

Semi-Annual Environmental Monitoring Report

Project number: 42266-023
January 2015

Period: July to December 2014

IND: Kolkata Environmental Improvement Investment Program – (Tranche 1)

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KOLKATA ENVIRONMENTAL IMPROVEMENT INVESTMENT PROGRAM (KEIIP) – PROJECT 1

PROJECT MANAGEMENT UNIT

1st

SEMI ANNUAL ENVIRONMENT MONITORING REPORT

TRANCHE 1

ADB Loan 3053-IND

(Period July to December 2014)

January 2015



KOLKATA MUNICIPAL CORPORATION

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ABBREVIATIONS

AAI	-	Airport Authority of India
ADB	-	Asian Development Bank
ASI	-	Archaeological Survey of India
BIS	-	Bureau of Indian Standards
BOD	-	Biochemical Oxygen Demand
CBO	-	Community Based Organization
COD	-	Chemical Oxygen Demand
CPCB	-	Central Pollution Control Board
CPHEEO	-	Central Public Health and Environmental Engineering Organisation
CTE	-	Consent to Establish
CTO	-	Consent to Operate
CW	-	Canal Water
DG	-	Diesel Generator
DO	-	Dissolved Oxygen
DPR	-	Detailed Project Report
DSC	-	Design and Supervision Consultants
DWF		Dry Weather Flow
KMC	-	Kolkata Municipal Corporation
EARF	-	Environmental Assessment and Review Framework
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
GRC	-	Grievance Redressal Committee
GRM	-	Grievance Redress Mechanism
GW	-	Groundwater
HC	-	Hydrocarbons
IEE	-	Initial Environmental Examination
INR	-	Indian National Rupee
KEIP	-	Kolkata Environmental Improvement Project
KEIIP		Kolkata Environmental Improvement Investment Program
KMC	-	Kolkata Municipal Corporation
KMDA	-	Kolkata Metropolitan Development Authority
LPG	-	Liquefied Petroleum Gas
MoEF	-	Ministry of Environment and Forest, Government of India
MTBM	-	Micro Tunnel Boring Machine
NIOSH	-	National Institute of Occupational Health
NGO	-	Non Government Organization
O and M	-	Operation and Maintenance
PMC	-	Project Management Consultant
PMU	-	Project Management Unit
PS	-	Pumping Station
REA	-	Rapid Environmental Assessment

ROW	-	Right of Way
RP	-	Resettlement Plan
S & D	-	Sewage & Drainage
SEIAA	-	State Level Environmental Impact Assessment Authority
SPM	-	Suspended Particulate Matter
SPS	-	Safeguard Policy Statement
STP	-	Sewage Treatment Plant
SWF	-	Storm Water Flow
SW	-	Surface Water
TDS	-	Total Dissolved Solids
TMP	-	Traffic Management Plan
TSS	-	Total Suspended Solids
UFW	-	Unaccounted For Water
USD	-	US Dollar
WBPCB	-	West Bengal Pollution Control Board
WTP	-	Water Treatment Plant

I. INTRODUCTION

A. Background

1. In continuation of Kolkata Environmental Improvement Project program (KEIP), both KMC & ADB have wished to continue their combined effort to improve environmental degradation and basic urban services by a multi - tranche financing program 'Kolkata Environmental Improvement Investment Program' (KEIIP). The ADB has expressed their willingness to support this program by providing a multi-tranche financing facility amounting to US \$400 Million. Figure in **Annexure 1** shows the areas considered to be taken up under KEIIP Tranche 1, 2 & 3. As a requirement of Tranche 1 works, ADB has already released about US \$100 Million and as per program another \$300 million is expected for the works covered under Tranche 2 & 3. The total investment duration for Tranche 2 & 3 is 2014 to 2022, however the duration for Tranche-I works is 2014 to 2019.

2. The following works are taken up under **Tranche 1** as depicted in **Table 1**

Table 1: Proposed works considered under KEIIP Tranche 1

Package	Description
PK-1	Water Loss Management at Cossipore Ward no. 01 to 06
PK-2	Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach
PK-3	Supply and Installation of pumps and Motors at Tallah, Palta Sytem and Garden Reach System.
PK-4	Laying of Water Trunk main from Garden Reach water works to Taratala Valve Station and Laying of Sewer line along Diamond Harbour Road by Micro-tunneling method.
PK-5	Construction of Pumping Station in Begore Khal & Joka Tram Depot and Construction of Sewerage & Drainage Network within Diamond Harbour Road Catchment.
PK-6	Micro Tunneling works on pressure main between Santoshpur MPS And Garden Reach STP
PK-7	Replacement of Ganga Action Plan (GAP) sewer line for defunct portion & allied works, laying of Pumping main along Taratala Road and Santoshpur Road from Trenching Ground Sewage PS to Santoshpur Main Sewage PS, development of S & D network in SSE catchment, construction of SSE PS, construction of DWF & SWF pumping mains and rehabilitation of SSE STP.
PK-8	Renovation works of PMU Office building & other Infrastructure

3. The objective of the Investment Program is to achieve service quality and operational sustainability increased in water supply and sewerage in 20% of the KMC area. As part of the Investment Program, the Project aims to increase operational efficiency and scale of water supply, sewerage and drainage services in 5% of KMC area.

4. Program output comprise of:

- ✓ rehabilitation of inefficient and outdates water supply assets;
- ✓ continued extension of sewerage to newly developed areas; and
- ✓ further development of financial and Project management capacity.

5. The Program is carried out at Kolkata city by the Govt. of West Bengal (GoWB) acting through Kolkata Municipal Corporation (KMC). Location of Kolkata city in West Bengal is shown in **Figure 1**. Sub project location map for Tranche 1 is shown in **Figure 2**.

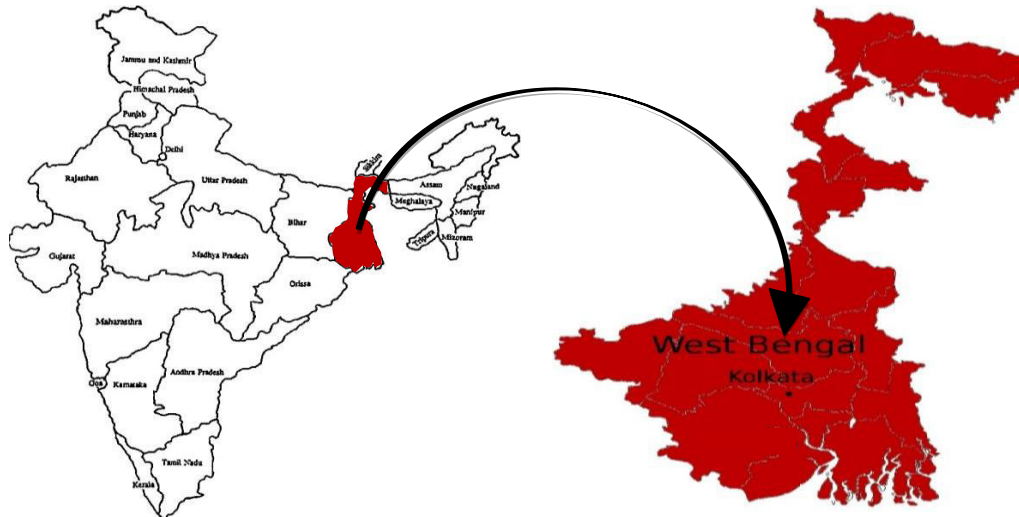


Figure 1: Map showing the location of Kolkata City in West Bengal

B. Project & Report Purpose

6. Sub projects under **Tranche 1** has been classified by ADB as environmental assessment category B (some negative impacts but less significant than category A) and the impacts of subprojects were assessed through Initial Environmental Examination (IEE), prepared according to ADB Safeguard Policy (SPS 2009).

7. Subprojects under different tranches aim to improve environmental conditions and quality of life in urban areas of Kolkata, the proposed improvement of infrastructure may result in some adverse environmental impacts.

8. This report is the “Semi Annual Environment Monitoring Report” for the period July to December 2014 to describe the present compliance status and implementation of the mitigation measures, monitoring and reporting as per EMP of the approved IEE.

