

# Land Acquisition and Resettlement Due Diligence Report

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April 2016

## IND: Kolkata Environmental Improvement Investment Program (TR2 SD10)

Prepared by Kolkata Municipal Corporation (KMC) for the Asian Development Bank.

This 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.

## **CURRENCY EQUIVALENTS**

(as of 22 April 2016)

Currency unit	=	Rupee (INR)
INR 1.00	=	USD 0.01504
USD 1.00	=	INR 66.4893

## **ABBREVIATIONS**

ADB	-	Asian Development Bank
BPL	-	below poverty line
DH	-	Diamond Harbour Road
DWF	-	dry weather flow
GAP	-	Ganga Action Plan
IR	-	involuntary resettlement
KEIP	-	Kolkata Environmental Improvement Project
KEIIP	-	Kolkata Environmental Improvement Investment Program
KMC	-	Kolkata Municipal Corporation
MFF	-	multi-tranche financing facility
NOC	-	no objection certificate
ROW	-	right of way
S&D	-	sewerage and drainage
STP	-	sewage treatment plant
SWF	-	storm weather flow
LPS	-	litres per second
MS	-	mild steel

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1. Summary of Community Consultation



## **I. INTRODUCTION**

### **A. Background**

1. On 26 September 2013, the Asian Development Bank (ADB) approved the provision of loans under a multitranche financing facility (MFF) for the Kolkata Environmental Improvement Investment Program (KEIIP or the Investment Program) for an aggregate amount not to exceed \$400 million. The impact of the Investment Program will be improved access to water supply and sanitation in Kolkata Municipal Corporation (KMC). The outcome will be improved water supply, sewerage and drainage service quality and operational sustainability in selected areas of KMC. KEIIP has three outputs: (i) inefficient water supply assets rehabilitated; (ii) sewerage extension to peripheral areas continued;<sup>1</sup> and (iii) financial and project management capacity further developed. KMC is KEIIP's executing agency. A project management unit (PMU) created under KMC is implementing KEIIP.

2. The first loan under it, Tranche 1 or Loan 3053-IND, amounting to \$100 million, was approved by ADB on 22 October 2013, signed on 3 March 2014 and made effective on 30 May 2014. Project 1, supported by tranche 1, included subprojects for improvement of infrastructure, operations and sustainability in sewerage, drainage and water supply in KMC.

3. The proposed Project 2, supported by the proposed tranche 2 of KEIIP, will include physical and non-physical investments in water supply and sanitation improvement in KMC. Project 2 is aligned with improved access to water supply and sanitation in KMC as defined by the Investment Program.

4. A total of six subprojects prioritizing sewerage and drainage work are prioritized under Project 2, including: (i) sewerage and drainage work and construction of 1 pumping station in ward no. 114 (package TR-2 SD 01); (ii) development of sewerage and drainage network in Rania box catchment including outfall structure (package TR-2 SD 02); (iii) development of sewerage and drainage network in Rania box catchment and Vivekananda Road catchment including one combined pumping station and outfalls (package TR-2 SD 03); (iv) laying of a trunk sewer along James Long Sarani (package TR-2 SD 04); (v) development of sewerage and drainage network including outfall structures in wards 123 and 124 (package TR-2 SD 05); and (vi) sewerage and drainage network in boroughs XIII and XIV (package TR-2 SD 06). Non-priority packages for sewerage and drainage under Project 2 include: (i) sewerage and drainage mains and 2 pumping stations (augmentation of Keorapukur MPS) in Tolly's Nullah/Keorapukur Sub-basin in Borough XIII (Ward 115 and part of Ward 122); and (ii) Construction of new pumping station at Lalababu Nikashi/Bagjola Canal.<sup>2</sup>

### **1. Scope of this Report**

5. This land acquisition and resettlement due diligence report is prepared for the proposed sewerage and drainage work in Rania box catchment, covering parts of wards 111, 112 and 113, under package TR-2/SD 10. The Vivekananda Road pumping station is proposed to be

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<sup>1</sup> The 1899 Calcutta Municipal Act defined the administrative domain of the municipal authority as covering 25 wards and having an areal extent of 48.5 square kilometers. Many boundary changes followed, the latest one in January 1984 when Boroughs XI, XII, XIII, XIV and XV were annexed to KMC. These boroughs in the peripheral areas, are popularly known as "added areas".

<sup>2</sup> Water supply subproject packages are also identified under tranche 2, of which one is a priority package.

constructed under another package - SD 011, for effective handling of storm water and wastewater generated from the area covered under packages TR-2/SD 10 and TR-2/SD 11.

6. 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 due diligence report needs to be read along with the Resettlement Framework prepared for KEIIP.

7. 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 in the subproject.

