







## Site Specific Environmental Management Plan

### SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN


WBDWSIP BANKURA-TALDANGRA

LOCATION-BENDALAXMANPUR OHSR (ZONE - 15)

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	ARRPROVED BY PIU
0	23.12.19	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I PIU Bankura WBDWSIP PHE Dte Govt. of West Bengal

  
Sasikumar P.S.  
(Project Manager)  
Larsen & Toubro Limited  
Bankura Taldangra Project

Sensitivity: LNT Construction Internal Use

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 2 of 96</b> <b>Original Issue Date :</b>
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### **List of Attachments (OHSR Site)**

Attachment O1: Details of construction Work sites and Site Layout Plan

Attachment O2: Details of construction camp sites

Attachment O3: List of clearances & statutory requirements

Attachment O4: Contractor's OHS Policy & Organization

Attachment O5: Utility shifting/relocation

Attachment O6: Details of Construction Materials

Attachment O7: Spoil Management Plan

### **List of Attachments (Pipelaying Works)**

Attachment P1: Details of construction Work sites and Map of distribution network

Attachment P2: Details of construction camp sites

Attachment P3: List of clearances & statutory requirements, Gram panchayat and other Authorities

Attachment P4: Contractor's OHS Policy & Organization

Attachment P5: Utility shifting/relocation

Attachment P6: Details of Construction Materials

Attachment P7: Spoil Management Plan

Attachment P8: Traffic Management Plan

### **List of Appendices (OHSR and Pipelaying Works)**

Appendix 1: Labor License

Appendix 2: Workman Compensation

Appendix 3- Risk Policy


Appendix 4: Contractor's EHS Policy Statement

Appendix- 5- Tie up Letter with local Hospital

Appendix 6- Certificate of Fitness and PUC

Appendix 7: Procedure for on-site Grievance Redress Mechanism

Appendix 8: Procedure for information disclosure prior to start of works

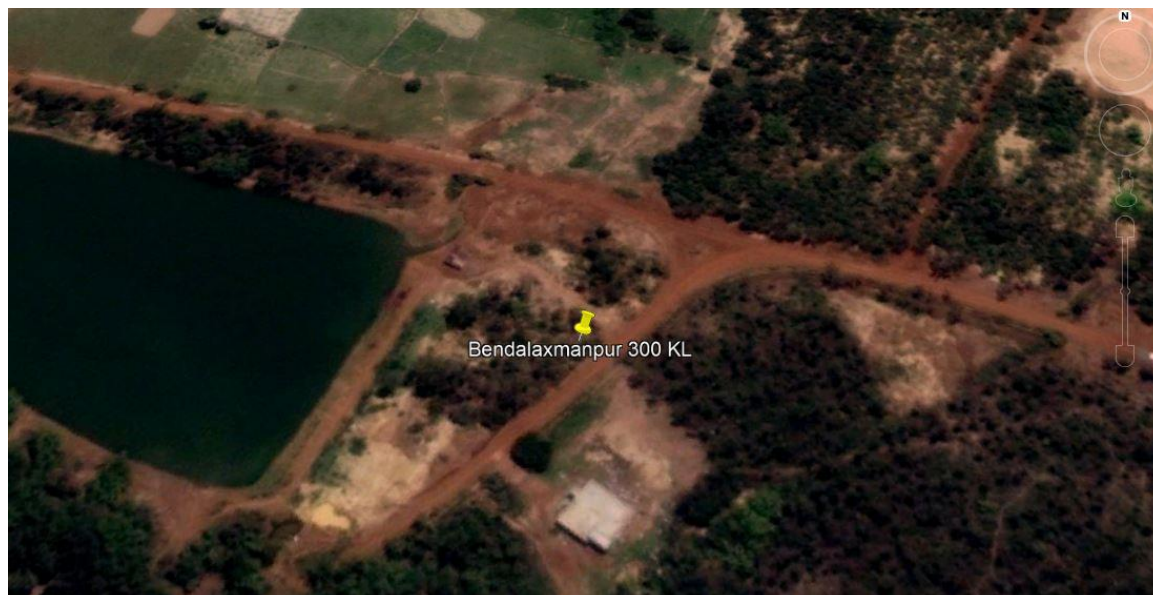
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<b>Package No.</b>	WBDWSIP/DWW/NCB/BK/02B/2018-19, <b>(Zone-15- OHSR, Bendalaxmanpur)</b> Under PIU Bankura
<b>Package title</b>	Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block SEMP is as per requirement of the Draft IEE covering package no. WBDWSIP/DWW/NCB/BK/02B/2018-19
<b>Contractor</b>	Larsen & Toubro Ltd.
<b>Date of Notice to proceed</b>	27/05/2019
<b>Date of works commencement for particular site</b>	25/12/2019
<b>Contract period</b>	Construction: 03 Years; O&M: 2 Years
<b>SEMP Component</b>	Construction of Overhead Service Reservoir – 300 KL
<b>Demolition Work</b>	No demolition activity involved
<b>Project area</b>	Bendalaxmanpur village, Taldangra Gram panchayat of Taldangra Block
<b>Project Description</b>	Individual household water supply schemes for the project Gram Panchayats
<b>Indicative Budget for EMP Implementation for the entire package</b>	INR 40,75,000/-
<b>Project Components</b>	As per project detailed design
<b>Gram Panchayat:</b>	Taldangra GP of Taldangra Block
<b>Land Status</b>	Government and Transferred
<b>OHSR Capacity</b>	300 KL
<b>Location</b>	



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Details of contractors on-site-personnel and workers	Zone- 15 OHSR (Bendalaxmanpur)
Project Manager	Mr. Sasikumar PS; 89272526103
Site Engineer	Mr. Soumya Jana; 9547174116
Site Supervisor	Mr. Seshapu Bala Sai Aravind Kumar ;9346466373
EHS Officer	Mr. Dhableswar Biswal; 8895094563
Archeological supervisor	N/A
Skilled / semi-skilled workers	5 skilled and 5 semi-skilled
Unskilled workers	5
Women workers	Nil
Workers – local / migrant	Local-15 / Migrant-00
<b>Details of facilities</b>	
Construction camps (no's and locations)	All are local labors. Camp not Established.

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**Table 1: Anticipated Impacts and Mitigation Measures – Pre-construction Environmental Mitigation Plan**

Field/Issues (1)	Anticipated Impact (2)	Recommended Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
Utilities	Electric poles and wires, water lines within proposed project area of OHSR site.	<ul style="list-style-type: none"> <li>Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during construction phase; and</li> <li>Require construction contractors to prepare a contingency plan to include actions to be taken in case of unintentional interruption of services.</li> <li>Require contractors to prepare spoils (waste) management plan and traffic management plan.</li> </ul>	<ul style="list-style-type: none"> <li>Contingency Plan has been developed by informing to emergency services like WBSEDCL, local administration and police etc</li> <li>First, we are digging the trial pit manually, if any obstruction arises the same is removed as per direction of end user</li> <li>The construction work to continue without disturbing the existing pipeline and electric poles.</li> <li>Spoil Management Plan is included in <b>Attachment O- 7</b> with this SEMP.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor, PIU</li> </ul>	<ul style="list-style-type: none"> <li>DSISC observation at site and document checking</li> </ul>	<ul style="list-style-type: none"> <li>Project cost</li> </ul>
Construction work camps, stockpile areas, storage areas, and	Conflicts with local community; disruption to traffic flow and sensitive	<ul style="list-style-type: none"> <li>Prioritize areas within or nearest possible vacant space in the project location;</li> </ul>	<ul style="list-style-type: none"> <li>For construction camp, storage area has been established away from water body.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor, PIU</li> </ul>	<ul style="list-style-type: none"> <li>DSISC observation at site</li> </ul>	<ul style="list-style-type: none"> <li>Project cost</li> </ul>


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disposal areas.	receptors.	<ul style="list-style-type: none"> <li>• If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems;</li> <li>• Do not consider residential areas;</li> <li>• Take extreme care in selecting sites to avoid direct disposal to water body which will inconvenience the community.</li> <li>• For excess spoil disposal, ensure (a) site shall be selected preferably from barren, infertile lands. In case agricultural land needs to be selected, written consent from landowners (not</li> </ul>	<ul style="list-style-type: none"> <li>• Spoil generated from construction activity has been re-used for labelling/ backfilling.</li> <li>• Disposal area has been selected at barren, infertile land nearest to the project zone as per suggestion of PIU.</li> <li>• Employees are trained for storage and handling of materials which can potentially cause soil contamination and water contamination;</li> <li>• Oil/Lubricant and chemical storage area is provided with concrete floor and metal tray.</li> <li>• Solid waste managed according to the suggested hierarchy: reuse, and disposal to designated areas;</li> </ul>			




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		lessees) will be obtained; (b) debris disposal site shall be at least 200 m away from surface water bodies; (c) no residential areas shall be located within 50 m downwind side of the site; and (d) site is minimum 250 m away from sensitive locations like settlements, ponds/lakes or other water bodies.				


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Sources of Materials	Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	<ul style="list-style-type: none"> <li>Obtain construction materials only from government approved quarries with prior approval of PIU.</li> <li>On a monthly basis documentation on material obtained from each source (quarry/borrow pit) should be submitted.</li> <li>In case of involvement of new quarries/ borrow areas, prior steps will follow for all clearances and permissions as required under law.</li> </ul>	<ul style="list-style-type: none"> <li>No involvement of any new borrow area or quarry is anticipated.</li> <li>Materials collected from-  <b>Cement-</b> Ambuja, Nuvoco and Ultratech  <b>Reinforcement-</b> Tata Steel, SAIL, RINL  <b>Coarse Aggregates-</b> Pachami quarry.  <b>Fine Aggregates-</b> River Damodar.  Detailed of material list is given in <b>Attachment O-6</b>. </li> <li>Mentioned source are government approved.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor, PIU</li> </ul>	<ul style="list-style-type: none"> <li>DSISC observation at site and document checking</li> </ul>	<ul style="list-style-type: none"> <li>Project cost</li> </ul>




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Consents, permits, clearances, no objection certificates (NOCs), etc.	Failure to obtain necessary consents, permits, NOCs, etc can result to design revisions and/or stoppage of works.	<ul style="list-style-type: none"> <li>• All necessary consents, permits, clearance, NOCs, etc prior to award of civil works should be obtained.</li> <li>• All necessary approvals for construction to be obtained before start of construction.</li> <li>• Acknowledge in writing and report on compliance consents, permits, clearance, NOCs etc. obtained.</li> </ul>	<ul style="list-style-type: none"> <li>• Already done land requisition, electric connection, water source etc.</li> <li>• Tree felling requirement for this site is not anticipated.</li> <li>• Made provision for detailed design drawing and documented all conditions</li> <li>• Please refer <b>Attachment O-3</b> for list of relevant permits and clearances.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor and PIU</li> </ul>	<ul style="list-style-type: none"> <li>• DSISC observation at site and document checking</li> </ul>	<ul style="list-style-type: none"> <li>• Project cost</li> </ul>


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**Table 2: Anticipated Impacts and Mitigation Measures – Construction Environmental Mitigation Plan**


Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
Environmental Management Plan (EMP) Implementation Training	Irreversible impact to the environment, workers, and community	<ul style="list-style-type: none"> <li>Project manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.</li> </ul>	<ul style="list-style-type: none"> <li>EMP implementation training session has been planned for all workers and community.</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost for implementation of mitigation
Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide,	<ul style="list-style-type: none"> <li>Comply with the air pollution / dust control measures for construction activities stipulated by the “Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009”</li> <li>Damp down the soil and any stockpiled material on site by water sprinkling;</li> <li>Use tarpaulins to cover the loose material (soil, sand, aggregate etc.,)</li> </ul>	<ul style="list-style-type: none"> <li>Only vehicles having valid PUC certificate have been engaged in the project.</li> <li>Sprinkling and dust screen arrangement have been made and will be used when required.</li> <li>Workers has been instructed to always use dust mask while working in the trench.</li> <li>Site is access controlled to prevent trespassing.</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost for implementation of mitigation

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	sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons.	when transported by trucks; <ul style="list-style-type: none"> <li>• Provide a dust screen/high compound wall around the construction sites (OHSRs)</li> <li>• Clean wheels and undercarriage of haul trucks prior to leaving construction site/quarry</li> <li>• Control dust generation while unloading the loose material (particularly aggregate, soil) at the site by sprinkling water and unloading inside the barricaded area</li> <li>• Stabilize surface soils where loaders, support equipment and vehicles will operate by using water and maintain surface soils in a stabilized condition</li> <li>• Apply water prior to leveling or any other earth moving activity to keep the soil moist throughout the process</li> <li>• Control access to work area, prevent unnecessary movement of vehicle, public trespassing into work areas; limiting soil disturbance will minimize dust generation</li> <li>• Ensure that all the construction</li> </ul>	<ul style="list-style-type: none"> <li>• Excavated earth piles will be maintained in such a way to minimize dust rising.</li> <li>• Air quality monitoring for base line data completed. Air quality Monitoring has been conducted at following places (5 locations) - Shibdanga more, Harmasra-Jemuya, Rajpur-Gamarbani, Chandabila-Satmouli, Chenchuriya-Patrabandh as per environmental monitoring plan recommended in the IEE.</li> </ul>			

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		equipment and machineries are fitted with pollution control devises, which are operating correctly, and have a valid pollution under control (PUC) certificate.				
Surface water quality	<p>Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during construction can contaminate nearby surface water quality.</p> <p>Ponding of water in the pits / foundation excavations</p>	<ul style="list-style-type: none"> <li>• All earthworks be conducted during the dry season to prevent the problem of soil run-off during monsoon season;</li> <li>• Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;</li> <li>• Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, only designated disposal areas shall be used;</li> <li>• Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;</li> <li>• Place storage areas for fuels and lubricants away from any drainage leading to water bodies;</li> </ul>	<ul style="list-style-type: none"> <li>• There is a nearby surface water body at OHSR site.</li> <li>• Surface water (pond water) quality monitoring for baseline data has been conducted in following places (5 locations) - Shibdanga more, Harmasra-Jemuya, Rajpur-Gamarbani, Chandabila-Satmouli, Chenchuriya-Patrabandh as per environmental monitoring plan recommended in the IEE.</li> <li>• Locations for fuels and lubricants store is away from drainage path and spill kits have been</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost for implementation of mitigation


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		<ul style="list-style-type: none"> <li>Store fuel, construction chemicals etc., on an impervious floor, also avoid spillage by careful handling</li> <li>Dispose any wastes generated by construction activities in designated sites; and</li> <li>Conduct surface quality inspection according to the Environmental Management Plan (EMP).</li> <li>Create a temporary drainage channel around the work area to arrest the entry of runoff from upper areas into the work area(ix) Pump out the water collected in the pits / excavations to a temporary sedimentation pond; dispose of only clarified water into drainage channels/streams after sedimentation in the temporary ponds</li> <li>Consider safety aspects related to pit collapse due to accumulation of water</li> </ul>	<p>obtained.</p> <ul style="list-style-type: none"> <li>All excavated soils are expected to be utilized on-site only. No excess spoil anticipated.</li> </ul>			
Noise Levels	Increase in noise level due to earth-	<ul style="list-style-type: none"> <li>Plan activities in consultation with PIU so that activities with the</li> </ul>	<ul style="list-style-type: none"> <li>Noise quality monitoring for baseline data</li> </ul>	Contractor	PIU and DSISC	Project cost for implementation


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	moving and excavation equipment, and the transportation of equipment, materials, and people	<p>greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;</p> <ul style="list-style-type: none"> <li>• Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</li> <li>• Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and use portable street barriers to minimize sound impact to surrounding sensitive receptor; and</li> <li>• Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity</li> <li>• Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</li> <li>• Consult local communities in advance of the work to identify and address key issues, and avoid</li> </ul>	<p>completed and has been conducted at 5 locations - Shibdanga more, Harmasra-Jemuya, Rajpur-Gamarbani, Chandabila-Satmouli, Chenchuriya-Patrabandh as per environmental monitoring plan recommended in the IEE. Sampling of 5 locations to be conducted shortly.</p> <ul style="list-style-type: none"> <li>• Consultation made with local communities in advance of the work to identify and avoid working at sensitive times, such as religious and cultural festivals.</li> <li>• No building found at risk from vibration damage.</li> </ul>		observation at site and document checking	of mitigation




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Landscape and aesthetics – waste generation	Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	<ul style="list-style-type: none"> <li>working at sensitive times, such as religious and cultural festivals.</li> <li>Prepare and implement a Construction Waste Management Plan</li> <li>As far as possible utilize the debris and excess soil in construction purpose, for example for raising the ground level or construction of access roads etc.,</li> <li>Stockpiles, lubricants, fuels, and other materials should be located away from steep slopes and water bodies;</li> <li>Avoid stockpiling any excess spoils at the site for long time. Excess excavated soils should be disposed of to approved designated areas immediately;</li> <li>If disposal is required, the site shall be selected preferably from barren, infertile lands; site should be located away from residential areas, forests, water bodies and any other sensitive land uses</li> </ul>	<ul style="list-style-type: none"> <li>Excavated earth is utilized for backfilling purpose.</li> <li>Spoil management plan has been developed. <b>(Attachment-O-7)</b></li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost for implementation of mitigation