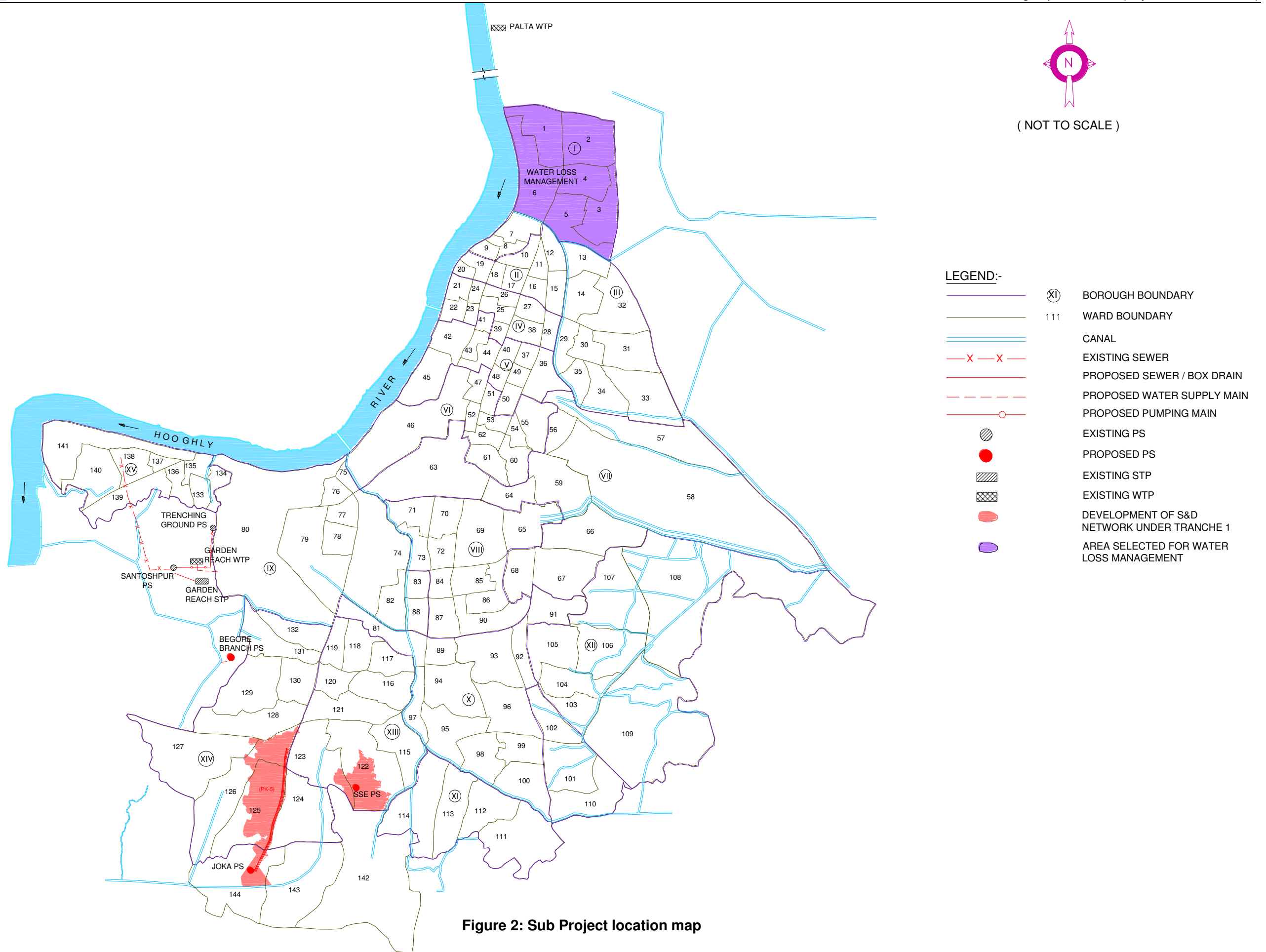


Figure 2: Sub Project location map

C. Project Profile Tranche 1

9. Till 31st December, 2014 contract agreement has been signed for five (5) sub projects under Tranche 1. Among 5 sub projects one package is related to procurement and installation of pumps and motors, which is environmentally non sensitive.

10. **Table 2** shows the status of award of different sub projects.

**Table 2: Status of Sub-project Awarded/Implementation under Tranche-1
(Upto 31st December 2014)**

Component, name of the sub project (Package No.)	Starting date of Implementation	Projected months of completion (as per Work order)	Schedule date of completion (Extended date of completion)	Physical progress (%) as on 31.12.2014
Water supply - Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach (KEIIP/ICB/ Tr-1/WS02/2013-14)	07.11.2014	48	06.11.2018	No physical progress (0%)
Water supply - Supply and Installation of Pumps & Motors at Tallah- Palta System and Garden Reach System (KEIIP/ICB/ Tr-1/WS03/2013-14)	19.05.2014	24	18.05.2016	3.92% Environmentally non sensitive project
Water supply & Waste water - Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunneling method (KEIIP/ICB/ Tr-1/WS & SD-04/13-14)	19.05.2014	36	18.05.2017	7%
Waste water - Construction of pumping stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment (KEIIP/ICB/ Tr-1/SD-05/13-14)	27.10.2014	42	26.04.2018	0.04%
Waste water - Micro-tunneling works on pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant (KEIIP/NCB/ Tr-1/SD-06/13-14)	19.05.2014	18	18.11.2015	No physical progress (0%)

II. IMPLEMENTATION PROGRESS

A. Major works and progress

11. Till date no major physical work has been started under **Tranche 1. Table 3** shows scope of the work under sub projects and type of preliminary works continued upto 31st December 2014.

12. Pre Construction & Construction phase monitoring has been started as per provision of Environmental Management Plan.

Table 3: Major Works under Sub project and Progress – Tranche 1

Component, Name of Sub Projects (Code No.)	List of major works under the sub project	Type of works continued at present	Expected changes from approved scope	Fulfillment of objectives- Type of remedial measures needed	Key assumptions and risks that affect attainment of the objectives
Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach (KEIIP/ICB/ Tr-1/WS02/2013-14)	<p>Palta Water Works:</p> <ul style="list-style-type: none"> • Rehabilitation/Strengthening of intake jetty 2 • Strengthening of embankment/ construction of new embankment in between Pre settling tanks (length of 650 m) to facilitate movement of the vehicles for collection and removal of sludge disposed (including construction of pond) • Construction of road of width 5 m and length of 75 m and width of 7.5 for the length of 1850 m. Including construction of culverts • Relocation /restructuring of existing drain along a portion of the proposed road alignment to a covered drain length of 245 m • Safe dismantling of existing 18 MGD WTP • Construction of 20 MGD new WTP <p>Garden Reach water works Rehabilitation and strengthening</p>	Drawings and Design approval continued Physical activity not yet started	Not yet	-	-

Component, Name of Sub Projects (Code No.)	List of major works under the sub project	Type of works continued at present	Expected changes from approved scope	Fulfillment of objectives- Type of remedial measures needed	Key assumptions and risks that affect attainment of the objectives
	of existing jetty no. 1 at Garden Reach intake system				
Supply and Installation of Pumps & Motors at Tallah-Palta System and Garden Reach System (KEIP/ICB/ Tr-1/WS03/2013-14)	Supply and Installation of Pumps & Motors at, <ul style="list-style-type: none"> • Tallah- Palta System • Garden Reach System 	Approval of different drawings being done (Procurement package)	Not yet	-	-
Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunneling method (KEIP/ICB/ Tr-1/WS & SD-04/13-14)	Water Supply part - <ul style="list-style-type: none"> • Transmission main from Garden reach water works to Taratala valve station by micro tunnelling, approx length 4.05 km MS pipe 1829 dia (OD) Waste water part- <ul style="list-style-type: none"> • RCC gravity main sewer from Sakher bazaar to Joka along Diamond Harbour Road by micro tunnelling, approx length 4.069 km RCC pipe 1400mm -2400 mm dia 	Water Main – <ul style="list-style-type: none"> • Work on construction of shaft nos. 5,6,7,8 and 9 for water main is in progress along Taratala Road • Construction of other shafts to be taken up • Soil investigation, alignment survey, utility identification done and drawing completed Sewer Main- <ul style="list-style-type: none"> • Barricading from Shakerbazar to different locations of DH Road • M.S barricade board placement at shaft no. 	Not yet	-	-

