

# Site-Specific Environmental Management Plan

---

Project number: 49107-006  
September 2019

IND: West Bengal Drinking Water Sector Improvement Project – Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block (Zone 4- Pipeline Laugachi)

Package No: N24P/02A

Prepared by Public Health Engineering Department, Government of West Bengal for the Asian Development Bank.

This site-specific environmental management plan is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature. Your attention is directed to the "terms of use" section of this website.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

NCC LIMITED	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block	Doc. No. NCC/SEMP/01 Revision No. 00 Revision Date : 00 Effective Date :
	Site Specific Environment Management Plan	

## SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN

**WBDWSIP HAROA BLOCK**

**LOCATION: ZONE- 4 LAUGACHI (PIPELINE WORK)**

0	21.09 2019				
REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PHE

West Bengal Drinking Water Sector Improvement Project

Environmental Specialist, DSISC  
North, 24 Parganas  
WBWSI Project

Engineer  
WBWSIP, PHE Div.  
West Bengal

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 2 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

<b>Package Area</b>	Package No : N24P/02A Zone 4- Pipeline (Laugachi) under PIU North 24 Parganas
<b>Package title</b>	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block . SEMP is as per requirement of the Draft IEE covering package no. N24P/02A
<b>Contractor</b>	<b>NCC Pvt. Ltd.</b>
<b>Date of Contract Award</b>	19/09/2018
<b>Date of particular works commencement</b>	26/09/19
<b>Contract period</b>	Construction: 3 Years ; O&M: 2 Years
<b>SEMP Component</b>	Laying of 37828m of pipeline as detailed below.
	No demolition activity involved
<b>Project Area</b>	Kulti Gram Panchayat of Haroa Block
<b>Project Description</b>	Individual household water supply schemes for the project Gram Panchayats
<b>Household Connection</b>	2123 (Estimated HH Connection)
<b>Non-Household Connection</b>	All Commercial, Educational, Religious and Health institutions will get potable water from this project. Numbers are not yet identified
<b>Indicative Budget for EMP Implementation for the entire package</b>	INR 21,42,500/-
<b>Project Components</b>	As per project detailed design

**Gram Panchayat (GP): Kulti**

Water Distribution Pipe Length (m) Summary											Total Length
Zone ID	Pipe Diameters(mm) <i>*External dia</i>										
	63*	75*	90*	110*	140*	200*	250	300	350	400	
Zone – H4	16308	8398	5802	2645	1450	3197	8	20			37828

**Map of Distribution Network**

Refer Appendix – P.1

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 3 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

<b>Details of contractors on-site-personnel and workers</b>	Zone 4- Pipeline (Laugachi) , Kulti Gram Panchayet of Haroa Block
Project Manager	Mr. Ramesh Singh; 8170011450
Site Engineer	Mr. Arijit Saha; 9732756414
Site Supervisor	Mr. Krishnapada Singh; 9735949496
EHS Supervisor	Mr. Saradindu Gain; 9775459487
Archeological supervisor	NA
Skilled / semi-skilled workers	1 skilled and 0 Semi-skilled
Unskilled workers	6
Women workers	Nil
Workers – local / migrant	Local-Nil / Migrant-7 (from other districts of West Bengal)
<b>Details of facilities</b>	
Construction camps, (no's and locations)	Labor accommodation at rented place, Makhla Bazar (As referred in Attachment P2)

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 4 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

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

<b>Field/ Issues</b>	<b>Anticipated Impact</b>	<b>Recommended Mitigation Measures</b>	<b>Actions Taken/ Status</b>	<b>Responsibility of Implementation</b>	<b>Monitoring of mitigation</b>	<b>Cost and source of fund</b>
Infrastructure and Services	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> </ul> <p>Please refer <b>Attachment P7 and P8</b> of this SEMP for site specific spoil management plan and traffic management plans.</p>	Contractor, PIU	DSISC observation at site and document checking	Project cost
Climate	The nature and intensity of rainfall events in an area, has implications for surface water management.	<ul style="list-style-type: none"> <li>Seasonal climatic variations should be taken into account during scheduling of construction in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Excavation works schedule during dry season have been approved by PMU.</li> <li>If excavation work is to be conducted during rainy season then preventive measures will be taken like dewatering from the trench</li> <li>During pipelaying use of Gumboot is a must.</li> <li>To avoid slip, trip and fall, no outsider is allowed within the barrication area.</li> </ul>	Contractor, PIU	DSISC observation at site	Project cost
Sources of Materials	Extraction of materials can disrupt natural land contours and vegetation resulting	<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</li> </ul>	No involvement of any new borrow area or quarry is anticipated. Excavated soil will be used for backfilling of trenches.	Contractor, PIU	DSISC document checking	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 5 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

	in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	documentation on material obtained from each source (quarry/borrow pit) should be submitted. • In case of involvement of new quarries/ borrow areas, prior steps will follow for all clearances 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>	<p>Pipelaying work will be continued without disturbing existing pipelines as recommended in the IEE</p> <p>No asbestos pipes encountered till now. In any circumstances the Asbestos Cement pipes will not be disturbed and left in situ.</p> <p>Subproject does not includes rehabilitation of existing infrastructure like replacement of AC pipes, tube wells, pumping stations and OHSRs</p>	Contractor and PIU	DSISC observation at site and document checking	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 6 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

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

<b>Field/ Issues</b>	<b>Anticipated Impact</b>	<b>Recommended Mitigation Measures</b>	<b>Actions Taken/ Status</b>	<b>Responsibility of Implementation</b>	<b>Monitoring of mitigation</b>	<b>Cost and source of fund</b>
Material Handling	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.	Continuous supervision regarding the use of safety gadgets is being ensured [Refer <b>Attachment P4</b> for availability of PPEs at Site].	Contractor	PIU through DSISC - observation at site and document checking	Project cost
Air Quality	Emissions from construction vehicles, equipment, machinery and DG set used for excavation and pipe laying resulting in dust and increase in concentration of vehicle-related noxious compounds that causes pollution.	<ul style="list-style-type: none"> <li>Following 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": <ul style="list-style-type: none"> <li>Only vehicles having valid Pollution Under Control Certificates should be engaged in the project.</li> <li>Vehicles transporting (cement, sands etc) should be covered and cleaned prior to release at site, sprinkling of water and stabilization of soil for dust hazards to be carried out on site.</li> </ul> </li> <li>Damp down soil, sand/ earth stockpiled at site should be maintained as per site condition.</li> <li>Control unnecessary movement of vehicle, public trespassing into work areas for</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 has been access controlled to prevent trespassing.</li> <li>Excavated earth piles will be maintained in such a way to minimise dust rising.</li> <li>Air quality monitoring has been conducted at following five places (<b>Zone-2 Nebutala Abad, Zone-5 Tegharia, Zone-13 Chauhata, Zone-17 Shalipur and Zone-21 Haroa</b>) in the Haroa Package.</li> </ul>	Contractor	PIU through DSISC - observation at site and document checking	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 7 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

<b>Field/ Issues</b>	<b>Anticipated Impact</b>	<b>Recommended Mitigation Measures</b>	<b>Actions Taken/ Status</b>	<b>Responsibility of Implementation</b>	<b>Monitoring of mitigation</b>	<b>Cost and source of fund</b>
		control of dust generation.				
Drainage and hydrology	Due to the nature and locality of the projects there is unlikely to be any significant impacts on water resources within the immediate area.	<ul style="list-style-type: none"> <li>The site surface should be engineered and shaped in such a way that rapid and efficient evacuation of runoff is achieved.</li> </ul>	<ul style="list-style-type: none"> <li>We have ensured run-off through the site to a local drain does not contaminate existing drain and pond around the project site.</li> <li>Dewatering, if any and hydrotest water, will be also discharged to local drains after ensuring no contamination.</li> </ul>	Contractor	PIU through DSISC - observation at site and document checking	Project cost
River/Surface water quality	Mobilization of settled silt materials, run-off from stockpiled materials, and chemical contamination from fuels and lubricants during construction works can contaminate nearby surface water quality.	<ul style="list-style-type: none"> <li>Avoid stockpiling of earth fill; especially in monsoon season, cover it with tarpaulins or plastic sheets.</li> <li>Prioritize and implement reuse of excess spoil and materials in the construction work; if necessary, dispose in designated disposal area.</li> <li>Storage locations should have impervious floors</li> <li>Fuels and lubricants should be stored away from drainage and spillage protection should be provided.</li> </ul>	<ul style="list-style-type: none"> <li>Excavated earth from dug trenches will be stacked along the pipeline and away from drainage locations/ nearby water bodies.</li> <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> <li>Surface water monitoring has been conducted already following two places (<b>Zone-2 Nebutala Abad and Zone-13 Chauhata</b>) in the Haroa project as per Environmental Monitoring Plan recommended in the IEE.</li> </ul>	Contractor	PIU through DSISC - observation at site and document checking	Project cost
Biodiversity	Due to the nature	<ul style="list-style-type: none"> <li>For flora protection, tree</li> </ul>	<ul style="list-style-type: none"> <li>Few trees are present along</li> </ul>	Contractor	PIU through	Project cost



