

# Land Acquisition and Resettlement Due Diligence Report

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Project number: 42266-026  
July 2018

**IND: Kolkata Environmental Improvement Investment Program (Tranche 3) – Sewage Treatment Plant (SD28)**

**Package No. SD28/2017-18: West Bengal State Electricity Transmission Company Limited Sewage Treatment Plant (45 MLD) in Ward 144**



## **CURRENCY EQUIVALENTS**

(as of 20 July 2018)

Currency unit = Indian rupee (₹)  
₹1.00 = \$0.014  
\$1.00 = ₹68.94

## **ABBREVIATIONS**

ADB	- Asian Development Bank
DDR	- due diligence report
DWF	- dry weather flow
KEIP	- Kolkata Environmental Improvement Project
KEIIP	- Kolkata Environmental Improvement Investment Program
KMC	- Kolkata Municipal Corporation
S&D	- sewerage and drainage
STP	- sewage treatment plant
WBSETCL	- West Bengal State Electricity Transmission Company Limited

## **NOTE**

In this report, "\$" refers to United States dollars.

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## I. INTRODUCTION

### A. Background

1. The Kolkata Environmental Improvement Project Phase 1 (KEIP 1) was a multi-agency endeavor to arrest environmental degradation and improve the quality of life in Kolkata. The aim of KEIP was to provide affordable access to basic urban services, revamp and upgrade the sewerage and drainage system, make the solid waste management system efficient, restore the city's drainage canals, and improve outdoor recreation facilities in parks and water bodies. It also had a stakeholder consultation program and a capacity building component to raise the standards of delivery of municipal services by the Kolkata Municipal Corporation (KMC). Financing was from the KMC, the Government of West Bengal (GOWB) and the Asian Development Bank (ADB). In addition, there was grant financing from the UK Department for International Development (DFID) for the KMC capacity building component of the Project.

2. The works under the KEIP Phase 1 was completed in 30 June 2012, the closing date of the ADB loans. Both KMC and ADB wished to continue their combined efforts to improve the urban environment and living conditions in Kolkata, building on results achieved and experience gained. Therefore, a continuation of the KEIP was proposed, which was named as the Kolkata Environmental Improvement Investment Program (KEIIP) consisting of three projects, or tranches. Kolkata Municipal Corporation (KMC) is the executing agency of the proposed investment program.

3. The KEIIP has been conceptualized as a multi-tranche financing facility - consisting of three projects or tranches. A total of 8 subprojects prioritizing sewerage and drainage work are prioritized under Tranche 3.

4. In continuation to the Tranche 2, different subprojects under KEIIP Tranche 3 have been proposed to be taken up for the areas which are not covered under KEIP and KEIIP – Tranche 1 and 2. The details of the sub-projects is given in the table below in Table 1.

**Table 1: Sewerage and Drainage Packages under Tranche 3**

Package Number	General Description
SD27/2017-18	Improvement of S&D Network and construction of a pumping station in Alipore body guard line premises in ward 74 and laying of sewer line along Diamond Harbour Road by Microtunneling method and Cut & Cover method
SD28/2017-18	Construction of WBSETCL Sewage Treatment Plant (45 MLD)
SD29/2017-18	Construction of Sewage Treatment Plant at Bank Plot (40 MLD)
SD30/2017-18	Construction of Rajpur – Sonarpur Sewage Treatment Plant 30 MLD)
SD31/2017-18	Development of S&D Network in Churial Extension Pumping Station catchment and Diamond Park Catchment and Construction of Churial Extension pumping station (annexed) in borough XVI (Part of Ward 124, 143 and 144)
SD32/2017-18	Improvement of S&D system in Mukundapur Area (Part of Ward 109) including construction of pumping station and improvement of drainage system in Rajdanga Area (Part of ward 107)
SD34/2017-18	Construction of pumping station at Lalababu Nikashi and upgradation of existing pumping station at Shakuntala Park
SD22/2016-17	Development of sewerage and drainage networks in Churial extension canal sub basin in Borough XIII & XVI (Part of Ward no. 122,123, 124) including laying of trunk sewer by microtunnelling method and construction of Churial extension pumping station

S&D = sewerage and drainage, MLD = million liters per day, WBSETCL = West Bengal State Electricity Transmission Company Limited.