Component, Name of Sub Projects (Code No.)	List of major works under the sub project	Type of works continued at present	Expected changes from approved scope	Fulfillment of objectives- Type of remedial measures needed	Key assumptions and risks that affect attainment of the objectives
		1,2 and 3 <ul style="list-style-type: none"> • Work of shaft no. 2 is in progress for sewer main along Dimond Harbour Road • All other safety arrangement done 			
Construction of pumping stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment (KEIP/ICB/ Tr-1/SD-05/13-14)	<ul style="list-style-type: none"> • Construction of Sewage and Drainage networks within Diamond Harbour Road catchment area including house drainage connections (ward 125&126) Approx length-17.5 km and dia ≥250 mm • Construction of RCC box drain inside Behala AAI land • Construction of Joka pumping station inside Joka Tram depot. – <ul style="list-style-type: none"> ✓ DWF pumping main of dia 800 mm, approx. 3250 m long ✓ SWF pumping main of dia 1626 mm, approx. 500 m long • Construction of Begore khal pumping station located inside Behala 	<ul style="list-style-type: none"> • Topographical survey at some of the project locations completed, balance under progress • Site office building and laboratory under progress • Dewatering from project sites (Begore khal PS & box drain area) completed • Land filling work at Begore PS in progress • Dismantling work under progress 	Not yet	-	-

Component, Name of Sub Projects (Code No.)	List of major works under the sub project	Type of works continued at present	Expected changes from approved scope	Fulfillment of objectives- Type of remedial measures needed	Key assumptions and risks that affect attainment of the objectives
	<p>Airport Authority of India Area</p> <ul style="list-style-type: none"> ✓ DWF pumping main of dia 400 mm, approx. 675 m long ✓ SWF pumping main of dia 1626 mm, approx. 270 m long • Desilting and resectioning of Bagore branch canal for the portion downstream of box drain upto its outfall at Bagore canal 				
<p>Micro-tunneling works on pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant (KEIIP/NCB/ Tr-1/SD-06/13-14)</p>	<p>Pressure main between Santoshpur Main pumping station (MPS) and Garden Reach sewerage treatment plant (STP) by micro tunnelling approx. Length 525 m, 1800 mm inner dia, RCC NP-4 pipe</p>	<ul style="list-style-type: none"> • Finalization of all design - done • Construction of Site office and camp under progress • Jungle cleaning, earth cutting, dewatering, <i>balla</i> pilling work continued • Soil testing and trial trenches completed • Construction of Jacking Pit and Reception Pit would be started shortly 	<p>Not yet</p>	<p>-</p>	<p>-</p>

III. ENVIRONMENTAL ASSESSMENT AND REVIEW PROCEDURE

A. Environmental Legal Requirement – Environmental Legislation and Pollution Control Acts

13. The Government of India has formulated various policy guidelines; acts and regulations aimed at the sustenance of environment in general, which are briefly summarized and applicable acts with the programs, are described in the following sub-sections.

Sl. No.	Sources	Legislation
1	EIA Notification	The Ministry of Environment and Forests has revised the EIA notification, 1994, and issues the revised EIA notification on 14th September 2006
2	Environment	The Environment (Protection) Act, 1986
3	Forest/ Tree resources	The Forest (Conservation) Act, 1980 West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006
4	Water Pollution	The Water (Prevention and Control of Pollution) Act, 1974, as amended in 1988
5	Air Pollution	The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987
6	Noise Pollution	The Noise Pollution (Regulation and Control) Rules, 2000
7	Public Liability	The Public Liability Insurance Act, 1991 The Public Liability Insurance Rules, 1991
8	Conservation, construction and reuse in and around the protected monuments	The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the rules, 1959
9	Hazardous Waste	<ul style="list-style-type: none"> ➤ Hazardous Waste (Management and Handling) Rules, 1989 ➤ Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 ➤ Emergency Planning Preparedness and Response for Chemical Disasters Rules, 1995 ➤ Hazardous Microorganisms and Genetically Modified Organisms (Manufacture, Use Import Export and Storage) Rules, 1999
10	Use and Management of Explosive	The Explosives Act, 1884 and The Explosives Rules, 1983

14. Prominent acts which are related to the project discussed below.

▪ **THE ENVIRONMENT PROTECTION ACT, 1986 AND THE EIA NOTIFICATION, 1994**

The Environmental (Protection) Act, 1986 is the umbrella legislation providing for the protection of environment in the country. This Act provided for the Environment (Protection) Rules, which have been formulated under the act “The Environmental Impact Assessment Notification, 1994 and the Amendments / Revised EIA notification on 14th September 2006”.and Year 2009.

▪ **WEST BENGAL TREES (PROTECTION AND CONSERVATION IN NON-FOREST AREAS) ACT, 2006**

As per Act no person shall fell any tree in Non- forest area and cut, remove or otherwise dispose of any tree, other than a tree which has been felled without the aid of human agency without taking permission from competent authority

▪ **THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT 1974 AS AMENDED IN 1988 AND AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981 AS AMENDED BY AMENDMENT ACT, 1987**

The water (Prevention and Control of Pollution) Act, 1974 resulted in the establishment of the Central and State level Pollution Control Boards whose responsibilities include managing water quality and effluent standards, as well as monitoring water quality, prosecuting offenders and issuing licenses for construction and operation of certain facilities. The SPCB is also empowered to set air quality standards and monitor and prosecute offenders under the air (Prevention and Control of Pollution) Act, 1981.

▪ **THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000, AS AMENDED**

Since the subproject corridor/ area is located within the city, the construction activity and use of heavy machinery and vehicles may increase the ambient noise levels during the construction phase. It is considered necessary to regulate and control noise producing and generating sources with the objective of maintaining the ambient air quality standards in respect of noise. The occupier of subprojects have to take measures for abatement of noise pollution ensuring that the existing noise levels do not exceed the standards specified under the Noise Pollution (regulation and control) rules, 2000, as amended.

15. The specific requirements to ensure compliance by these components and subprojects are shown in **Table 4**.

Table 4: Action required ensuring compliance with National Environmental Laws

Component	Applicable Legislation	Compliance	Action Required
1. All components that require acquisition of forest land	Forest (Conservation) Act 1980; Wildlife (protection) Act 1972 West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006	Approval from State Forest Office, Principal Chief Conservator of Forest and Ministry of Environment and Forests (MoEF), Government of India	Identification of non- forest land and formulate an afforestation program. Tree felling permission as per requirement
2. Water Treatment Plant (WTP) – Surface water and Sewage Treatment Plant (STP)	The Water (Prevention and Control of Pollution) Act, 1974, as amended in 1988	Consent to Establish (CTE) and Consent to Operate (CTO) from West Bengal Pollution Control Board (WBPCB), Government of	Based on project review and site inspection, West Bengal Pollution Control Board (WBPCB) provides CTE before construction, and stipulates the disposal standards to be met during operation.

Component	Applicable Legislation	Compliance	Action Required
		West Bengal	After completion of construction, Consent to Operate (CTO) will be issued confirming compliance with the CTE conditions, if any
		Renewal of CTO during operation of surface Water Treatment Plant (WTP) and Sewage Treatment Plant (STP)	Based on the performance of the WTP/STP and its compliance with the disposal standards CTO to be renewed every year.