<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 8 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

<b>Field/ Issues</b>	<b>Anticipated Impact</b>	<b>Recommended Mitigation Measures</b>	<b>Actions Taken/ Status</b>	<b>Responsibility of Implementation</b>	<b>Monitoring of mitigation</b>	<b>Cost and source of fund</b>
Fauna and Flora	and locality of the project there is unlikely to be any significant impacts on bio-diversity within the area.	cutting is strictly prohibited; if necessary then obtain permission through proper channel. <ul style="list-style-type: none"> <li>For faunal activity, instruction should be given to everyone to inform site EHS Coordinator who should take appropriate action for their protection and safe rescue.</li> </ul>	the existing alignment; cutting of tree strictly banned without regulatory clearance, if necessary trimming allowed. <ul style="list-style-type: none"> <li>So far no faunal movement has been observed in this site.</li> </ul>		DSISC - observation at site and document checking	
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials by labours	<ul style="list-style-type: none"> <li>Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers minimising the sound impact to surrounding sensitive receptor;</li> <li>Horns not to be used unless it is necessary to warn other road users;</li> <li>Maintain maximum sound levels not exceeding 75 decibels (dbA). When measured at a distance of 1m from the vehicle/s.</li> <li>Baseline and construction phase Noise Monitoring (Day &amp; Night time) should be conducted.</li> </ul>	<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>Noise quality Monitoring has been conducted at following five places (<b>Zone-2 Nebutala Abad, Zone-5 Tegharia, Zone-13 Chauhata, Zone-17 Shalipur and Zone-21 of Haroa</b>) in the Haroa Package as per monitoring recommendation included in the IEE.</li> <li>DG set (less than 5 kVA) are used for connecting the HDPE lines. This is properly maintained and stopped immediately after completion of work.</li> </ul>	Contractor	PIU through DSISC - observation at site and document checking	Project cost
Landscape and Aesthetics character, and sense	Construction wastes as well as excess construction materials may show some impact.	<ul style="list-style-type: none"> <li>Prepare a construction waste management plan for site.</li> <li>Hazardous wastes e.g. waste oil, empty paint cans, etc. should</li> </ul>	<ul style="list-style-type: none"> <li>Spoil management plan has been developed [Refer <b>Attachment P7</b>]</li> <li>Excavated earth is utilized</li> </ul>	Contractor	PIU through DSISC - observation at site and document	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 9 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

<b>Field/ Issues</b>	<b>Anticipated Impact</b>	<b>Recommended Mitigation Measures</b>	<b>Actions Taken/ Status</b>	<b>Responsibility of Implementation</b>	<b>Monitoring of mitigation</b>	<b>Cost and source of fund</b>
of place		be stored on site and then shifted to a central location from where these will be disposed in accordance with Hazardous Wastes Management Rule, 2016. <ul style="list-style-type: none"> <li>As far as possible utilize the debris and excess soil in construction purpose such as for site filling and labelling purpose.</li> <li>Avoid stockpiling excavated earth at the site for long time, if required, dispose at the site selected, in consultation with local GP preferably from barren, infertile land, which is located away from any sensitive area.</li> </ul>	for backfilling purpose. <ul style="list-style-type: none"> <li>Excavated earth will be backfilled on the same day.</li> </ul>		checking	
Occupational Health and Safety	Occupational hazards which can arise during work	Develop and implement a 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 mask etc. (c) documentation of work related accidents. (d) Providing qualified first aider at all times. (e) Providing to all workers reflective jacket,	<ul style="list-style-type: none"> <li>Based on NCC'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</li> </ul>	Contractor	PIU through DSISC - observation at site and document checking	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 10 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
		(f) Marking and providing sign boards for most of hazardous areas such as high voltage equipment, (g) Workers allowed exposure to noise level up to 85 dB (A) only.	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; <ul style="list-style-type: none"> <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>			
Socio Economic Employment	Generation of temporary employment and increase in local revenue	<ul style="list-style-type: none"> <li>• Employ local labour force as far as possible</li> <li>• Comply with labour laws</li> </ul>	<ul style="list-style-type: none"> <li>• Local labours are employed, on priority, whenever available.</li> <li>• Refer <b>Attachment P3</b> for documents relating to statutory compliances</li> </ul>	Contractor	PIU through DSISC - observation at site and document checking	Project cost
Environmental Management Plan (EMP) Implementation	Irreversible impact to the environment, workers, and community	Project Manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures	Training session for all employees has been arranged.	Contractor	PIU through DSISC - observation at site and document checking	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 11 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

<b>Field/ Issues</b>	<b>Anticipated Impact</b>	<b>Recommended Mitigation Measures</b>	<b>Actions Taken/ Status</b>	<b>Responsibility of Implementation</b>	<b>Monitoring of mitigation</b>	<b>Cost and source of fund</b>
tion Training		(SOP) for construction works; occupational health and safety (OHS), core labour laws, applicable environmental laws etc.				
Construction Camps	Temporary air, noise, land and water pollution from machine operation and after establishment of habitation	<ul style="list-style-type: none"> <li>• Camp sites shall be away from residential areas (100 m), sensitive areas (schools, hospitals, etc. 250 m), water bodies (500 m) and forests (more than 1 km)</li> <li>• Use unused, vacant lands; no trees shall be cut</li> <li>• Provide a proper fencing/compound wall</li> <li>• Prepare a site layout plan &amp; display at the site; uniformly label (name boards) all the places in the facility</li> <li>• Entire site/facility area shall be provided with hard levelled surface as appropriate; no loose soil, slush, water logging etc.,</li> <li>• Living quarters and construction camps shall be provided with standard materials; no shacks or huts</li> <li>• Adequate lighting and ventilation</li> <li>• Provide drinking water, water for other uses, and sanitation facilities; drinking water should be</li> </ul>	<ul style="list-style-type: none"> <li>• Before locating project offices, sheds, and construction plants we discussed with DSISC and within or nearest place has been selected,</li> <li>• Till date no trees have been cut and no any destruction of property, irrigation and drinking water supply systems observed,</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; Kitchen wastes collected in a dustbin then it is disposed outside from area to designated disposal location,</li> <li>• Daily generated effluent disposed by arrangements already present in camp/ household.</li> <li>• The details of labour</li> </ul>	Contractor	PIU through DSISC - observation at site and document checking	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 12 of 44</b> <b>Original Issue Date :</b>
	Site Specific Environmental Management Plan	

<b>Field/ Issues</b>	<b>Anticipated Impact</b>	<b>Recommended Mitigation Measures</b>	<b>Actions Taken/ Status</b>	<b>Responsibility of Implementation</b>	<b>Monitoring of mitigation</b>	<b>Cost and source of fund</b>
		regularly tested <ul style="list-style-type: none"> <li>• Provide clear pathways for safe movement</li> <li>• Provide cooking fuel (cooking gas); and a separate safe place to cook; fire wood not allowed</li> <li>• Construct septic tanks and soak pit arrangement for wastewater disposal</li> <li>• Solid waste shall be properly managed – provide separate bins, compost biodegradable waste; sell recyclable waste.</li> <li>• According to rule and regulation camp will be vacated and restored to pre-project conditions before acceptance of work.</li> </ul>	accommodation is presented in <b>Attachment P2.</b>			
Archaeological and Cultural characteristics	Risk of archaeological chance finds	<ul style="list-style-type: none"> <li>• Strictly follow the protocol for chance finds in any excavation work;</li> <li>• Construction staff members should be made aware of the likelihood of heritage resources being unearthed and of the scientific importance of such discoveries.</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 through DSISC - observation at site and document checking	Project cost