## **II. SUBPROJECT DESCRIPTION**

8. The new areas added to the city of Kolkata after 1984 ('added areas') have major sewage and drainage disposal issues. Major portions of the added areas are devoid of any organized drainage system and are served only by a surface drainage system carrying both sullage and storm runoff. The proposed subproject aims to minimize the drainage problems in a portion of the added area and contribute to its overall environmental upgradation.

9. Proposed subproject components under package Tr-2/SD 10 include development of sewerage and drainage network in Rania Box catchment covering parts of wards 111, 112 and 113, to relieve water-logging problems and redirect the dry weather flow (DWF) generated from the subproject area to the proposed Jeodagar STP (proposed under a different package). The storm weather flow (SWF) generated from the subproject coverage area will be handled by the Vivekananda Road pumping station, proposed to be constructed under a separate package.

10. The proposed subproject area, which is a part of the 'added areas' not covered under KEIP in Rania Box catchment (part of wards 111, 112 and 113), is almost devoid of any organized sewerage and drainage system, except for some isolated parts of Brahmpur South Road, Panpara Road, Nath Para Road, Naskar Para, Pora Khola Road, etc. At present, there is no sewerage system in this sub-basin. The coverage area presently depends largely on septic tanks. However, there are a few open drains which were either laid by KMC or other agencies, which carry storm water as well as DWF to Rania Canal, Western Channel Extension and western channel, which ultimately leads to River Hooghly. In many cases, the drains do not have any proper outlet and end in low-lying lands / canals.

11. The KMC area is divided into nine major drainage basins, the sub-project area comprising part of Borough XI falls under a drainage basin named Rania Canal (Sub-Basin). The entire area within Rania Box catchment has been divided into three sub-catchments, namely, Brahmpur Road sub-catchment, Seikhpara Road sub-catchment and HL Sarkar Road sub-catchment.

12. The objective of the Package TR-2/SD 10 is:

- (i) To develop sewerage and drainage (S&D) network facilities on priority basis which in turn helps to improve environmental condition
- (ii) To provide relief from water-logging conditions in the project area
- (iii) To divert sewage generated within the project area to STP through an organized S&D system for treatment which will help prevent pollution to the canal and river
- (iv) Development of S&D network including outfall arrangements

13. The proposed subproject components under package TR-2/SD10 include laying of sewer network in Brahmpur Road sub-catchment, Seikhpara Road sub-catchment and HL Sarkar Road sub-catchment. In order to convey combined flow generated from a portion of the subproject coverage area (Brahmpur Road and Seikhpara Road sub-catchments) to the proposed Vivekanada Road PS, sewers are proposed to be laid within adjoining Sonarpur and Rajpur Municipality areas (Ward no. 34 and 35). 'Looping arrangement/ overflow arrangement' is proposed to be introduced within the sewer network at strategic locations to optimize sewer size to match with respective road widths. No road width is anticipated to be fully obstructed.

### **III. FIELD WORK AND PUBLIC CONSULTATION**

#### **A. Outline of Field Work**

14. In November and December 2015 field inspections were carried out at the proposed subproject site location for Development of sewerage and drainage network including outfall structures and stakeholder consultations were conducted. Inspections were carried out along the entire stretch of 12.55 km pipeline to be laid for trunk sewer along: (i) Bhattacharya Para Road, Boral Purba Para Road, Panchanantala Road, Brahmapur Road, Pragati Park, Panpara Road, Risi Rajnarayan Road in Brahmpur Road Sub Catchment, (ii) Nathpara Road, Risi Rajnarayan Road, Seikhpara Road, Purbasha Road, Pora Khola Road, Naskar Para Road in Seikhpara Road Sub Catchment and (iii) H L Sarkar Road - Pirpukur Road in H L Sarkar Road Sub Catchment. The entire land requirement for laying of sewer pipes under the package TR-2/SD10 will be fulfilled by government land. Pipeline for trunk sewer proposed under the subproject to be laid along existing public road RoW, belonging to Kolkata Municipal Corporation (KMC).

#### **B. Public Consultation**

15. Meetings were conducted with key stakeholders in line with ADB's requirements pertaining to environment and social considerations. These consultations helped identify the felt needs/concerns and apprehensions of the communities related to the project and their priorities. Discussions were held with people residing at/near and/or having businesses at/near the proposed subproject locations. Consultations revealed that people are aware of the existing drainage and sewerage problem; they shared that some of the areas have no sewerage and drainage facility and the waste water and sewer water is drained into septic tanks of the houses. Some parts of the coverage area face water-logging problems during heavy rain. The community is willing to cooperate for the proposed project; summary of discussions is presented in Table 1.