B. Compliance with Environmental Regulations

16. Before implementation of the project compliance with environmental policy, law and legislation is necessary.

17. Under **Tranche 1** present status of Environment, forest and other clearances are mentioned below.

Table 5: Present Status of Environment & Forest and Other Clearances (upto 31.12.2014)

Work (Package No.)	Applicable Legislation/ Type of clearance	Subject / Issue	Clearance given by and date	Remarks/ Action needed
Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach (KEIP/ICB/ Tr-1/WS02/2013-14)	Water (Prevention and Control of Pollution) Act, 1974 Consent to Establish (CTE) for rehabilitation of WTP from West Bengal Pollution Control Board Consent to operate will be required before operation The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Noise Pollution (Regulation and Control) Rules, 2002 amended up to 2010. Also for setting up hot mix plant, batching plant and use of diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)	Consent to Establish (CTE) for rehabilitation of WTP is needed before starting of any physical activity	-	Immediate application to WBPCB for the said CTE During implementation of project compliance against Air Act , Noise Rules and Water Act will be required

Work (Package No.)	Applicable Legislation/ Type of clearance	Subject / Issue	Clearance given by and date	Remarks/ Action needed
Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunneling method (KEIP/ICB/Tr-1/WS & SD-04/13-14)	Water (Prevention and Control of Pollution) Act, 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO) West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006-Tree felling permission	Tree felling NOC Requirement of permission for felling of the trees within the pipeline alignment Consent to Establish (CTE) for placement of generator Compliance against Air Act, Noise Rules and Water Act	Tree felling-Permission obtained from Divisional Forest Officer, Forest Utilization Division, Govt. of West Bengal at Kolkata (Ref letter 655/17 T dated 29.09.14) – felling of 17 trees along Taratala Road for laying of water main. Compensatory afforestation of 75 trees is recommended in clearance certificate.	Immediate application to WBPCB for the said CTE. Instruction given to contractor During implement of project compliance against Air Act, Noise Rules and Water Act will be required Regular monitoring on survival of planted trees
Construction of pumping stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment (KEIP/ICB/Tr-1/SD-05/13-14)	Water (Prevention and Control of Pollution) Act, 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Noise Pollution (Regulation and Control) Rules, 2002 amended up to 2010 Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)	Compliance against Air Act, Noise Rules and Water Act	-	During implementation of project compliance against Air Act, Noise Rules and Water Act will be required
Micro-tunneling works on pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant (KEIP/NCB/Tr-1/SD-06/13-14)	Water (Prevention and Control of Pollution) Act, 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Noise Pollution (Regulation and Control) Rules, 2002 amended up to 2010	Compliance against Air Act, Noise Rules and Water Act	-	During implementation of project compliance against Air Act, Noise Rules and Water Act will be required

C. Compliance of Safeguard Loan Covenants

18. The status of compliance of ADB’s major Loan Covenants related to Safeguard issues is shown below:

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues
Environment		
7	The Borrower shall ensure or cause the EA to ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project, and all projects’ facilities comply with (i) all applicable laws and regulations of the Borrower and the State relating to environment, health, and safety; (ii) the Environmental Safeguards; (iii) the EARF; and (iv) all measures and requirements set forth in the respective IEE and EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	<p>Under compliance Document is prepared/ or under preparation by complying all relevant State and National Laws, Safeguard Policy Statement (SPS 2009) of ADB, Environment Assessment Review Framework (EARF) for Tranche-1 program. Same will be followed for subsequent Tranches.</p> <p>For Tranche 1 project Initial Environmental Examination (IEE), Environment Management Plan (EMP) report prepared and approved by ADB. IEE will be updated and revised in case of any change of scope and location. All measures and requirements as prescribed in IEE/EIA and EMP will be considered during implementation. Corrective or preventive action plans will be reflected in Environment Monitoring Report and project implementation authority will be taken care.</p>
Human and Financial Resources to Implement Safeguards Requirements		
11	The Borrower shall make available, or cause the EA to make available, all necessary budgetary and human resources to fully implement the EMP required.	<p>Complied Budgetary provisions have been included in EMP of Tranche 1 sub project Environment and Social Management Coordinator of Program Management Unit is in place Human resource (project consultant, i.e Environmental Specialist of DSC) for implementation of EMPs is in place for regular compliance.</p>
Safeguards – Related Provisions in Bidding Documents and Works Contracts		

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues
12.	<p>The Borrower shall ensure, or cause the EA to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <p>(a) comply with the measures and requirements relevant to the contractor set forth in the IEE, the EMP, the RP and the IPP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report;</p> <p>(b) make available a budget for all such environmental measures;</p> <p>(c) provide the EA with a written notice of any unanticipated environmental risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP, the RP or the IPP;</p> <p>(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and</p> <p>(e) fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.</p>	<p>Under compliance</p> <p>(a) Approved IEE, EMP for Tranche 1 project is attached in Bidding documents. This process will be followed for all the sub projects within the present Tranche. In case of any change of scope, revised IEEs, EMPs will be prepared and corrective measures will be disclosed to contractor and same will be reflected in the “Environment Monitoring Report”.</p> <p>(b) IEE indicates budgetary provisions for implementation of EMP.</p> <p>(c) With the development of sub project and implementation, in case of additional impacts/risks due to change in scope/area, that will be reflected in the revised IEEs, EMPs and Environment Monitoring Report and accordingly project Executing Agency will inform the Construction Agency for taking relevant corrective measures.</p> <p>(d) Haul roads will be marked properly (by avoiding residences and agricultural land) before commencement of transportation of materials.</p> <p>(e) Pathways, land which are likely to be affected for a short period during implementation of the sub project will be restored by concerned construction agency before acceptance of the work. Restoration status will be reflected in post construction monitoring report.</p>
Safeguards Monitoring and Reporting		
13	<p>The Borrower shall cause the EA to do the following:</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during</p>	<p>Under compliance</p> <p>(a) Generally Environmental Monitoring Report is to be prepared after starting of implementation of the project but as per action plan of ADB 1st semi-annual Safeguards Monitoring Report is prepared upto December 2014, which mainly cover loan covenant part, monitoring format and pre construction compliance including partial generation of base line monitoring data</p> <p>(b) With the development of project and implementation, in case of additional impacts/risks due to change in scope/area,</p>

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues
	<p>construction, implementation or operation of the Project that were not considered in the IEEs, the EMPs, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and</p> <p>(c) report any breach of compliance with the measures and requirements set forth in the EMPs, promptly after becoming aware of the breach.</p>	<p>will be reflected in revised IEEs, EMPs and accordingly Executing Agency (EA) will inform the ADB along with corrective action plan which will be reflected in the Monitoring Report.</p> <p>(c) in case of any breach of compliance with the measures and requirements set forth in the EMP; EA will promptly inform ADB and suitable corrective action plan will be planned.</p>
Prohibited List of Investments		
14	<p>The Borrower shall ensure or cause the State to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.</p>	<p>Complied</p> <p>Under Tranche -1, there is no violation of prohibited investment activities as per ADB SPS (2009) Appendix 5.</p>
Other Social Measures		
15	<p>The EA shall ensure that civil works contracts under the Project follow all applicable labor laws of the Borrower and the State, and that these further include provisions to the effect that contractors: (i) carry out HIV/AIDS awareness programs for labor and 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 (ii) follow and implement all statutory provisions on labor (including not employing or using children as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts will also include clauses for termination in case of any breach of the stated provisions by the contractors.</p>	<p>Complied in document and to be complied during implementation</p> <p>Provision are included (as per EMP & BID document) to carry out HIV/AIDS awareness programs for construction contractor, application of all relevant labour laws for health and safety including child labour law and engagement of local labours (preferably from economically backward group) covering women labours.</p> <p>In case of any breach of provision, necessary corrective measures as per contract clauses shall be taken.</p> <p>All activities including awareness program will be reflected in "Monitoring Report".</p>

D. Environmental and Social Organization and Management along with Implementation Arrangements

19. Safeguard implementation arrangement for the program is shown in **Figure 3**.

20. The institutional arrangement will follow KEIIP's organizational structure and functions (**Figure 3**). The subproject will be implemented and monitored by the Project Management Unit (PMU). The KEIIP Special Officer (Co-ordination) and Deputy Chief Engineer I will be PMU's Environmental Coordinator. The responsibilities of the Environmental Coordinators will ensure that (i) environmental and social safeguard issues

are addressed; (ii) EMP/approved SEP is implemented; (iii) physical and non-physical activities under the subproject are monitored; and (iv) monitoring reports are prepared on time and submitted to ADB.