5. The proposed Project 3 supported under Tranche 3 of KEIIP includes S&D works with sewage treatment plants (STPs). Many of the S&D sub-projects will become functional within next two years and it would be mandatory to treat the sewage (dry weather flow) conforming to the latest CPCB guidelines before discharging it into the water bodies. In this context four STPs have been proposed to be constructed under Tranche 3.

## **B. Scope of this Report**

6. This land acquisition and resettlement due diligence (DDR) report for TR-03/SD 28 is prepared for the proposed construction work of sewage treatment plant located in ward 144, (within WBSETCL sub-station) which has been planned to treat the dry weather flow (DWF) generated from S&D systems in parts of Borough XVI and parts of Borough XIV of south Kolkata.

7. A due diligence process was conducted to examine the land acquisition and resettlement issues in detail, in line with ADB SPS 2009. This report describes the findings and provides copies of relevant documents, resolutions, minutes of meetings and photographs. This land acquisition and resettlement DDR needs to be considered along with the Resettlement Framework prepared for KEIIP.

8. Upon project implementation, the officer designated for social safeguards at PMU will be required to undertake a review of this due diligence, prepare a confirmation letter or report documenting any modifications for the subproject and submit to ADB; and receive a 'no objection' confirmation from ADB prior to start of construction of the subproject.

## **II. SUBPROJECT DESCRIPTION**

### **A. Background of Subproject Area**

9. In the concept report stage of this project, a larger STP was planned, but due to the inadequacy of the land, the service area of this STP has been changed. The subproject area used to depend largely on septic tank arrangement for household sanitary systems and open surface drainage systems mainly for storm water and effluents of septic tanks. In many cases the drains do not have any proper outlet and terminated into low land/ canal. All these practices have been partially addressed by ongoing S&D schemes under KEIIP but lacks any dedicated wastewater treatment facility.

10. The proposed STP will cater to the DWF generated from wards 125, 126, 144 and parts of ward 123, 124 and 143 under Borough XVI and 127 (Borough XIV). The population of the catchment for the design horizon (2030) is 2,57,882 and its total catchment is approximately 1444 Ha, which will serve as the command area for the proposed STP.

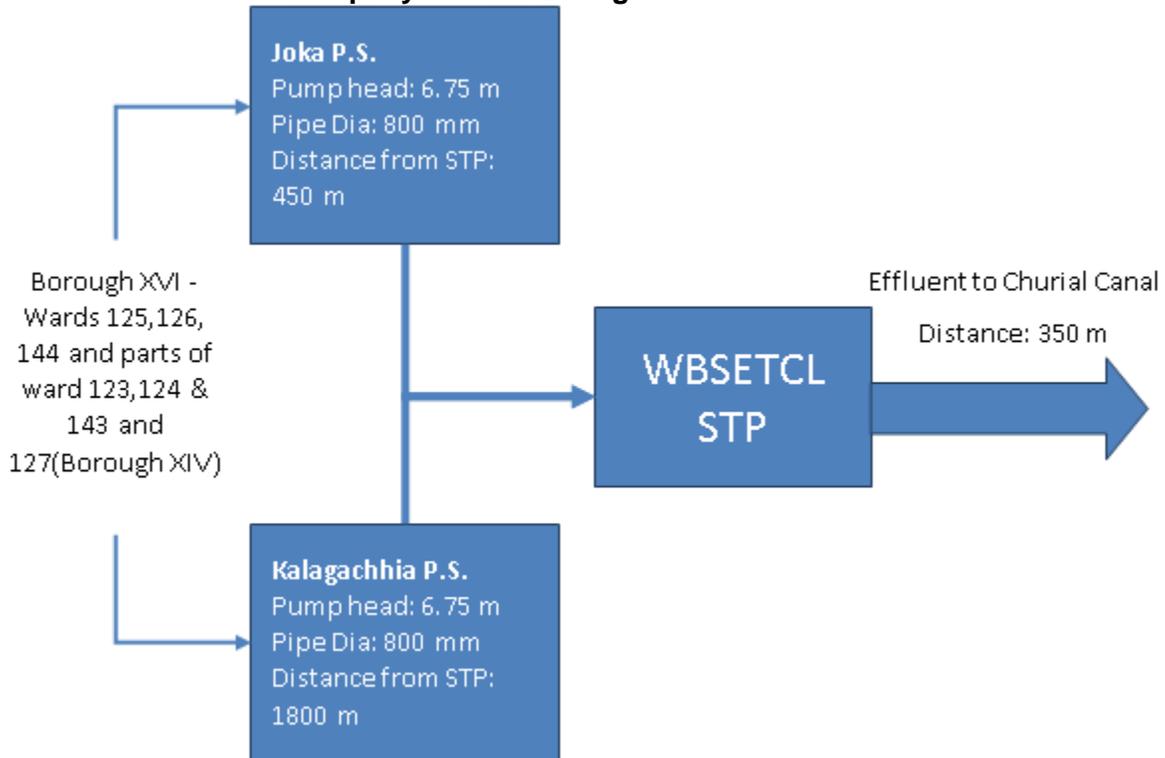
### **B. Proposed Subproject Components**

