



Social Safeguards Due Diligence Report

February 2023

India: Kolkata Environmental Improvement Investment Program-Tranche 3

Subproject : Improvement of Sewerage and Drainage Network and Construction of a Pumping Station in Alipore Body Guard Line Premises in Ward 74
Package No: TR-03/SD 27R

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

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Asian Development Bank

Land Acquisition and Resettlement Due Diligence Report

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IND: Kolkata Environmental Improvement Investment Program Tranche 3 - Improvement of Sewerage and Drainage Network and Construction of a Pumping Station in Alipore Body Guard Line Premises in Ward 74

Package No: TR-03/SD 27R

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CURRENCY EQUIVALENTS

(as of 10 August 2022)

Currency unit = Indian rupee (₹)

₹1.00 = \$0.013

\$1.00 = ₹79.49

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
NOC	-	No Objection Certificate
PMU	-	project management unit
PWD	-	Public Works Department
S&D	-	sewerage and drainage
STP	-	sewage treatment plant
SWF	-	storm water flow

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 and the 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. KMC is the executing agency of the proposed investment program.
3. The KEIIP has been conceptualized as a multitranche financing facility - consisting of three projects or tranches. A total of 8 subprojects prioritizing sewerage and drainage (S&D) 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 – Tranches 1 and 2. The details of the subprojects are given in the table below in Table 1.

Table 1: Sewerage and Drainage Packages under Tranche 3

SI. No.	Package Name	Package Number
1	Improvement of S&D network and construction of a pumping station in Alipore body guard line premises in Ward 74	SD-27R
2	Construction of Sewage Treatment Plant near WBSETCL, Joka	SD-28
3	Construction of Sewage Treatment Plant at Bank Plot, MG Road, Joka	SD-29
4	Construction of Sewage Treatment Plant at Rajpur – Sonarpur , Rania	SD-30
5	Development of S&D Network in Churial Extension PS catchment & Diamond Park catchment and construction of Churial Extension pumping station (Annex) in Borough XVI (Part of Ward 124, 143 & 144)	SD-31Lot1
6	Development of S&D network in Bakrahat road catchment (Ward 125) by cut & cover method and laying of RCC sewer line along Bakrahat road and DH road by micro tunneling	SD-31Lot 2

Sl. No.	Package Name	Package Number
7	Improvement of S &D system in Mukundapur area (Part of Ward 109) including construction of Mukundapur pumping station (Ward109)	SD-32
8	Construction of 2 new Pumping Stations near confluence of Lalababu Nikashi & Bagjola Canal and within Behala Node C premises, Sakuntala Park	SD-34

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

B. Scope of this Report

5. Based on preliminary design a draft land acquisition and resettlement due diligence (DDR) report was prepared and disclosed (in 2018) for the proposed sewerage and drainage (S&D) subproject SD 27 that involves construction of a pumping station and development of S&D system within Alipore Body Guard Lines located in KMC ward number 74. This DDR has been updated based on the final design and detailed measurement survey (DMS). No Involuntary Resettlement impact has been identified during the DMS based on final design. During the implementation stage, regular monitoring will be done by the social safeguard officer PMU and the findings will be incorporated in the semi-annual social monitoring report.

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 considered along with the resettlement framework prepared for KEIIP.