21. PMU will be supported by the Design and Supervision Consultants (DSC). An Environment Specialist will be engaged to ensure: (i) EMP/ approved SEP is implemented; (ii) surveys and measurements are undertaken; (iii) inspections and observations throughout the construction period are recorded to ensure that safeguards and mitigation measures are provided as intended; and (iv) statutory clearances and permits from government agencies/other entities are obtained prior to start of civil works.

22. The Contractor will be required to:

- (i). Submit Site environmental plan (SEP) covering proposed sites / locations for construction work camps, storage areas, hauling roads, lay down areas, disposal areas for solid and hazardous wastes
- (ii). Comply with all applicable legislation, is conversant with the requirements of the EMP/ approved SEP;
- (iii). Brief his staff, employees, and laborer about the requirements of the EMP/ approved SEP;
- (iv). Ensure any sub-contractors/ suppliers who are utilized within the context of the contract comply with the environmental requirements of the EMP/ approved SEP. The Contractor will be held responsible for non-compliance on their behalf;
- (v). Supply method statements for all activities requiring special attention as specified and/or requested by the DSC Environment Specialist during the duration of the Contract;
- (vi). Provide environmental awareness training to staff, employees, and laborers;
- (vii). Bear the costs of any damages/compensation resulting from non-adherence to the EMP/ approved SEP or written site instructions;
- (viii). Conduct all activities in a manner that minimizes disturbance to directly affected residents and the public in general, and foreseeable impacts on the environment.
- (ix). Ensure that the PMU Environment Coordinators are timely informed of any foreseeable activities that will require input from the DSC Environment Specialist.



Notes: PMU = Project Management Unit; DSC = Design and Supervision Consultants; R & R = Relocation and Rehabilitation

Figure 3: Safeguards Implementation Arrangement

IV. IMPLEMENTATION STATUS OF ENVIRONMENT MEASURES

A. EMP Compliance Status

23. Field activities under the **Tranche 1** are just started. Application of EMP has been commenced as per final IEE report for preliminary activities under the project. Site specific EMP has been prepared by concerned contractor of the package. The compliance monitoring status for application of mitigation measures against impacts on air, water, soil environment, social and safety aspects is enclosed in **Annexure 2**. Summary compliance status of EMP application and actions/ corrective measures is presented in **Table 6** below.

Table 6: Summary Compliance status of Environment Management and Monitoring Plan

Name of Sub Project	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent/Satisfactory/Partially Satisfactory/Below Satisfaction/Poor/Very Poor)	Actions Proposed or continued/Additional Corrective Measures Required (31 st December 2014)
Water supply - Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach (KEIP/ICB/ Tr-1/WS02/2013-14)	No	-	No activity at site
Water supply & Waste water - Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunneling method (KEIP/ICB/ Tr-1/WS & SD-04/13-14)	Yes	Satisfactory	Maintaining occupational and public safety at work sites Removal of overburden earth from working sites as per requirement
Waste water - Construction of	Yes	Satisfactory	Camp site management -

Name of Sub Project	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent/Satisfactory/Partially Satisfactory/Below Satisfaction/Poor/Very Poor)	Actions Proposed or continued/Additional Corrective Measures Required (31 st December 2014)
pumping stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment (KEIIP/ICB/ Tr-1/SD-05/13-14)			improvement required
Waste water- Micro-tunneling works on pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant (KEIIP/NCB/ Tr-1/SD-06/13-14)	Yes	-	Just started – Physical progress – 0%

V. ENVIRONMENTAL MONITORING AND EVALUATION

24. For effective monitoring, selected environmental parameters have been identified as indicators which will be qualitatively and quantitatively measured and compared over a period of time in order to assess/ensure the compliance of EMP. The environmental performance indicators are physical, biological and social characteristics identified as most important in affecting the environment at critical locations all along the subproject locations. The parameters identified as performance indicators are:

- Air, noise and water quality
- Compliance to EMP
- Compliance to local/state/national environmental regulations

25. During implementation process, performance monitoring fact sheet will be maintained against each possible environmental impact and will be attached with the monitoring report. **Annexure 3** shows the Performance Fact Sheet for implementation of EMP at pre construction and construction stage.

26. Base line air quality monitoring at project sites have been started. Ambient air quality monitoring data is presented in **Table 7**. It is noted from the result that concentration of SO₂, NO₂ and PM_{2.5} are within the standard. But at 2 locations of specific package PM₁₀ is above the standard.

Table 7: Base line Ambient Air Quality Monitoring Data at working sites

Package	Locations/ Date of sampling	Parameters			
		SO ₂ µg/m ³	NO ₂ µg/m ³	PM _{2.5} µg/m ³	PM ₁₀ µg/m ³
Construction of pumping	Nearby Incoming sewer pipeline – SWF & DWF pumping main	24.15	48.21	51.19	106.44

Package	Locations/ Date of sampling	Parameters			
		SO ₂ µg/m ³	NO ₂ µg/m ³	PM _{2.5} µg/m ³	PM ₁₀ µg/m ³
stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment (KEIIP/ICB/ Tr-1/SD-05/13-14)	from Begore Khal Pumping station (PS) – near PS / 27.12.2014				
	Box drain location- near Behala Airport/ 27.12.2014	25.33	50.89	57.36	126.84
	Near pipe laying work – Junction point of Dakshin Behala Road & Swashan Kalitala road – near Barisha Youth club/ 27.12.2014	24.15	49.55	41.15	89.26
	Near Joka Tram Depot. Pumping station / 27.12.2014	22.22	48.60	37.41	84.24
Standard as per CPCB		80.0	80.0	60.0	100.0

27. Base line ambient air quality monitoring will be conducted shortly for the packages,
- Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunnelling method (KEIIP/ICB/ Tr-1/WS & SD-04/13-14)
 - Micro-tunnelling works on pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant (KEIIP/NCB/ Tr-1/SD-06/13-14)
 - Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach (KEIIP/ICB/ Tr-1/WS02/2013-14)

28. Base line ambient noise level data is presented in **Table 8**. In most of the cases Leq value is below the standard for commercial and residential area.

Table 8: Base Line Noise Level Monitoring Data at Working Sites

Package	Locations / Date of sampling	Sound Level in Leq dB(A)
Construction of pumping stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment (KEIIP/ICB/ Tr-1/SD-05/13-14)	Nearby Incoming sewer pipeline – SWF & DWF pumping main from Begore Khal Pumping station (PS) – near PS / 27.12.2014	Day time: Max: 66.7 dB(A), Min: 59.3 dB(A), Leq: 63.97 Night time: Max: 60.3 dB(A), Min: 50.5 dB(A), Leq: 56.32
	Box drain location- near Behala Airport/ 27.12.2014	Day time: Max: 57.1 dB(A), Min: 50.2 dB(A), Leq: 54.23 Night time: Max: 52.9 dB(A), Min: 45.3 dB(A), Leq: 49.91
	Near pipe laying work – Junction point of Dakshin Behala Road & Swashan Kalitala road – near Barisha Youth club/ 27.12.2014	Day time: Max: 65.7 dB(A), Min: 51.2 dB(A), Leq: 60.74 Night time : Max: 55.8 dB(A), Min: 47.4 dB(A), Leq: 52.26
	Near Joka Tram Depot. Pumping station / 27.12.2014	Day time: Max: 55.7 dB(A), Min: 49.6 dB(A), Leq: 52.77 Night time : Max: 51.3 dB(A), Min: 45.3 dB(A), Leq: 48.86
Standard as per CPCB		Day time: Industrial area:75 Commercial: 65 Residential area: 55 Night time: Industrial area:70 Commercial: 55 Residential area: 45

29. Base line noise level monitoring will be conducted shortly for the packages,
- Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunnelling method **(KEIIP/ICB/ Tr-1/WS & SD-04/13-14)**
 - Micro-tunnelling works on pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant **(KEIIP/NCB/ Tr-1/SD-06/13-14)**
 - Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach **(KEIIP/ICB/ Tr-1/WS02/2013-14)**
30. Since water source is involved for the package “Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach”, water quality will be monitored for the said package.
31. “During construction” air quality, noise level and water quality monitoring will be carried out as per Environment Management and Monitoring Plan.

