name of the Village: SINGLO PATHER			
1	SMT. KUKHASHARI SONWAL	WIFE	FARMER/HOUSE WIFE (H/W)
2	SMT.LAKHI SONWAL	WIFE	FARMER/H/W
3	SMT. BEENA SONWAL	WIFE	FARMER/H/W
4	SMT.PINKI SONWAL	WIFE	FARMER/H/W
5	SMT.BEENA SONAWAL	WIFE	FARMER/H/W
6	SMT.REKHA DWARA	DAUGHTER	
7	SMT. MADHARI SONWAL	WIFE	ANGANWADI WORKER
Name of the Village: SOLA PATHAR			
1	SUPRITY SHYAM	WIFE	TEMPORARY JOB
2	GITANJALI SHYAM	DAUGHTER	STUDENT
3	DOLLY SHYAM	DAUGHTER	STUDENT
4	PUSTPER SHYAM	DAUGHTER	H/W
5	ARJANA SHYAM	DAUGHTER	H/W
6	LAKSHAMI SHYAM	DAUGHTER	H/W
7	ANNU SHYAM	DAUGHTER	H/W
8	PARBATHI SHYAM	DAUGHTER	H/W
Name of the Village: MYBELLA CO-OPERATIVE			
1	PADUMI NATH	WIFE	ASHA MEMBER
2	PUSPA LATA NATH	WIFE	HOUSE WIFE
3	MRS RENU NATH	WIFE	TEACHER
4	MRS. DHAMU DEHI CHTRI	WIFE	WARD MEMBER
5	MRS NIRU DUTTA	WIFE	HOUSE WIFE
6	SRI MERA DUTTA	WIFE	HOUSE WIFE
7	MISS MOON DAS	WIFE	UNEMPLOYMENT
Name of the Village: SUFFRY			
1	SMT. KALPANA DEVI	WIFE	HOUSE WIFE
2	MISS KAMALY RAI	DAUGHTER	AT HOME TRAINING NURSE
3	MISS SANGITA GORH	STUDENT	
4	SMT. SAVITRI CHETIA	WIFE	H/W
5	SMT. SONA PRABHA TELI	WIFE	H/W
6	SMT.SULUKHA GORH	WIFE	H/W
7	SMT. MANSHA ROA	WIFE	H/W
8	SMT. BOBBY THAKUR	WIFE	H/W
9	SMT. NAVNEET GORH	WIFE	STUDENT
Name of the Village: MOHAN GAON/BAR PATHAR			
1	SMT. RENU GUPTA	SHG. PRESIDENT (WIFE)	TAILORING H/W

S.NO	Name of the Participants	Relation to the Head of the Households	Occupation
2	SMT. RAZIA BEGAM	WIFE	H/W
3	SMT.RANJANA KALWAR	WIFE	BUSINESS/, H/W
4	SMT. MONI SINHA	WIFE	VEGETABLE SHOP
5	SMT. JYOTSANA KALWAR	WIFE	H/W
6	SMT. SAVITA KALWAR	WIFE	
7	SMT.SHIV KUMAR KALWAR	WIFE	
8	RINKI KALWAR	WIFE	H/W/ BEAUTY PARLOUR
Name of the Village: MATHURA PUR/BHAKAT GAON			
1	SMT. BHANU PRABHA GOGOI	WIFE	ANGANWADI WORKER
2	SMT. MONIK FUKAN	WIFE	HELPER
3	SMT. RUMUMANI GOGOI	WIFE	H/W
4	SMT. MARRY GOGOI	WIFE	H/W
5	BARNALI FUKAN GOGOI	WIFE	H/W
6	MISS MEENA TANT	DAUGHTER	STUDENT
7	SMT. PREMADA GOGOI	WIFE	H/W
8	SMT. RENU GOGOI	WIFE	H/W
9	SMT. RUBBY RAJ KUMARI	WIFE	H/W
10	SMT. SHILIKA GOGOI	WIFE	H/W
11	SMT. SAPANA GOGOI	WIFE	H/W
12	SMT. RUPOHI GOGOI	WIFE	H/W