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b> <b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 13 of 44</b> <b>Original Issue Date :</b>
	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	5 locations (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 Quarterly (yearly 4- times) during construction (2-year period considered)	Near Zone 02 Nebutala Abda, Zone 05, Kulti Uposasthya Kendra, Zone 13, Paschim Bhaida Primary School ,Zone 17,Near Majanpur High School, Zone 21, Haroa Market	225,000
Ambient noise	5 locations (same as air quality monitoring)	• Day time and night time noise levels (24 hours)	Once before start of construction Quarterly (yearly 4- times) during construction (2-year period considered)	Near zone 02, Nebutala Abda, Zone 05, Kulti Uposasthya Kendra, Zone 13, Paschim Bhaida Primary School Zone 17,Near Majanpur High School, Zone 21, Haroa Market	67,500
Surface water quality	2 locations (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 Half yearly during construction (2- year construction period considered)	Pond Water near Nebutola Abada, Zone-3, Pond Water in Paschim in Zone 13	40,000
Chance Finds	Areas protected by ASI or West Bengal State Archaeology Department	• Chance finds protocol	Before finalization of detailed design, consult with ASI or West Bengal State Archaeology Department		

Note: \* It should be noted that every quarter only 5 locations in the entire package is monitored for air and noise while two locations are monitored for surface water every half-yearly. 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.

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 14 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

### **Monitoring Locations on Google Earth**



<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 15 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

### **List of Attachments**

Attachment P1: Details of construction Work sites  
Attachment P2: Details of construction camp sites  
Attachment P3: List of clearances & statutory requirements  
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  
Attachment P9: Procedure for on-site Grievance Redressal Mechanism  
Attachment P10: Procedure for information disclosure prior to start of works

Appendix P1: Map of Distribution Network  
Appendix P.A: Gram Panchayat and other Authorities Permission  
Appendix P.B: Labour License  
Appendix P.C: Workman Compensation  
Appendix P.D: PUC Certificates  
Appendix P.2: Contractor's OHS Policy Statement  
Appendix P.3: Sample Grievance Registration Form

Enclosure 1 : Health\_Safety\_Management\_Plan of Pkg.N24PGS/02A\_Haroa block,




<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 16 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

### Attachment P1: Details of construction Work sites

1. Zone 4: Pipeline construction Site							
Location- Laugachi							
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 Machin-1 No</li><li>▪ DG (less than 5 kVA) – 1 No</li><li>▪ JCB – 1 no</li></ul>						
C	<b>Site office – No</b>						
D	<b>Laboratory – No</b>						
E	<b>Security cabin – No</b>						
F	<b>Labor welfare facilities at Site</b> <ul style="list-style-type: none"><li>• Drinking water</li><li>• First Aid Box.</li></ul>						
D	<b>Road, agriculture land involvement and infrastructure facility</b> No agricultural land involved No as such underground infrastructure available. No record for village road <b>Details of pipeline, roads and construction methodology are presented below</b>						
	<b>Pipe Diameter (mm)</b>	<b>Length (m)</b>	<b>Width of trench (m)</b>	<b>Depth of Trench (m)</b>	<b>Width of roads (m)</b>	<b>Type of roads (earthen / BT / CC )</b>	<b>Excavation method (manual/mechanical)</b>
	<b>DI Pipes ( 28 m)</b>						
	400 mm	---	0.4- 0.8	1.250	2.0-6.0	CC/BT/Earthen	Manual/Mech
	350 mm	---	0.4- 0.8	1.140	2.0-6.0	CC/BT/Earthen	Manual/Mech
	300 mm	20	0.4- 0.8	1.30	2.0-6.0	CC/BT/Earthen	Manual/Mech
	250 mm	8	0.4- 0.8	1.25	2.0-6.0	CC/BT/Earthen	Manual/Mech
	<b>Distribution Network— HDPE Pipes (37,800 m)</b>						
	200 mm	3197	0.4- 0.8	1.20	2.0-6.0	CC/BT/Earthen	Manual/Mech
	140 mm	1450	0.4- 0.8	1.14	2.0-6.0	CC/BT/Earthen	Manual/Mech
	110 mm	2645	0.4- 0.8	1.11	2.0-6.0	CC/BT/Earthen	Manual/Mech
	90 mm	5802	0.4- 0.8	1.09	2.0-6.0	CC/BT/Earthen	Manual/Mech
	75 mm	8398	0.4- 0.8	1.08	2.0-6.0	CC/BT/Earthen	Manual/Mech
	63 mm	16308	0.4- 0.8	1.06	2.0-6.0	CC/BT/Earthen	Manual/Mech

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 17 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

### Attachment P2: Details of construction camp sites

<b>1.</b>	<b>Labour Accommodation, Pipeline site – Zone 4</b>
<b>Location- Laugachi, Kulti near Makhla Bazar (Latitude-22.584607, Longitude-88.563024)</b>	
<b>A</b>	<p>Accommodation – For 7 construction workers. No women / families in the camp</p> <p>Facilities provided at camp site</p> <ul style="list-style-type: none"> <li>• Type of living accommodation – Rented apartment</li> <li>• Accommodation provided for 7 workers</li> <li>• Separate cooking area</li> <li>• Cooking gas</li> <li>• Drinking water</li> <li>• Bath rooms</li> <li>• Toilets</li> <li>• Drainage system</li> <li>• First aid box</li> </ul>
<b>B</b>	<b>Camp photographs</b>
Original site Photographs	Not applicable as rented house is being used as labour accommodation.
Photos of camp and facilities provided	
	Labour accommodation

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 18 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

		
	Toilet	Kitchen with cooking gas

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 19 of 44 Original Issue Date :</b>
	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 Panchayat and Other Authorities Permission	Obtained [Refer <b>Appendix – P.A</b> ]
<b>B</b>	<b>Labour Safety / Welfare Related</b>	
1	Labour license	Obtained [Refer <b>Appendix – P.B</b> ]
2	Workmen Compensation	Obtained [Refer <b>Appendix – P.C</b> ]
<b>C</b>	<b>Safety / liability safety related</b>	
1	Medical insurance	Tie-up with local hospital done
<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 – P.D</b> ]
3	Driving licenses for drivers	Obtained
4	Insurance for vehicles / equipment, as required	Obtained

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 20 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

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

<b>1</b>	<b>Contractor agency has a OHS plan</b>	<b>Yes/No</b>
A	If yes, provide policy details: 1. Policy statement 2. OHS organization & responsibilities:	Yes [Refer Appendix P2] Yes
B	List safety risks anticipated in the project Area works (Pipeline Work) • Trips and falls • Slope failure / trench collapse • Road accidents Linear works (pipelines) • Accidents from open trenches	-
C	List personal protection equipment provided to workers • Boots- 8 nos. • Gloves- 2 nos. • Helmet- 8 nos. • Safety jacket- 8 nos. • Goggles- 2 nos	Yes
	Preventive Measures	
	• Orientation of all workers on OSH	Done
	• Work permit system	No
	• Toolbox/safety meetings (how often will this be conducted, what are the minimum topics)	Twice Weekly on work inside trench, firefighting, first-aid, housekeeping, etc.
	• Safety signages	Displayed on site
	• Barricades (more than 1 m deep requires hard barricading)	Wherever road width permits
<b>2</b>	<b>Contractor emergency procedure</b>	
A	Detail what steps/procedure to be adopted in emergency situation (eg. accidents) • In case of emergency 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.	Yes
B	<b>Contact information, staff and responsibilities for emergency situations</b>	
	<b>Designation</b>	<b>Staff name &amp; contact</b>
	Site Engineer	Mr. Arijit Sing Mob: 9732756414
	EHS Supervisor	Saradindu Gain Mob: 9775459487
	Project Manager Representative	Mr. Ramesh Singh Mob: 8170011450
	<b>Emergency responsibility</b>	
	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 Supervisor.	
	EHS Supervisor 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 shall be responsible for taking all necessary action and decisions.	
C	<b>Reporting procedure in case of work accidents</b> • Details of accidents shall be recorded in accident register. • Copy of accident register shall be submitted to client at the end of every month. • In case of any major accidents client shall be informed immediately.	Yes
D	Mandatory Reporting to Authorities	Yes
E	Prohibited Acts and Penalties for Violations	Yes