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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		<ul style="list-style-type: none"> <li>Domestic solid wastes should be properly segregated in biodegradable and non-biodegradable for collection and disposal to designated solid waste disposal site; create a compost pit at workers' camp sites for disposal of biodegradable waste; non-biodegradable / recyclable material shall be collected separately and sold in the local recycling material market</li> <li>Residual and hazardous wastes such as oils, fuels, and lubricants shall be disposed of in disposal sites approved by local authorities/West Bengal Pollution Control Board (WBPCB);</li> <li>Prohibit burning of construction and/or domestic waste;</li> <li>Ensure that wastes are not haphazardly dumped thrown within and around the project site and adjacent areas; provide proper collection bins, and create awareness to use the dust bins.</li> </ul>				

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 17 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		<ul style="list-style-type: none"> <li>Conduct site clearance and restoration to original condition after the completion of construction work; PIU to ensure that site is properly restored prior to issuing of construction completion certificate</li> </ul>				
Ecological Resources – Terrestrial	Loss of vegetation and tree cover	<ul style="list-style-type: none"> <li>Minimize removal of vegetation and disallow cutting of trees, by adopting best site layout and pipeline alignments</li> <li>If tree-removal will be required, obtain tree-cutting permit and</li> <li>Plant 5 native trees for every one that is removed.</li> </ul>	<ul style="list-style-type: none"> <li>Tree removal is not required for OHSR site.</li> </ul>	Contractor, PIU	DSISC observation at site and document checking	Project cost for implementation of mitigation
Accessibility	Traffic problems and conflicts near project locations and haul road	<ul style="list-style-type: none"> <li>Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites</li> <li>Schedule transport and hauling activities during non-peak hours;</li> <li>Locate entry and exit points in areas where there is low potential for traffic congestion;</li> <li>Drive vehicles in a considerate manner</li> </ul>	<ul style="list-style-type: none"> <li>Transportation and hauling activities have been planned during non-peak hours.</li> <li>Project details has been displayed on project site.</li> <li>Demarcation/ collection of detail of ROW is under process.</li> </ul>	Contractor	PIU and DSISC observation at site	Project cost for implementation of mitigation

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 18 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		<ul style="list-style-type: none"> <li>Notify affected public by public information notices, providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints.</li> </ul>				
Socio-Economic - Employment	Generation of temporary employment and increase in local revenue	<ul style="list-style-type: none"> <li>Employ local labor force as far as possible</li> <li>Comply with labor laws</li> </ul>	<ul style="list-style-type: none"> <li>Local labours are employed, on priority, whenever available.</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Contractor costs
Occupational Health and Safety	Occupational hazards which can arise during work	<ul style="list-style-type: none"> <li>Comply with all national, state and local core labor laws</li> <li>Develop and implement site-specific occupational health and safety (OHS) Plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose musk and ear plugs; (c) OHS Training for all site personnel; (d) documented procedures to be followed for all site</li> </ul>	<ul style="list-style-type: none"> <li>Based on L&amp;T's OHS Plan, a site specific OHS plan has been developed.</li> <li>Site OHS plan is attached at <b>attachment 4</b>.</li> <li>All workers have been provided with and made to use Personal Protective Equipment like helmet, gumboot, reflective jacket, gloves, nose mask and ear plugs;</li> <li>H&amp;S Training for all site</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost for implementation of mitigation


 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 19 of 96</b> <b>Original Issue Date :</b>
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		activities; and (e) documentation of work-related accidents; <ul style="list-style-type: none"> <li>• Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</li> <li>• Provide medical insurance coverage for workers;</li> <li>• Secure all installations from unauthorized intrusion and accident risks;</li> <li>• Provide supplies of potable drinking water;</li> <li>• Provide clean eating areas where workers are not exposed to hazardous or noxious substances;</li> <li>• Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</li> <li>• Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or</li> </ul>	personnel has been arranged and it will be continued; <ul style="list-style-type: none"> <li>• H&amp;S orientation training provided to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuries to fellow workers</li> <li>• Documented procedures are followed for all site activities;</li> <li>• Work-related accidents will be recorded;</li> <li>• Bottled water provided at site.</li> <li>• First Aid box provided at working sites</li> <li>• Clean eating areas provided to workers;</li> <li>• Moving equipment maintained with audible back-up alarms</li> </ul>			


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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted; <ul style="list-style-type: none"> <li>• Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;</li> <li>• Ensure moving equipment is outfitted with audible back-up alarms;</li> <li>• Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate;</li> </ul>				
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and	<ul style="list-style-type: none"> <li>• Restrict construction vehicle movements to defined access roads and demarcated working areas (unless in the event of an</li> </ul>	<ul style="list-style-type: none"> <li>• Safety signage and demarcation of work area has been maintained.</li> </ul>	Contractor	PIU and DSISC observation at site	Cost for implementation of mitigation measures




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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
	waste transportation	emergency) <ul style="list-style-type: none"> <li>Enforce strict speed limit (20-30 kph) for playing on unpaved roads, construction tracks</li> <li>Night-time haulage will be by exception only, as approved by the PIU to minimize driving risk and disturbance to communities</li> <li>Temporary traffic control (e.g. flagmen) and signs will be provided where necessary to improve safety and provide directions</li> <li>All drivers will undergo safety and training</li> <li>Public access to all areas where construction works are on-going will be restricted through the use of barricading and security personnel</li> <li>Warning signs, blinkers will be attached to the barricading to caution the public about the hazards associated with the works, and presence of deep excavation</li> <li>The period of time when the pipeline trench is left open will be minimized</li> </ul>	<ul style="list-style-type: none"> <li>Night time haulage will be avoided.</li> <li>Construction of OHSR is site-specific, no disruption of traffic due to construction activity.</li> <li>Water sprinkler will be used regularly to control dust during dry season.</li> <li>Access road will be maintained with proper safety measures.</li> <li>Vehicles and equipment will be checked regularly for better performance.</li> </ul>			responsibility of contractor.

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 22 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		through careful planning <ul style="list-style-type: none"> <li>Control dust pollution – implement dust control measures as suggested under air quality section</li> <li>Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.</li> <li>Provide road signs and flag persons to warn of on-going trenching activities.</li> </ul>				
Labour camp areas	Conflicts with local community; temporary air, water and noise pollution, unsanitary and poor living conditions for workers	<ul style="list-style-type: none"> <li>Provide proper temporary accommodation with proper materials, adequate lighting and ventilation, appropriate facilities for winters and summers; ensure conditions of liveability at work camps are maintained at the highest standards possible at all times;</li> <li>Minimize removal of vegetation and disallow cutting of trees</li> <li>Ensure conditions of liveability at work camps are maintained at the highest standards possible at all</li> </ul>	<ul style="list-style-type: none"> <li>All are local labours, so labour camp not established.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor, PIU</li> </ul>	<ul style="list-style-type: none"> <li>DSISC observation at site</li> </ul>	<ul style="list-style-type: none"> <li>Project cost</li> </ul>

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 23 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		<p>times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workers</p> <ul style="list-style-type: none"> <li>• Camp shall be provided with proper drainage, there shall not be any water accumulation</li> <li>• Provide drinking water, water for other uses, and sanitation facilities for employees</li> <li>• Prohibit employees from cutting of trees for firewood; contractor should be providing proper facilities including cooking fuel (oil or gas; fire wood not allowed)</li> <li>• Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; provide a compost pit for biodegradable</li> </ul>				

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 24 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		waste, and non-biodegradable / recyclable waste shall be collected and sold in local market				
Chance Finds	There are no protected properties in the subproject sites. However, in case of chance finds, contractors will be required to follow a protocol as defined in the mitigation measures.	<ul style="list-style-type: none"> <li>Consult Archaeological Survey of India (ASI) or West Bengal State Archaeology Department to obtain an expert assessment of the archaeological potential of the site</li> <li>Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available.</li> <li>In case of chance finds, works must be stopped immediately until such time chance finds are cleared by experts</li> </ul>	<ul style="list-style-type: none"> <li>Protocol will be maintained if such incident occurs.</li> </ul>	Contractor		Contractor cost
Submission of EMP implementation report	Unsatisfactory compliance to EMP	<ul style="list-style-type: none"> <li>Appointment of (I) Environment, Health and Safety (EHS) Supervisor to ensure EMP implementation</li> <li>Timely submission of monitoring reports including pictures.</li> </ul>	<ul style="list-style-type: none"> <li>EHS Officer has been appointed.</li> <li>For timely submission of monitoring report has been instructed to contractor.</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost for implementation of mitigation measures



## Site Specific Environmental Management Plan

**Table 3: Construction Phase Environmental Monitoring Plan for Entire Package**

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency	Locations*	Cost as per budget (in Rs.)
Ambient air quality	<b>5 locations</b> (to be selected during implementation to represent the overall project area)	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> , SO <sub>2</sub> , CO	Once before start of construction. Yearly 3- times except monsoon period during construction (3-year period considered)	(Shibdanga more, Harmasra-Jemuya, Rajpur-Gamarbani, Chandabila-Satmouli, Chenchuriya-Patrabandh)	250,000/-
Ambient noise	<b>10 locations</b> (same as air quality monitoring)	Day time and night time noise levels(24 hours)	Once before start of construction. Yearly 3- times except monsoon period during construction (3-year period considered)	(Shibdanga more, Harmasra-Jemuya, Rajpur-Gamarbani, Chandabila-Satmouli, Chenchuriya-Patrabandh). At 5 locations will be conducted shortly.	150,000/-
Surface water quality	<b>5 locations</b> (to be selected during implementation)	pH, Oil and grease, Cl, F, NO <sub>3</sub> , TC, FC, Hardness, Turbidity BOD, COD, DO, Total Alkalinity	Once before start of construction. Yearly 3- times except monsoon period during construction (3-year period considered)	(Shibdanga more, Harmasra-Jemuya, Rajpur-Gamarbani, Chandabila-Satmouli, Chenchuriya-Patrabandh)	250,000/-
Soil quality	<b>5 locations</b> (includingz, construction camps, workers camps)	pH, Elect. Conductivity (at 250C), Moisture (at 1050C), Texture (silt, clay, sand), Calcium (as CaO), Magnesium (as Mg), Permeability, Nitrogen (as N), Sodium (as Na), Phosphate (as PO <sub>4</sub> ), Potassium (as K), Organic Matter, oil and grease	Once before start of construction. Yearly 3- times except monsoon period during construction (3-year period considered)	Sampling will be conducted shortly	250,000/-
Ground Water Quality	<b>5 locations</b> (including workers camp site & Construction camp/storage yards)	As per IS10,500: 2012	Once before start of construction. Yearly 3- times except monsoon period during construction (3-year period considered)	(Shibdanga more, Harmasra-Jemuya, Rajpur-Gamarbani, Chandabila-Satmouli, Chenchuriya-Patrabandh)	300,000/-

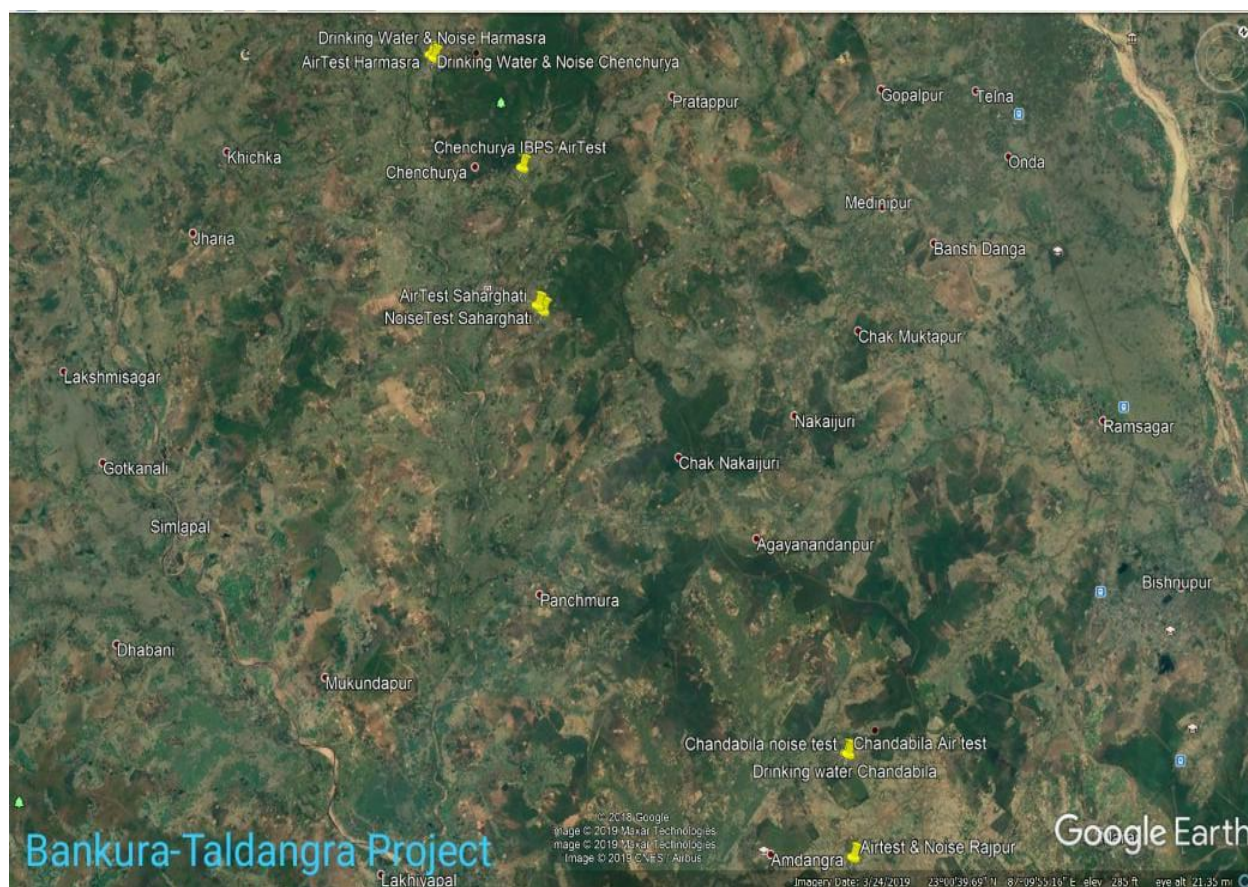




## Site Specific Environmental Management Plan

**Note-** Mention locations had been selected for Baseline data. Sampling were done, report pending. During construction locations are changeable with progress of work. Present locations as mentioned in mitigation tables are base line monitoring conducted as per EMP provision. The exact locations of these monitoring are reported in SEMR over google earth image. For all the packages conduct of these monitoring is responsibility of concerned Contractor and cost for such already budgeted in the IEE

### Monitoring Locations on Google Earth







**L&T Construction**  
Water & Effluent Treatment

Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.  
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## Site Specific Environmental Management Plan

### **List of Attachments (OHSR Site)**

Attachment O1: Details of construction Work sites and Site Layout Plan

Attachment O2: Details of construction camp sites

Attachment O3: List of clearances & statutory requirements

Attachment O4: Contractor's OHS Policy & Organization

Attachment O5: Utility shifting/relocation

Attachment O6: Details of Construction Materials

Attachment O7: Spoil Management Plan



## Site Specific Environmental Management Plan

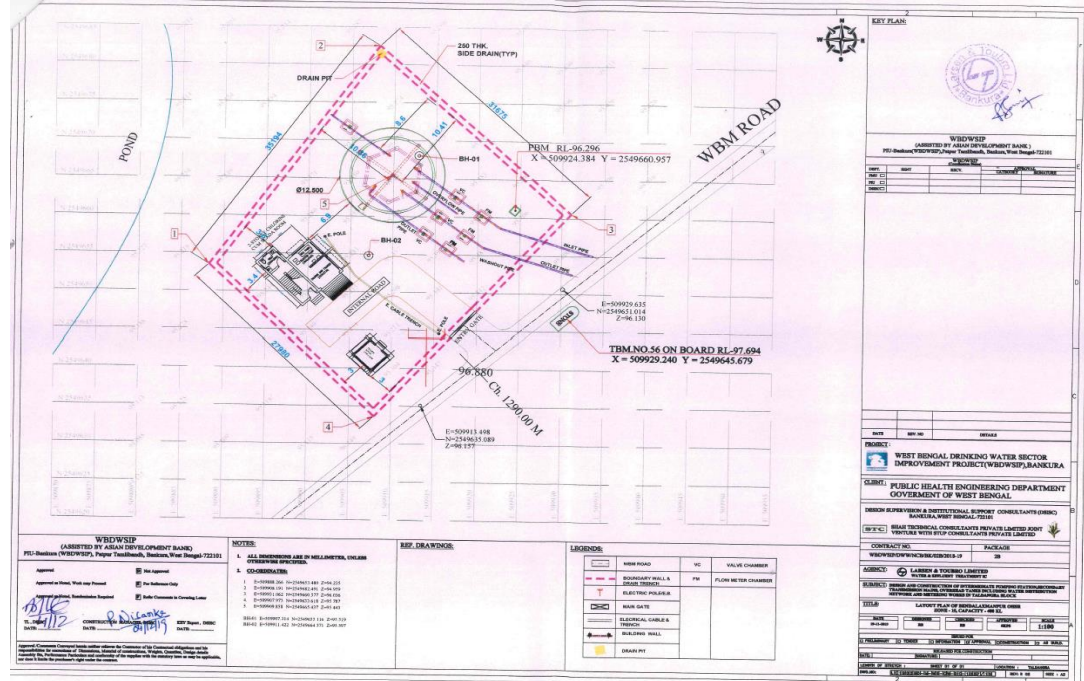
### Attachment O1: Details of construction Work sites and site layout map