Table 1: Summary of Stakeholder Consultations

Date	Location	No. of Participants				Status of Participants	Topic Discussed	Issues Raised
		Male	Female	% of Female	Total			
09.12.15	Garia Bramhapur Balak Sangha, Ward 111.	16	4	20%	20	<b>MALE</b> : retired persons, ex-cricketer and businessmen  <b>FEMALE</b> : Housewives/home-makers	<ol style="list-style-type: none"> <li>1. Details of the proposed subproject.</li> <li>2. Need for the project.</li> <li>3. Details of proposed subproject components, including augmentation of a combined Pumping Station.</li> <li>4. Tentative commencement date of project work</li> <li>5. Appropriate mitigation measures proposed to be adopted to ensure that daily activities and local travel can continue.</li> <li>6. Structure or income loss not anticipated.</li> <li>7. Grievance Redress procedures.</li> <li>8. Public participation and awareness.</li> </ol>	<ol style="list-style-type: none"> <li>1. The drainage system of the area is an area of concern for the local people. Though many promises were made earlier, no actions were taken to address the issues.</li> <li>2. Commencement of project work and duration of implementation.</li> <li>3. Few areas suffer from prolonged water-logging during monsoon, including Pragati Park, Brahmapur Road, Raj Narayan Basu Road etc. People were concerned how the problem of water-logging would be addressed during construction in the monsoons</li> <li>4. Non-existence of any drainage system in parts of Rajpur Sonarpur Municipality (Ward No 35) is also one of the major challenges for the area. Most of the SWF during monsoon period floods a major area of Ward No. 111.</li> <li>5. Prevalence of vector borne disease is common in this ward.</li> </ol>



#### IV. LAND AVAILABILITY AND RESETTLEMENT IMPACTS

##### A. Laying of Sewer Line

16. No land acquisition or resettlement impacts are anticipated for the laying of proposed sewer lines under the package TR-2 / SD 10. All civil works proposed under the package are within the ROW of public roads owned and maintained by urban local bodies. Kolkata Municipal Corporation (KMC) is the owner of the majority of roads where pipe alignments are proposed under the package. A trunk sewer proposed along the Rania Main Road falls within the jurisdiction of Sonarpur-Rajpur Municipality. Hence, a no objection certificate (NOC) from Sonarpur-Rajpur Municipality will be required prior to project implementation.

17. Components proposed under package TR-2/SD 10 aim to make the sewerage and drainage system within Rania Box catchment planned and organised. The Rania Box Catchment has been subdivided into three sub-catchments: Seikhpara Road sub-catchment, Brahmapur Road sub-catchment and HL Sarkar Road sub-catchment, where underground trunk sewers are proposed to be laid under the above-mentioned package. Parts of wards 111, 112 and 113 fall in the coverage area of the package.

18. The combined flow of DWF and SWF generated from Brahmpur Road Catchment, and Seikhpara Road Catchment are proposed to flow to the Vivekananda Road Pumping Station (proposed under a different package) through trunk sewers that are proposed to be laid under Rania Main Road, Rania Ramkrishna Sarani and Rania Vidyasagar Sarani under Sonarpur-Rajpur Municipality (ward no. 34 and 35). Part of SWF generated from the Rania Box catchment is proposed to be discharged to Rania Canal through a gravity outfall proposed at the end of the box drain. The remaining SWF is designed to be conveyed to the Vivekananda Road PS.

19. Combined flow generated from the Rania Box Catchment is proposed to be conveyed through a trunk sewer proposed to be laid along (i) Bhattacharya Para Road, Boral Purba Para Road, Panchanantala Road, Brahmapur Road, Pragati Park, Panpara Road, Rishi Rajnarayan Road under Brahmpur Road sub-catchment covering part of KMC ward 111, (ii) Nathpara Road, Risi Rajnarayan Road, Seikhpara Road, Purbasha Road, Pora Khola Road, Naskar Para Road under Seikhpara Road sub-catchment, covering parts of wards 111 and 112 of KMC, and (iii) H L Sarkar Road, Pirpukur Road under H L Sarkar Road sub-catchment, covering parts of ward 112 and ward 113 of KMC.

20. The roads within command area of this catchment are generally narrow, hence laying of large dia conduits is difficult. In order to overcome these issues, 'looping arrangement' has been introduced within the network at strategic locations for effective flow diversion. This led to optimization of sewer sizes to match with the respective road widths. Table 2 provides details of road widths and diameter range of proposed pipelines.