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 21 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

#### **Attachment P5: Utility shifting/relocation**

<b>Sl. No.</b>	<b>List work sites that require utility shifting, relocation, temporary shut off</b>	<b>Remarks</b>
1	Area work sites (Pipeline)	Not Required

#### **Attachment P6: Details of Construction Materials**

<b>Sl. No</b>	<b>Material</b>	<b>Approximate quantity required (m3) for project</b>	<b>Source</b>	<b>Indicate if source has all necessary government clearances</b>
1	Earth	10900.00	From trench cutting	Not required

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 22 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

### Attachment P7: Spoil Management Plan

<b>NCC LIMITED</b>	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block	Doc. No. NCC/ SEMP /01 Revision No. 00 Revision Date : 00 Effective Date :
	Spoil Management Plan	

## SPOIL MANAGEMENT PLAN

### WBDWSIP HAROA BLOCK

#### LOCATION: ZONE- 4 LAUGACHI (PIPELINE WORK)

IS	21.09.2019				
REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSIC	APPROVED BY PIU

West Bengal Drinking Water Sector Improvement Project

Environmental Specialist, DSIC  
North 24 Parganas  
WBDWSI Project

B.S. Chatterjee, Project Director, DSIC  
West Bengal

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 23 of 44 Original Issue Date :</b>
	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 lying in Zone (4). For the Pipeline site we do not anticipated 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 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.
- 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.



<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 24 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

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. 10900 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 no 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 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 Laugachi (Zone 4) for Pipe laying**

Sl. No.	Dia(mm)	Length(m)	Width(m)	Depth(m)	Total(cum)
1	63	16312	0.25	1.063	4334.914
2	75	8395	0.25	1.075	2256.15625
3	90	5802	0.25	1.09	1581.045
4	110	2646	0.25	1.11	734.265
5	140	1449	0.25	1.14	412.965
6	200	3141	0.25	1.2	942.3
7	200	57	0.3	1.2	20.52
8	250	8	0.3	1.25	3
9	300	20	0.6	1.3	15.6
10	Extra for bend, joints etc				599.2348
11	Approx. generated total Spoil (Soil) at Laugachi				<b>10900</b>

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 25 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

#### Attachment P8: Traffic Management Plan

<b>NCC LIMITED</b>	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block	Doc. No. NCC/ TMP /01 Revision No. 00 Revision Date : 00 Page 1 of 7 Effective Date :
	Traffic Management Plan	

## TRAFFIC MANAGEMENT PLAN

### WBDWSIP HAROA BLOCK

**LOCATION: ZONE- 4 LAUGACHI (PIPELINE WORK)**

C	21.09.2019				
REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU

West Bengal Drinking Water Sector Improvement Project

Environmental Specialist, DSISC  
North 24 Parganas  
WBDWSI Project

Assistant Engineer  
PIU-I, N-24 Pgs., WBDWSIP, PHE Div.  
Govt. Of West Bengal

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 26 of 44 Original Issue Date :</b>
	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 for Zone – 4 LAUGACHI.

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.
- 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.

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 27 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

- 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.