1. Zone 15: OHSR construction Site	
Location- BENDALAXMANPUR	
A	<b>Material storage</b> <ul style="list-style-type: none"> <li>• Cement</li> <li>• Steel</li> <li>• Fine Aggregate</li> <li>• Coarse Aggregate</li> <li>• Shuttering Material</li> <li>• Shuttering Oil</li> </ul>
B	<b>Plant &amp; Machinery</b> <ul style="list-style-type: none"> <li>Concrete Mixer – 1 No</li> <li>Needle Vibrator – 2 Nos</li> <li>Steel Cutter – 1 No</li> <li>JCB- 1 No</li> <li>Truck- 1 No.</li> </ul>
C	<b>Site office – No</b>
D	<b>Laboratory – Yes</b>
E	<b>Security cabin – No</b>
F	<b>Labor welfare facilities at Site</b> <ul style="list-style-type: none"> <li>• Labor rest area</li> <li>• Toilets</li> <li>• Drinking water</li> <li>• First Aid Box.</li> </ul>

## Site Specific Environmental Management Plan

G

### Site Layout Plan



H

### Site photographs

Original site photographs

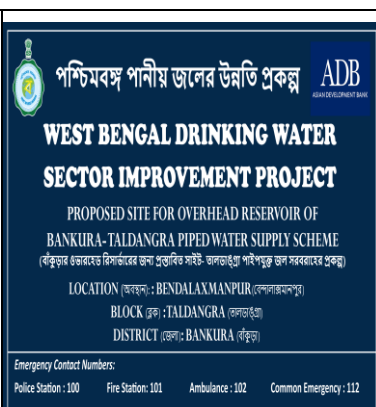


OHSR site before Construction



## Site Specific Environmental Management Plan

Project facilities  
at Site



Project Information Board



Safety signage at site



Toilet on OHSR site



PPEs use at site



First Aid Box at site



Labour Rest Area




## Site Specific Environmental Management Plan

### Attachment O2: Details of construction camp sites

All are local workers. Camp not established.

### Attachment O3: List of clearances & statutory requirements

Sl. No.	Project related	Status
<b>A</b>	<b>Construction/work related</b>	
1	Possession of land	Available
2	Notice to Proceed from PIU	Available
<b>B</b>	<b>Labour Safety / Welfare Related</b>	
1	Labour license	Obtained [Refer <b>Appendix – 1</b> ]
2	Workmen Compensation	Obtained [Refer <b>Appendix – 2</b> ]
3	Risk Policy	Obtained [Refer <b>Appendix – 3</b> ]
<b>C</b>	<b>Safety / liability safety related</b>	
1	Medical Insurance	Tie-up with local hospital made [Refer <b>Appendix – 4</b> ]
<b>D</b>	<b>Others</b>	
1	Fitness certificate for vehicles, equipment used in construction	Obtained [Refer <b>Appendix – 5</b> ]
2	Pollution under control (PUC) certificates for vehicles and equipment	Available [Refer <b>Appendix – 5</b> ]
3	Driving licenses for drivers	Obtained
4	Insurance for vehicles / equipment, as required	Obtained

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#### Attachment O4: Contractor's OHS Policy & Organization

<b>1</b>	<b>Contractor agency has a EHS policy</b>	<b>Yes/ No</b>
A	If yes, provide policy details  1. Policy statement:  2. EHS organization & responsibilities:	  Yes [Refer <b>Appendix-6</b> ]  Yes
B	List safety risks anticipated in the project  Work area - OHSR • Trips and falls • Head injury from falling objects • Confined work space • Slope failure / trench collapse • Accidents from open excavations	-
C	List of personal protection equipment provided to workers • Boots- 15 Nos. • Gloves-5 no. • Helmet-15 nos. • Safety jacket- 15 nos. • Goggles- 4 nos.	Yes
D	Preventive Measures	
	• Orientation of all workers on EHS	Tool Box Talk has been conducted.
	• Work permit system	Yes – for work at height
	• Toolbox/safety meetings (how often will this be conducted, what are the minimum topics)	Twice Weekly on work at height, firefighting, first-aid, housekeeping, etc.
	• Safety signages	Displayed on site
	• Barricades (more than 1 m deep requires hard barricading)	Yes
<b>2</b>	<b>Contractor emergency procedure</b>	
A	• In case of accident, first aid treatment to injured labour/person shall be provided. • In case hospitalization is required, concerned site in-charge will immediately take necessary action for hospitalization and he will inform to our Project Manager. • Details of accident shall be reported in accident register and the same shall be informed to client also.	
B	<b>Contact information, staff and responsibilities for emergency situations</b>	
	<b>Designation</b>	<b>Staff name &amp; contact</b>
		<b>Emergency responsibility</b>





## Site Specific Environmental Management Plan

Site Engineer	Mr. Soumya Jana; Mob: 9547174116	Site Engineer shall be responsible for arranging of first aid treatment and other necessary action required in case of emergency. He will also be responsible for informing to EHS Officer.
EHS Officer	Dhabaleswar Biswal, Mob: 8895094563	EHS Officer should assess the emergency situation and accordingly instruct the Site Engineer of appropriate actions. Depending on the gravity of the situation, he should also inform Project Manager Representative.
Project Manager Representative	Mr. Sasikumar PS; Mob: 8927252613	Project Manager Representative shall be responsible for taking all necessary action and decisions.
C	<b>Reporting procedure in case of work accidents</b> <ul style="list-style-type: none"> <li>Details of accidents shall be recorded in accident register.</li> <li>Copy of accident register shall be submitted to client at the end of every month.</li> <li>In case of any major accident's client shall be informed immediately.</li> </ul>	Yes
D	Mandatory Reporting to Authorities	Yes
E	Prohibited Acts and Penalties for Violations	Yes



## Site Specific Environmental Management Plan

### Attachment O5: Utility shifting/relocation

Sl. No.	List work sites that require utility shifting, relocation, temporary shut off	Remarks
1	Area work sites (OHSR)	Not Required

### Attachment O6: Details of Construction Materials

Sl. No	Material	Approximate quantity required for project	Source	Indicate if source has all necessary government clearances
1	Steel	35.550 MT	Approved supplier SAIL, RINL & TATA	-
2	Cement	135.75 MT	Approved supplier Novoco, UltraTech & Ambuja.	-
3	Sand	137.92 Cum	From approved quarries at Damodar River	Yes
4	Aggregate	174.22 Cum	From approved quarries at Panchami	Yes









## Site Specific Environmental Management Plan

### Attachment O7: Spoil Management Plan

## SPOIL MANAGEMENT PLAN(SMP)

WBDWSIP BANKURA-TALDANGRA

LOCATION-BENDALAXMANPUR OHSR (ZONE - 15)

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	ARRPROVED BY PIU
0	23.12.19	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I PIU Bankura WBDWSIP, PHE Dte Govt. of West Bengal

Sasikumar P.S.  
( Project Manager )  
Larsen & Toubro Limited  
Bankura Taldangra Project

Sensitivity: LNT Construction Internal Use

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## Site Specific Environmental Management Plan

### 1. INTRODUCTION OF SMP:

SMP is to describe how the project will manage the spoil generated and reuse related to design and construction works. This is an integral part of EMP. The objective of SMP is to reuse of spoil from works.

### 2. SCOPE:

This Spoil Management Plan developed for **OHSR site in Zone (15)**. For the OHSR site. We do not anticipate any excess Spoil for disposal as all excavated material will be reuse at site only.

### 3. LEGAL AND OTHER REQUIREMENTS:

In this project, there is no legal litigation at site for land and working area or site. Disposal of spoil will be confirming the Environmental Protection Rules and Regulations of Govt. of India and the State Govt.

### 4. ROLES AND RESPONSIBILITY:

#### SITE ENGINEER:

- Will strictly work as per drawing.
- Will stay at site during activity is going on.
- Will see excess earth is kept at a particular place after completion of backfilling.
- Will ensure quality of the work by discussing daily about the type of activity on that day with the workmen.
- Will check site drain outlets are not blocked due to excavated earth on the drain.

#### SAFETY PERSONNEL:

- Will constant Job specific Tool Box Talk with Supervisor and Workmen.
- Will check excavated earth kept away from top.
- Will check if any underground pipeline is there or live electric cable their water should be sprayed to avoid dust hazard from excavation.
- Necessary Safety signage, Cones to be used.
- Vehicles reverse horn etc to be checked will ensure zero tolerance in safety.

#### WORKER:

- They will start activity only after Tool Box Talk done.
- They will wear job specific safety items before start of work.
- During working inside the excavated trench, they should use ladder for easy access.
- They should barricade the area of activity with Safety barricading tape.
- Worker should be skilled to carry out the work.

It is the responsibility of the Engineers and all department head to implement this procedure and ensure that delegated staff and worker under their supervision carry it out in this project. Major roles and responsibilities are mentioned below:

- Excavated earth should be utilized like refilling at site only.
- Traffic movement should not be obstructed by dumping soil during the work.
- No low land, pond, ditch etc. will be filled up by extra soil outside the work place.



## Site Specific Environmental Management Plan

- Ensuring no accident occurs during rainy season by excavated earth during or finished the work.
- All the drains, outlet should be free from excavated earth.

### 5. IDENTIFICATION AND ASSESSMENT OF SPOIL ASPECTS AND IMPACTS:

In this project, places will be identified jointly along with design engineer for utilization. Main places where the excavated earth can be utilized are the trench of pipes and backfilling location.

### 6. SPOIL VOLUMES AND CHARACTERISTICS:

In this project, approx. Generation of excavated earth will be **approx. 641.4 cum**. There is no excess earth in this project as the same earth is to be used to fill the low land area.

As per report from soil expert, excavated earth is cohesive in nature.

### 7. SPOIL REUSES OPPORTUNITIES, IDENTIFICATION AND ASSESMENT:

In this project, there is **approx. 101 cum** excess quality of excavated earth; total excavated earth should be reuse as per plan.

### 8. ON SITE SPOIL MANAGMENT APPROACH:

In this project, no need of the approach as there is no extra soils for disposal.

### 9. SPOIL TRANSPORTATION METHODOLOGY:

In this project, no need for spoil transport as there is no extra soils for disposal.

### 10. MONITORING, REPORTING, REVIEW AND IMPROVEMENTS:

Monitoring, Reporting and all necessary improvements will be done as per requirements.

## SPOIL DETAILS

Sl. No.	Zone	Name of the structure	Excavation Total Qty (C.U.M)	Back Filling Total Qty (C.U.M)	Reuse Excess Qty (C.U.M)
1	15	Boundary wall	128.83	98.41	30.42
2	15	OHSR	512.61	441.34	71.27
<b>Total</b>			<b>641.4</b>	<b>539.75</b>	<b>101.69</b>









## Site Specific Environmental Management Plan


# SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN

WBDWSIP BANKURA- PKG-02B

TALDANGRA BLOCK

LOCATION-BENDALAXMANPUR PIPELINE WORKS (ZONE-15)

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	ARRPROVED BY PIU
0	23.12.19	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I PIU Bankura WBDWSIP PHE Dto Govt. of West Bengal

  
Sanku Kumar P.S.  
(Project Manager)  
Larsen & Toubro Limited  
Bankura Taldangra Project

Sensitivity: LNT Construction Internal Use

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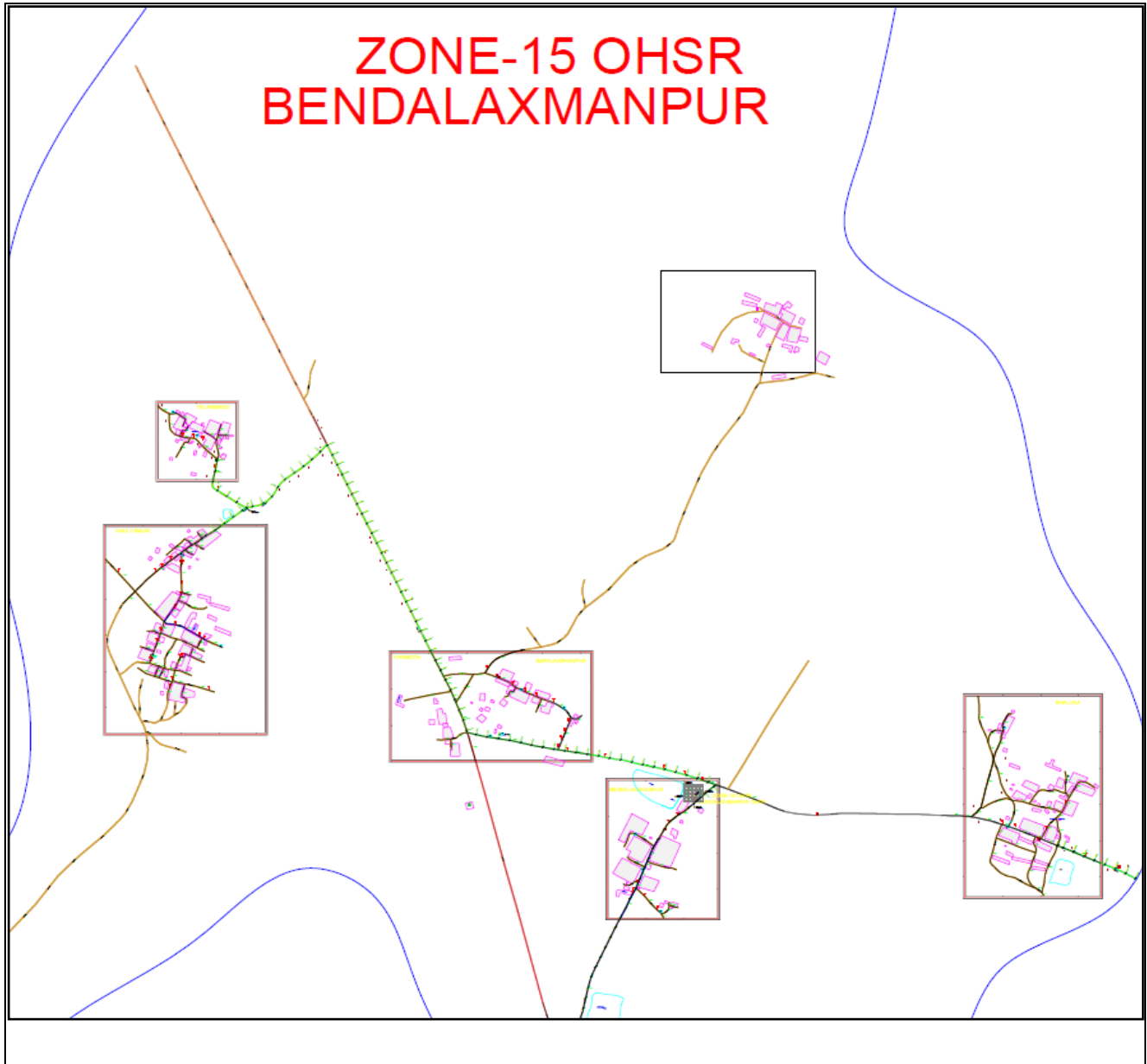


## Site Specific Environmental Management Plan

Package No.				WBDWSIP/DWW/NCB/BK/02B/2018-19, <b>ZONE-15, Pipeline (Bendalaxmanpur)</b> under PIU Bankura							
Package title				Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block SEMP is as per requirement of the Draft IEE covering package no. WBDWSIP/DWW/NCB/BK/02B/2018-19							
Contractor				Larsen & Toubro Ltd.							
Date of Notice to proceed				27/05/2019							
Date of particular works commencement				30/1/2020							
Contract period				Construction: 3 Years; O&M: 2 Years							
SEMP Component				Laying of 22776m of pipeline as detailed below.							
Demolition Work				No demolition activity involved							
Project Area				Bendalaxmanpur village, Taldangra GP of Taldangra Block							
Project Description				Individual household water supply schemes for the project Gram Panchayats							
Household Connection				3957 (Estimated HH Connection)							
Non-Household Connection				All Commercial, Educational, Religious and Health institutions will get potable water from this project. Numbers are not identified							
Indicative Budget for EMP Implementation for the entire package				INR 40,75,000/-							
Project Components				As per project detailed design							
Gram Panchayat (GP):				Taldangra Gram panchayat of Taldangra Block							
Water Distribution Pipe Length (m) Summary											Total Length
Zone ID	Pipe Diameters(mm)										
	75*	90*	110*	140*	200*	250	300	350	400		
Zone - 15	0	4846	12553	1997	3362	18	0	0	0	22776	
Map of Distribution Network											