11. The site of the proposed STP is located off the Diamond Harbour Road in ward no. 144 in South Kolkata primarily identified as Joka, the complete command area of the WBSETCL STP.

12. In the command area of the proposed STP, part of the trunk S&D network is under construction and remaining part will be implemented under Tranche 3. The S&D network will collect the DWF and storm water flow to the Kalagachia pumping station and Joka pumping

station. The DWF collected will be then pumped to the proposed STP for treatment. It is expected that the proposed STP will be functional before completion of the S&D works. A basic schematic diagram is presented in Figure 1.

**Figure 1: Schematic Diagram of the Proposed West Bengal State Electricity Transmission Company Limited Sewage Treatment Plant**



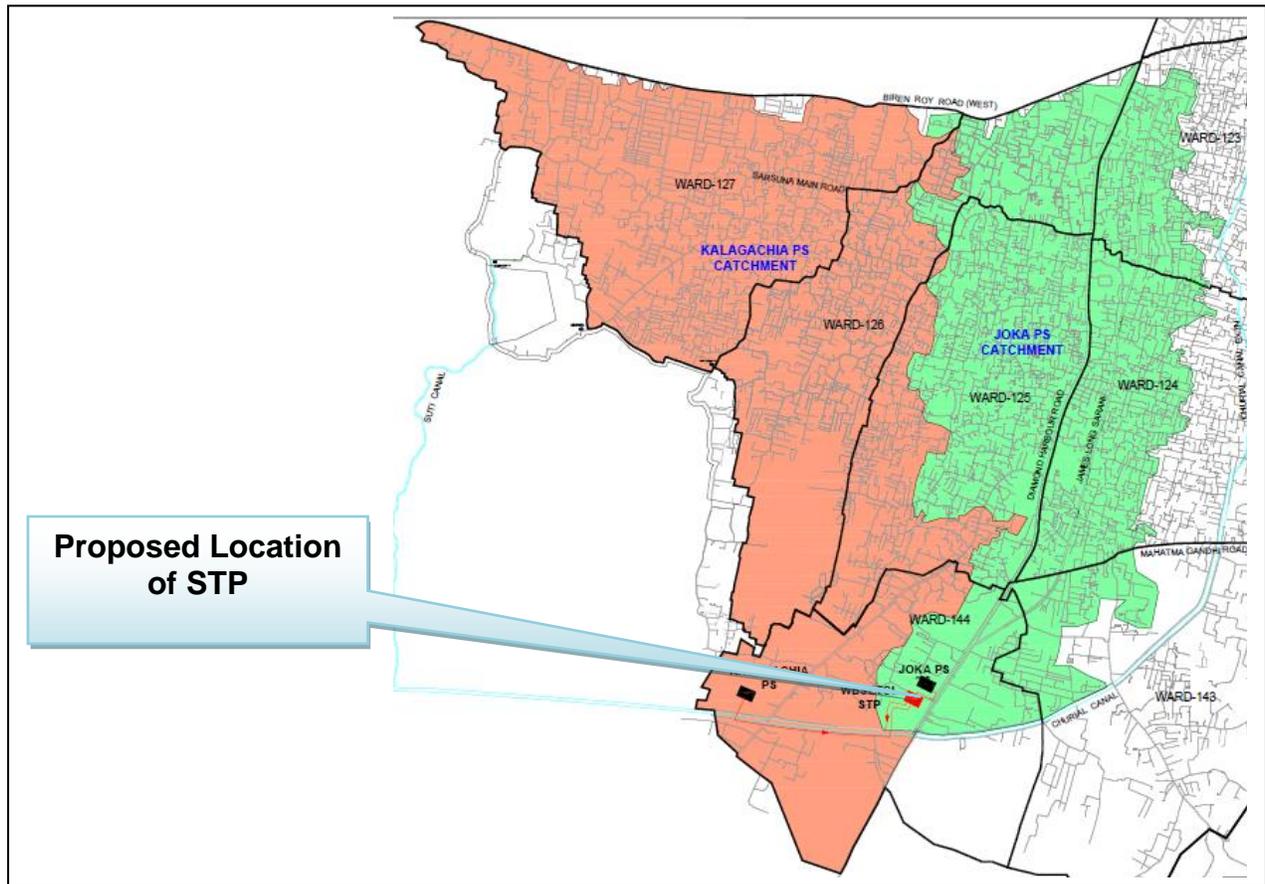
m = meter, mm= millimeter, STP = sewage treatment plant, WBSETCL = West Bengal State Electricity Transmission Company Limited.