**Table 2: Proposed Diameter of Sewer Pipelines under TR-2/SD10**

Road Name	Diameter range (mm)	ROW (m)	Required trench width (m)
Brahmpur Road	1200 – 1400	5.80 - 6.90	2.10 - 2.40
Nath Para Road	500 – 1200	3.70 - 8.00	1.05 - 2.10
Brahmpur South Road	800 – 1200	4.50 - 4.70	1.50 - 2.10
Risi Rajnarayan Road	800 – 1400	5.10 - 6.80	1.50 - 2.40
Seikhpara Road	1400 – 1600	4.20 - 6.50	2.40 - 2.70
Postal Park, Naskar Para, Pora Khola Road	700 – 1200	5.50 - 9.90	1.35 - 2.10
Roynagar	1000	4.40 - 5.20	1.80
Purbash Road	800 – 1000	5.00 - 6.00	1.50 - 1.80
Vidyasagar Sarani	1000 – 1200	4.80 - 5.50	1.80 - 2.10
Ramkrishna Sarani	800 – 1000	3.80 - 4.00	1.50 - 1.80
Rania Main Road	1600 – 2000	4.60 - 8.00	2.70 - 3.30
HL Sarkar Road, Pirpukur Road	700 – 1400	4.20 - 9.90	1.35 - 2.40
Congress Pally	500 – 800	3.30 - 3.60	1.05 - 1.50

21. The total length of proposed sewers to be laid under the package is 12.55 km. The total coverage area under all the sub-catchments in the package (TR-2/SD 10) is 236 ha. Details of proposed sewer pipelines, sub catchment wise, are given in table 3.

**Table 3: Details of Proposed Sewerage and Drainage Network under Package Tr-2/SD 10**

Description	Sub Catchments			Sonarpur-Rajpur Area	Total
	Brahmpur Road	Seikhpara Road	HL Sarkar Road		
Trunk sewer (600 mm and above) (Km)	2.30	4.30	2.20	2.90	11.70
Secondary sewer (below 600 mm) (Km)	0.05	0.00	0.00	0.00	0.05
Box Drain (Km)	0.80				0.80
<b>Total Length (KM)</b>	2.35	4.30	2.20	2.90	12.55

22. No private land will be required for the proposed laying of sewer pipelines for the package TR-2/SD 10 and no structure is anticipated to be affected due to the proposed civil works. Laying of sewer pipelines in the subproject area has been carefully planned to minimize disturbance to pedestrians and traffic and avoid income loss to businesses. Potential temporary

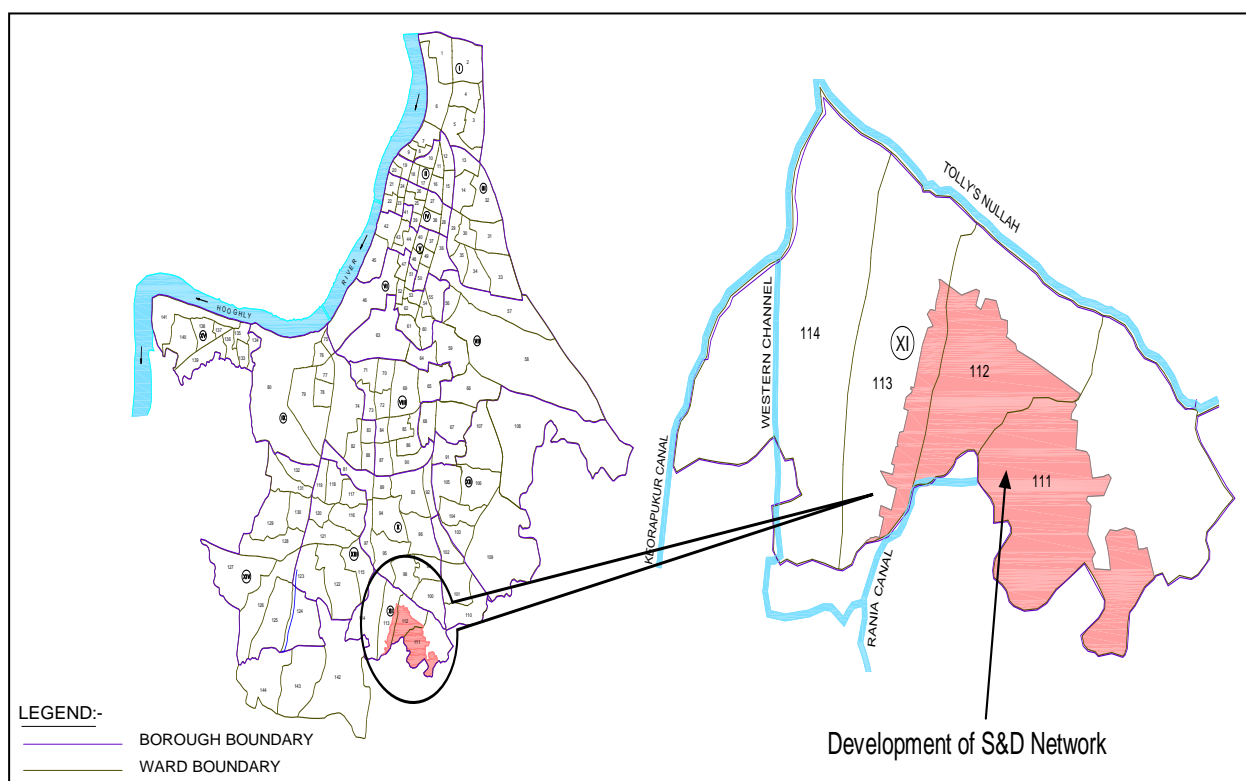
impacts<sup>3</sup> to traffic/access to shops and residences due to digging and excavation for pipe laying are possible during construction. Such impacts will be avoided/mitigated by ensuring access to properties through provision of pedestrian planks, provision of adequate signage, and careful traffic management, in consultation with the local authorities and community. Though there were no mobile hawkers during field visits along the internal roads where the S&D work is proposed, any such hawkers found during implementation will be assisted to move to nearby locations to ensure that their business remains uninterrupted. No economic impact or income loss is anticipated. Prior notice about the civil work will be given to the community before start of civil works. No tree cutting and minimal utility shifting is anticipated during implementation of the package.