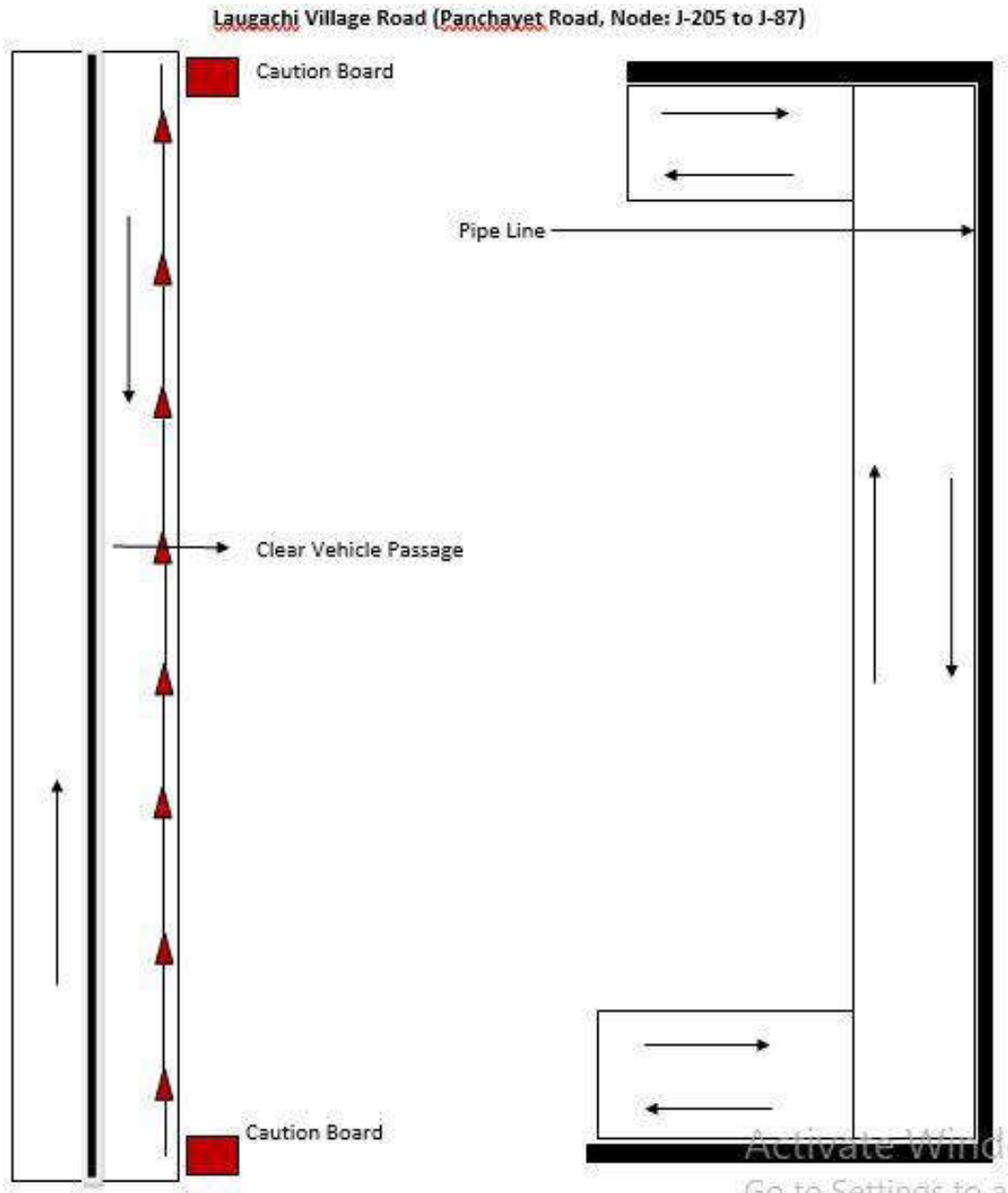
### **5.8 Working Area**

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

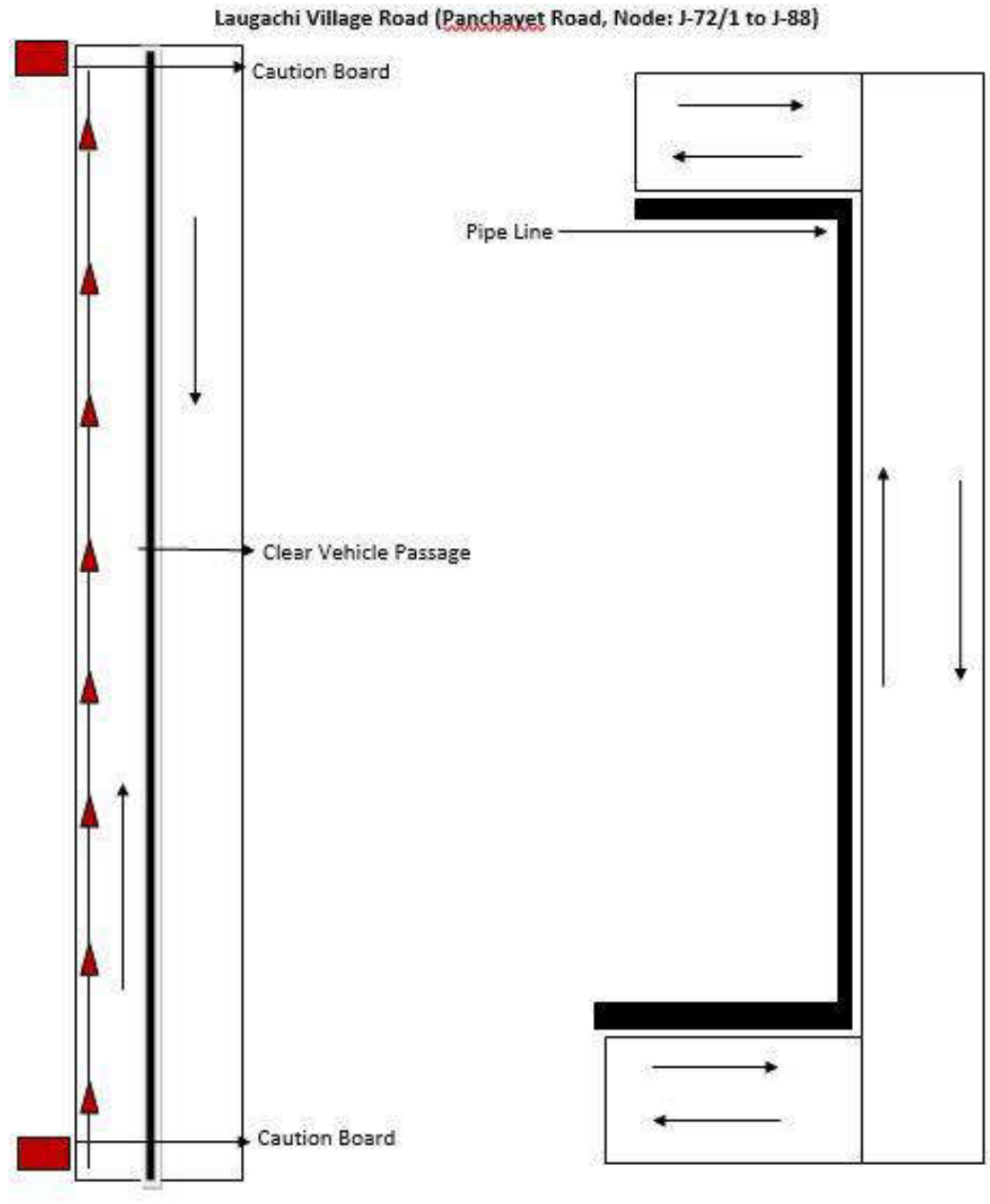
Particular attention has been taken in working area:

- 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.

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 28 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	



<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 29 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

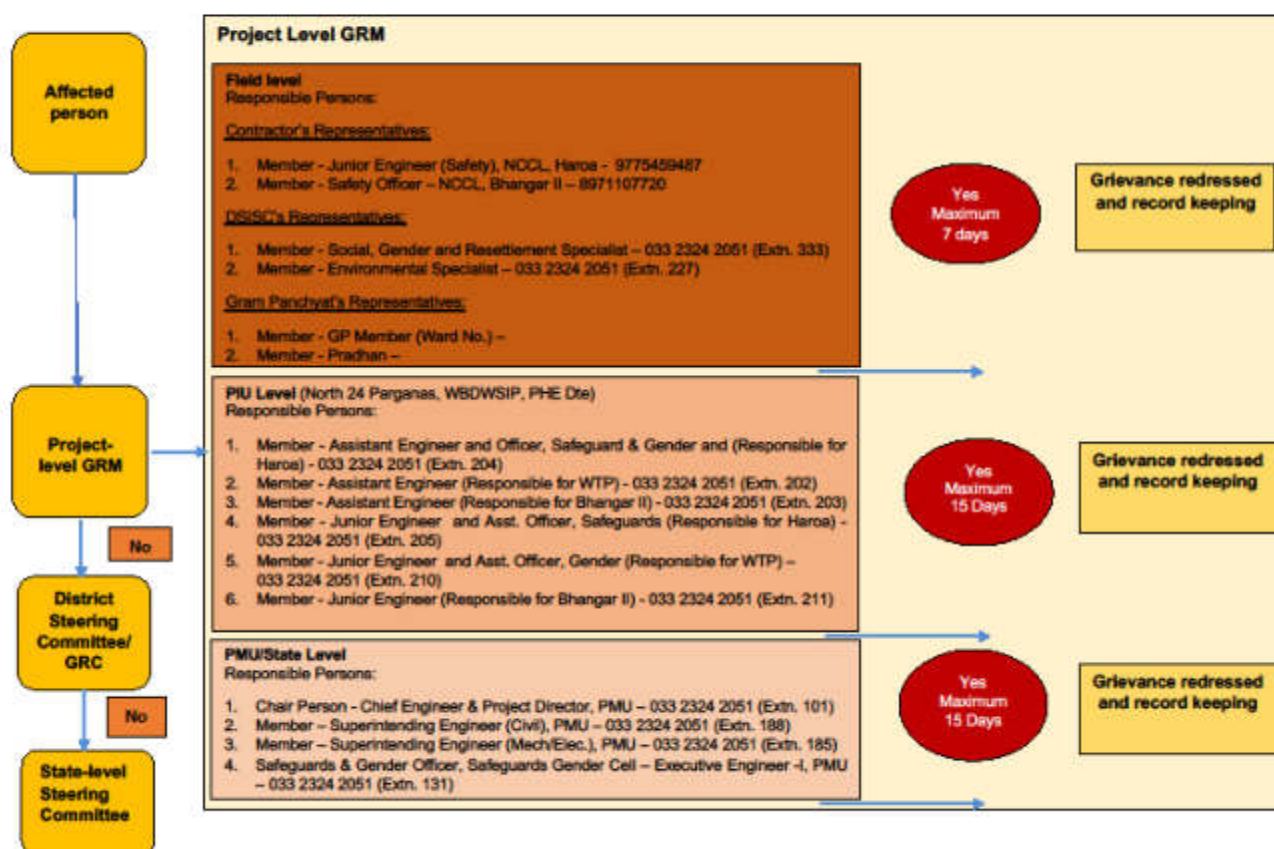


<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b>
	Site Specific Environmental Management Plan	<b>Last Revision No. 00</b> <b>Last Revision Date: 00</b> <b>Page 30 of 44</b> <b>Original Issue Date :</b>

### Attachment P9: Procedure for on-site Grievance Redressal 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.

#### Grievance Redress Mechanism



All grievances are recorded in site grievance register and resolved at the earliest. The sample grievance registration form is included in Appendix P3.