VI. MAJOR PROJECT ISSUES AND PROBLEMS: ENVIRONMENTAL CONTEXT

32. Major field activity of the sub-project under **Tranche 1** is yet to start. Till date, no major issues and problems have been encountered with, at the sub project locations.

VII. CONSULTATIONS AND RECOMMENDATIONS: ENVIRONMENTAL CONTEXT

33. For protection of local environment during construction phase, application of mitigation measures will be done as per specified EMP. Public consultation during construction/ implementation phase will be planned as per the requirement. **Annexure 4** shows the blank consultation format for recording.

VIII. GRIEVANCE REDRESSAL

34. A common grievance redress mechanism (GRM) will be in place for social, environmental or any other subproject related grievances.
35. PMU will maintain a Complaint Cell headed by a designated Grievance Officer at its office. The Grievance Registration/Suggestion Form (**Annexure 5**) will be available at the Complaints Cell and in Borough Offices and will also be downloadable from the KEIIP website.
36. Grievances/ suggestions of affected persons can be dropped in suggestion boxes or conveyed through phone or mail. Affected Persons will also be able to register grievances – social, environmental or other, personally at the Complaint Cell and at Borough offices of KMC. The Grievance Officer and designated official at the Boroughs will be able to correctly interpret/record verbal grievances of non-literate persons and those received over telephone. The Complaint Cell will also serve as Public Information Centers, where, apart from grievance registration, information on the Project, subprojects, social and environmental safeguards can be provided.
37. The Grievance Officer will resolve simple issues and in case of complicated issues, consult/seek the assistance of the Environment/Social Coordinator of the PMU. Grievances not redressed through this process within one month of registration will be brought to the notice of the Project Director, KEIIP.

38. Periodic community meetings with affected communities to understand their concerns and help them through the process of grievance redress (including translation from local dialect/language, recording and registering grievances of non-literate affected persons and explaining the process of grievance redress) will be conducted if required.

39. Grievance Redressal Committee (GRC): An apex GRC will be considered, if required, to address grievances pertaining to broader concerns related to the program/subproject. The membership of the Committee will be decided by Commissioner, KMC.

40. Records will be kept by PMU of all grievances received including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were in effect, and final outcome.

41. Grievances received and responses provided will be documented and reported back to the affected persons. The number of grievances recorded and resolved and the outcomes will be displayed/disclosed in the offices of the different Boroughs of KMC and web.

42. Periodic Review and Documentation of Lessons Learned. PMU will periodically review the functioning of the GRM and effectiveness of the mechanism, especially on the Project's ability to prevent and address grievances.

43. All costs involved in resolving the complaints (meetings, consultations, communication and reporting / information dissemination) will be borne by PMU.

IX. ISSUES AND ACTION PLAN

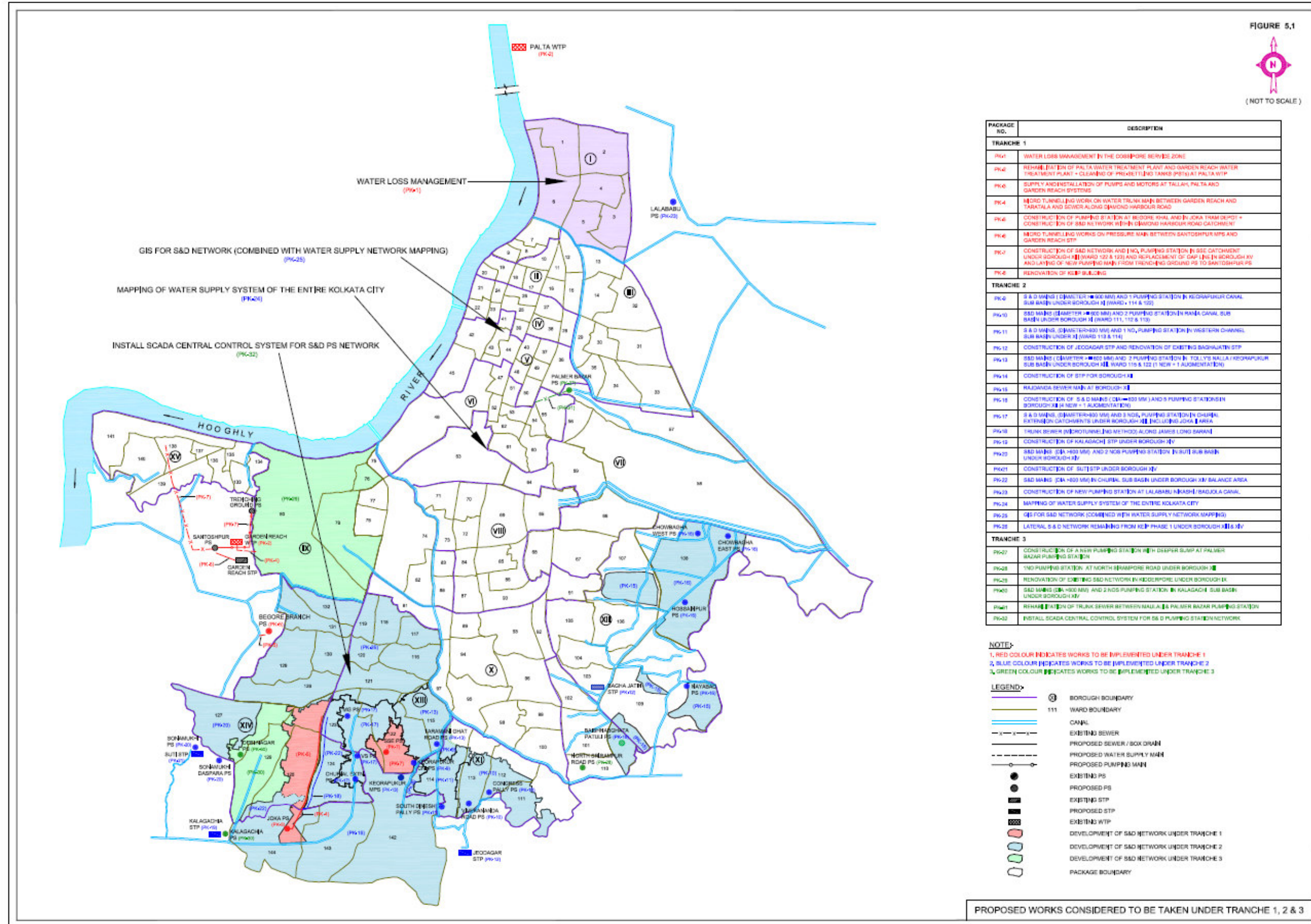
44. Experience from ADB-funded urban projects show complex social, economic, legal, institutional, and management issues in urban development – largely derived from realities of urban life in developing countries like India. Urban projects typically consist of a variety of infrastructure such as roads, water, sewerage, solid waste, and slum improvement/upgrading activities. It is important to mention in this context that the final detailed engineering design in each sub project of KEIIP will be prepared keeping in mind to avoid or minimize social and environmental impact as far as possible. However, since all the developments foreseen are city centric, it is difficult to avoid any impact whatsoever in densely populated towns or cities.

45. With the development of project under KEIIP the action plan will be considered for timely and satisfactory environmental compliance. Sample suggestion & action plan format is shown in **Table 9**. Since major physical work under Tranche 1 not yet started, action plan will be developed with the progress of the project.