## Site Specific Environmental Management Plan






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<b>Details of contractors on-site-personnel and workers</b>	<b>ZONE-15- Pipeline Works- Bendalaxmanpur</b>
Project Manager	Mr. Sasikumar PS; 8927252613
Site Engineer	Mr. Balaji R; 8940749996
Site Supervisor	Mr. Pardeep Kumar Chahal; 8462013925
EHS Officer	Mr. Dhabaleswar Biswal- 8895094563
Archeological supervisor	NA
Skilled / semi-skilled workers	3 skilled and 6 Semi-skilled
Unskilled workers	6
Women workers	Nil
Workers – local / migrant	Local-15 (Planned)
<b>Details of facilities</b>	
Construction camps	Not yet established

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 42 of 96</b> <b>Original Issue Date :</b>
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**Table 1: Anticipated Impacts and Mitigation Measures – Pre-construction Environmental Mitigation Plan**

Field/Issues (1)	Anticipated Impact (2)	Recommended Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
Utilities	Electric poles and wires, water lines within proposed project area of Pipe laying.	<ul style="list-style-type: none"> <li>Locations and operators of these utilities to be identified as per detailed design documents to prevent unnecessary disruption of services during construction phase.</li> <li>Prepare spoils (Waste) management plan.</li> </ul>	<ul style="list-style-type: none"> <li>Contingency Plan has been developed by informing to emergency services like WBSEDCL, Telecommunication, local administration and police etc.</li> <li>First, we are digging the trial pit manually, if any obstruction arise the same is removed as per direction of end user</li> <li>The pipe laying work to continue without disturbing the existing water pipelines and electric poles and overhead HT line.</li> <li>Flagman deployed on-site with Red and Green flags to control traffic and activity side by side.</li> <li>Please refer <b>Attachment P7 and P8</b> of this SEMP for site specific spoil management plan and traffic management plans.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor, PIU</li> </ul>	<ul style="list-style-type: none"> <li>DSISC observation at site and document checking</li> </ul>	<ul style="list-style-type: none"> <li>Project cost</li> </ul>
Construction work camps, stockpile areas, storage areas, and	Conflicts with local community; disruption to traffic flow and sensitive receptors.	<ul style="list-style-type: none"> <li>Prioritize areas within or nearest possible vacant space in the project location;</li> <li>If it is deemed necessary to locate</li> </ul>	<ul style="list-style-type: none"> <li>At present no construction camp established. For construction camp, if established, storage area to be established away from water body.</li> <li>Spoil generated from construction activity has been re-used for labelling/</li> </ul>	<ul style="list-style-type: none"> <li>Contractor, PIU</li> </ul>	<ul style="list-style-type: none"> <li>DSISC observation at site</li> </ul>	<ul style="list-style-type: none"> <li>Project cost</li> </ul>


 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 43 of 96</b> <b>Original Issue Date :</b>
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Field/Issues (1)	Anticipated Impact (2)	Recommended Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
disposal areas.		elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems; <ul style="list-style-type: none"> <li>Do not consider residential areas;</li> <li>Take extreme care in selecting sites to avoid direct disposal to water body which will inconvenience the community.</li> <li>For excess spoil disposal, ensure (a) site shall be selected preferably from barren, infertile lands. In case agricultural land needs to be selected, written consent from landowners (not lessees) will be obtained; (b) debris disposal site shall be at least 200 m away</li> </ul>	backfilling. <ul style="list-style-type: none"> <li>Disposal area has been selected at barren, infertile land nearest to the project zone.</li> <li>Employees are trained for storage and handling of materials which can potentially cause soil contamination and water contamination;</li> <li>Solid waste managed according to the following preferential hierarchy: reuse, and disposal to designated areas.</li> </ul>			


 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 44 of 96</b> <b>Original Issue Date :</b>
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Field/Issues (1)	Anticipated Impact (2)	Recommended Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
		from surface water bodies; (c) no residential areas shall be located within 50 m downwind side of the site; and (d) site is minimum 250 m away from sensitive locations like settlements, ponds/lakes or other water bodies.				
Sources of Materials	Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	<ul style="list-style-type: none"> <li>Obtain construction materials only from government approved quarries with prior approval of PIU.</li> <li>On a monthly basis documentation on material obtained from each source (quarry/borrow pit) should be submitted.</li> <li>In case of involvement of new quarries/ borrow areas, prior steps will follow for all clearances</li> </ul>	<ul style="list-style-type: none"> <li>No involvement of any new borrow area or quarry is anticipated.</li> <li>Materials collected from-  <b>Cement-</b> Ambuja, Nuvoco and Ultratech  <b>Reinforcement-</b> Tata Steel, SAIL, RINL  <b>Coarse Aggregates-</b> Pachami quarry.  <b>Fine Aggregates-</b> River Damodar.             Mentioned source are government approved.         </li> </ul>	Contractor, PIU	DSISC document checking	Project cost



 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 45 of 96</b> <b>Original Issue Date :</b>
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Field/Issues (1)	Anticipated Impact (2)	Recommended Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
		and permissions as required under law.				
Consents, permits, clearances, no objection certificates (NOCs), etc.	Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works.	<ul style="list-style-type: none"> <li>All necessary consents, permits, clearance, NOCs, etc prior to award of civil works should be obtained.</li> <li>All necessary approvals for construction to be obtained before start of construction.</li> <li>Acknowledge in writing and report on compliance consents, permits, clearance, NOCs etc. obtained.</li> </ul>	<ul style="list-style-type: none"> <li>We have already received pipe laying permission from local authorities, electric connection, water source etc.</li> <li>NOC taken from Gram Pradhans for carrying out the activity.</li> <li>DG sets of capacity less than 5 kVA only being used.</li> <li>Refer <b>Attachment P3</b> for relevant clearances.</li> </ul>	Contractor and PIU	DSISC observation at site and document checking	Project cost
Asbestos Cement Pipes	Health risk due to exposure to asbestos materials	<ul style="list-style-type: none"> <li>Obtain details on location of underground Asbestos cement pipes</li> <li>Locate the new pipe carefully to avoid encountering AC pipes</li> <li>Leave the Asbestos Cement pipes undisturbed in the ground.</li> </ul>	<ul style="list-style-type: none"> <li>Pipe laying work will be continued without disturbing existing pipelines as recommended in the IEE.</li> <li>No asbestos pipes seen till work period.</li> </ul>	Contractor and PIU	DSISC observation at site	

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 46 of 96</b> <b>Original Issue Date :</b>
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**Table 2: Anticipated Impacts and Mitigation Measures – Construction Environmental Mitigation Plan**

Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
Environmental Management Plan (EMP) Implementation Training	Irreversible impact to the environment, workers, and community	<ul style="list-style-type: none"> <li>Project manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.</li> </ul>	<ul style="list-style-type: none"> <li>EMP implementation training session has been planned for all workers and community.</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost
Material procurement	HDPE pipes gets heated during strong sun and at fusion weld joints.	Hand gloves, nose masks and related PPE's should be used by the workmen.	<ul style="list-style-type: none"> <li>Continuous supervision regarding the use of safety gadgets is being ensured [Refer <b>Attachment P5</b>]</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost
Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in	<ul style="list-style-type: none"> <li>Comply with the air pollution / dust control measures for construction activities stipulated by the "Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009"</li> </ul>	<ul style="list-style-type: none"> <li>Only vehicles having valid PUC certificate have been engaged in the project.</li> <li>Sprinkling and dust screen arrangement have been made and will be used when required.</li> <li>Workers has been instructed to always use dust musk while working in the trench.</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 47 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
	concentration of vehicle-related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons.	<ul style="list-style-type: none"> <li>• Damp down the soil and any stockpiled material on site by water sprinkling;</li> <li>• Use tarpaulins to cover the loose material (soil, sand, aggregate etc.,) when transported by trucks;</li> <li>• Provide a dust screen/high compound wall around the construction sites (OHSRs)</li> <li>• Clean wheels and undercarriage of haul trucks prior to leaving construction site/quarry</li> <li>• Control dust generation while unloading the loose material (particularly aggregate, soil) at the site by sprinkling water and unloading inside the barricaded area</li> <li>• Stabilize surface soils where loaders, support equipment and vehicles will operate by using water and maintain surface soils in a stabilized condition</li> <li>• Apply water prior to leveling or any other earth moving activity</li> </ul>	<ul style="list-style-type: none"> <li>• Site is access controlled to prevent trespassing.</li> <li>• Excavated earth piles will be maintained in such a way to minimize dust rising.</li> <li>• Air quality monitoring for base line data completed. Air quality Monitoring has been conducted at following five locations - Shibdanga more, BENDALAXMANPUR-Jemuya, Rajpur-Gamarbani, BENDALAXMANPUR-Satmouli, Chenchuriya- Patrabandh as per environmental monitoring plan recommended in the IEE.</li> </ul>			

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 48 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		to keep the soil moist throughout the process <ul style="list-style-type: none"> <li>Control access to work area, prevent unnecessary movement of vehicle, public trespassing into work areas; limiting soil disturbance will minimize dust generation</li> <li>Ensure that all the construction equipment and machineries are fitted with pollution control devises, which are operating correctly, and have a valid pollution under control (PUC) certificate.</li> </ul>				
Surface water quality	Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during construction can contaminate nearby surface water quality.  Ponding of water	<ul style="list-style-type: none"> <li>All earthworks be conducted during the dry season to prevent the problem of soil run-off during monsoon season;</li> <li>Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;</li> <li>Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, only designated</li> </ul>	<ul style="list-style-type: none"> <li>Surface water quality (pond water) monitoring for baseline data has been conducted in 5 locations - Shibdanga more, BENDALAXMANPUR-Jemuya, Rajpur-Gamarbani, BENDALAXMANPUR-Satmouli, Chenchuriya- Patrabandh. as per environmental monitoring plan recommended in the IEE.</li> <li>A temporary drainage channel has been created to work area to arrest</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost


 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 49 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
	in the pits / foundation excavations	disposal areas shall be used; <ul style="list-style-type: none"> <li>• Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;</li> <li>• Place storage areas for fuels and lubricants away from any drainage leading to water bodies;</li> <li>• Store fuel, construction chemicals etc., on an impervious floor, also avoid spillage by careful handling</li> <li>• Dispose any wastes generated by construction activities in designated sites; and</li> <li>• Conduct surface quality inspection according to the Environmental Management Plan (EMP).</li> <li>• Create a temporary drainage channel around the work area to arrest the entry of runoff from upper areas into the work area(ix) Pump out the water collected in the pits / excavations to a temporary</li> </ul>	the entry of run-off from upper areas into the work area. <ul style="list-style-type: none"> <li>• Locations for fuels and lubricants store is away from drainage path and spill kits have been obtained.</li> <li>• All excavated soils are expected to be utilized on-site only. No excess spoil anticipated.</li> </ul>			


 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 50 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		sedimentation pond; dispose of only clarified water into drainage channels/streams after sedimentation in the temporary ponds <ul style="list-style-type: none"> <li>Consider safety aspects related to pit collapse due to accumulation of water</li> </ul>				
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	<ul style="list-style-type: none"> <li>Plan activities in consultation with PIU so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;</li> <li>Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</li> <li>Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and use portable street barriers to minimize sound impact to surrounding sensitive receptor; and</li> </ul>	<ul style="list-style-type: none"> <li>Noise quality monitoring for baseline data completed at following five places - Shibdanga more, BENDALAXMANPUR-Jemuya, Rajpur-Gamarbani, BENDALAXMANPUR-Satmouli, Chenchuriya- Patrabandh. as per environmental monitoring plan recommended in the IEE. Sampling of 5 locations will be conducted shortly.</li> <li>Consultation made with local communities in advance of the work to identify and avoid working at sensitive times, such as religious and cultural festivals.</li> <li>No building found at risk from vibration damage.</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost




 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 51 of 96</b> <b>Original Issue Date :</b>
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		<ul style="list-style-type: none"> <li>Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity</li> <li>Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</li> <li>Consult local communities in advance of the work to identify and address key issues, and avoid working at sensitive times, such as religious and cultural festivals.</li> </ul>				
Landscape and aesthetics – waste generation	Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers,	<ul style="list-style-type: none"> <li>Prepare and implement a Construction Waste Management Plan</li> <li>As far as possible utilize the debris and excess soil in construction purpose, for example for raising the ground level or construction of access roads etc.,</li> <li>Stockpiles, lubricants, fuels, and other materials should be located away from steep slopes</li> </ul>	<ul style="list-style-type: none"> <li>Excavated earth is utilized for backfilling purpose.</li> <li>Spoil management plan has been developed. <b>(Attachment- P7)</b></li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 52 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
	spoils, oils, lubricants, and other similar items.	and water bodies; <ul style="list-style-type: none"> <li>Avoid stockpiling any excess spoils at the site for long time. Excess excavated soils should be disposed of to approved designated areas immediately;</li> <li>If disposal is required, the site shall be selected preferably from barren, infertile lands; site should be located away from residential areas, forests, water bodies and any other sensitive land uses</li> <li>Domestic solid wastes should be properly segregated in biodegradable and non-biodegradable for collection and disposal to designated solid waste disposal site; create a compost pit at workers' camp sites for disposal of biodegradable waste; non-biodegradable / recyclable material shall be collected separately and sold in the local recycling material market</li> <li>Residual and hazardous</li> </ul>				

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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		wastes such as oils, fuels, and lubricants shall be disposed of in disposal sites approved by local authorities/West Bengal Pollution Control Board (WBPCB); <ul style="list-style-type: none"> <li>Prohibit burning of construction and/or domestic waste;</li> <li>Ensure that wastes are not haphazardly dumped thrown within and around the project site and adjacent areas; provide proper collection bins, and create awareness to use the dust bins.</li> <li>Conduct site clearance and restoration to original condition after the completion of construction work; PIU to ensure that site is properly restored prior to issuing of construction completion certificate</li> </ul>				
Ecological Resources – Terrestrial	Loss of vegetation and tree cover	<ul style="list-style-type: none"> <li>Minimize removal of vegetation and disallow cutting of trees, by adopting best site layout and pipeline alignments</li> </ul>	<ul style="list-style-type: none"> <li>Demarcation of ROW is pending that's why design of pipeline laying is under process.</li> </ul>	Contractor, PIU	DSISC observation at site and document	Project cost

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 54 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		<ul style="list-style-type: none"> <li>If tree-removal will be required, obtain tree-cutting permit and</li> <li>Plant 5 native trees for every one that is removed.</li> </ul>			checking	
Accessibility	Traffic problems and conflicts near project locations and haul road	<ul style="list-style-type: none"> <li>Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites</li> <li>Schedule transport and hauling activities during non-peak hours;</li> <li>Locate entry and exit points in areas where there is low potential for traffic congestion;</li> <li>Drive vehicles in a considerate manner</li> <li>Notify affected public by public information notices, providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints.</li> </ul>	<ul style="list-style-type: none"> <li>Transportation and hauling activities have been planned during non-peak hours.</li> <li>Project details has been displayed on project site.</li> <li>Demarcation/ collection of detail of ROW is under process.</li> </ul>	Contractor	PIU and DSISC observation at site	Project cost
Socio-Economic - Employment	Generation of temporary employment and increase in local	<ul style="list-style-type: none"> <li>Employ local labor force as far as possible</li> <li>Comply with labor laws</li> </ul>	<ul style="list-style-type: none"> <li>Local labours are employed, on priority, whenever available.</li> </ul>	Contractor	PIU and DSISC observation at site and	Contractor costs


 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 55 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
	revenue				document checking	
Occupational Health and Safety	Occupational hazards which can arise during work	<ul style="list-style-type: none"> <li>Comply with all national, state and local core labor laws</li> <li>Develop and implement site-specific occupational health and safety (OHS) Plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose musk and ear plugs; (c) OHS Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents;</li> <li>Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</li> <li>Provide medical insurance coverage for workers;</li> </ul>	<ul style="list-style-type: none"> <li>Based on L&amp;T's OHS Plan, a site specific OHS plan has been developed.</li> <li>Site OHS plan is attached at <b>Attachment –P4</b>.</li> <li>All workers have been provided with and made to use Personal Protective Equipment like helmet, gumboot, reflective jacket, gloves, nose mask and ear plugs;</li> <li>H&amp;S Training for all site personnel has been arranged and it will be continued;</li> <li>H&amp;S orientation training provided to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuries to fellow workers</li> <li>Documented procedures are followed for all site activities;</li> <li>Work-related accidents will be recorded;</li> <li>Bottled water provided at site.</li> <li>First Aid box provided at working</li> </ul>	Contractor	PIU and DSISC observation at site and document checking	Project cost


 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 56 of 96</b> <b>Original Issue Date :</b>
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		<ul style="list-style-type: none"> <li>Secure all installations from unauthorized intrusion and accident risks;</li> <li>Provide supplies of potable drinking water;</li> <li>Provide clean eating areas where workers are not exposed to hazardous or noxious substances;</li> <li>Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</li> <li>Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</li> <li>Ensure the visibility of workers through their use of high visibility vests when working in</li> </ul>	sites <ul style="list-style-type: none"> <li>Clean eating areas provided to workers;</li> <li>Moving equipment maintained with audible back-up alarms</li> </ul>			




 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 57 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		or walking through heavy equipment operating areas; <ul style="list-style-type: none"> <li>• Ensure moving equipment is outfitted with audible back-up alarms;</li> <li>• Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate;</li> </ul>				
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	<ul style="list-style-type: none"> <li>• Restrict construction vehicle movements to defined access roads and demarcated working areas (unless in the event of an emergency)</li> <li>• Enforce strict speed limit (20-30 kph) for playing on unpaved roads, construction tracks</li> <li>• Night-time haulage will be by</li> </ul>	<ul style="list-style-type: none"> <li>• Safety signage and demarcation of work area will be maintained.</li> <li>• Night time haulage will be avoided.</li> <li>• Temporary traffic control (e.g. flagmen) and signs will be provided where necessary to improve safety and provide directions</li> <li>• All drivers will undergo safety and training</li> </ul>	Contractor	PIU and DSISC observation at site	Cost for implementation of mitigation measures responsibility of contractor.