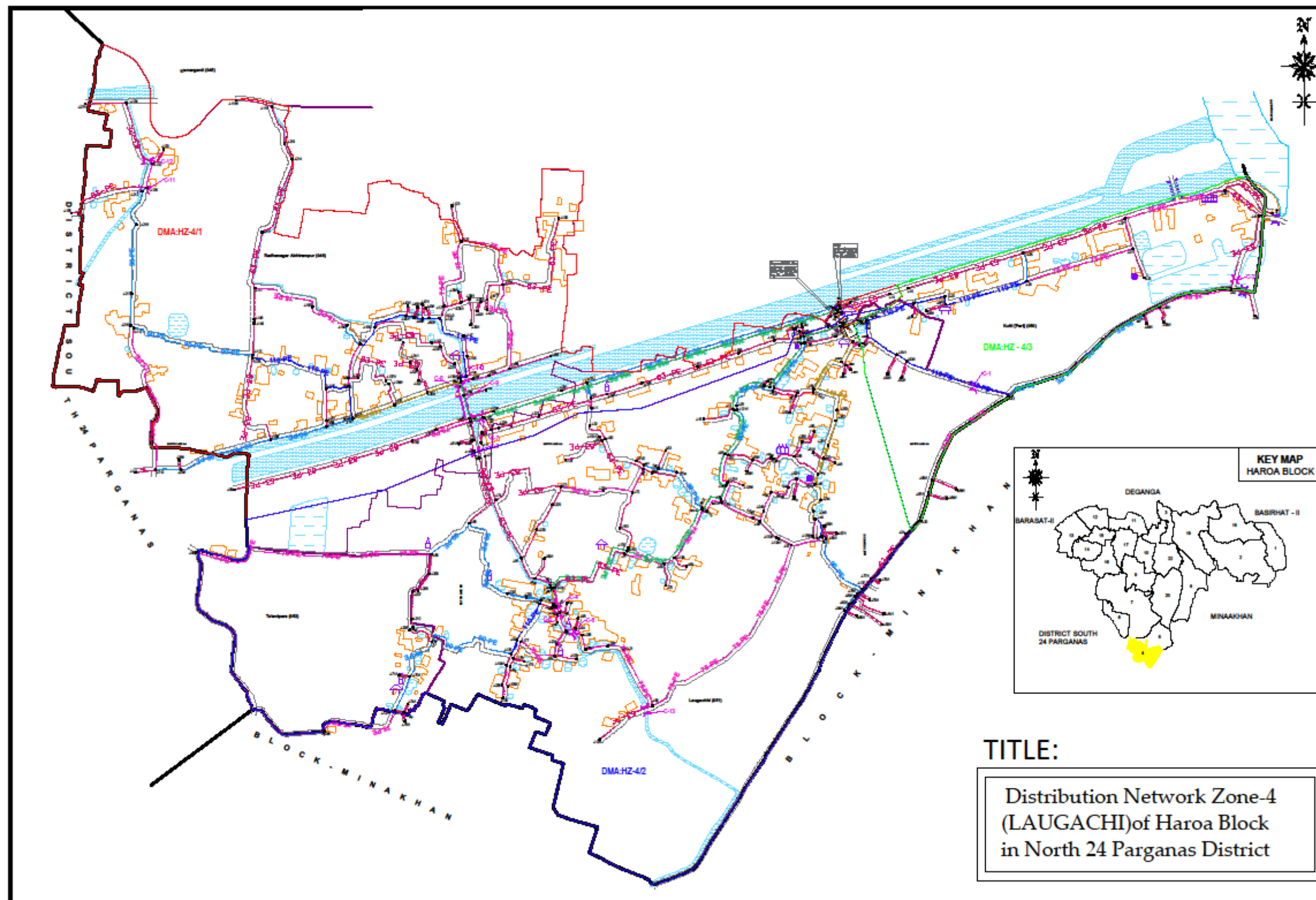
### Attachment P10: Procedure for information disclosure prior to start of works

- 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 Panchyat level and work details including time period is informed.



NCC LIMITED	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block	Doc. No. NCC/ SEMP /01 Last Revision No. 00
	Site Specific Environmental Management Plan	Last Revision Date : 00 Page 31 of 44 Original Issue Date :


#### Appendix P.1: Map of Distribution Network





<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b>
	<b>Site Specific Environmental Management Plan</b>	<b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 32 of 44</b> <b>Original Issue Date :</b>

## Appendix P.A: Gram Panchayat and other Authorities Permission

  
**Government of West Bengal**  
**Office of the Executive Engineer**  
**PIU, North 24 Parganas, WBDWSIP, PHE Dte.**  
**Utility Building, Tank No.3, 2<sup>nd</sup> Floor, Block-A1,**  
**Action Area-1A, New Town, Kolkata-700156**  
**Phone No. : (033) 2324-2051, E-mail : ee.piu24p.adh@wbphed.gov.in**

---

Memo No. \_\_\_\_\_/EE(C)PIUN24P, Dated, New Town, the, \_\_\_\_\_

To  
The Executive Engineer,  
Barisal Division, WBSRDA,  
North 24 Parganas.

Sub. : Design and construction of overhead reservoir including water supply distribution network & metering works in Haroa Block (Zone-04) Laugachil.

Dear Sir,

This is to inform you that, PHE Dte. has undertaken a water supply project in the month of October 2018 in Haroa block under the financial assistance of ADB and laying of foundation stone of the same was done by Hon'ble Chief Minister of West Bengal on 26<sup>th</sup> October 2018. Now the entrusted agency will start the laying of distribution network from 20.09.2019 in Kultu Gram Panchayat along the road under your jurisdiction within the ROW and a copy of distribution network drawing is herewith enclosed for ready reference.

Your kind co-operation in this regard is requested.

Encls. : As stated.

Yours faithfully,  
  
Sd/-  
Executive Engineer,  
PIU, N-24 Pgs, WBDWSIP, PHE Dte.  
Dated, New Town, the, \_\_\_\_\_

Memo No. \_\_\_\_\_/EE(C)PIUN24P,  
Copy forwarded for information to :-  
1) The Sahbadhipati, North 24 Parganas Zilla Parishad.  
2) The District Magistrate, North 24 Parganas.  
3) The Additional Executive Officer, North 24 Parganas Zilla Parishad.  
4) The District Engineer, North 24 Parganas Zilla Parishad.

Sd/-  
Executive Engineer,  
PIU, N-24 Pgs, WBDWSIP, PHE Dte.  
Dated, New Town, the, 19/09/2019

Memo No. 734 (4-3) /EE(C)PIUN24P,  
Copy forwarded for information to :-  
1) The Superintending Engineer, PIU, North 24 Parganas, WBDWSIP, P.H.E. Dte.  
2) The Assistant Engineer, PIU-I, North 24 Parganas, WBDWSIP, P.H.E. Dte.  
3) The Team Leader, DSISC-North 24 Parganas, WBDWSIP.

Sd/-  
Executive Engineer,  
PIU, N-24 Pgs, WBDWSIP, PHE Dte.

Inward No. 1828  
RECEIVED  
Date 19/09/19  
Signature  
Time - 2:53

File  
19/9/19

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 33 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	



Government of West Bengal  
Office of the Assistant Engineer  
PIU-I, North 24 Parganas, WBDWSIP, PHE Dte.  
Utility Building, Tank No. - 3, 2<sup>nd</sup> Floor, Block-AI  
Action Area-IA, New Town, Kolkata-700156  
Phone No. : (033) 2324-2051, E-mail : ae3.piu24p.adb@wbphed.gov.in

Memo No. \_\_\_\_\_/AB(C)PIU-I/N24P,

Dated, New Town, the, \_\_\_\_\_

To

- 1) The Station Manager,  
WBSEDCL, Haroa, North 24 Parganas.
- 2) The Sub Division Engineer,  
BSNI, Basirhat Sub Division, North 24 Parganas.

Sub. : Design and construction of overhead reservoir including water supply distribution network & metering works in Haroa Block (Zone-04) Laugachi.

This is to inform you that, PHE Dte. has undertaken a water supply project in the month of October 2018 in Haroa block with financial assistance of ADB. Now the entrusted agency will start laying distribution network from 20.09.2019 in **Kulti Gram Panchayet** along the road within ROW and a copy of drawing is herewith enclosed for your ready reference. In this matter you are requested to provide contract details of authorized person under your control regarding utilities & others if any during execution for smooth work progress without hampering existing services under your jurisdiction.

Your kind co-operation in this regard is requested.

Encls. : As stated.

SD/-  
S. BOSE

Assistant Engineer  
PIU-I, N-24 Pgs., WBDWSIP, PHE Dte.

Dated, New Town, the, \_\_\_\_\_

Memo No. \_\_\_\_\_/AB(C)PIU-I/N24P,

Copy forwarded for information to :-

- 1) The Savapati, Haroa Panchayet Samity.
- 2) The Executive Officer, Haroa Panchayet Samity.

SD/-  
S. BOSE

Assistant Engineer  
PIU-I, N-24 Pgs., WBDWSIP, PHE Dte.