Table 9: Suggestion & Action plan considered for satisfactory Environmental Compliance

Sr. No.	Issues	Suggestion and recommendation	Action to be taken by	Time Frame
1	Application of EMP			
2	Health and Safety			
3	Base line and during construction – generation of air, noise and water quality data			
4	Restoration of the construction area			
5	Social relationship and public safety			

ANNEXURE 1: LOCATION MAP PROJECT AREA



ANNEXURE –2: FORMAT FOR COMPLIANCE OF APPLICATION OF EMP

Project: Water Supply & Waste Water - Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunneling method

Package No: KEIP/ICB/ Tr-1/WS & SD-04/13-14

Progress: 7 %

Physical progress : Preliminary work- Soil investigation, alignment survey, utility identification done, Barricading and construction of shafts going on

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
Pre Construction Design phase						
1	Site preparation work including necessary clearance	Construction site	DSC/PMU	Observation and document checking	DSC/ PMU	Under Compliance Tree felling permission obtained and tree felling done. Permission for installation of Generator set to be obtained from WBPCB. Instructions given to contractor. Alignment available for micro tunneling
2	Shifting of affected utilities like electric and telephone poles, pipe lines	Construction site	DSC/ Contractor/ Utility company	Observation and document checking	DSC/ PMU	To be done as per final design
3	Planning for Traffic Management	Construction site	DSC/Contractor	Observation and document checking	DSC/ PMU	Complied Traffic Management plan prepared in consultation with DSC Engineer and Police (Traffic dept.)
4	Planning for setting up worker camps, hot mix plant, stockpile area, storage and disposal areas	Construction site	DSC/Contractor	Observation and document checking	DSC/ PMU	Planned for arrangement of rented house
Construction						
5	Use of Govt. approved quarry sites for procurement of materials	Construction site	Contractor	Site observation	DSC/PMU	To be maintained as per EMP
6	Establishment of temporary camps with drinking water, sanitary and solid waste management arrangement	Construction site	Contractor	Site observation	DSC/PMU	Complied Site office developed with all facility. Rented house arranged for labours

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
7	Removal of overburden and excavated material from working site and use / preservation of the same – as per mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	No generation of overburden till date. Removal to be done as per requirement
8	Water sprinkling at construction site for arresting dust (if any during dry period)	Construction site	Contractor	Site observation	DSC/PMU	Not yet required as per nature of work
9	Materials carrying vehicle are covered- Reducing dust hazard	Construction site & town road	Contractor	Site observation	DSC/PMU	Transportation of construction materials not yet started
10	All vehicles and equipment mobilized to construction site and producing emission, have Pollution Control Board certification	Construction site & town road	Contractor	Record	DSC/PMU	Complied PUC certificate obtained
11	At sensitive locations enclosures provided around generator set or other noise producing machinery	Construction site	Contractor	Site observation	DSC/PMU	Complied Enclosure provided at working location
12	Regular maintenance of noise producing equipment done	Construction site	Contractor	Site observation	DSC/PMU	To be done as per requirement
13	Arrangement of drainage of waste water and arresting solid waste/silt from waste water generated at construction site	Construction site	Contractor	Site observation	DSC/PMU	Not yet required
14	Felling of trees done (if necessary) with mitigation measures i.e. planting of three trees for each tree fell.	Construction site	Contractor	Site observation	DSC/PMU	Complied Tree felling and necessary compensatory afforestation undergoing. Till date 5 nos. trees out of 17 nos. are cut and 65 nos. out of 75 nos. planted Monitoring of survival of tree needs to be done frequently
15	Disposal of construction debris if any as per mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	Under Compliance Not yet generated. Spoil Management Plan prepared
16	Ensure use of Personal Protective Equipment like helmet, gumboot, gloves,	Construction site	Contractor	Site observation	DSC/PMU	Complied PPE used as per requirement.

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
	and earplugs at work place Arrangement of First Aid Box at working site					First Aid box available at site
17	Provide Health and Safety training to all personnel and implement H&S plan	Construction site	DSC/ Contractor	Record	DSC/PMU	Complied Training conducted and to be continued in fixed interval
18	Plan truck routes (for carrying construction materials including pipes) to avoid narrow or congested roads	Construction site	Contractor	Observation	DSC/PMU	To be planned as per EMP
19	Consideration of public safety - as per prescribed mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	Complied Barricading and placement of safety caution tape done
20	Employ at least 50% of workforce from communities near sites	Construction site	Contractor	Site observation	DSC/PMU	Complied Local labours are involved at present
21	Continuous monitoring on implementation of mitigation measures	Construction site	Contractor/ DSC	Site observation and record checking	DSC/PMU	Daily, weekly and monthly monitoring continued

NA: Not Applicable, NR- Not Required

Project: Waste Water - Construction of pumping stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment

Package No: KEIIP/ICB/ Tr-1/SD -05/13-14

Progress: 0.04 %

Physical progress: Preliminary work- Topographical survey work partly completed- rest continued, dewatering from project sites (Begore khal PS & box drain area) completed, Land filling work at Begore PS in progress, dismantling work under progress

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
Pre Construction Design phase						
1	Site preparation work including necessary clearance	Construction site	DSC/PMU	Observation and document checking	DSC/ PMU	Under Compliance Land development work continued
2	Shifting of affected utilities like electric and telephone poles, pipe lines	Construction site	DSC/ Contractor/ Utility company	Observation and document checking	DSC/ PMU	To be done as per final design
3	Planning for Traffic Management	Construction site	DSC/Contractor	Observation and document checking	DSC/ PMU	Complied Traffic Management plan prepared in consultation with

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
						DSC Engineer. To be implemented after consultation with Police Dept.
4	Planning for setting up worker camps, hot mix plant, stockpile area, storage and disposal areas	Construction site	DSC/Contractor	Observation and document checking	DSC/ PMU	Planned to set up labour camp set up with toilet, drinking water facility etc.
Construction						
5	Use of Govt. approved quarry sites for procurement of materials	Construction site	Contractor	Site observation	DSC/PMU	To be maintained as per EMP
6	Establishment of temporary camps with drinking water, sanitary and solid waste management arrangement	Construction site	Contractor	Site observation	DSC/PMU	Partially Complied Site office and camp established but improvement is required
7	Removal of overburden and excavated material from working site and use / preservation of the same – as per mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	No generation of overburden till date. Removal to be done as per requirement
8	Water sprinkling at construction site for arresting dust (if any during dry period)	Construction site	Contractor	Site observation	DSC/PMU	Not yet required as per nature of work
9	Materials carrying vehicle are covered- Reducing dust hazard	Construction site & town road	Contractor	Site observation	DSC/PMU	Transportation of contraction materials not yet started
10	All vehicles and equipment mobilized to construction site and producing emission, have Pollution Control Board certification	Construction site & town road	Contractor	Record	DSC/PMU	Complied PUC certificate obtained
11	At sensitive locations enclosures provided around generator set or other noise producing machinery	Construction site	Contractor	Site observation	DSC/PMU	Not required now
12	Regular maintenance of noise producing equipment done	Construction site	Contractor	Site observation	DSC/PMU	To be done as per requirement
13	Arrangement of drainage of waste water and arresting solid waste/silt from waste water generated at construction site	Construction site	Contractor	Site observation	DSC/PMU	Not yet required. Only dewatering done from project location (presently low land)
14	Felling of trees done (if necessary) with mitigation	Construction site	Contractor	Site observation	DSC/PMU	Not required till date

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
	measures i.e. planting of three trees for each tree fell.					
15	Disposal of construction debris if any as per mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	Under Compliance Not yet generated. Spoil Management Plan prepared
16	Ensure use of Personal Protective Equipment like helmet, gumboot, gloves, and earplugs at work place Arrangement of First Aid Box at working site	Construction site	Contractor	Site observation	DSC/PMU	Complied PPE used as per requirement. First Aid box available at site
17	Provide Health and Safety training to all personnel and implement H&S plan	Construction site	DSC/ Contractor	Record	DSC/PMU	Complied Training conducted and to be continued with fixed interval
18	Plan truck routes (for carrying construction materials including pipes) to avoid narrow or congested roads	Construction site	Contractor	Observation	DSC/PMU	To be maintained as per EMP
19	Consideration of public safety - as per prescribed mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	Under Compliance Barricading and placement of safety caution tape will be placed as per requirement
20	Employ at least 50% of workforce from communities near sites	Construction site	Contractor	Site observation	DSC/PMU	Complied Local labours are involved at present
21	Continuous monitoring on implementation of mitigation measures	Construction site	Contractor/ DSC	Site observation and record checking	DSC/PMU	Daily, weekly and monthly monitoring continued

NA: Not Applicable, NR- Not Required

Project: Waste Water - Micro-tunneling works on Sewage pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant