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 58 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		<p>exception only, as approved by the PIU to minimize driving risk and disturbance to communities</p> <ul style="list-style-type: none"> <li>• Temporary traffic control (e.g. flagmen) and signs will be provided where necessary to improve safety and provide directions</li> <li>• All drivers will undergo safety and training</li> <li>• Public access to all areas where construction works are on-going will be restricted through the use of barricading and security personnel</li> <li>• Warning signs, blinkers will be attached to the barricading to caution the public about the hazards associated with the works, and presence of deep excavation</li> <li>• The period of time when the pipeline trench is left open will be minimized through careful planning</li> <li>• Control dust pollution –</li> </ul>	<ul style="list-style-type: none"> <li>• Public access to all areas where construction works are on-going will be restricted through the use of barricading and security personnel</li> <li>• Warning signs, blinkers will be attached to the barricading to caution the public about the hazards associated with the works, and presence of deep excavation</li> <li>• The period of time when the pipeline trench is left open will be minimized through careful planning</li> <li>• Water sprinkler will be used regularly to control dust during dry season.</li> <li>• Access road will be maintained with proper safety measures.</li> <li>• Vehicles and equipments will be checked regularly for better performance.</li> </ul>			

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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		implement dust control measures as suggested under air quality section <ul style="list-style-type: none"> <li>• Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.</li> <li>• Provide road signs and flag persons to warn of on-going trenching activities.</li> </ul>				
Labour camp areas	Conflicts with local community; temporary air, water and noise pollution, unsanitary and poor living conditions for workers	<ul style="list-style-type: none"> <li>• Provide proper temporary accommodation with proper materials, adequate lighting and ventilation, appropriate facilities for winters and summers; ensure conditions of livability at work camps are maintained at the highest standards possible at all times;</li> <li>• Minimize removal of vegetation and disallow cutting of trees</li> <li>• Ensure conditions of liveability at work camps are maintained at the highest standards</li> </ul>	<ul style="list-style-type: none"> <li>• Labour camp not yet established. It will be provided all the basic facilities like kitchen, drinking water, toilet, first aid box, light, fan etc. When required.</li> <li>• LPG will be provided for cooking. Use of firewood prohibited at camp.</li> <li>• Kitchen waste will be collected in a dustbin and is disposed outside from area to designated disposal location.</li> <li>• Housekeeping will be maintained regularly to keep the area clean and hygienic.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor, PIU</li> </ul>	<ul style="list-style-type: none"> <li>• DSISC observation at site</li> </ul>	<ul style="list-style-type: none"> <li>• Project cost</li> </ul>

 <b>L&amp;T Construction</b> <i>Water &amp; Effluent Treatment</i>	<b>Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.</b> <b>(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)</b>	<b>Doc. No. L&amp;T/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 60 of 96</b> <b>Original Issue Date :</b>
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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
		<p>possible at all times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workers</p> <ul style="list-style-type: none"> <li>• Camp shall be provided with proper drainage, there shall not be any water accumulation</li> <li>• Provide drinking water, water for other uses, and sanitation facilities for employees</li> <li>• Prohibit employees from cutting of trees for firewood; contractor should be providing proper facilities including cooking fuel (oil or gas; fire wood not allowed)</li> <li>• Manage solid waste according to the following preference hierarchy: reuse, recycling and</li> </ul>				

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		disposal to designated areas; provide a compost pit for biodegradable waste, and non-biodegradable / recyclable waste shall be collected and sold in local market				
Chance Finds	There are no protected properties in the subproject sites. However, in case of chance finds, contractors will be required to follow a protocol as defined in the mitigation measures.	<ul style="list-style-type: none"> <li>Consult Archaeological Survey of India (ASI) or West Bengal State Archaeology Department to obtain an expert assessment of the archaeological potential of the site</li> <li>Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available.</li> <li>In case of chance finds, works must be stopped immediately until such time chance finds are cleared by experts</li> </ul>	<ul style="list-style-type: none"> <li>No archaeological chance finds are reported at project sites till date.</li> <li>If there is any such finding, action will be taken up as per requirement.</li> </ul>	Contractor	PIU and DSISC observation	Contractor cost
Submission of EMP implementation	Unsatisfactory compliance to EMP	<ul style="list-style-type: none"> <li>Appointment of (I) Environment, Health and Safety (EHS) Supervisor to</li> </ul>	<ul style="list-style-type: none"> <li>EHS Officer has been appointed.</li> <li>For timely submission of monitoring report has been instructed to</li> </ul>	Contractor	PIU and DSISC observation	Project cost

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Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of found (7)
report		ensure EMP implementation <ul style="list-style-type: none"> <li>Timely submission of monitoring reports including pictures.</li> </ul>	contractor.		at site and document checking	





## Site Specific Environmental Management Plan

### **List of Attachments (Pipelaying Works)**

Attachment P1: Details of construction Work sites and Map of distribution network

Attachment P2: Details of construction camp sites

Attachment P3: List of clearances & statutory requirements, Gram panchayat and other Authorities

Attachment P4: Contractor's OHS Policy & Organization

Attachment P5: Utility shifting/relocation

Attachment P6: Details of Construction Materials

Attachment P7: Spoil Management Plan

Attachment P8: Traffic Management Plan

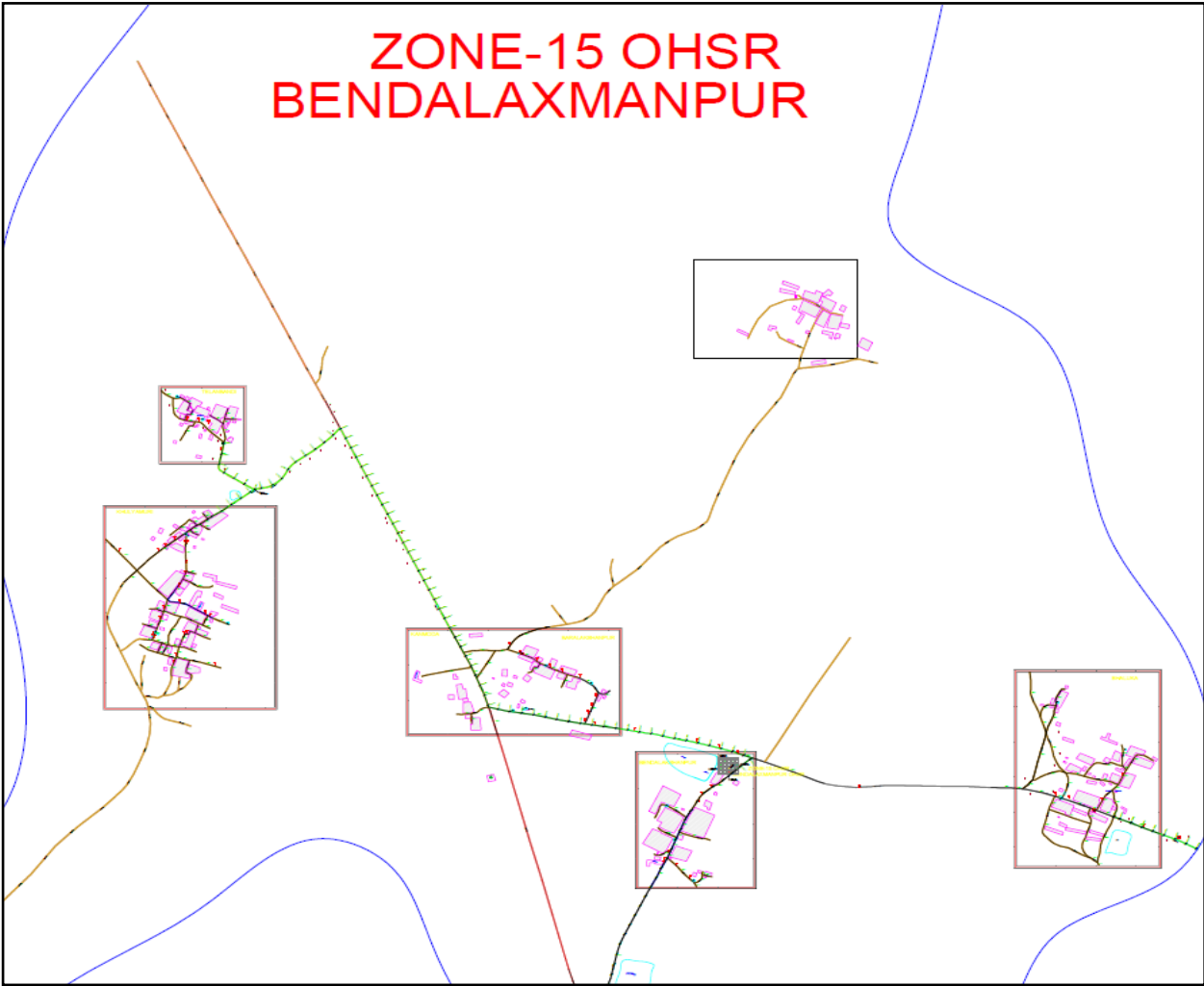


## Site Specific Environmental Management Plan

### Attachment P1: Details of construction Work sites and Map of distribution network

1. (ZONE-15): Pipeline construction Site																																																																																			
Location- BENDALAXMANPUR																																																																																			
A	<b>Material storage</b> <ul style="list-style-type: none"> <li>• Pipe</li> <li>• Fittings</li> </ul>																																																																																		
B	<b>Plant &amp; Machinery</b> <ul style="list-style-type: none"> <li>▪ Jointing Machine-1 Nos</li> <li>▪ DG (less than 5 kVA) – 1 Nos</li> <li>▪ JCB – 1 Nos</li> </ul>																																																																																		
C	<b>Site office</b> – Yes																																																																																		
D	<b>Laboratory</b> – Yes																																																																																		
E	<b>Security cabin</b> – Yes																																																																																		
F	<b>Labor welfare facilities at Site</b> <ul style="list-style-type: none"> <li>• Drinking water</li> <li>• First Aid Box.</li> </ul>																																																																																		
G	<b>Road, agriculture land involvement and infrastructure facility</b> No agricultural land involved No as such underground infrastructure available. Earthen village roads. Details of pipeline, roads and construction methodology are presented below- <table border="1"> <thead> <tr> <th>Pipe Diameter (mm)</th><th>Length (m)</th><th>Width of trench (m)</th><th>Depth of Trench (m)</th><th>Width of roads (m)</th><th>Type of roads (earthen / BT / CC)</th><th>Excavation method (manual/mechanical)</th></tr> </thead> <tbody> <tr> <td colspan="7"><b>DI Pipes ( 55m)</b></td></tr> <tr> <td>250 mm</td><td>55</td><td>0.4- 0.8</td><td>1.25</td><td>2.0-6.0</td><td>CC/BT/Earthen</td><td>Manual/Mech</td></tr> <tr> <td colspan="7"><b>Distribution Network— HDPE Pipes (22,776 m)</b></td></tr> <tr> <td>250 mm</td><td>18</td><td>0.4- 0.8</td><td>1.25</td><td>2.0-6.0</td><td>CC/BT/Earthen</td><td>Manual/Mech</td></tr> <tr> <td>200 mm</td><td>3362</td><td>0.4- 0.8</td><td>1.20</td><td>2.0-6.0</td><td>CC/BT/Earthen</td><td>Manual/Mech</td></tr> <tr> <td>140 mm</td><td>1997</td><td>0.4- 0.8</td><td>1.14</td><td>2.0-6.0</td><td>CC/BT/Earthen</td><td>Manual/Mech</td></tr> <tr> <td>110 mm</td><td>12553</td><td>0.4- 0.8</td><td>1.11</td><td>2.0-6.0</td><td>CC/BT/Earthen</td><td>Manual/Mech</td></tr> <tr> <td>90 mm</td><td>4846</td><td>0.4- 0.8</td><td>1.09</td><td>2.0-6.0</td><td>CC/BT/Earthen</td><td>Manual/Mech</td></tr> <tr> <td>75 mm</td><td>0</td><td>0</td><td>0</td><td>0</td><td>-</td><td>-</td></tr> <tr> <td>63 mm</td><td>0</td><td>0</td><td>0</td><td>0</td><td>-</td><td>-</td></tr> </tbody> </table>						Pipe Diameter (mm)	Length (m)	Width of trench (m)	Depth of Trench (m)	Width of roads (m)	Type of roads (earthen / BT / CC)	Excavation method (manual/mechanical)	<b>DI Pipes ( 55m)</b>							250 mm	55	0.4- 0.8	1.25	2.0-6.0	CC/BT/Earthen	Manual/Mech	<b>Distribution Network— HDPE Pipes (22,776 m)</b>							250 mm	18	0.4- 0.8	1.25	2.0-6.0	CC/BT/Earthen	Manual/Mech	200 mm	3362	0.4- 0.8	1.20	2.0-6.0	CC/BT/Earthen	Manual/Mech	140 mm	1997	0.4- 0.8	1.14	2.0-6.0	CC/BT/Earthen	Manual/Mech	110 mm	12553	0.4- 0.8	1.11	2.0-6.0	CC/BT/Earthen	Manual/Mech	90 mm	4846	0.4- 0.8	1.09	2.0-6.0	CC/BT/Earthen	Manual/Mech	75 mm	0	0	0	0	-	-	63 mm	0	0	0	0	-	-
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63 mm	0	0	0	0	-	-																																																																													

**Map of Distribution Network in Bendalaxmanpur**



**Attachment P2: Details of construction camp sites**

1.	Labour Accommodation, Pipeline site – Zone 15
Location-Not yet established	



## Site Specific Environmental Management Plan

### Attachment P3: List of clearances & statutory requirements

Sl. No.	Project related	Status
<b>A</b>	<b>Construction/work related</b>	
1	Gram Panchayet and Other Authorities Permission	Obtained (Refer <b>Appendix-7</b> )
<b>B</b>	<b>Labour Safety / Welfare Related</b>	
1	Labour license	Obtained [Refer <b>Appendix – 1</b> ]
2	Workmen Compensation	Obtained [Refer <b>Appendix – 2</b> ]
3	Risk policy	Obtained [Refer <b>Appendix – 3</b> ]
<b>C</b>	<b>Safety / liability safety related</b>	
1	Medical insurance	Tie-up with local hospital done [Refer <b>Appendix – 4</b> ]
<b>D</b>	<b>Others</b>	
1	Fitness certificate for vehicles, equipment used in construction	Obtained
2	Pollution under control (PUC) certificates for vehicles and equipment	Available [Refer <b>Appendix – 5</b> ]
3	Driving licenses for drivers	Available
4	Insurance for vehicles / equipment, as required	Available



## Site Specific Environmental Management Plan

### Attachment P4: Contractor's OHS Policy & Organization

<b>1</b>	<b>Contractor agency has a EHS policy</b>	<b>Yes/ No</b>
A	<p>If yes, provide policy details</p> <p>1. Policy statement:</p> <p>2. EHS organization &amp; responsibilities:</p>	<p>Yes [Refer <b>Appendix-6</b>]</p> <p>Yes</p>
B	<p>List safety risks anticipated in the project</p> <p>Work area – Pipe laying works</p> <ul style="list-style-type: none"> <li>• Trips and falls</li> <li>• Head injury from falling objects</li> <li>• Confined work space</li> <li>• Slope failure / trench collapse</li> <li>• Accidents from open excavations</li> </ul>	-
C	<p>List of personal protection equipment provided to workers</p> <ul style="list-style-type: none"> <li>• Boots- 15 Nos.</li> <li>• Gloves-5 no.</li> <li>• Helmet-15 nos.</li> <li>• Safety jacket- 15 nos.</li> <li>• Goggles- 4 nos.</li> </ul>	Yes
D	Preventive Measures	
	<ul style="list-style-type: none"> <li>• Orientation of all workers on EHS</li> </ul>	Tool Box Talk has been conducted.
	<ul style="list-style-type: none"> <li>• Work permit system</li> </ul>	Yes – for work at height
	<ul style="list-style-type: none"> <li>• Toolbox/safety meetings (how often will this be conducted, what are the minimum topics)</li> </ul>	Twice Weekly on work at height, firefighting, first-aid, housekeeping, etc.
	<ul style="list-style-type: none"> <li>• Safety signages</li> </ul>	Displayed on site
	<ul style="list-style-type: none"> <li>• Barricades (more than 1 m deep requires hard barricading)</li> </ul>	Yes
<b>2</b>	<b>Contractor emergency procedure</b>	
A	<ul style="list-style-type: none"> <li>• In case of accident, first aid treatment to injured labour/person shall be provided.</li> <li>• In case hospitalization is required, concerned site in-charge will immediately take necessary action for hospitalization and he will inform to our Project Manager.</li> <li>• Details of accident shall be reported in accident register and the same shall be informed to client also.</li> </ul>	
B	<b>Contact information, staff and responsibilities for emergency situations</b>	
	<b>Designation</b>	<b>Staff name &amp; contact</b>
		<b>Emergency responsibility</b>