## B. Interception and Disposal of storm weather flow and dry weather flow

23. The entire DWF generated from the package TR -2/SD 10 & TR-2/SD 11 is proposed to be conveyed to the Vivekananda Road PS, from where it is proposed to be transported to Jeodagar STP by means of a dedicated pumping main (proposed under a different package). Part of the SWF generated from the packages TR-2/SD 10 and TR-2/SD 11 is designed to be disposed into the Rania Canal / Western channel through gravity outfalls. There is provision for sluice gates at the end of the outfall. The remaining part of SWF is proposed to be conveyed to Vivekananda Road PS. No sites are required for this sub-component.

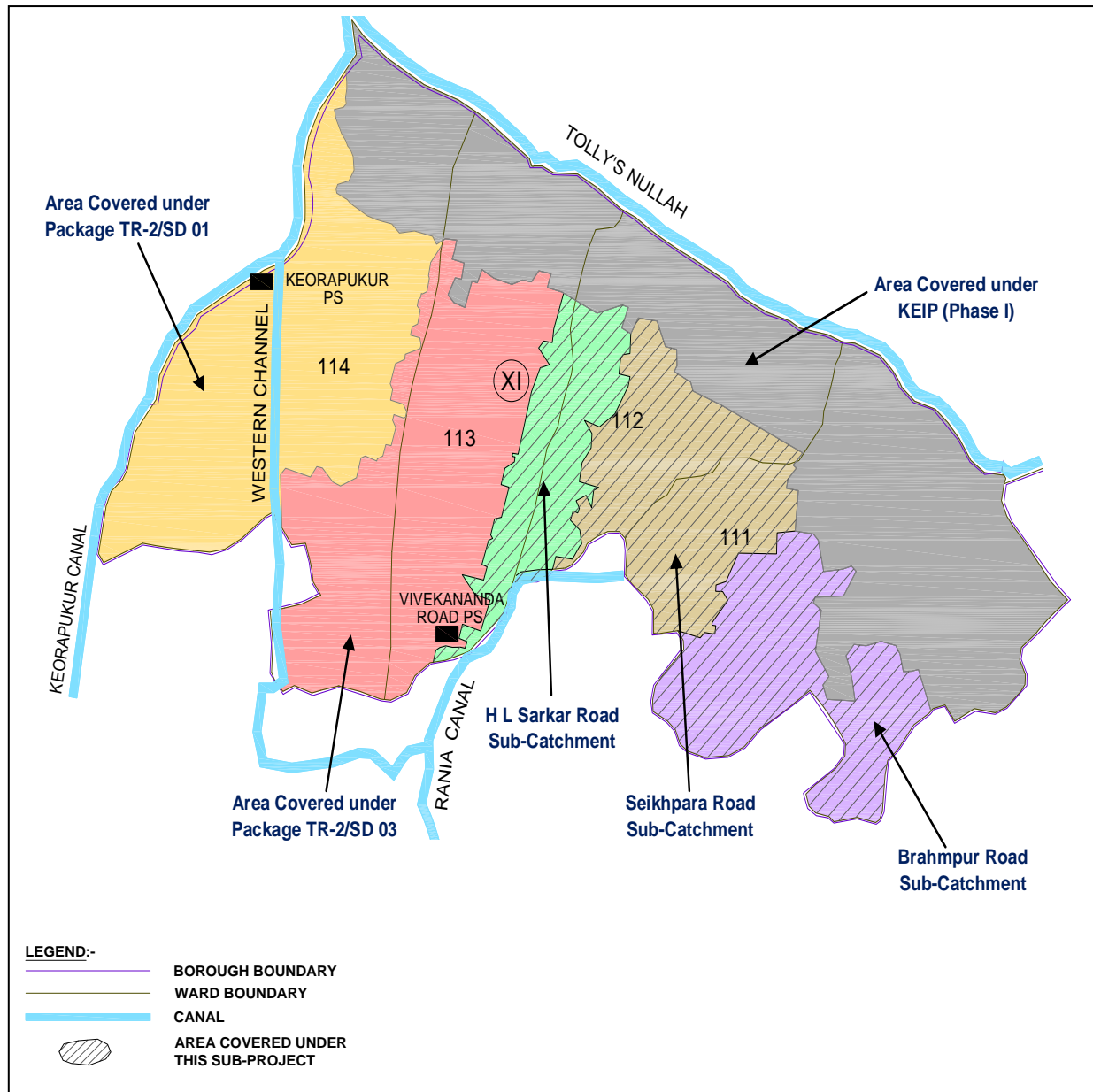
24. The following maps, including a Google earth map depict the proposed coverage area and proposed components, i.e., laying of sewerage and drainage network.