APPENDIX- 4: SUMMARY DETAILS OF PUBLIC CONSULTATIONS

S.No.	Issue Discussed	People's Views and Perception
1	How long have you been living here in this area	people have been living in this area for the last 30-50 years
2	Do you have any knowledge about the Lakwa Plant when it was constructed few years ago	Technical knowledge about Lakwa plant is limited people are aware about power generation, especially Gas provided by ONGC and the power plant.
3	Did you experience any loss of land or property during that time	No loss of land in most Villages. Some villages say that the pipelines go through the villages. In villages in Nagaland next to the river, they experienced water pollution because of coal mines that are situated next to them that affected animals as well.
4	Do you face any problem due to the gas plant and the gas pipeline	Most villages did not face any problem due to the pipe line. Some villages said that their silk worms died due to rise in the air temperature.
5	Do you have any concern related to the safety of the locality due to the gas plant as well as its associated lines	There are largely no related concerns except for a couple of villages where there have been accidents due to the presence of a high tension wire crossing the length of the village. People and animals have had accidents due to the same. Some participants expressed concern over the chemical waste dumped into the river.
6	General perception about the project and the awareness about the proposed project (Replacement of Old plant by new plant) within the existing area.	People are either unaware of the project or supportive of the same. Most people who know about the project feel that it will solve the energy needs of the village. Participants from some of the villages expressed concern about the fact that the high tension wires have already been harmful to people and animals
7	support of local people for proposed project	100% support of local people for the proposed project without any issue or concern.
8	critical issue and concern by the local people for the project	People who are aware of the project just hope that the project will be executed without harming the river or the local ecosystem. Others hope that it will solve the local energy related issues.
9	criteria liked to see during project design, operation stage and construction	People who are aware of the project just hope that the project will be executed without harming the river or the local ecosystem. Others hope that it will solve the local energy related issues.
10	access to forest land and use	Most villages do not have access to foreign lands and the ones that do have land that is governed by the department of forestry.
11	Protected areas (national park, protected forest, religiously sensitive sites, historical or archaeological sites), if any	Abhaypur and Solapathar reserve forests are areas of concern.
12	sources of power supply	Grid an Discoms
13	sources of electricity	ASEB
14	average amount of electricity used by per household	100-150 units/month per house hold by local people
15	What is the unit rate for household and commercial activities	Rs 5 for domestic purposes and Rs. 7/- for comercial use. However, in villages that do not have a meter the limited power supply is free of cost.
16	Average total monthly expenditure per household on grid electricity	2000-2500 for newly meters installed for one time which people are not satisfied with the bill. The expenditure on electricity consumption ranges from Rs 300-100 month per house hold depending on size of the family
17	other non grid electricity to use in your village and expenditure	No other non-grid electricity supply available in the villages.

S.No.	Issue Discussed	People's Views and Perception
18	How many agricultural pumps do you have in your village	While some villages have no pump, in others the number of pumps ranges between 10 to 50.
19	What is the average horse power of the pumps	In areas where it has been calculated it is 5HP.
20	How many farmers depend on one pump and how they manage. Who is responsible for getting the pump installed and maintenance including the payment of electricity bill	In areas where data is available, only one farmer depends on one pump.
21	How many hours of electricity you get for your pump and how much you pay monthly.	Rarely is the electricity supply constant. In most cases there is no electricity for farming and only 5-6 hours for domestic use.
22	How much land can be irrigated with an average size of horse power pump	It varies between 1 to 5 acre per pump.
23	What are the major crops and how many crops you cultivate in a year.	Tea, paddy, banana, tambul (betlenuts)
24	What is the average yielding of each crop per bigha and what is the market rate of the crop (per quintals)	Tea- 2 quintal/bigha/week- Rs.1200-2000 per quintal Paddy- 2 to 3 quintals and Rs. 900 per quintal.
25	Health status, Availability of Hospitals, Number of Hospitals in the area and over all environmental condition. Is there any chronic disease prevalent in this area and are you aware about HIV/AIDS?	Sub- center facility in the village area there and for any emergency, people use to visit sonari 7km. Some of the tea gardens have their own clinic also. People use government health facility. Economic condition is not affordable for getting health facility for all basically poor section. Medical facility is not good only medical shops and mini PHC (sub. Center) are in the village. Common diseases are malaria, fever, diabetics, etc. Tuberculosis is common chronic diseases found in the area. People are aware about HIV/AIDS. No cases of HIV/AIDS are noticed in and around the village.
26	Migration Pattern (If any), inward or outward	People do migrate for availing jobs. The usual places of migration are Bangalore, Chennai, Kerala, Bihar, Rajasthan and Bangladesh.
27	Perceived benefits from the project	No benefits from the existing project as recorded from the local people except for the employment of 10 people from all the villages covered in the survey. However, they expect some temporary employments during the construction of new and replacement work.
28	Perceived losses from the project	No major losses from the project except for loss in land fertility and fish crop in certain areas.
29	What other organizations of a social nature (NGOs/CBOs/ Civil Society) active in the area? Name of these organizations	No NGOs operating in these areas.
30	Organization of the village and its structure. Do you have a village committee? What is the decision-making system in your village/Who are the decision makers on community related issues in your village? Are they elected or selected? If elected: By consensus or By majority vote	Gram Panchayat is there with representations from both males and female members. These are elected bodies. All section of the society get involved in decision making system through gram sabha.

S.No.	Issue Discussed	People's Views and Perception
31	Any Other Issues you may feel to share: (Demand of power, whether they welcome the project, will there be cooperation from the local community during the implementation, security measures, etc)	Power supply, roads, and employment opportunities are the main demands from the project.
32	Is this consultation useful? Comments	This was very useful as people became aware of the project. This gave opportunity to the local community to come together and had a discussion on the issue. This was great in terms of building trust within the community.
33	Will there be likely involvement of local people in the implementation of the project?	People are willing to be involved if they are called upon in the implementation of the project.
34	Any Other Valid Points or Observation or Suggestions	People want infrastructural facilities such as good roads, power supply, healthcare facilities, etc. they also seek protection from losses caused by wild elephants.