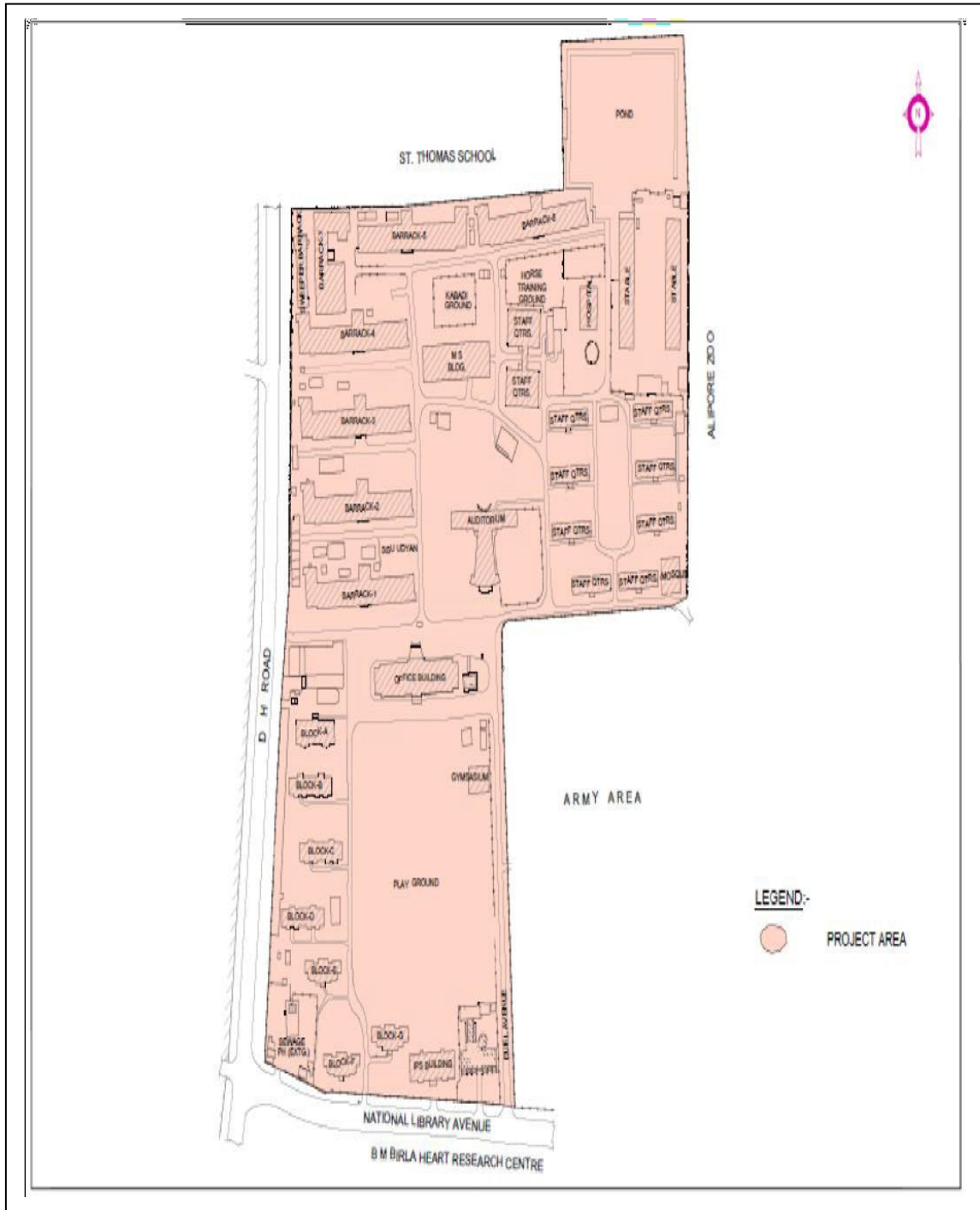
7. During project implementation, the officer designated for social safeguards at PMU will (i) undertake a review and monitor this due diligence; (ii) update DDR or prepare safeguards document as required if there is a change in project design and scope; and (iv) report the status in SMR.

II. SUBPROJECT DESCRIPTION

A. Background of Subproject Area

8. The subproject is located in ward number 74 under Borough IX, in Alipore Body Guard Lines. The premises of Alipore Body Guard Lines (BGL) which is the headquarter of the Kolkata Armed Police Force is located near the Ekbalpore crossing, intersection of National Library Avenue and Diamond Harbour Road. It is bounded by St. Thomas School and Mary Cooper House in the north, Alipore Zoo, Alipore Regional Meteorological Centre (Observatory) and Army area in the east, National Library Avenue and Diamond Harbour Road in the south and west respectively. The total area of the campus is around 10 ha. Figure 1 shows the area considered for development of S&D system under package - TR -03/SD 27R.

Figure 1: Area Considered for Development of Sewerage and Drainage System under Package TR-03/SD 27



9. Although the Body Guard Lines campus enjoys a prime location within the municipal corporation limits, it is beleaguered with acute water logging problems during and after moderate to heavy rainfall, causing great hindrances to day to day activities during such incidences and posing as a serious threat to the health and safety of the residents of the campus. Several field visits were undertaken to the BGL campus by the project team and discussions held with the residents and officials and Public Works Department (PWD) engineers. The study of the topography and existing sewerage and drainage system of the area revealed that due to the apparent saucer like topography of the area, the storm water once accumulated does not get easily drained out of the area. A major part of the campus is about 600 mm lower than the surrounding areas with the lowest point being the road in front of the office building which is about 900 mm lower than the surrounding areas. Besides, surface runoff from the adjoining relatively higher areas finds access to the low-lying Body Guard Line Campus causing additional water accumulation problem. It has been learnt that a moderate rainfall of 15 minutes duration is sufficient to cause water logging for half a day while a heavier rainfall causes the inundation to remain for at least 2 to 3 days.