**Figure 1: Proposed Subproject Coverage Area under Package TR-2/SD 10**

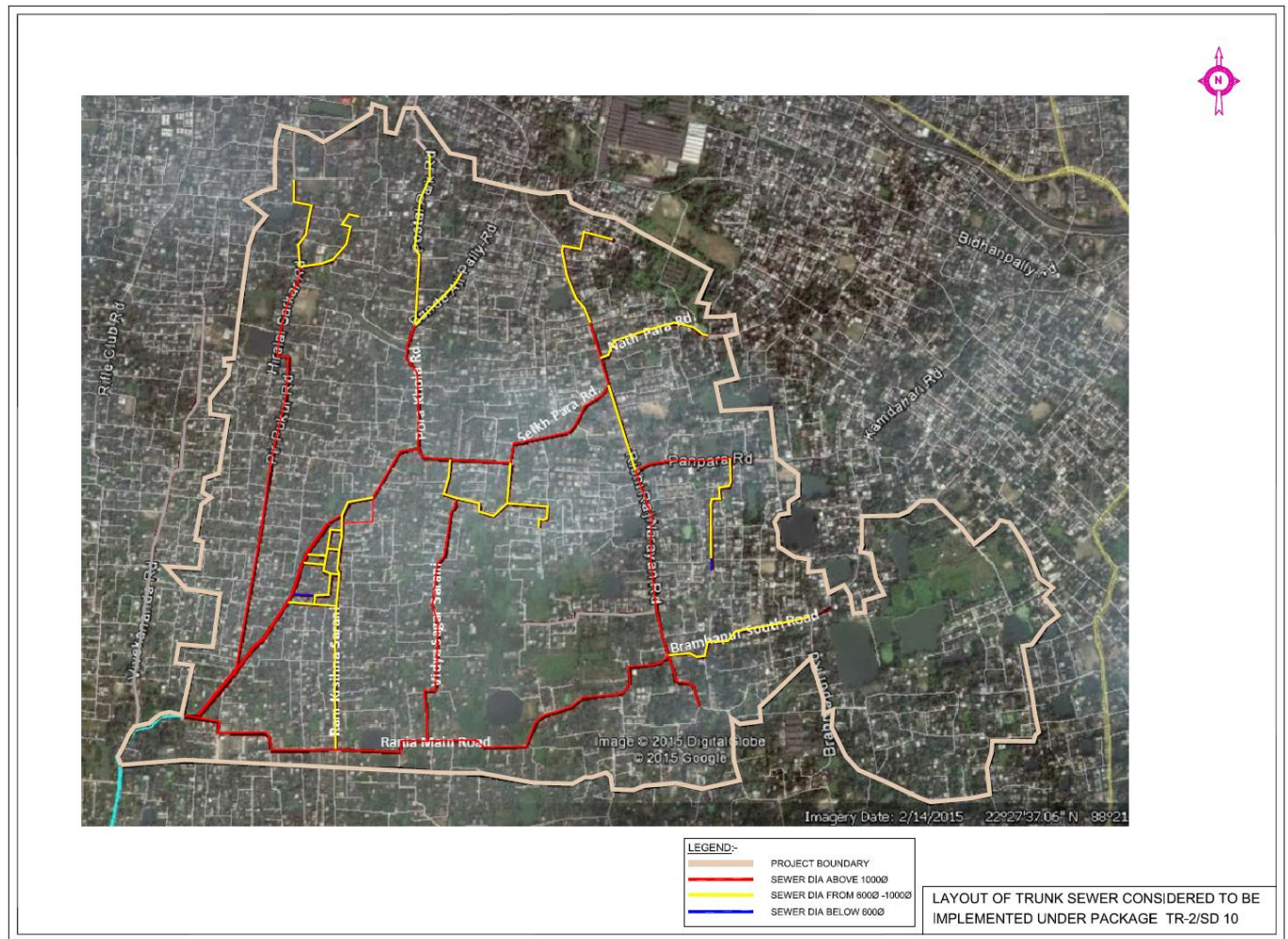


<sup>3</sup> Potential temporary impacts were assessed on the basis of transect walks through roads in proposed sewer laying area under the subproject.