## Site Specific Environmental Management Plan

Site Engineer	Mr. Soumya Jana; Mob: 9547174116	Site Engineer shall be responsible for arranging of first aid treatment and other necessary action required in case of emergency. He will also be responsible for informing to EHS Officer.
EHS Officer	Dhabaleswar Biswal, Mob: 8895094563	EHS Officer should assess the emergency situation and accordingly instruct the Site Engineer of appropriate actions. Depending on the gravity of the situation, he should also inform Project Manager Representative.
Project Manager Representative	Mr. Sasikumar PS; Mob: 8927252613	Project Manager Representative shall be responsible for taking all necessary action and decisions.
C	<b>Reporting procedure in case of work accidents</b> <ul style="list-style-type: none"> <li>Details of accidents shall be recorded in accident register.</li> <li>Copy of accident register shall be submitted to client at the end of every month.</li> <li>In case of any major accident's client shall be informed immediately.</li> </ul>	Yes
D	Mandatory Reporting to Authorities	Yes
E	Prohibited Acts and Penalties for Violations	Yes

### Attachment P5: Utility shifting/relocation

Sl. No.	List work sites that require utility shifting, relocation, temporary shut off	Remarks
1	Area work sites (Pipeline)	Under Process

### Attachment P6: Details of Construction Materials

Sl. No	Material	Approximate quantity required (m3) for project	Source	Indicate if source has all necessary government clearances
1	Earth	7490	From trench cutting	Not required
2	Pipe - DI	55 m	Rashmi metallicks	Yes
3	Pipe - HDPE	22776 m	TEXMO INDUSTRIES	Yes





## Site Specific Environmental Management Plan

### Attachment P7: Spoil Management Plan

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU
0	23-12-19	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I PIU Bankura WBDWSIP, PHE Dept Govt. of West Bengal

  
Sasikumar P.S.  
(Project Manager)  
Larsen & Toubro Limited  
Bankura Taldangra Project

Sensitivity: LNT Construction Internal Use

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## Site Specific Environmental Management Plan

### 1. INTRODUCTION OF SMP:

SMP is to describe how the project will manage the spoil generated and reuse related to design and construction works. This is an integral part of EMP. The objective of SMP is to reuse of spoil from works.

### 2. SCOPE:

This Spoil Management Plan developed for pipeline network laying in **Zone (15)**. For this site, we do not anticipate any excess Spoil for disposal as all excavated material will be reused at site only.

### 3. LEGAL AND OTHER REQUIREMENTS:

In this project, there is no legal litigation at site for land and working area or site. Disposal of spoil will be conforming the Environmental Protection Rules and Regulations of Govt. of India and the State Govt.

### 4. ROLES AND RESPONSIBILITY:

#### SITE ENGINEER:

- Will strictly work as per drawing.
- Will stay at site during activity is going on.
- Will see excess earth is kept at a particular place after completion of backfilling.
- Will ensure quality of the work by discussing daily about the type of activity on that day with the workmen.
- Will check site drain outlets are not blocked due to excavated earth on the drain.

#### SAFETY PERSONNEL:

- Will constant Job Specific Tool Box Talk with Supervisor and Workmen.
- Will check excavated earth kept away from top.
- Will check if any underground pipeline is there or live electric cable there water should be sprayed to avoid dust hazard from excavation.
- Necessary Safety signage, Cones to be used.
- Vehicles reverse horn etc to be checked will ensure zero tolerance in safety.

#### WORKER:

- Workers will start activity only after job specific Tool Box Talk done by the job supervisor.
- They will wear job specific safety items before start of work.
- During working inside the excavated trench, they should use ladder for easy access.
- They should barricade the area of activity with Safety barricading tape/Safety cone/ Caution Boards at the start and end of a road under excavation
- Worker should be skilled to carry out the work.
- Workers should take care of the pedestrians and vehicles safe movement.

It is the responsibility of the Engineers and all department head to implement this procedure and ensure that delegated staff and worker under their supervision carry it out in this project. Major roles and responsibilities are mentioned below:

- Excavated earth should be utilized like refilling at site only.
- Traffic movement should not be obstructed by dumping soil during the work.



## Site Specific Environmental Management Plan

- No low land, pond, ditch etc. will be filled up by extra soil outside the work place.
- Ensuring no accident occurs during rainy season by excavated earth during or finished the work.
- All the drains, outlet should be free from excavated earth.

### 5. IDENTIFICATION AND ASSESSMENT OF SPOIL ASPECTS AND IMPACTS:

In this project, there are some places which will be assessed and identified jointly along with design engineer. Main places where the excavated earth can be utilized are the trench of pipes and backfilling location.

### 6. SPOIL VOLUMES AND CHARACTERISTICS:

In this project, approx. generation of excavated earth will be **approx. 7490 cum**. There is no excess earth in this project as the same earth is to be used to fill the low land area.

As per report from soil expert, excavated earth is cohesive in nature.

### 7. SPOIL REUSES OPPORTUNITIES, IDENTIFICATION AND ASSESMENT:

In this project, there is **approx. 1148 cum** quality of excavated earth; total excavated earth will be reused for backfilling of low land area as per plan.

### 8. ON SITE SPOIL MANAGMENT APPROACH:

In this project, no need of the approach as there is no extra soil for disposal.

### 9. SPOIL TRANSPORTATION METHODOLOGY:

In this project, no need of transport as there is no extra soil for disposal.

### 10. MONITORING, REPORTING, REVIEW AND IMPROVEMENTS:

Monitoring, Reporting and all necessary improvements will be done as per requirements.







### **Expected Spoil generated at Bendalaxmanpur (Zone-15) for Pipe laying**


Sl.	Dia	Length(m)	Width(m)	Depth(m)	Excavated earth(cum)	Back filled earth(cum)	Spoil generated (cum)
1	75	0	0	0	0	0	0
2	90	4846	0.3	1.075	1562.8	1406.6	156.3
3	110	12553	0.3	1.09	4104.8	3694.3	410.5
4	140	1997	0.3	1.11	665.0	598.5	66.5
5	200	3362	0.3	1.14	1149.8	1034.8	115.0
6	250	18	0.45	1.25	10.1	9.1	1.0
<b>Approx. generated total Spoil at (ZONE-15)</b>					<b>7490</b>	<b>5481</b>	<b>1148</b>



## Site Specific Environmental Management Plan

### Attachment P8: Traffic Management Plan

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU
0	23.12.19	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I PIU Bankura WBDWSIP, PHE Div Govt. of West Bengal

  
Sasikumar P.S.  
(Project Manager)  
Larsen & Toubro Limited  
Bankura Taldangra Project

Sensitivity: LNT Construction Internal Use

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## Site Specific Environmental Management Plan

### 1. **PURPOSE**

Main purpose is to prevent accident between vehicles, pedestrians and employees and also minimise inconvenience to the vehicle. To stop property damage and prevent injury to persons arising from site traffic and site transport.

### 2. **SCOPE**

The procedure is applicable for HDPE/DI pipe laying area. Pipelaying works not required full road closure but partial closure is required on all these roads and hence, traffic management plans have been developed accordingly.

### 3. **RESPONSIBILITY**

It is the responsibility of the Engineers and all department head to implement this procedure and ensure that delegated staff under their supervision carries it out.

### 4. **LEGAL REQUIREMENT**

The Building and Other Construction Workers (Regulations of Employment and Conditions of Service) Act 1996 and Central Rule 1998 Rule 48, 88 and 95, Motor Vehicle Act 1988

### 5. **REQUIREMENTS**

#### 5.1 **General**

All road works create inconvenience and are a potential hazard to the safety of all road users and those employed in carrying out the work.

All the effects should be reduced to the minimum, and to ensure that the works are properly guarded, lighted and signed.

A clear and early warning of any obstruction to all road users should be provided.

All areas where work is going on should be clearly demarcated by proper barricading and entry into these areas should be restricted to only authorize personnel.

Site access for local people.

#### 5.2 **Planning Stage**

Particular attention should be given to:

- Traffic signs
- Cones
- Barriers
- Road hazard warning lights
- Information boards and
- Site lighting
- Site access for local people
- Consider necessity to traffic control systems such as temporary traffic lights or Stop/Go boards.
- Access should be planned to eliminate dangerous movements of site traffic (e.g. reversing of vehicles) and personnel (e.g. crossing dual carriageways).
- Provision of adequate lighting while working at night.



## Site Specific Environmental Management Plan

- All persons working on the road shall wear high visibility jackets.

### 5.3 On Site

The working space shall be defined and “A PLACE FOR EVERYTHING AND EVERYTHING IN ITS PLACE” to be follow.

### 5.4 Operators/Drivers

- Only Experienced operators and drivers with valid licensed has been appointed.
- One copy of license has been collected.
- Refreshment training conducted for all operators and drivers.
- Operators/Drivers authentication and validation to operate the particular machinery displayed in the machine/vehicles.

### 5.5 Equipment

- Drivers undertake a daily visual inspection of their vehicles include steering, brakes, mirrors, lights, horn, tyres and windshield wipers.
- Safety Department along with Plant and machinery department shall check the vehicles as a monthly basis.
- All vehicles have reverse horns and it is in working properly.
- All vehicles, preventive maintenance schedule has to be followed strictly.

### 5.6 Roads

- For safe operation we are following the below safety measure:
- Safe width of road has been provided.
- Flag man deployed at every traffic point to control the vehicles and pedestrians.
- Speed limits 10km/hr within the working area.
- Caution board has been placed in every location within the site.
- Workers are working with reflective jacket as well as required PPE's.
- Road for use of pedestrian has been identified.
- Reverse horn used in vehicles.
- While reverse vehicles ensuring Banks man.
- Do's and Don'ts displayed at site office.

### 5.7 Loading and Unloading

- Only authorized persons were engage loading/unloading.
- Materials loaded within the permitted safe weight limit (as per RTO) for the truck.
- Ensuring Soil and Sand loaded trucks are covered with tarpaulin while transporting
- During Toolbox talk's intimation has been delivered to all drivers/operators that when the drivers leave the driving seat, the engine of the truck shall be switched off, the gear engaged and parking brakes applied. On slopes, wheel blocks shall be applied.
- Helper has been provided with all vehicles.
- After unloading, the banks man ensuring that the tipper is lowered before moving.
- Turn buckle and side stoppers used while transporting as required.





## Site Specific Environmental Management Plan

### 5.8 Working Area

- The working area has been restricted from unauthorized entry.
- The working space has been defined.

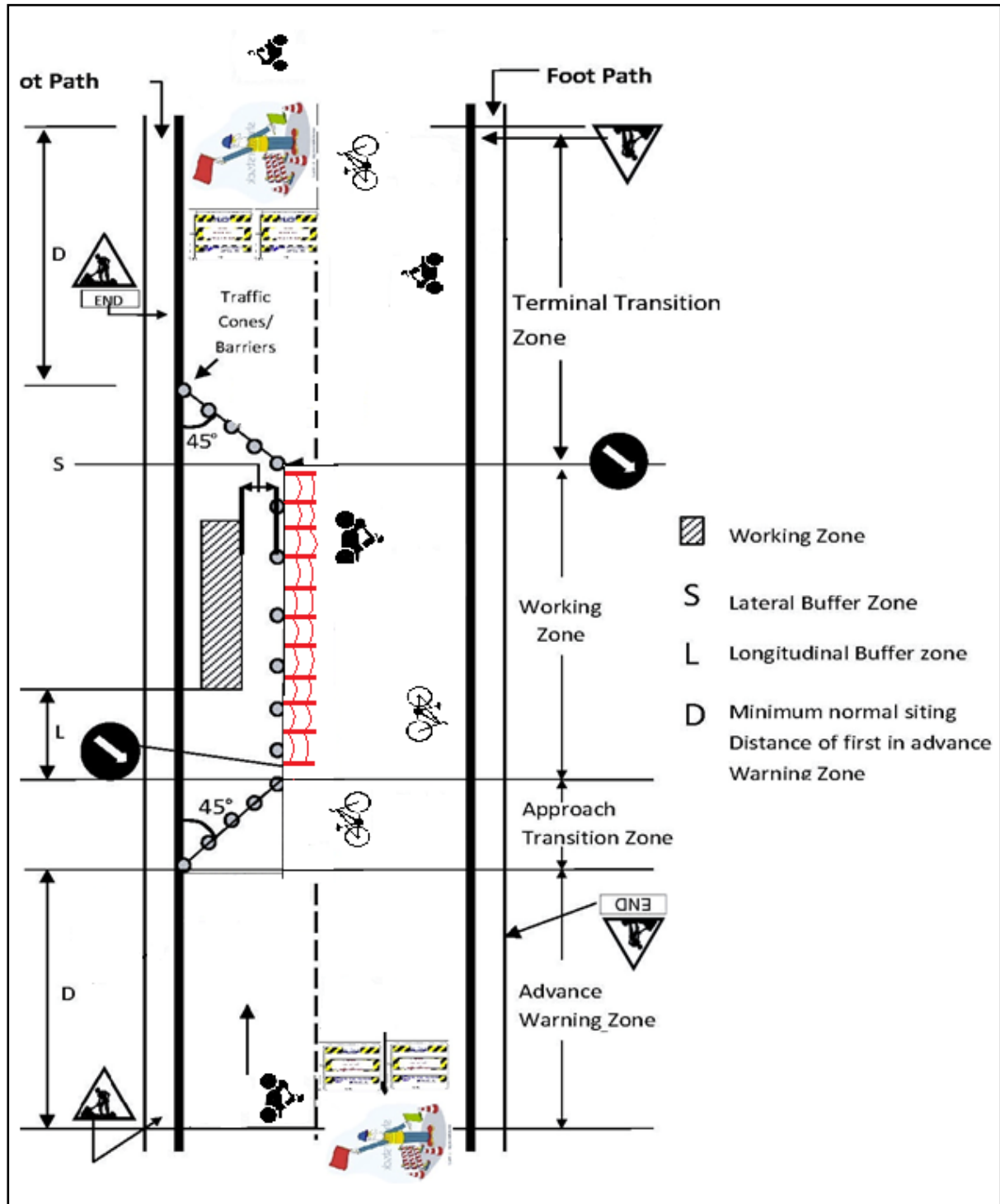
Particular attention has been taken in working area:

- Traffic signs
- Cones
- Barriers
- Information boards, and
- Site lighting
- Adequate lighting has been provided at working area at night.
- All persons wear high visibility jackets.



## Site Specific Environmental Management Plan

### Traffic management Plan for Low traffic (PMGSY-ROAD)





## Site Specific Environmental Management Plan

### **List of Appendices (OHSR and Pipelaying Works)**

Appendix 1: Labor License

Appendix 2: Workman Compensation

Appendix 3- Risk Policy

Appendix 4: Contractor's EHS Policy Statement

Appendix- 5- Tie up Letter with local Hospital

Appendix 6- Certificate of Fitness and PUC

Appendix 7- Permission Letter



Appendix 8: Procedure for on-site Grievance Redress Mechanism

Appendix 9: Procedure for information disclosure prior to start of works



## Site Specific Environmental Management Plan

### Appendix 1: Labour License

**GOVERNMENT OF WEST BENGAL**  
OFFICE OF THE ASSISTANT LABOUR COMMISSIONER , KHATRA  
Office Of The Assistant Labour Commissioner, Khatra Dhalai Road PO & PS- khatra Dist.- Bankura Pin-722140

**FORM VI**  
[ See Rule 25(1) ]


Licence No. : **KTR16/CLL/000043** Date : **21st Aug, 2019**

Lic Fees	250
S.Deposit	10000

**LICENCE**

Licence is hereby granted to **Larsen & Toubro Limited** at **Ward No. 9 Holding no. 95/B/11, Uttar Aurobindo Nagar, Junbedia More, Bankura Municipality , Ward- 9, Bankura Sadar , PS - Bankura , District - Bankura, Pin Code - 722101** under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 subject to the conditions specified in Annexure.