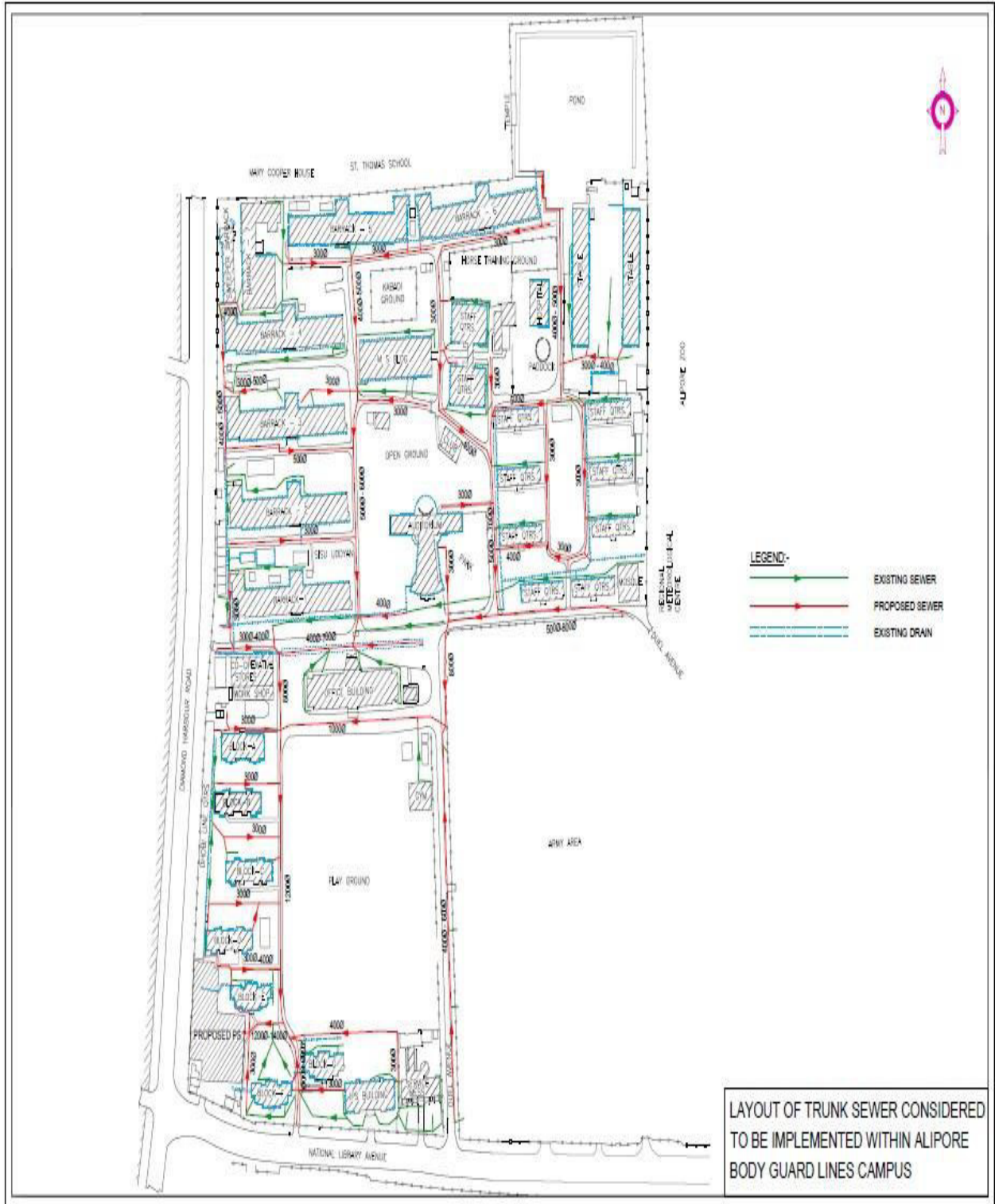
10. The subproject area has an existing S&D network (Figure 2). The existing S&D network present within the area is combined in nature, carrying both storm water flow (SWF) and dry weather flow (DWF) with a total network length of approximately 8 km. Both pipes and drains were laid inside the campus, with a number of interconnections. These conduits convey a part of the flow to an existing pumping station and a part to Diamond Harbour road sewer through existing outfalls. In many instances, the pipes cross the drains, thereby reducing the capacity of drains. Substantial portion of the sewers and drains is silted up, greatly reducing their carrying capacities. A number of drains present within the campus are almost totally blocked with silt and as a result do not serve the purpose of disposal of storm water. In addition, the storm water finds entry into the BGL campus through access entry gates.