**Figure 2: Drainage Catchment and Proposed Coverage Area under TR-2/SD 10**



**Figure 3: Google Earth Map Depicting the Proposed S&D Network under Package TR-2/SD 10**



## V. CONCLUSIONS

### A. Summary and Conclusions

25. No land acquisition, structure loss or income loss is assessed for package TR-2/SD10, as pipe laying activity is proposed along the RoW of government roads. Potential temporary disruption to road users, pedestrians and community members due to laying of sewerage and drainage network will be avoided by using simple mitigation measures such as provision of planks for pedestrian access to shops and residences, and traffic management.

26. A budgetary provision is made for costs likely to be incurred by the PMU for updating this due diligence report (INR 50000), consultation, communication and grievance redress (INR 100000), and contingencies (15%, i.e., INR 22500), totaling up to INR 172500.

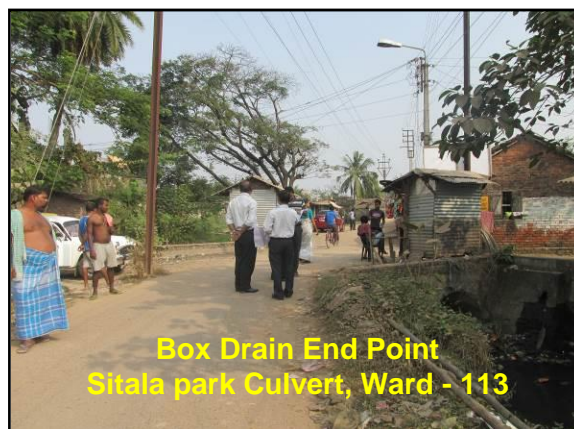
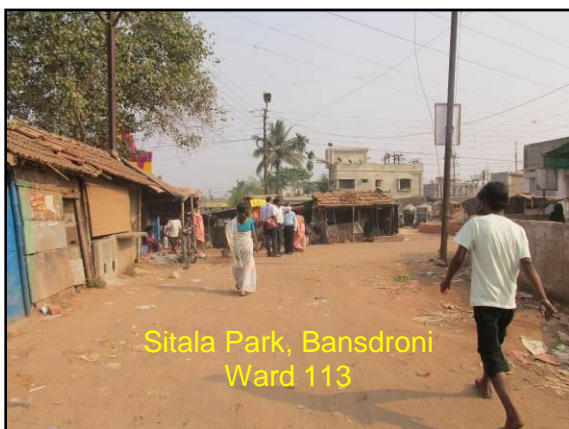
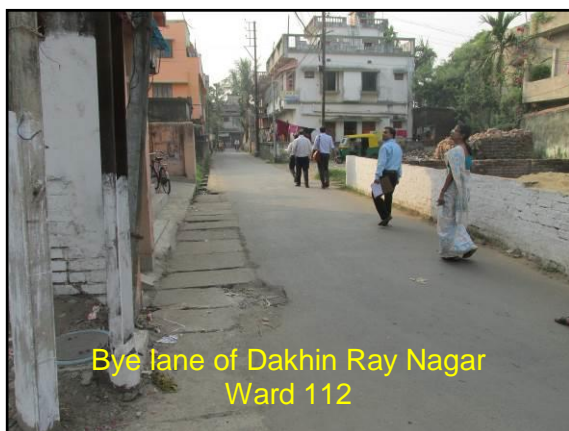
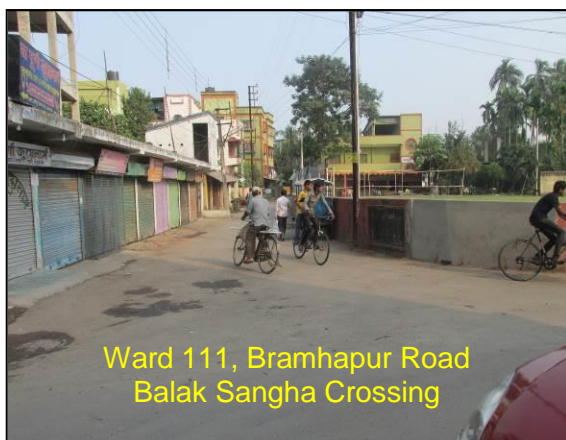
**B. Next Steps**

27. The following actions are required:

- (i) No objection certificate (NOC) to be sought from Sonarpur-Rajpur Municipality and added to the updated DDR.
- (ii) Due diligence report to be updated by PMU, initiation/completion of due procedures reported, and ADB approval obtained prior to start of construction.