13. This will ensure that collected DWF can be treated to the environmentally sustainable levels as per the latest CPHEEO/ Central Pollution Control Board (CPCB) norms. The treated effluent from the STP will be discharged to the nearby Churial canal. Once the project is completed it is expected that the water quality in Churial canal will improve, which in turn will create more hygienic conditions along its length. It will also help in controlling the pollution of River Ganga as the Churial canal finally merges in it.

14. In summary following are the main reasons for taking up this project:

- (i) To ensure that the command area has a fully functioning S&D network of which STP is a crucial component;
- (ii) To improve public health, for population living on the banks of the canals as well as areas around it: and
- (iii) To improve water quality of River Ganga by treating waste water before discharging for fulfilling Government Policy and one of the objectives of cleaning river Ganga.

**Figure 2: Proposed Location of West Bengal State Electricity Transmission Company Limited Sewage Treatment Plant with Its Catchment Area**



**Table 2: Components of SD28/2017-18**

Package: SD28/2017-18 - WBSETCL Sewage Treatment Plant (45 MLD) in Ward 144	
Major Project Components	Construction of a 45 MLD sewage treatment plant (STP) on WBSETCL land. Laying of 350 m Effluent Discharge Pipeline from STP to Churial Canal. Laying of 400 m pumping mains from Joka Pumping station to STP- 800 mm dia pipe. Laying of 1800 m pumping mains from Kalagachia Pumping Station to STP - 800mm dia pipe
Coverage	The population of the catchment for the design horizon (2030) is 2,57,882 and its total catchment is approximately 1444 Ha.

### III. FIELD WORK AND PUBLIC CONSULTATION

#### A. Outline of Field Work

15. In July 2017, field inspections were carried out at the proposed sub -project site location for STP subproject and its adjoining areas. Stakeholder consultations were also conducted. Inspections and transect walks were carried out in the sub project areas. The proposed site location has no residential area adjacent to it.

**B. Public Consultation**

16. Consultations were undertaken with key stakeholders in line with ADB's requirements pertaining to environmental and social considerations. The tool used for consultation was stakeholder meetings. These consultations helped to identify the felt needs/concerns and apprehensions of the communities related to the project and priorities of concerned stakeholders. Discussions were held with people residing or having businesses near the proposed subproject locations. Although the STP will be constructed within WBSETCL plot with no immediate residential area, however the community people residing more or less near to it are willing to cooperate for the proposed project. The local community people are willing to cooperate for the construction of the sub-project which they understand is for their own betterment and better civic facilities. Summary of stakeholder consultation is provided in Table 3 and the stakeholder consultations report and list of participants is provided in Appendix 1.