B. Subproject Description

11. The main project component under the program (KEIIP) is to develop adequate sewerage and drainage system in all wards within the municipal corporation limits of KMC. This particular subproject is located in ward number 74 under Borough IX, in Alipore Body Guard Lines. The subproject focuses on the development of sewerage and drainage (S&D) system in Alipore BGL area along with a pumping station within the Body Guard Lines and pumping mains passing through National Library Avenue and Belvedere Road. The objective of the subproject is to develop S&D network facilities to improve the environmental conditions and water logging conditions within the sub-project area.

12. The subproject area of BGL is part of Borough IX and falls under a major drainage basin, the Tolly's Nullah Basin. The entire combined flow generated from the BGL campus area is proposed to be conveyed to the pumping station proposed to be constructed within BGL campus area. The SWF from the proposed subproject area will be discharged to Tolly's Nullah, while the DWF will be discharged from BGL pumping station to the existing Diamond Harbour road brick sewer within the core Kolkata S&D system.

Figure 3: Existing and Proposed Sewerage and Drainage System and Pumping Station



13. Table 2 provides an outline of the proposed subproject, including S&D pipelines, laying of pumping main pipelines construction of pumping station within the BGL campus, under package TR-3/SD 27R.

Table 2: Components of TR-03/SD 27R

Package – TR-3/SD 27R: Improvement of S&D Network and Construction of a Pumping Station in Alipore Body Guard Line Premises in Ward 74 under package-TR-03/SD 27R	
Major Project Components	<ul style="list-style-type: none"> • Development of S&D Network within BGL campus, ward 74 –3.0 km • Construction of Combined Cycle Pumping Station within BGL campus –SWF – 3 working + 1 standby + 1 future, capacity 300 lps each, DWF – 2 working + 2 standby, capacity 16 lps each • Laying of SWF Pumping Main (1016 mm OD) through National Library Avenue and Belvedere Road –1.2 km (Part to be laid by Micro tunneling method for 0.3 km and part to be laid by Cut & Cover method for 0.85 km and part to be laid by Jack pushing method for 0.05 km) and laying of DWF pumping main (200 mm dia.) – 30 m
Coverage	Subproject will cover part of Ward 74 of Borough IX - partly within the BGL campus and partly outside the BGL campus (National Library Avenue and Belvedere Road)

BGL = body guard line, DWF = dry weather flow, km = kilometer, lps = liters per second, mm = milliliter, S&D = sewerage and drainage, SWF = storm water flow.

III. FIELD WORK AND PUBLIC CONSULTATION

A. Outline of Field Work

14. Field inspections were carried out at the proposed sub -project site location for its adjoining areas. Stakeholder consultations were also conducted. Inspections and transect walks were carried out along the entire stretch of the BGL campus and along the pressure mains in adjoining area and also along the Diamond Harbour Road.

B. Public Consultation

15. Consultations were undertaken with key stakeholders in the Body Guard Lines as per ADB's requirements pertaining to environmental and social considerations. Meetings with stakeholders helped identify the felt needs, concerns and apprehensions of the communities related to the project, as well as their priorities. Discussions held with people residing near the proposed alignments and those having businesses near them revealed that people are aware of the existing drainage and sewerage issues. They shared that some of the areas have no sewerage and drainage facility and that presently, most of the area is served by private septic tanks. Some areas face severe water- logging problems during heavy rain in the monsoons. The community indicated willingness to cooperate for the proposed project.

16. Door to door survey and filed level consultation with the end users are integral part of KEIIP's Sewerage & Drainage Component. Experienced and duly trained Project Assistants of Social Safeguard Cell, approach each house hold within the subproject area.

17. The main purpose of such visit, is to aware them regarding the underground sewer

system replacing the existing open surface drain and involve the community in the process by encouraging them to shift to newly constructed underground Sewerage & Drainage System.