VILLAGE WISE LIST OF PARTICIPANTS

SNo	Name of the Participants	Sex (Male/Female)	Age	Occupation
Name of the Village: SINGLO PATHAR				
1	BIREN SONWAR	MALE	70	FARMER
2	MUNI RAM BAR GOHEIN	MALE	35	SHOPKEEPER
3	SAINI RAM SONWALL	Male	57	SERVICE
4	MANI KANT SONWALL	MALE	26	FARMER
5	LUCHAN SONWALL	MALE	32	FARMER
6	JAYENTA SONWALL	MALE	31	FARMER
7	HEMANTA SONWALL	MALE	45	FARMER
8	LOSEN SONWALL	MALE	42	FARMER
9	JOTIN HATIMARIK	MALE	47	FARMER
10	JITUL SONWALL	MALE	30	FARMER
11	ANATA SONWALL	MALE	27	FARMER
12	RUBUL SONWALL	MALE	26	FARMER
13	SUIA SONWALL	MALE	41	FARMER
14	AEHUK TAT	MALE	52	FARMER
15	LAKHI GANTA	MALE	45	FARMER
16	PRUNAB SOMWALL	MALE	27	FARMER
17	KARTIK SOMWALL	MALE	33	FARMER
18	PODMA SOMWALL	MALE	46	FARMER
19	SOLEEN SOMWALL	MALE	28	FARMER
20	JATIN SOMWALL	MALE	38	FARMER
21	NITUL SAIKIN	MALE	28	FARMER
22	AKHAM HANDIGUR	MALE	27	FARMER
23	UMAKANTO TANTI	MALE	54	FARMER
24	PADMU SOMWALL	MALE	40	FARMER
25	TRITHM SAMWAL	MALE	38	FARMER
26	BIMOL BORULM	MALE	35	FARMER
27	ANIL SAMWAL	MALE	35	FARMER
28	PRUPHUKHA SAMWAL	MALE	27	FARMER

SNo	Name of the Participants	Sex (Male/Female)	Age	Occupation
29	BISNU SAMWAL	MALE	25	FARMER
30	MONDAY LAMU	MALE	35	FARMER
Name of the Village: SOLA PATHAR				
1	ASHOK SHYAM	MALE	38	UNEMPLOYED
2	BIKASH SHYAM	MALE	28	UNEMPLOYED
3	GITANJALI SHYAM	FEMALE	26	STUDENT
4	SNPRITY SHYAM	FEMALE	30	TEMPARARY JOB
5	PROMOD CHOWBAY	MALE	42	SERVICE
6	JHNMET SHYAM	MALE	65	FARMER
7	DHARJYA SHYAM	MALE	60	FARMER
8	PRATARK SHYAM	MALE	62	SERVICE
Name of the Village: MOHAN GAON/ BAR PATHER				
1	RENU GUPTA	FEMALE	35	SMALL BUSINESS
2	RAZIA BEGUM	FEMALE	60	H/W
3	ANJANA KALWAR	FEMALE	45	H/W
4	MONI SIHA	FEMALE	30	VEG SHOP
5	JYOT SANA KALWAR	FEMALE	28	H/W
6	SAWITA KALWAR	FEMALE	32	H/W
7	SHIV KUMAR KALWAR	FEMALE	35	H/W
8	RINKI KALWAR	FEMALE	26	H/W
Name of the Village: MYBELLA CO-OPERATIVE				
1	RANJIT DUTTA	MALE	47	CULTURAL
2	DALBAHADUR TAMANG	MALE	64	SERVICE
3	TUKESWAR OGOI	MALE	60	SERVICE
4	AROUP GOGOI	MALE	30	UNEMPLOYE
5	PULIN NATH	MALE	40	UNEMPLOYE
6	MATHAB DAS	MALE	21	EMPTY
7	PROMUD SONUNAL	MALE	50	EMPTY
8	BIPUL URANG	MALE	28	EMPTY
9	SARAT DAS	MALE	19	EMPTY
10	NOREN SAIKIA	MALE	47	FARMER
11	MIRA DUTTA	FEMALE	47	FARMER
12	DIPALI LAMA	FEMALE	43	FARMER
13	MOON DAS	FEMALE	25	STUDENT
14	PUSPA NATH	FEMALE	57	FARMER
15	LABANYA GOGOI	FEMALE	48	FARMER
Name of the Village: SUFFRY/ RANGE PATHAR				
1	PINKU KALINDI	MALE	25	FARMER
2	UTPAL CHETTA	MALE	40	TECHER
3	GUDU CHETA	MALE	53	SERVICE
Name of the Village: MARTHURA PUR				
1	MD. ABDUL MOTHILE	MALE	43	FARMER
2	HEMANTA CHANGMAI	MALE	33	FARMER
3	SUDHIR SINGHA	MALE	38	FARMER
4	KRISHNA NEWAR	MALE	43	FARMER
5	DEBABRATE SINGHA	MALE	39	FARMER
6	MD. ABDUL HUMAIN	MALE	45	FARMER

APPENDIX-5: PHOTOGRAPHS DURING CONSULTATIONS