**Table 3: Summary of Community Consultation**

Date	Location	Participant Details				Description	Key Discussions	Issues Raised by Participants
		Male	Female	% of Female	Total			
05.07.2017	Hanspukur	13	23	64%	36	Local residents, shop owners, housewives, businessmen, Service men, representatives of KEIIP and Contractors	<p>1. Suitable Wastewater Treatment Technology will be selected adhering to latest discharge norms by Central Pollution Control Board (CPCB).</p> <p>2. It will be ensured that the technology selected can be executed within the land area available for treating the command area's dry weather flow (DWF).</p> <p>3. The subproject will provide a wastewater discharge in the canals and water bodies of Kolkata which will ensure amelioration of its water quality.</p> <p>4. The project work will to reduce environmental impact/ health problems that is caused by open discharge of domestic wastewater</p> <p>5. It will be ensured that river Ganga is not polluted which is a priority of the state and national government.</p>	<p>1. Tentative date of commencement of project</p> <p>2. Whether livelihood facilities will be affected by project works and if so to what extent</p> <p>3. Will the project involve any environmental and/ or health impacts</p> <p>The above-mentioned issues as raised by the participants were put to ease by The KMC officials in the sense that the project will not have any negative impacts on the society or environment. Rather, the project will ensure improved livelihood facilities for all.</p>

#### IV. LAND AVAILABILITY

17. The proposed construction work will be done on Government Land. The 3.5 acres of land, schedule of which is given as Mouza - Joka, J.L. No. 21, P.S. - Behala, Dist-South 24 Parganas, within the premises of Behala 132 kV Sub-Station of WBSETCL is handed over to Kolkata Municipal Corporation as permissive possession in Appendix 2.

18. The details of land are appended below:

**Table 4: Details of Proposed Land of West Bengal State Electricity Transmission Company Limited**

P.S., District	Mouza	J.L. No.	C.S. Plot No.	Full (F)/ Part (P)	Area in acres
P.S. - Behala, Dist. - South 24 Parganas	Joka	21	587	F	0.08
			588	P	0.51
			589	P	0.04
			590	P	0.04
			595	P	0.03
			606	P	0.48
			607	P	0.66
			611	P	1.41

19. Construction Work in the subproject area has been carefully planned to minimize any disturbance to adjacent community people and pedestrians (if any). The proposed site is a vacant plot and assessed to have no resettlement impact. The effluent discharge pipeline from STP to Churial Canal will pass through WBSETCL and Irrigation Department plots. Laying of the pipelines for carrying DWF from two Pumping Stations to STP and Effluent discharge pipeline STP to Churial Canal will require permission or No Objection Certificate from the concern departments. The effluent discharge pipeline will be laid along the boundary wall of the adjacent WBSETCL sub-station and partly through Churial Canal right of way to Churial Canal.

20. Laying of pipelines for carrying DWF from pumping stations to STP and effluent discharge from STP to Churial Canal will be through open cut method. The following Table 5 provides details of the pipelines to be laid.

**Table 5: Details of Dry Weather Flow Pipelines and Effluent Discharge Pipelines**

Component	Length of Pipeline (m)	Material/Dia of Pipe (mm)	Trench Width (m)	Road Width (m)	Land Ownership
Laying of pipeline for carrying dry weather flow from Joka Pumping Station to sewage treatment plant (STP)	400 m	DI – 600 mm	1.2	Partly 4 m (Hanspukur Rd) & Partly 7.5 m (Diamond Harbour Rd), rest in STP plot	KMC
Laying of pipeline for carrying DWF from Kalagachia Pumping Station to STP	600 m	DI -700 mm	1.35	3.5 wide road	WBSETCL
Laying of Effluent Discharge Pipeline from STP to Churial Canal	350 m	MS – 1000 mm	1.8	3.5 wide road	WBSETCL and Irrigation Dept. Govt. of West Bengal

Figure 3: Google Earth Image of Subproject Area



## V. CONCLUSIONS

### A. Summary and Conclusion

21. The construction work of the sub-project will not cause any involuntary resettlement impacts as the work is proposed on a vacant land. The identified site for the proposed civil works at all pipe laying zones is proposed along government road rights of ways and government plots. Temporary disruptions during construction will be mitigated by the contractor through a traffic management plan and simple measures such as proper stacking/storing of construction materials, provision of planks to ensure that pedestrian access to shops and residences is maintained.

### B. Next Steps

22. DDR to be updated during detailed design. ADB approval of the updated DDR based on the final assessment at detailed measurement survey stage needs to be obtained by the PMU.

23. Permission of Irrigation Department, Government of West Bengal and WESETCL will be required for constructing the outfall over Churial Canal and laying of pumping mains. The same will be updated in the DDR.

**PHOTO GALLERY**



Photograph of Community Consultation

## LIST OF PARTICIPANTS AT COMMUNITY CONSULTATION

KOLKATA ENVIRONMENTAL IMPROVEMENT INVESTMENT PROGRAMME

List Of Participants In Community Consultation

Date: 5.7.17

Place: Harnipukur.