18. During this Door – to – Door survey a printed Leaf Let is also distributed among them for information dissemination. The Key Points which has been printed in the Leaf Lets are:

- A brief introduction of KEIP as an initiative of Kolkata Municipal Corporation with the financial assistance of Asian Development Bank to arrest the degradation of environmental issue of Kolkata city.
- Process of getting a new underground house drainage connection and its facilities.
- The cost involved in the process is also printed to maintain transparency at every level
- Information like address, phone no, fax no etc so that anyone can have an easy access at anytime to lodge any grievances.
- A design of House Pit which will be required to be constructed by the households to avail the underground house drainage connection.

IV. LAND AVAILABILITY

19. No land acquisition or resettlement impacts are identified during DMS for the proposed subproject. Implementation of the subproject will not cause any land acquisition or resettlement impact. Under the S&D project there is no major construction which will involve significant land requirement.

A. Sewerage and Drainage Network

20. The Body Guard Lines area consists of a substantial existing sewerage and drainage (S&D) network, effort has been made to retain the existing assets to the extent possible. However, the existing sewer network does not include a trunk sewer and has been proposed to act only as lateral sewers. Considering its age and inadequate hydraulic carrying capacity, the need for the subproject is evident. Proper interconnections will be provided between the existing and proposed sewers. Existing sewers which do not have sufficient carrying capacity to cater the large storm flows have been proposed to be replaced with larger and deeper sewers as per the hydraulic design of the proposed S&D network of the area. Hence, the proposed S&D network will be along the existing S&D network alignment within the Body Guard Lines Campus, which is government land. The rights of way of the proposed pipes are vacant and unused for any other purpose. No involuntary resettlement impacts are anticipated.

21. For laying of the sewerage and drainage pipelines in the subproject area the roads have been numbered for implementation of the subproject. Details are provided in Table 4.

Table 3: Roads where Sewer Lines are Being Laid under TR-03/SD 27

Road Name	Road Width (m)	Dia of Pipe (mm)	Trench Width with Shoring (mm)	Road Name	Road Width (m)	Dia of Pipe (mm)	Trench Width with Shoring (mm)
Road 1	6.0	300	850	Road 13	6.5 – 13.0	300 – 400	850 – 1000
Road 2	6.5 – 15.5	400 – 1200	1000 – 2200	Road 14	6.5 – 8.0	500 – 600	1150 – 1300
Road 3	10.0	300 – 1000	850 – 1900	Road 15	9.0	300	850
Road 4	7.5 – 8.0	400 – 600	1000 – 1300	Road 16	9.0	500	1150
Road 5	13.0	800	1600	Road 17	4.0 – 11.5	300	850
Road 6	10.0	300 – 700	850 – 1450	Road 18	8.5 – 14.0	300	850
Road 7	6.0 – 7.0	500 – 800	1150 – 1600	Road 19	8.0 – 9.5	300	850
Road 8	5.0 – 10.5	400 – 500	1000 – 1150	Road 20	6.0 – 7.5	300 – 500	850 – 1150
Road 9	5.0 – 6.5	300	850	Road 21	10.0	1200 – 1400	2200 – 2500
Road 10	3.0 – 7.0	300 – 400	850 – 1000	Vacant land		300 – 500	850 – 1150
Road 11	6.5 – 8.5	300 – 700	850 – 1450				
Road 12	5.0	300	850				

Figure 4: Google Earth Image Showing the Roads within the Body Guard Line Campus



Source: Google Earth.

B. Pumping Station

22. The SWF and DWF generated are proposed to be discharged through a newly constructed combined flow pumping station from BGL campus. The SWF generated in the subproject area will be discharged to Tolly's Nullah through dedicated pumping mains and dry weather flow (DWF) generated will be discharged to the Diamond Harbour Road sewer. The pumping station will be located within the BGL campus. The site for proposed pumping station in Alipore Body Guard Line has an existing pumping station in dilapidated condition, which is proposed to be demolished and the new pumping station constructed in its place. The PWD, Government of West Bengal runs the existing pumping station. The existing pump operator of PWD is not likely to be affected as he is a permanent government employee and will be deployed elsewhere by PWD once KMC constructs the proposed facility at the location. No involuntary resettlement impacts are anticipated.

Table 4: Details of Combined Pumping Station

Pumping Station	Type of Pumping Station	Proposed Capacity (lps)	No. of Pumps to be Installed	Land
BGL pumping station	Combined	SWF: 900 lps DWF: 32 lps	SWF: 4 (3 W + 1 S + 1 F), each having capacity 300 lps. 4 pumps to be installed now. DWF: 4 (2 W + 2 S), each having capacity 16 lps	The combined pumping station will be constructed within the BGL campus, in PWD land

BGL = Body Guard Line, DWF = dry weather flow, lps = liters per second, SWF = storm water flow, PWD = Public Works Department.