The Licence shall remain in force till: **19th Aug, 2020.**



Digitally signed  
by AMIT RAY  
Date: 2019.08.21  
15:23:34 +05'30'

**AMIT RAY**  
Licensing Officer  
Under the Contract Labour(R&A) Act, 1970  
&  
Assistant Labour Commissioner  
Khatra, Bankura

**Establishment Information:**  
Project Implimentation Unit, Public Heath Engineering Directorate [BAN08/CLR/000038]  
W.Site - Ailakundi, PHE Complex ,  
Anchuri, Block - Bankura -I , Bankura Sadar - 722102, PS - Bankura , Bankura

**Work site exact location:**  
Taldangra Project, Vill:- Chechuriya, Near Chechuriya Eco park.  
Taldangra, Block- Taldangra , Khatra  
PS - Taldangra , District - Bankura, Pin Code - 722152

1 of 2



## Site Specific Environmental Management Plan

### ANNEXURE

The licence is subject to the following conditions:

- (1). The licence shall be non-transferable.
- (2). The number of workmen employed as contract labour in the establishment shall not on any day, exceed **100 (One Hundred )**.
- (3). Except as provided in the rules the fees paid for the grant, or as the case may be, for renewal of the licence shall be non-refundable.
- (4). The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the Schedule of employment under the Minimum Wages Act, 1948, where applicable, and where the rates have been fixed by agreement, settlement or award, not less than the rates fixed.
- (5). In cases where the workmen employed by the contractor perform the same or similar kind of work: as the workmen directly employed by the principal employer of the establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of the contractor shall be the same as applicable to the workmen directly employed by the principal employer of the establishment on the same or similar kind of work provided that in the case of any disagreement with regard to the type of work the same shall be decided by the Labour Commissioner, West Bengal, whose decision shall be final.
- (6). In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (7). In every establishment where 50 or more, women having children are ordinarily employed as contract labour there shall be provided 2 rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as a play room for the children and the other as bed room for the children. For this purpose the contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping room. The standard of construction and maintenance of the creches may be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (8). The Licensee shall notify any change in the number of workmen or the conditions of work to the Licensing Officer.

**ASHIS KUMAR  
GARAI**

Digitally signed by ASHIS  
KUMAR GARAI  
Date: 2019.08.13 17:31:17  
+05'30'





**L&T Construction**  
Water & Effluent Treatment

Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.

(Contract Package No:  
WBDWSIP/DWW/NCB/BK/02B/2018-19)

Doc. No. L&T/ SEMP /01  
Last Revision No. 00  
Last Revision Date : 00  
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Original Issue Date :

## Site Specific Environmental Management Plan

### Appendix 2: Workman Compensation

PACKAGE - 02B

**ICICI Lombard**  
— GENERAL INSURANCE —

Certificate No: 697      Date: 02-Dec-2019

To whomsoever it may concern

This is to certify that we have issued Group Personal Accident Policy No. 4005/102843874/04/000 to M/S. Larsen & Toubro Limited valid for the period 31-03-2019 to 30-03-2020.

This Policy covers all Permanent Workers, Temporary Workers, Sub-contractor's Workers, Piece-rate workers, Trainee Workers working at Project/Office of L&T Ltd and their Subsidiary & Associate Companies, Factories & Consortiums, SPVs, JVs, L&T Infrastructure Development Projects Ltd, L&T Hydrocarbon Engineering Ltd located anywhere in India.

This Policy covers the above workers in the following project site.

LE190280 - Design and Construction of Intermediate Pumping Station, Secondary Transmission Mains, Overhead Reservoirs including Water Distribution Network and Metering Works in Taldangra Block.

For ICICI Lombard General Insurance Co Ltd

  
Rathnakar Nair K | Associate Vice President – Specialized Industries

**ICICI Lombard General Insurance Company Limited**      AA

<b>Mailing Address:</b> 401 & 402, 4th Floor, Interface 11, New Linking Road, Malad (West), Mumbai - 400 064.	<b>Registered Office:</b> ICICI Lombard House, 414, Veer Savarkar Marg, Near Siddhi Vinayak Temple, Prabhadevi, Mumbai - 400 025.	<b>Toll free No. :</b> 1800 2566 <b>Alternate No.:</b> 0 2236 22656 (chargeable) <b>Email :</b> customersupport@icicilombard.com <b>Website :</b> www.icicilombard.com
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**L&T Construction**  
Water & Effluent Treatment

**Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldangra Block.**

**(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)**

**Doc. No. L&T/ SEMP /01  
Last Revision No. 00  
Last Revision Date : 00  
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Original Issue Date :**

## Site Specific Environmental Management Plan

### Appendix- 3- Risk Policy

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**BAJAJ Allianz**

Date: 13-08-2019

Customer ID : 101770109

Customer Name : LARSEN AND TOUBRO LIMITED

Address : 11<sup>th</sup>, tower-II, Godrej Water Side Building Salt Lake city, North 24 Paraganas,  
West Bengal ,700091

Dear Sir,

**Subject: Interim Held Cover Letter**

In consideration of having received the below premium – we hereby confirm our coverage with effect from 12-Aug-2019 00:00 Hrs strictly as per terms quoted by us on 07-Aug-2019 and subject to our standard Policy Terms and Conditions.

Line of Business	Engineering
Type of Policy	Erection All Risk Policy
Insured	<b>Principal</b> Public Health Engineering Directorate, Project Management Unit, West Bengal Drinking Water Sector Improvement Project, Utility Building, 1st Floor, (Premises No-09/1-0024) AA-1A, (Tank No.3), New Town Kolkata -700156
	<b>Contractor</b> M/s Larsen & Toubro Limited, 11th, Tower –II, Godrej Water Side Building, Salt Lake City, North 24 Paraganas, West Bengal-700091
Perils Covered	As per quote submitted
Sum Insured / Limit of liability	EAR Section 1 : INR 196,43,00,000 EAR Section 2 (Third Party Liability) : INR 20,00,00,000
Period of Insurance	From 12-Aug-2019 00:00 Hrs To Midnight of 26-May-2022 + 12 Extended Maintenance Period as per Proposal form
Project Period	From 27-May-2019 00:00 Hrs To Midnight of 26-May-2022
Deductible/ Retention	As per quote submitted
Exclusions	As per quote submitted
Premium Payable(Including Taxes)	EAR Total Premium : INR 27,81,449
	EAR 1 <sup>st</sup> Instalment Premium : INR 5,79,469

**Additional terms:-**

Job No : LE190280

**Description:** Design and Construction of Intermediate Pumping Station, Secondary transmission mains, overhead reservoirs including water distribution network and metering works in Taldangra block.



## Site Specific Environmental Management Plan



Above coverages and exclusions are suggestive in nature. For complete details please refer to Policy schedule and standard Policy Terms and Conditions to be issued. Detailed Policy schedule with coverages and exclusions will be sent to you at the earliest.

This letter will be valid only till we issue an insurance policy. Non realization of cheque/DD/PO will result into cover being void ab-initio.

Thanking You,

For Bajaj Allianz General Insurance Company Limited





**L&T Construction**  
Water & Effluent Treatment

**Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldanga Block.**


**(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)**

**Doc. No. L&T/ SEMP /01  
Last Revision No. 00  
Last Revision Date : 00  
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Original Issue Date :**

## Site Specific Environmental Management Plan

### Appendix- 4- Tie up Letter with local Hospital

o/c



Larsen & Toubro Limited  
L&T Construction  
Water & Effluent Treatment  
Indpur & Taldanga Packages  
Ward No. 9, Holding No. 85/3/11  
Uttar Aurobindo Nagar,  
Junbedia More,  
PO:PS- Bankura  
Dist- Bankura - 722101  
West Bengal - India  
www.Lntccc.com

Ref: PMU/WBDWSIP/PHED/82/207 & Date: 06-06-2019  
PMU/WBDWSIP/PHED/83/208 DT. 08/03/2019

To,  
Bankura Seva Niketan Hospital  
Patpur, Jail Road  
Bankura (W.B.) – 722101

**Kind Attention : Mr. Sibaram Sana**

**Sub: MoU for Staffs & Workers Medical Health Checkup.**

Sir,

With reference to the previous discussions had with you, we are pleased to sign this MoU for staff's and worker's Medical Health Checkup as per the following:

**Purpose & Scope :** Medical Health Checkup for Staffs and Workers whenever necessary.

**Conditions & Arrangements:** Medical Health Checkups needs to be performed whenever required. You are also required to attend our staffs or workers in case of any emergency. The location/ premises will be as per the convenience of both the parties.

**Timings :** 24 x 7

**Payment Terms:**  
Bill is to be submitted on Monthly basis & payment is to be made within fifteen days of Bill submission.  
Tax as applicable will be recovered.  
Payment will be made by NEFT/ RTGS only.

Kolkata Cluster Office :- Godrej Waterside Building, 11 Th. Floor, Salt Lake, Sector-V Block-Dp-5, Kolkata-700091, West Bengal, India  
Headquarters: Mount Poonamallee Road, Manapakkam, P.B. No. 979, Chennai - 600 089, INDIA  
Registered Office: L&T House, N. M. Marg, Ballard Estate, Mumbai - 400 001, INDIA  
Licence No.: CIN - L99999MH1946PLC004768  
L&T Construction - Water & Effluent Treatment is a brand of Larsen & Toubro Limited



**L&T Construction**  
Water & Effluent Treatment

**Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldanga Block.**

**(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)**

**Doc. No. L&T/ SEMP /01  
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## Site Specific Environmental Management Plan



**LARSEN & TOUBRO**

Larsen & Toubro Limited  
L&T Construction  
Water & Effluent Treatment  
Indpur & Taldanga Packages  
Ward No. 9, Holding No. 98/B/11  
Uttar Aurobindo Nagar,  
Jambheda More,  
PO+PS- Bankura  
Dist- Bankura -722101  
West Bengal -India  
www.Lntec.com

The present MoU elucidates the general conditions and arrangements for future cooperation between the concerned parties.

Signature

For and on behalf of: Larsen & Toubro Limited

Date: 06/06/2019

Signature



For and on behalf of: Bankura Seva Niketan Hospital

Date: 06.06.19

Thanking you in anticipation.

Yours Faithfully,

For Larsen & Toubro Limited

Sanjib Bose.  
Project Manager.

Bankura Packages

Kolkata Cluster Office :- Godrej Waterside Building, 11 Th. Floor, Salt Lake, Sector-V Block-Dp-5, Kolkata-700091, West Bengal, India  
Headquarters: Mount Poonamallee Road, Manapakkam, P.B. No. 979, Chennai - 600 089, INDIA  
Registered Office: L&T House, N. M. Marg, Ballard Estate, Mumbai - 400 001, INDIA  
Licence No.: CIN - L99999MH1946PLC004768

L&T Construction - Water & Effluent Treatment is a brand of Larsen & Toubro Limited



**L&T Construction**  
Water & Effluent Treatment

**Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldanga Block.**


**(Contract Package No: WBDWSIP/DWW/NCB/BK/02B/2018-19)**

**Doc. No. L&T/ SEMP /01  
Last Revision No. 00  
Last Revision Date : 00  
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## Site Specific Environmental Management Plan


### Appendix 5- Certificate of Fitness and PUC

<https://vahan.parivahan.gov.in/vahan/vahan/ui/reports/formFitnessCerti...>



**GOVERNMENT OF WEST BENGAL**

State Transport Department  
Bankura RTO  
FORM 38  
[See Rule 62(1)]  
**CERTIFICATE OF FITNESS**  
(Applicable in the case of transport vehicles only)




Vehicle No: WB67A6810 (Omni Bus) is certified as complying with the provisions of the Motor vehicles Act, 1988 and the rules made there under.

Certificate will expire on : 03-May-2021  
Next Inspection Due Date : 05-Mar-2021  
Inspection Fee Receipt : WB67R19050000251  
No

Application No : WB19050355191330  
Receipt Date : 03-May-2019  
Chassis No : MA1WG2GRKD2K71412  
Engine No : GRD4K64095  
Seating Capacity : 9 (Including Driver)  
Type of Body : SALOON  
Registration No : WB67A6810  
Category of Vehicle : LPV  
Printed on : 08-May-2019 16:16:15

Manufacturing Year : 2013  
Inspected on : 03-May-2019

Inspected by (RISHIKESH JAISWAL)

  
 Signature of Inspecting Authority  
 Bankura RTO  
 03/05/19





**L&T Construction**  
Water & Effluent Treatment

Design and Construction of Intermediate Pumping Station, Ground Storage Reservoirs, Overhead Reservoirs, Water Distribution Networks and Metering works in Taldanga Block.

(Contract Package No:  
WBDWSIP/DWW/NCB/BK/02B/2018-19)

Doc. No. L&T/ SEMP /01  
Last Revision No. 00  
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## Site Specific Environmental Management Plan

M/S SHIV SHAKTI PETROLEUM

Transport Department  
Govt. of JHARKHAND

TATISILWAY  
RANCHI  
9264436881

### POLLUTION UNDER CONTROL CERTIFICATE

COMPUTERISED EMISSION TEST CERTIFICATE  
Rule 163B(3) of JMV Rules 1992

PUC NO.: 00000160      Make: ESCORTS LIMITED      Chamber Temp.:  
Vehicle Reg. No.: JH 01DS 8413      Model: TRX1550 4P WITH CASINO      COASTING 59016  
Date of Reg.: 22-11-2019      Vehicle: Commercial      Engine No.: 15385  
Category: OTHERS      Oil Temp.: 0 °C      Color: NA  
Speedometer Rdn: NA

License No. 81/2019  
Valid :  
Fuel: DIESEL  
Name: GLOBLE EQUIPMENT  
Address: NA  
NA

Flushing Cycle Mean RPM min.: 0      RPM max.: 0

S.No.	HSU (%)	K (%)	RPM_min	RPM_max	Oil T
01	49.7	1.6	00000	00000	000
02	47.5	1.5	00000	00000	000
03	46.6	1.46	00000	00000	000
MEAN ( HSU/K m-1 ) :      47.9      01.52					

Result: PASS

Grade:

Test Fee: Rs. 200

Seal of Testing Centre

Authorised Signature

Date: 30/11/2019  
Time: 07:05 PM  
Valid Up To: 29/05/2020

SSS15

Verified that the vehicle's CO Emission level confirms to the standards prescribed under Rule 115(2) of C.M.V. Rules 1989

15/2019



## Site Specific Environmental Management Plan

**POLLUTION UNDER CONTROL CERTIFICATE**  
(Under the West Bengal Motor Vehicles Rules, 1989)

Vehicle Registrn. No. : **WB67A 6810** **WB-01-D 3723914**

Date of issue: **10-11-2019** Valid upto: **18-05-2020**

Pollution Level:

CO (%)	0.42
HC (ppm)	0.42
SD (HSU)	0.42

PUC Certificate issued by: **TUKUN AUTO EMISSION TESTING CENTRE**

Signature: **[Signature]** License No. and Seal: **23/2010**

**COMPUTERISED EMISSION TEST CERTIFICATE**  
**WB-01-D 3723914**

Authorised Transport Dept. of West Bengal  
**TUKUN AUTO EMISSION TESTING CENTRE**  
SHIVDANGA MORE, TALDANGRA, BANKURA

Liscence Number :- 23/2010

I.D. Number :- 000147 Date :- 19-11-2019  
Year Of Registration :- 2014 Time :- 10:00:49 AM  
Vehicle Registration Number :- WB67A 6810

Speedometer:-  
Engine Number :- 64095  
Chasis Number :- 71412  
Vehicle Color :- WHITE  
Vehicle Make :- M.M  
Vehicle Model :- BOLERO.  
Type Of Engine :- 4S  
Type of Vehicle :- 4W  
Owner :- AJAHAR ALI  
Driver :-

Contac :- 9932778899  
Oil Temperature :- 33  
Fuel :- Diesel  
Test Fee :- 100  
Result :- Pass

Valid Upto :- 18-05-2020

	Ideal RPM	Max RPM	K Value	HSU Value	Oil Temp
1	850	1890	0.01	0.32	33
2	850	2000	0.01	0.42	33
3	850	2090	0.01	0.52	33
Avg	850.00	1993.00	0.01	0.42	

Name of Authorise Signatory  
with Seal of Testing Center

**TUKUN AUTO EMISSION TESTING CENTRE**  
SHIVDANGA MORE, TALDANGRA, BANKURA

CS Scanned with CamScanner





## Site Specific Environmental Management Plan

### Appendix 6: Contractor's EHS Policy Statement

#### DRUG AND ALCOHOL POLICY

##### Purpose

Water and Effluent Treatment-IC (WET IC) has responsibility and commitment toward its employees, visitors, stakeholders and interested parties to ensure a safe and healthy workplace and a work environment free of alcohol and drug use / abuse.

##### Policy

This policy applies at the workplace of WET IC, to its employee, workmen, visitors, Sub-Contractors and other related parties during the working Hours.

- All employees are expected to report fit for duty for scheduled work and should be able to perform assigned duties safely and acceptably without any limitations due to the use or after-effects of alcohol, illicit drugs, non-prescription drugs or prescribed medications or any other substance.
- Alcohol or drugs can have adverse effects upon the workplace, the integrity of our work culture and the safety of employees. It will diminish the objective of an alcohol and drug free work environment. As such, the Company wants to impress upon all employees that it has zero tolerance for employees who arrive at work under the influence of alcohol or drugs, and/or whose ability to work is impaired in any way by reason of consumption of alcohol or drugs on the Company property.
- The Company strictly prohibits the use, unlawful manufacture, sale, purchase, offer to purchase or sell, transfer, distribution, consumption or possession of drugs or alcohol on company property. To this end, the Company reserves the right to conduct searches for drugs or alcohol, including but not limited to lockers, filing cabinets, desks, packages, etc. which are on Company property or in a Company facility. Any drugs or alcohol found as a result of such a search will be confiscated and the occupant or user of the object searched will be subject to disciplinary action, up to and including termination of employment.
- No workmen, Sub-Contractors, visitors and other related parties shall be allowed to enter the workplace under the influence of alcohol and drugs.