Sl. No.	Name	Signature
1.	Dipali Das.	Dipali Das
2.	Lagna Mukherjee.	লগ্না মুখার্জী
3.	Jaya Bhowal.	জয়া ভোয়াল
4.	Champa Jana.	চম্পা জানা
5.	Sunita Das.	সুনিতা দাস
6.	ISHITA MITRA.	Ishita Mitra
7.	PUSPA SINHA.	পুষ্পা সিনহা
8.	Madhali Ghosh.	মদহালী গোস্বামী
9.	Ratna Mukherjee.	Ratna Mukherjee
10.	Sina Bose.	সিনা বোস
11.	Sena Bose.	সেনা বোস
12.	Rita Dutta.	রীতা দত্ত
13.	Swapna Dutta.	স্বপ্না দত্ত
14.	Kaveri Gupta	Kaveri Gupta
15.	Amrita Gupta	Amrita Gupta

16.	Madhu Singh .	Manohar Singh
17.	Madhuri Gaiswal	मधु (गैसवाल)
18.	Sabita Kela .	Binay pal
19.	Sita Kela .	सिता केली
20.	Sandhya Naskar	Soma Das
21.	Aloka Halder .	श्रीलक्ष्मी
22.	Bunala Meite .	बाबुलक्ष्मी
23.	Bunala Meite .	बाबुलक्ष्मी
24.	Chitto Das .	चित्तू
25.	Raju Kela .	राजू केली
26.	Bantu Kela .	Bunala .
27.	Swapan Halder .	स्वप्न
28.	Japan Pal .	जपान
29.	Jitu Naskar .	जितू



**LETTER FROM WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED FOR SEWAGE TREATMENT PLANTS LAND**



West Bengal State Electricity Transmission Company Limited  
(A Govt. of West Bengal Enterprise)

Memo. No: BLA/E-39/588

3640 03/12/16

Dated: 03/12/16

**PERMISSIVE POSSESSION CERTIFICATE**

In pursuance of letter No. 241-PO/O/C-I/5M-197/15 dt-01.12.2016 of the Special Secretary, Deptt. of Power & NES, Govt. of West Bengal read with letter no. Con/COM/320/2016-17 dt-01.12.2016 of the Municipal Commissioner, Kolkata Municipal Corporation, 3.25 acres of land, schedule of which is given below at mouza-Joka, J.L.No.21, P.S-Behala, Dist- South 24 Parganas within the premises of Behala 132 k.V Sub-Stn. of WBSETCL is handed over to Sri Asit Kundu, the Chief Valuer and Surveyor on behalf of Kolkata Municipal Corporation as permissive possession for the purpose of their construction of Water supply head works including pumping station for distribution of filtered water in erstwhile Joka-I&II, presently in wards 142,143 & 144 of KMC.

The market value of the above 3.25 acres of land is to be determined as per provision in para 165(3) of chapter XV of the West Bengal Land Acquisition Manual, 1991 as mentioned in the above order.

This transfer of permissive possession shall not take into any effect to the order of resumption by the District Magistrate & Collector, South 24 Parganas if any for its subsequent transfer to KMC for the purpose as stated herein as per provision under West Bengal Land Acquisition Manual, 1991 read with West Bengal Land Management manual, 1991.

P.S., District	Mouza	J.L.No.	C.S. Plot No.	Full(F)/Part(P)	Area in Acres
P.S.-Behala, Dist.- South 24 Parganas	Joka	21	587	F	0.08
			588	P	0.51
			589	P	0.04
			590	P	0.04
			595	P	0.03
			606	P	0.48
			607	P	0.66
			611	P	1.41
<b>TOTAL</b>					<b>3.25</b>

**Enclo:** One land plan

Permissive Possession taken over by:

*Asit Kundu*  
3/12/16  
Chief  
Valuer & Surveyor  
K. M. C.