C. Pumping Main

23. The SWF from the proposed BGL pumping station will be discharged to Tolly's Nullah through a 1016 mm OD mm dia pipe. The pumping mains will be laid through National Library Avenue, Alipore Road, Belvedere Road and Road beside Alipore Women's Correctional Home and the pipelines will be laid for 1.2 km. Ownership of the roads is with PWD Alipore Division. No involuntary resettlement impact is anticipated because the identified alignments for proposed civil works are proposed along government road rights of way.

Table 5: Roads where Pumping Mains are Being Laid under TR-03/SD 27R

Road Name	Road Width (m)	Dia of Pipe (mm)	Trench Width with Shoring (mm)	Road Name	Road Width (m)	Dia of Pipe (mm)	Trench Width with Shoring (mm)
National Library Avenue	17.0 – 25.5	1016	1900	Alipore Road	18.5 – 40	1016	1900
Belvedere Road	13.5 - 19.5	1016	1900	Road beside Alipore Women's Correctional Home	2.5 – 7.5	1016	1900

Figure 5: Google Earth Image of Pumping Mains



Source: Google Earth.

V. CONCLUSION

A. Summary and Conclusion

24. The subproject is not envisaged to cause any involuntary resettlement impacts. The identified sites for the proposed civil works at all pipe laying zones is proposed along government road rights of way. The public and the local community will be intimated before start of civil work and will again be informed about the project implementation period and estimated project completion date. 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 residences is maintained. The mitigation measures will include the installation of signages and warning signs to minimize inconvenience and traffic disturbances during construction.


B. Actions for PMU/PIU

25. The updated DDR will be appended with the following documents
- a. No Objection Certificate (NOC) must be obtained from PWD Alipore Division for execution of sub-project activity (laying of pumping mains and construction of pumping station) and to be appended to the due diligence report.
 - b. NOC from Police Department for execution of subproject activity (S&D network and Pumping Stations) and to be appended to the due diligence report.
 - c. NOC from PWD for construction of pumping station to be obtained and appended to the updated DDR.

Appendix 1: Photographs of Road Alignment of Body Guard Line Campus



Appendix 2: Community Consultation at Belvdre road, Held on 22.02.18

Date	Location	No. of Participants	Topics Discussed	Photographs
22.02.18	Belvedere Road	22	<p>1. People told that they will be very much benefitted due to newly constructed S&D network.</p> <p>2. They are hopeful that Water logging problem in rainy season may be eradicated for up gradation of S&D network.</p> <p>3. They have expressed their hardship due to water logging problem in rainy season. It will be helpful specially for School going children and aged people during rainy season.</p> <p>4. People also expressed their gratitude for individual house drainage connection in a subsidized rate.</p> <p>5. Participants are informed on behalf of the project that such kind of construction of S&D network will be carried out as per design. Their active cooperation is needed for successful implementation of the project.</p> <p>6. Participants have been informed that, they can contact at concerned Contractor's office or local Borough Office to lodge their complaint. Apart from that, a Grievance Register is also available at every work site which has remained accessible for common people to record their grievance. Leaflets were distributed among them.</p>	

LIST OF PARTICIPANTS

Participants List

Name of place (Ward No)

Date

Sl.No	Name of Participants	Contact No, if any	Signature
11.	ଶ୍ରୀରାମ ଚନ୍ଦ୍ର		
12.	ସୁଜାତା ଚନ୍ଦ୍ର		ସୁଜାତା ଚନ୍ଦ୍ର
13.	Pradip Das	9038063434	P-DAS
14	Anup Kumar Pal	91474127681	Anup Kor Paul.
15.	Birwanath Dutta	9339612631	ବିରଞ୍ଚନ ନାଥ
16	Santi Manna	9239112680	santi manna
17.	Debashree Mukherjee	9830183297	Debashree Ch Mukherjee
18	Sabita Dutta		ସାବିତ୍ରୀ ଦତ୍ତ
19	Lakshmi Monda		ଲକ୍ଷ୍ମୀ ମଣ୍ଡା
20	Aparna Manna	9239112686	Aparna Manna

Appendix 3: Location of the Existing Pumping Station in dilapidated condition at Alipore Body Guard Line (proposed for demolition). This is also the site for the proposed Pumping Station under package TR 03/SD 27.