Dated, New Town, the, 18/09/19

Memo No. 58/24/AB(C)PIU-I/N24P,

Copy forwarded for information to :-

- 1) The Superintending Engineer, PIU, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 2) The Executive Engineer, PIU, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 3) Sri Manab Chakraborty, J.E., PIU-I, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 4) The Team Leader, DSISC-North 24 Parganas, WBDWSIP.

File  
24.9.19  
Time - 5:00 PM

RECEIVED  
24.9.19  
Signature

Assistant Engineer  
PIU-I, N-24 Pgs., WBDWSIP, PHE Dte.



<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 34 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	



Government of West Bengal  
Office of the Assistant Engineer  
PIU-I, North 24 Parganas, WBDWSIP, PHE Dte.  
Utility Building, Tank No. - 3, 2<sup>nd</sup> Floor, Block-AI  
Action Area-IA, New Town, Kolkata-700156  
Phone No. : (033) 2324-2051, E-mail : ae3.plun24p.adb@whphed.gov.in

Memo No. 57 /AE(C)PIU-I/N24P,

Dated, New Town, the, 18/09/19.

To  
The H.D.O. & Executive Officer,  
Haroa Development Block & Haroa Panchayat Samity,  
North 24 Parganas.

Sub. : Design and construction of overhead reservoir including water supply distribution network & metering works in Haroa Block (Zone-04) I. sugachi.

You are well aware that the water supply project under reference is being going on within Haroa block with financial assistance of ADB. Now the entrusted agency will start laying distribution pipe network from 20.09.2019 in Kulti Gram Panchayat along the road within ROW and a copy of drawing is herewith enclosed for your ready reference.

Your kind co-operation in this regard is requested.

Encls. : As stated.

Assistant Engineer  
PIU-I, N-24 Pgs., WBDWSIP, PHE Dte.

Dated, New Town, the, 18/09/19.

Memo No. 57/1-3 /AE(C)PIU-I/N24P,

Copy forwarded for information to :-

- 1) The Sevapsai, Haroa Panchayat Samity.
- 2) The Pradhan, Kulti Gram Panchayat.
- 3) The Officer in Charge, Haroa Police Station.

Assistant Engineer  
PIU-I, N-24 Pgs., WBDWSIP, PHE Dte.

Dated, New Town, the, 18/09/19.

Memo No. 57/3(1-4) /AE(C)PIU-I/N24P,

Copy forwarded for information to :-

- 1) The Superintending Engineer, PIU, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 2) The Executive Engineer, PIU, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 3) Sri Menab Chakraborty, J.E., PIU-I, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 4) The Team Leader, DSISD-North 24 Parganas, WBDWSIP.

Date 24.9.19 Signature

Time - 5:00 PM

Assistant Engineer  
PIU-I, N-24 Pgs., WBDWSIP, PHE Dte.

OFFICE COPY

Printed and Published by the Director, Calcutta

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 35 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

#### Appendix P.B: Labour License

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 36 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	



**GOVERNMENT OF WEST BENGAL**  
OFFICE OF THE ASSISTANT LABOUR COMMISSIONER, BASIRHAT  
MOILAKHOLA MORE TAKI ROAD BASIRHAT 24 PARGANAS (NORTH) PIN - 743412

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

**License No. : BST09/CLL/000029**

**Date : 05th Dec, 2018**

Lic Fees	1000
S. Deposit	30000

**LICENSE**

License is hereby granted to **NCC LIMITED** at **Haroa, Block- Haroa , Basirhat, PS - Haroa , District - North 24 Parganas, Pin Code - 743425** under Section 12(1) of the Contract Labour(Regulation and Abolition)Act,1970 subject to the condition specified in Annexure.

The License shall remain till:-04th Dec, 2019

sd/-  
Signature & Seal  
Licensing Officer

**RENEWAL**

[Rule 29]

Renewal vide AIN No.	RENEWAL-LIC-009311-008372-17200-2019
1.Date of Renewal	02nd Dec, 2019
2.Fees paid for Renewal	₹ 1250 (One Thousand Two Hundred Fifty rupees only)
3.Date of Expiry	04th Dec, 2020

**SUPRIYA  
BANDYOP  
ADHYAY**

Digitally signed by  
SUPRIYA  
BANDYOPADHYAY  
Date: 2019.12.02  
12:41:53 +05'30'

**P.E. Details:-**

Office of the Executive Engineer, North-24 Parganas Water Supply Division-II, P.H.E. Dte.(BST09/CLR/000088)

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 37 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	



**GOVERNMENT OF WEST BENGAL**  
OFFICE OF THE ASSISTANT LABOUR COMMISSIONER, BASIRHAT  
MOILAKHOLA MORE TAKI ROAD BASIRHAT 24 PARGANAS (NORTH) PIN - 743412

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

Licence No. : **BST09/CLL/000029**

Date : **05th Dec, 2018**

Lic Fees	1000
S. Deposit	30000

**LICENCE**

Licence is hereby granted to **NCC LIMITED** at **NCC Limited, Vill. Peara, P.O. + PS. Haroa, Pin.- 743425, Haroa, Block- Haroa, Basirhat, PS - Haroa, District - North 24 Parganas, Pin Code - 743425** 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: **04th Dec, 2019.**

**Supriya  
Bandyopadhyay**

Digitally signed by  
Supriya Bandyopadhyay  
Date: 2018.12.05  
10:54:45 +05'30'

Licensing Officer  
Under the Contract Labour(R&A) Act, 1970

&  
Assistant Labour Commissioner  
Basirhat, North 24 Parganas

**Establishment Information:**

Office of the Executive Engineer, North 24 Parganas Water Supply Division-II, P.H.E. Dto. [BST09/CLL/000029]

W.Site - Utility Building, Tank No.-3, 2nd Floor, Action Area-1A, New Town, Kolkata.

Haroa, Block - Haroa, Basirhat - 743425, PS - Haroa, North 24 Parganas

**Work site exact location:**

NCC LIMITED, VILL. PEARA, PO+PS: HAROA, PIN. 743425

Haroa, Block- Haroa, Basirhat

PS - Haroa, District - North 24 Parganas, Pin Code - 743425



<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b>
	<b>Site Specific Environmental Management Plan</b>	<b>Last Revision No. 00</b> <b>Last Revision Date : 00</b> <b>Page 38 of 44</b> <b>Original Issue Date :</b>