## PHOTOGRAPHS



*Transect Walk along TR-2 / SD 10*

# COMMUNITY CONSULTATION AT SD – 10 AT BRMHAPUR BALAK SANGHA



*Councilor of Ward No 111 addressing the participants of Ward no. 111  
in presence Assistant. Engineers of Borough XI (sitting to the right from councilor of Ward 111)*



*Local Participants of Public Consultation meeting at  
Bramhapur Balak Sangha*



## **Summary of Community Consultation**

### **A brief report on Community Consultation**

**Date: 9.12.2015**

**Venue: BRAHMPUR BALAK SANGHA, Ward No. 111**

A community consultation meeting was conducted on 9<sup>th</sup> December 2015 at the above-mentioned location for information dissemination and exchange of views for the proposed sewerage and drainage work under Tranche – II KEIIP.

The consultation meeting was presided over by Sri.Chayan Bhattachariya, Councilor of KMC Ward no- 111. The Assistant Engineer of Borough XVI was also present during the consultation meeting. The meeting was conducted by the Staff of Social Safeguard Cell, KEIIP under supervision of Sri, Kali Sankar Ghosh Social Safeguard Expert, DSC. Participants included 4 Female and 16 Male (total 20 persons). The meeting took place at Balak Sangha in ward No. 111 situated in Brahmapur, Garia, and continued for 1 hour. Information was shared regarding the proposed subproject work.

#### **Information shared on following topics:**

- Introduction to KEIIP as an initiative of Kolkata Municipal Corporation, with the financial support of the Asian Development Bank, to arrest the environmental degradation of Kolkata and adjoining areas.
- Need for project and scope of work of KEIIP.
- Tentative commencement date of the project. The total time as planned to complete the work is 36 months.
- Open cut method to be adopted for laying S&D network covering parts of Ward Nos. 111, 112, 113 and Ward No 35 of Rajpur Sonarpur Municipality under package SD – 02 of Tranche – II.
- No adverse impact on structures, livelihood etc. is anticipated. Traffic diversion and shifting of utilities may take place if required like electricity, water supply etc. There will be no effect on the daily business of shop owners or local traders.
- Technical information, i.e. total length of work, phase wise implementation procedure, diameter of pipes to be laid along the road, flow of water, augmentation of combined pumping station at Vivekananda Road and Box Drain at Rania Canal etc., shared.
- The Borough Engineers (XVI) addressed the participants and indicated that if the main infrastructure is created by the KEIIP then the rest of work (networking of S&D lines in bye lanes and other areas) can be done by KMC.
- Importance of public participation and public awareness highlighted.
- Envisaged long term benefits of the project; impact of the project on the environment. etc.
- Grievance redressal procedure
- Importance of cooperation from local residents during implementation phase.

#### **Issues raised by the participants:**

- The drainage system of the area is a burning issue for the local people. Though many promises were made earlier to address the problem, no actions have been taken till date

- The commencement of project work and duration. During the implementation phase, how will the problems will be addressed during the monsoon period?
- Few areas suffer prolonged water logging problem during monsoon season such as Pragati Park, Brahmapur Road, Raj Narayan Basu Road etc
- Non existence of any drainage system in parts of Rajpur Sonarpur Municipality (Ward No 35) is one of the major challenges in the area. Most of the SWF during monsoon floods a major area of Ward No. 111.
- Prevalence of vector borne disease is common in this ward.

## Participants List

Name of place (Ward No) **111** Bramhapur Balak Langha.  
 Date **9/12/2015** (Bramhapur)

Sl.No	Name of Participants	Contact No, if any	Signature
1	Indramath Choudhury	9088964842	
2	Swapan Banerjee	9830875723	
3	Kalan Dasgupta	9433468231	
4	Namita Srivastava	8100934680	
5	Soma Datta	9748167699	
6	সাতীশ চট্টোপাধ্যায়		
7	সুখীয়া চট্টোপাধ্যায়	9748473293	
8	Boijan Ghosh	9903150368	
9	Bijoy Kr. Chatterjee	9143212082	
10	Rupak Chatterjee	8420145846	

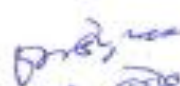
## Participants List

Name of place (Ward No) [11]

Date 9/12/2015

Sl.No	Name of Participants	Contact No, if any	Signature
11	S. K. Maity	9474700926	
12	Tapaswini Datta	9831939782	
13	MOO CHANDRA YHA	9433546815	
14	KRISHNA DASH KAR	9423799263	
15	Pratip Kr Mondal	9193233480	
16	Dipankar Kumar Paul	9046280585	
17	Rantan-Bose	9831453762	
18	Aziz Bhai	9830479123	
19	Aparna Mondal	8013087286	
20	Biswanath Ghosh	98742794 21	

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09.12.15  
  
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