Permissive Possession delivered by:

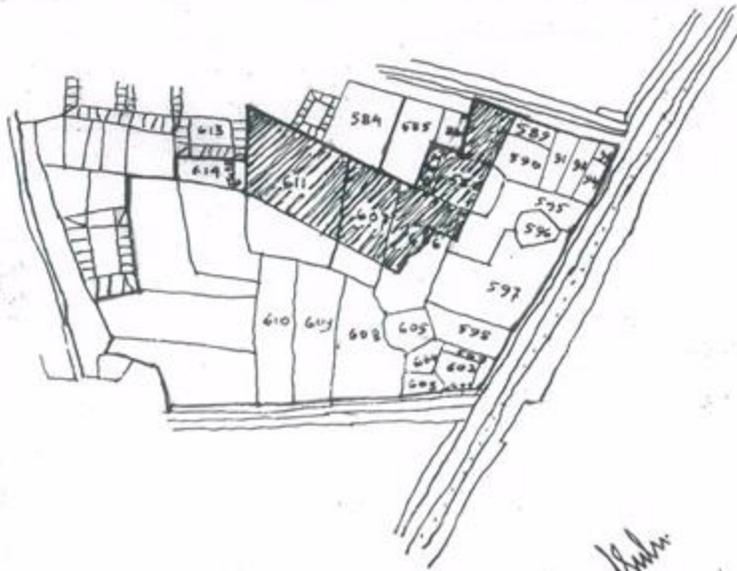
*Biphal Biswas*  
03/12/16  
S.E. & Area Manager  
Behala Area Office  
W.B.S.E.T.C.L.

LAND PROPOSED FOR RELINQUISHMENT OF 3.25 ACRES OF LAND IN MOUZA-JOKÁ,  
 J.L-21, P.S-BEHALA WITHIN THE ACQUIRED AREA FOR BEHALA 132 K.V SUB-STATION  
 WHICH WAS EARLIER ACQUIRED VIDE CASE NO. 87 OF 1958-59 UNDER LA ACT-II,  
 1948

Scale 330'=1"

Total Acquire area vide LA Case No  
 LA-II/87 of 58-59 = 14.63 acres as  
 shown as..... 

Land under purview of  
 permissive possession shown  
 as..... 



Land Schedule proposed for relinquishment

Sl No.	C.S Plot No.	Part/Full	Area in Acres
1.	587	F	0.08
2.	588	P	0.51
3.	589	P	0.04
4.	590	P	0.04
5.	595	P	0.03
6.	606	P	0.48
7.	607	P	0.66
8.	611	P	1.41
Total			3.25

*ASIT Bannu Shukla*  
 2/12/16  
 District  
 Welfare & Rehabilitation  
 A. M. C.  
 Special Officer (L)  
 WBS ETC  
*Asst. District  
 Officer*  
 Behala Area  
 W.B.S.E.T.C.



# West Bengal State Electricity Transmission Company Limited

পশ্চিমবঙ্গ রাজ্য বিদ্যুৎ সংবহন কোম্পানী লিমিটেড

(A Govt. of West Bengal Enterprise)

OFFICE OF THE CHIEF ENGINEER- TRANSMISSION (O&M)

BIDYUT BHAVAN: 10<sup>TH</sup> FLOOR: 'D' BLOCK

SALT LAKE CITY: KOLKATA - 700 091

FAX : 033-2359-1892  
Telephones : 2359-1895  
2358-5292 to 95, Exten. : 465  
Email ID : cetr@rediffmail.com

Bidyut Bhawan (10<sup>th</sup> Floor)  
DJ - Block, Sector -  
Salt Lake City, Kolkata - 700 091.



Memo. : CETR/O&M/TECHNICAL/ 494

Date: 12.04.2017

To  
The Project Director  
Kolkata Environmental Improvement Investment program  
206, A/JC Bose Road, Kolkata 700017  
Email: [pdkeip@gmail.com](mailto:pdkeip@gmail.com)  
[pdkeip@gmail.com](mailto:pdkeip@gmail.com)

Sub: Approval of drawing in connection with laying of pumping mains inside  
132 KV Behala Substations.

Dear Sir,

Please find enclosed herewith one set of approved alignment drawing, typical cross-section of road and typical cross-section at location of proposed bus structure for your further necessary action please.

Encl: one set of approved drawing.

Yours Faithfully

*(Signature)*  
(A. Ghosal)  
12/4/17  
Chief Engineer TR (O&M)

*DC/P*  
*For taking*  
*copy. Bf*  
*(Signature)*  
*24/4/17*  
*make a*  
*copy &*  
*return the*  
*original.*  
*84*  
*24/4 M.A. / F.L. / 20-3*