Package No: KEIP/NCB/ Tr-1/SD -06/13-14

Progress: 0 %

Physical progress: Preliminary work- Finalization of all design – done, Construction of Site office and camp under progress, Jungle cleaning, earth cutting, dewatering, balla pilling work continued, Soil testing and trail trenches completed

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
Pre Construction Design phase						
1	Site preparation work including necessary clearance	Construction site	DSC/PMU	Observation and document checking	DSC/ PMU	Complied Land available for construction activity
2	Shifting of affected utilities like electric and telephone poles, pipe lines	Construction site	DSC/ Contractor/ Utility company	Observation and document checking	DSC/ PMU	To be done as per requirement
3	Planning for Traffic Management	Construction site	DSC/Contractor	Observation and document checking	DSC/ PMU	Not required – project location within pump house and STP
4	Planning for setting up worker camps, hot mix plant, stockpile area, storage and disposal areas	Construction site	DSC/Contractor	Observation and document checking	DSC/ PMU	Planned to set up labour camp set up with toilet, drinking water facility etc.
Construction						
5	Use of Govt. approved quarry sites for procurement of materials	Construction site	Contractor	Site observation	DSC/PMU	To be maintained as per EMP
6	Establishment of temporary camps with drinking water, sanitary and solid waste management arrangement	Construction site	Contractor	Site observation	DSC/PMU	Under compliance Site office and camp development work continued.
7	Removal of overburden and excavated material from working site and use / preservation of the same – as per mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	No generation of overburden till date. Removal to be done as per requirement
8	Water sprinkling at construction site for arresting dust (if any during dry period)	Construction site	Contractor	Site observation	DSC/PMU	Not yet required as per nature of work
9	Materials carrying vehicle are covered- Reducing dust hazard	Construction site & town road	Contractor	Site observation	DSC/PMU	Transportation of contraction materials not yet started
10	All vehicles and equipment mobilized to construction site and producing emission, have Pollution Control Board certification	Construction site & town road	Contractor	Record	DSC/PMU	Complied PUC certificate obtained
11	At sensitive locations	Construction	Contractor	Site	DSC/PMU	Not yet required

Sr. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
	enclosures provided around generator set or other noise producing machinery	site		observation		
12	Regular maintenance of noise producing equipment done	Construction site	Contractor	Site observation	DSC/PMU	To be done as per requirement
13	Arrangement of drainage of waste water and arresting solid waste/silt from waste water generated at construction site	Construction site	Contractor	Site observation	DSC/PMU	Not yet required.
14	Felling of trees done (if necessary) with mitigation measures i.e. planting of three trees for each tree fell.	Construction site	Contractor	Site observation	DSC/PMU	Not required till date
15	Disposal of construction debris if any as per mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	Under Compliance Not yet generated. Spoil Management Plan prepared
16	Ensure use of Personal Protective Equipment like helmet, gumboot, gloves, and earplugs at work place Arrangement of First Aid Box at working site	Construction site	Contractor	Site observation	DSC/PMU	Complied PPE used as per requirement. First Aid box available at site
17	Provide Health and Safety training to all personnel and implement H&S plan	Construction site	DSC/ Contractor	Record	DSC/PMU	Complied Training conducted and to be continued with fixed interval
18	Plan truck routes (for carrying construction materials including pipes) to avoid narrow or congested roads	Construction site	Contractor	Observation	DSC/PMU	To be maintained as per EMP
19	Consideration of public safety - as per prescribed mitigation measures	Construction site	Contractor	Site observation	DSC/PMU	Under Compliance Project location at Isolated area. Caution tape placed
20	Employ at least 50% of workforce from communities near sites	Construction site	Contractor	Site observation	DSC/PMU	Complied Local labours are involved at present
21	Continuous monitoring on implementation of mitigation measures	Construction site	Contractor/ DSC	Site observation and record checking	DSC/PMU	Daily, weekly and monthly monitoring continued

NA: Not Applicable, NR- Not Required

ANNEXURE 3: ENVIRONMENT PERFORMANCE FACT SHEET

S. No.	Sub project Identification No.	Name of Sub Project	Name of Contractor	EMP Part of contract Document (Yes / No)	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent, Satisfactory, Partially Satisfactory, Below Satisfactory)	Environmental Consents / Clearances Required						Nomination of Environmental & Social Safeguard Officer by Contractor (Nominated / Yet to be Nominated)	Dust Control (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)	Labour Camp Management (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)	Workers Safety Measures (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)	Traffic Safety Measures (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)	
							Tree Cutting	Crusher	Batching Plant	Hot Mix Plant	Diesel Generator Set	Pollution Under Control (PUC) Certificates for Contractor's Vehicles						
Kolkata																		
1	KEIIP/ICB/ Tr-1/WS02/20 13-14	Rehabilitation and Refurbishment of Water Works at Palta and Garden Reach	ITD -CEM INDIA Jv (Just awarded)	Yes	No (Just awarded)	-	NR	NR	NR	NR	NR	To be collected	Yet to nominate	NR	Not started	Not started	Not started	
2	KEIIP/ICB/ Tr-1/WS & SD-04/13-14	Laying of water trunk main from Garden Reach waterworks to Taratala valve station and laying of sewer line along Diamond Harbour Road by Micro tunneling method	ITD -ITD CEM JV	Yes	Yes	Satisfactory	Tree felling Done after getting NOC from forest dept.	NR	NR	NR	NR	Permission to be obtained from Pollution control Board – instruction given to contractor	Yes	Yes	NR	Rented house – satisfactory	Satisfactory	Satisfactory planning
3	KEIIP/ICB/ Tr-1/ SD-05/13-14	Construction of pumping stations in Begore khal and in Joka Tram Depot and Construction of Sewerage and Drainage Network within Diamond Harbour Road catchment	TANTIA - MPPL (WILO) JV	Yes	Yes	Satisfactory	NR	NR	NR	NR	NR	Yes	Yes	NR	Partially Satisfactory	Satisfactory	Satisfactory planning	
4	KEIIP/NCB/ Tr-1/SD-06/13-14	Micro-tunneling works on pressure main from Santoshpur Pumping Station to Garden Reach Sewage Treatment Plant	SIMPLEX-KRITA JV	Yes	Yes	Satisfactory	NR	NR	NR	NR	NR	Yes	Yes	NR	Labour camp under construction	Satisfactory (preliminary activity going on)	NR	

NR: Not Required

**ANNEXURE 4: PUBLIC CONSULTATION ON ENVIRONMENTAL ISSUES
DURING CONSTRUCTION/ IMPLEMENTATION**

PLACE OF CONSULTATION	
DATE OF CONSULTATION	
PROJECT NAME	
PACKAGE NO.	
NAME OF THE FIELD SUPERVISORS	
NAME OF THE PERSONS	
ADDRESS	

S.No.	POINTS DISCUSSED	REMARKS
01.		
02.		
03.		
04.		
05.		
06.		
07.		
08.		
09.		
10.		

Consultation Summary

Participants

ANNEXURE 5: SAMPLE GRIEVANCE REGISTRATION FORM

(To be available in Hindi and English or local language - Bengalee)

The **Kolkata Environmental Improvement Investment Program (KEIP)** welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing ***(CONFIDENTIAL)*** above your name. Thank you.

Date		Place of registration			
Contact Information/Personal Details					
Name		Gender	Male Female	Age	
Home Address					
Village / Town					
District					
Phone no.					
E-mail					
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below:					
If included as attachment/note/letter, please tick here:					
How do you want us to reach you for feedback or update on your comment/grievance?					

FOR OFFICIAL USE ONLY

Registered by: (Name of official registering grievance)	
If – then mode:	
<input type="checkbox"/> Note/Letter <input type="checkbox"/> E-mail <input type="checkbox"/> Verbal/Telephonic	
Reviewed by: (Names/Positions of Official(s) reviewing grievance)	
Action Taken:	
Whether Action Taken Disclosed:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Means of Disclosure:	

**GRIEVANCE REDRESS REGISTAR
GRIEVANCES RECORD AND ACTION TAKEN**

Sr. No.	Date	Name and Contact No. of Complainer	Type of Complain	Place	Status of Redress	Remarks