##### Roles & Responsibilities

It is the responsibility of an employee's superior to identify a situation in which they have concerns about the individual's immediate ability to perform their job and take appropriate steps. Where necessary, they will remove any employee, workmen, Sub-Contractor, visitor and other related parties who are suspected of violating the provisions of this policy from Company premises, pending investigation and a decision on appropriate disciplinary action.

  
**S. Rajavel**

SR. VP & Head  
Water & Effluent Treatment IC & SWC BU

Date: 18th September, 2018



**L&T Construction**  
Water & Effluent Treatment IC



## Site Specific Environmental Management Plan

### ENVIRONMENT HEALTH & SAFETY POLICY

The **Water and Effluent Treatment IC** of L&T Construction is committed to conserve the Environment and to provide a Healthy, Safe and Cordial Workplace to Employees and Stakeholders.

#### EHS Philosophy

- Minimize the Environmental Aspect & Impacts
- All incidents are preventable
- "Zero Harm" across the work places and offices
- Preserve natural resources for future generations and
- No task is so important that risk of injury to people or damage to the environment is justified

#### The objectives of this EHS Policy shall be achieved by

- Integrating the EHS Plan and Procedures into every operations of the Independent Company.
- Achieving an incident free work places and offices through proactive capturing and correcting of maximum number of UA/UC/UB, Near Miss and First-Aid cases and subsequent reduction of Severity Rate, Frequency & Fatality Rates
- Compliance to applicable Legal and Other Requirements.
- Elimination & Reduction of OH&S Hazards and Risks.
- Encouraging the preparation of HIRA & EAISR across the sites and offices to have better proactive EHS hazard control measures and minimize the environmental aspect and impact
- Inculcating a positive EHS culture among employees through continuous training and awareness programs
- Encouraging Communication, Consultation and Coordination among Employees, Stakeholders and External Agencies
- Achieving continual improvement by integrating EHS procedures into every process and through periodic internal/external auditing of IMS Management System
- Continuous monitoring of EHS Implementation across the IC through various software modules
- Assessing and employing the Sub-Contractors complying with L&T/WET-IC IMS Standard.
- Engages, Motivates and Develops Employees to promote Sustainability Initiatives that result in Innovative ideas, Operational efficiencies, Cost savings and a reduced Environmental footprint.
- Preserving water through Reduce, Reuse and Recycle principles.

The Top management is committed to provide Manpower, Infrastructure and Financial assistance for achieving the above EHS objectives. Employees are accountable and responsible for implementing and maintaining the EHS Management System across the WET-IC. Business Units, Tendering & Contracts, EDRC, P&M, HR, HR (W), IR & Admin, Supply Chain & Sub-Contractor Management and other Functional departments and Sites shall support and implement the above Management directives to achieve "Zero Harm" across the WET-IC as per employment conditions.



**S. Rajavel**

SR. VP & Head

Water & Effluent Treatment IC & SWC BU

Date: 18<sup>th</sup> September, 2018



**L&T Construction**  
Water & Effluent Treatment IC





## Site Specific Environmental Management Plan

### SMOKE FREE POLICY

#### Purpose

Water and Effluent Treatment IC (WET IC) has a duty to provide a safe and healthy work environment for its employees, service users, customers and visitors. Exposure to second-hand smoke, also known as passive smoking, increases the risk of lung cancer, heart disease and other illnesses. Ventilation or separating smokers and non-smokers within the same airspace does not completely stop potentially dangerous exposure.

#### Policy

It is the policy of WET IC that all our workplaces are to be smoke-free and all employees have a right to work in a smoke-free environment.

Smoking or use of tobacco products (including but not limited to pipes, cigars and snuff or chewing tobacco) is prohibited throughout the entire workplace with no exceptions. This includes company vehicles. Employees may smoke outside the office or at designated smoking areas.

This policy applies to all employees, consultants, Sub-Contractors, customers or members and visitors.

#### Implementation

- Senior and Middle Management are responsible for the implementation of the policy.
- Staff members are obliged to and facilitate the implementation of the policy.
- Appropriate 'No smoking' signs will be clearly displayed at the entrances to and within the premises.

#### Non-compliance

Local disciplinary procedures shall be followed if a member of staff consultants, Sub-Contractors, customers or members and visitors does not comply with this policy.

  
**S. Rajavel**

SR. VP & Head

Water & Effluent Treatment IC & SWC BU

Date: 18<sup>th</sup> September, 2018






**L&T Construction**  
Water & Effluent Treatment IC



## Site Specific Environmental Management Plan

### Appendix 7- Permission Letter

   *Received on 09/01/2020*

**GOVERNMENT OF WEST BENGAL**  
**OFFICE OF THE EXECUTIVE ENGINEER**  
Project Implementation Unit, Bankura, WBDWSIP, P.H.E.DTE.  
AAILAKUNDI :: KATJURIDANGA :: BANKURA :: PIN - 722102  
Ph No - 03242-241007, 241008 :: email: [ee.piubankura.adh@wbphed.in](mailto:ee.piubankura.adh@wbphed.in)

---

**Memo No- 75 / AE ( HQ ) / PIU -Bankura** **Dated - Bankura The : 07-01-2020**

**To**  
The Block Development Officer  
Taldanga Dev. Block  
Bankura



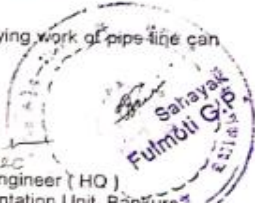
**Sub: Permission for laying of Raw/Clear water transmission main and Distribution pipe line along different Roads.**

You are aware that Public Health Engineering Department has taken up the Bankura District Pipe Water Supply Project (Phase-II) assisted by Asian Development Bank (ADB) and in this context Raw/Clear water transmission main alongwith distribution pipeline will be laid along different roads under your control in Taldanga Block. This is also to mention that, following points will be considered during laying of pipe line.

1. Utmost care will be taken during laying work, so that, traffic may be kept running.
2. Pipe will be laid through the outer most boundary of the road.
3. Restoration of the road will be done from this end after completion of pipeline laying if any damage occurred in the road during work.

Therefore, you are requested to accord blanket permission so that the laying work of pipe line can be started at an early date. Your co-operation in this regard is highly solicited.

*Received on 09/01/2020*  
*Secretary*  
Taldanga Gram Panchayat


  



*Received on 09/01/2020*  
*Pradhan*  
Panchmura Gram Panchayat

**Memo No- 75 (1-4) / AE ( HQ ) / PIU -Bankura** **Dated - Bankura The :**

**For forwarded for information to :-**

- 1) The Executive Engineer ( Civil ), PIU Bankura, WBDWSIP PHE Dte.
- 2) The Team Leader, DSISC Bankura, WBDWSIP.
- 3) The Junior Engineer, PIU- Bankura, WBDWSIP, PHE Dte.
- 4) The Pradhan, Gram Panchayat, Taldanga Block, Bankura.

 *Received on 9/01/2020*  
*Pradhan*  
Barda Gram Panchayat

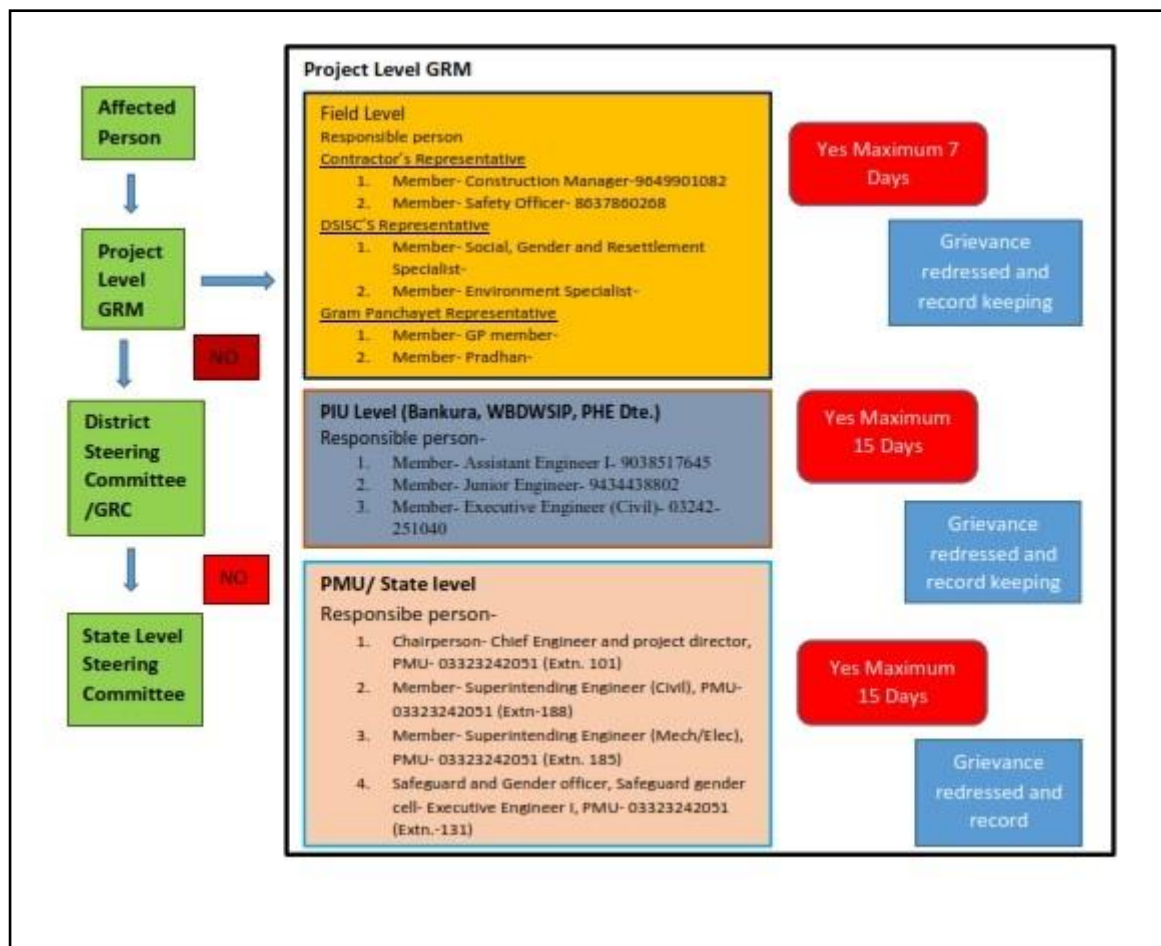
*Received on 9/01/2020*  
*Pradhan*  
Khaligram Gram Panchayat



## Site Specific Environmental Management Plan

### Appendix 8: Procedure for on-site Grievance Redress Mechanism

A common Grievance Redressal Mechanism (GRM) is in place to redress social, environmental or any other project and/or subproject related grievances. The GRM presented below has been developed in consultation with stakeholders. Public awareness campaign has been conducted to ensure that awareness on the project and its grievance redress procedures is generated. The campaign has ensured that the poor, vulnerable and others are made aware of grievance redress procedures and entitlements per project entitlement matrix, and PMU and PIU will ensure that their grievances are addressed in time.



All grievances are recorded in site grievance register and resolved at the earliest. The sample grievance registration form is given below.





## Site Specific Environmental Management Plan

### Sample Grievance Registration Form

**(Available in Bengali and English)**

The \_\_\_\_\_ Project 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 into 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	Project Town		
		Project:		
Contact information/personal details				
Name		Gender	* Male * Female	Age
Home address				
Place				
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)	
Mode of communication: Note/letter E-mail Verbal/telephonic	
Reviewed by: (Names/positions of officials reviewing grievance)	
Action taken:	
Whether action taken disclosed:	Yes No
Means of disclosure:	



## Site Specific Environmental Management Plan

### অভিযোগ নিবন্ধন ফর্মের নমুনা

..... প্রকল্পকে বাস্তবায়িত করার লক্ষ্যে অভিযোগ, পরামর্শ, অনুসন্ধান এবং মন্তব্যের জন্য স্বাগত।

আমরা অভিযোগকারীকে অভিযোগ সহ নাম জানাতে উৎসাহিত করি এবং আপনার সাহচর্যে এসে এর শোধন ও প্রতিক্রিয়া জানাতে সক্ষম হই।

অবশ্যই আপনি আপনার ব্যক্তিগত বিষয় বিস্তারিত ভাবে যুক্ত করতে ইচ্ছাপ্রকাশ করবেন। যে তথ্য আপনি দেবেন, তা অবশ্যই গোপন থাকবে। তাই অনুগ্রহ করে আপনার নাম লিখে / টাইপ করে জানান।

তারিখ	নিবন্ধনের জায়গা	প্রকল্পের শহর	প্রকল্পঃ
যোগাযোগের তথ্য / বিস্তারিত ব্যক্তিগত তথ্য			
নাম		লিঙ্গ	পুরুষ মহিলা
বাড়ীর ঠিকানা			
জায়গা / স্থান			
ফোন নং			
ই-মেল			
যেকোন অভিযোগ / পরামর্শ / মন্তব্য / প্রশ্ন অনুগ্রহ করে নিচে বিস্তারিতভাবে (কে, কি, কোথায় এবং কেমন করে) আপনার অভিযোগ জানান			
যদি কোন সংযুক্তি / চিরকুট / চিঠি অন্তর্ভুক্ত করতে চান, অনুগ্রহ করে সেখানে টিক দিন।			
আপনার অভিযোগ / মন্তব্যের হালনাগাদ (আপডেট) বা প্রতিক্রিয়া কিভাবে পেতে চান?			

Office ব্যবহারের জন্যঃ

অভিযোগ নিবন্ধনকারী আধিকারিকের নামঃ	
যোগাযোগ ব্যবস্থাঃ	
চিরকুট / চিঠি-	
ই-মেল-	
মৌখিক / টেলিফোন-	
নিবন্ধকৃত অভিযোগ পর্যালোচনাকারী আধিকারিকের নাম ও পদঃ	
অভিযোগের বিরুদ্ধে গৃহীত ব্যবস্থা-	
গৃহীত ব্যবস্থা প্রকাশ্যে আনা হয়েছে কি না	হ্যাঁ না
প্রকাশের উপায়	





## Site Specific Environmental Management Plan



### Appendix 9: Procedure for information disclosure prior to start of works

- Local population is informed through community leaders as well as by visiting individual households of the locality.
- Information board is placed at construction site
- Stakeholder consultation carried out at Gram Panchayat level and work details including time period is informed.

### Report and attendance sheet of Public consultation

#### Summary of Public Consultations

#### (Package- 02B)

BLOCK	MOUZA	GP	OHR/GLSR ZONE CODE	Number of Participants	Concerned/ Issues discussed	Photographs
Taldangra Block	Dhangasimul Mouza	Bibarda Gram Panchayat	Venue-Medina Village, Date- 19 <sup>th</sup> September, 2019	Community people (42) Male- 30 Female-12	<ul style="list-style-type: none"> <li>Given brief description of the project to the consumers. They were very happy to listen about the project and wanted to raise their supporting hand.</li> <li>Local people were not found aware about the upcoming water supply project in their area.</li> <li>Collected information of total number of tube wells including working and non-working condition present in this GP. Most of the tube wells are in very bad condition.</li> <li>Role of ADB and PHED were discussed with them.</li> <li>Water borne diseases, fluoride contamination of ground water and benefits of treated surface water were discussed.</li> <li>Women of the villages said that door to door water connection will save their time.</li> <li>Availability of local labour during construction time was discussed. Sufficient amount of labours available in the villages.</li> </ul>	 



## Site Specific Environmental Management Plan

### WEST BENGAL DRINKING WATER SECTOR IMPROVEMENT PROJECT (WBDWSIP)

#### ATTENDANCE SHEET FOR PUBLIC CONSULTATION

District- BANGURA

Block- TALDANGRA

Venue- MEDINA VILLAGE

Duration of discussion- 45 minutes

Date- 13.09.2019

Time- 3:30 P.m.

No. of participants- 42 (Male- 30 Female- 12 )

Sl. No.	Name	Sex	Address	Contact Number
1	Kalyan Kumar Mandal	Male	Medina	
2	Lal Mohan Suley	"	Medina	9832448594
3	Jaydeb Halder	"	"	9800756331
4	Raju Mallick	"	"	9800977241
5	Sadil Bhuiin	"	"	7872683151
6	Dan Si Maleik	"	"	7908415754
7	Rasitosh Bhuiin	"	"	6297560215
8	Jaydeb Khatrakal	"	Medina	
9	ଅନିମା ଦେବୀ	"	"	
10	Manik Chakraborty	"	"	8967245222
11	Debanis Bhuiin	"	"	7381802794
12	ଅନିମା ଦେବୀ	"	"	
13	ଅନିମା ଦେବୀ	"	"	
14	ଅନିମା ଦେବୀ	"	"	
15	Nalendu Sahani Bhuiin	"	"	