## Appendix P.C: Workman Compensation



Workmen's Compensation Policy- Policy Schedule		
<b>Policy Servicing Office :</b>	Off Code-15, Future Generali India Insurance Co Ltd, 1st Floor D.No.7-1-21A, APDL Estate Opp Country Club, Begumpet, Hyderabad, Telangana, Pincode-500016, Tel No: 040-66038000	
<b>Policy No Insured :</b>	2019-L0129168-FWC	<b>Period of Insurance :</b> From 00:00 04/02/2019 To Midnight of 03/02/2020
<b>Address :</b>	WORKS IN HAROA BLOCK, North Twenty Four Parganas, West Bengal, 743425	<b>Intermediary Name/Code :</b> INDIA INSURE RISK MANAGEMENT AND INSURANCE BROKING SERVICES-60001521
<b>GSTIN Number :</b>	19AAACN7335C1ZM	<b>Telephone (Mob, Off, Home) :</b> 4027822990/09892590738/4027822990
		<b>Fax No &amp; Email Id :</b> 01256791416 / PADMAJA.SURYARAJAN@INDIAINSURE.COM
		<b>FGI GSTIN Number :</b> 36AABCF0191R1ZA
In consideration of the Policy holder named herein paying to the Future Generali India Insurance Company Limited (herein after called the Insurer) the premium as stated in the Schedule and in reliance upon the statements made by the Policy holder in the proposal including its attachments or otherwise, and the material incorporated therein, the Insurer agrees to provide insurance against loss damage liability or expense to the extent and in the manner herein provided subject to all terms, conditions, exceptions and warranties herein first set forth.		
Co-Insurance Details		Schedule Of Premium ( ₹ )
Insurer	Share (In %)	Gross Premium
FUTURE GENERALI INDIA INSURANCE COMPANY LIMITED	100%	134,304.36
		Goods and Service Tax
		24,174.78
		Total Premium
		158,479.00
Risk Details		
<b>Nature of Business :</b>	Design and Construction of overhead reservoir including water supply distribution and metering works in Haroa Block	
<b>Location :</b>	Design and Construction of overhead reservoir including water supply distribution and metering works in Haroa Block	
<b>Contractor/Sub-Contractor Name :</b>	NCC LTD	
No of Employees	Description of work done by Employees	Declared Wages during the Period of Insurance ( ₹ )
50	Highly Skilled workers	6,642,000.00
50	Skilled workers	6,048,000.00
50	Semi Skilled Workers	5,490,000.00
50	Unskilled Workers	4,986,000.00
<b>Total</b>		<b>23,166,000.00</b>
Coverage Details		
The Policy covers Liability of the Insured under the following Law(s) shown as covered, subject to claim being otherwise admissible as per terms, conditions and exclusions of the Policy and subject to Limit of Indemnity as stipulated against each Law:		
Law	Limit of Indemnity	Coverage
Employee's Compensation Act, 1973 and subsequent amendments thereon prior to the date of issue of this Policy	Subject otherwise, to the terms, conditions & Exclusions of the Policy, the amount of liability incurred by the Insured	Yes
Common Law/ Fatal Accident		Yes
Law(s)		
WC Act 1923 and subsequent amendment of the said Act prior to the date of issue of the policy provided that the insurance granted hereunder is not extended to include		
i. Any interest and/or penalty imposed on the insured on account of his/their failure to comply with the requirements laid down under WC Act 1923		
ii. Occupational disease of any kind.		
Additional Clauses, Conditions, Warranties & Exclusions		
Terrorism is excluded from coverage.		
No cover for Medical Expenses, Unless specifically allowed in the policy.		
No Cover for Medical Expenses.		
No Cover for occupational Diseases.		
Jurisdiction/ Territory : India		
Excluding Wet Risk, Blasting, Tunneling and Handling of Explosives		
Excluding loss arising out of installation and erection of live wiring.		
Warranted that safety practices are followed by the workers and safety gadgets are used by the workers while working in heights.		
Contractors and sub-contractors employees are covered.		
Important:- 1. All other Terms, Conditions and Exclusions as per attached Policy Wordings. 2. In case of payment by cheque, in the event of dishonour of cheque for any reason whatsoever insurance provided under this document automatically stands cancelled from the inception irrespective of whether a separate communication is sent or not.		
For Future Generali India Insurance Co. Ltd.		
Receipt No : Z9065378	 (Authorised Signatory)	
Date of Issue : 07/02/2019		
Place of Issuance : Mumbai*		
*Addresses mentioned below.		
<b>Note: This document is digitally signed by Sharada Ramakrishnan, Authorised Signatory of Future Generali India Insurance Company Limited on 07/02/2019</b>		

The stamp duty of Rs 67.15 paid by Letter Of Authorisation No. CSD/118/2018/3179/18, dated 16/08/2018 Madurai - 2017/C.R.97/M-1, dated 09/01/2018.

Product/IN : IRDAN132P0012V01200708



Future Generali India Insurance Company Limited, Corporate & Registered Office: 6th Floor, Tower - 3, Indiabulls Finance Center, Sankaraj Bazar,

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 39 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

#### Appendix P.D: PUC Certificates


**POLLUTION UNDER CONTROL CERTIFICATE**  
(Under the West Bengal Motor Vehicles Rules, 1988)


Vehicle Registr. No. **WB15B2529** WB-01-**D 5678745**

Date of issue: **23-07-2019** Valid upto **22-01-2020**

Pollution Level

CO (%)	
HC (ppm)	
SD (HSU)	55.83

PUC Certificate issued by: 


Signature  32/D

**COMPUTERISED EMISSION TEST CERTIFICATE**  
CMVR AUTHORISED BY : Govt. of we  
**AKBAR AUTO EMISSION TESTING CENTRE**  
BASANTI HIGHWAY, GHATAKPUKUR, PO/PS-BHAGAR, 24 PGS (S), W.B-743502

I.D Number **WB32D3647596** Licence No: **32/D**  
Year Of Registration= **2011** Date : **23-07-2019**  
vehicle registration no = **WB15B2529** TIME: **05:46:14**  
Spedometer Reading[kms] = **2541** Owner: **NABA KUMAR GHOSH /851304**  
Engine Number=**28746** Driver:- **SELF**  
chasis Number=**B5954** Test Fee : **Rs.100/-**  
Vehicle Colour = **OTHERS** Fule : **Diesel**  
Vehicle Make : **HMT** Smk cell Temp : **00**  
Vehicle Model : **4022** Oil Temp : **93.0**  
:Type Of Engine : **OTHERS** Valid Up To : **22-01-2020**  
Type Of Vehicle: **OTHERS** Grade : **A**

Test Result : Free Acceleration Validity **6 Months**

	ideal Rpm	max Rpm	K Value	Hsu val	Oil Temp
1	860	2900	5.37	90.06	61
2	860	2900	0.17	6.9	68
3	852	2700	0.12	6.9	66
Avg	860	2930	1.9	55.83	



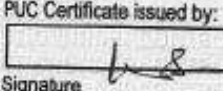


<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 40 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	


Date of issue: **14-Sep-2019** Valid upto: **13-Mar-2020**

Pollution Level:

CO (%)	1.745
HC (ppm)	00542
SD (HSU)	00542

PUC Certificate issued by: 

License No. and Seal: **30/NAD/2011**

Signature: 

Vehicle Registration No.: **WB-52H-7637**

### TEST REPORT

AUTHORISED BY **TRANSPORT DEPT. GOVT OF W.B.**  
**CHOWRASTA, NH-34, CHAKDAH, NADIA**

WB-01-D **3044009**

Vehicle Registration No.: WB-52H-7637 Test Fee : 80.00  
Year of Registration: 01-02-2010 Fuel : PETROL  
Sedometer Reading(kms) : \* Type Of Vehicle 2W  
Engine Number: 33374 Type Of engine 4S  
Chasis Number: 02501 Vehicle Make HERO HONDA  
Vehicle Color: RED Vehicle Model CDDAWN  
I.D. Number: WBPP003628  
Time : 04:03:26 Driver: SELF  
Date : 14-Sep-2019 Owner: NAGARJUNA CONSTRUCTION LTD

### Test Result: IDLING

	Regulation(%)	Actual Reading	
		Final	
CO	3.5	01.359	%Vol
HC	4500	00542	PPM
CO2	---	10.32	%Vol
O2	---	02.57	%Vol
NOx	---	---	%Vol
Lambda	---	4.1900	
Oil	---	141	°C
RPM	---	00000	
AFR	---	18.712	
PEF	---	---	
CO(corr.)	---	1.745	%Vol

Certified that this vehicle's CO and HC Emission Level confirm to the standards prescribed under Rule 115(2) of CMV Rules, 1989

Validity : 6 months

Valid UpTo 13-Mar-2020

Grade A 

Seal Of Testing

Name of Authorised Signatory With Signature 

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 41 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

**POLLUTION UNDER CONTROL CERTIFICATE**  
(Under the West Bengal Motor Vehicles Rules, 1988)


Vehicle Registr. No. **PB02BL7373** WB-01-D **5679142**

Date of Issue: **16-08-2019** Valid upto: **15-02-2020**

Pollution Level

CO (%)	55.83
HC (ppm)	55.83

PUC Certificate No. **32/D**

Signature 

**WB-01-D 5679142**

### COMPUTERISED EMISSION TEST CERTIFICATE

CMVR AUTHORISED BY : Govt. of we  
AKBAR AUTO EMISSION TESTING CENTRE  
BASANTI HIGHWAY, GHATAKPUKUR, PO/PS-BHAGAR, 24 PGS (S), W.B-743502

I.D Number **WB32D3647572** Licence No. **32/D**  
Year Of Registration= **2011** Date : **16-08-2019**  
vehicle registration no = **PB02BL7373** TIME= **02:47:14**  
Speedometer Reading(kms) = **21522** Owner= **N C C CO**  
Engine Number=**9218** Driver:- **SELF**  
chassis Number=**G2011** Test Fee : **Rs. 100/-**  
Vehicle Colour = **YELLOW** Fuel : **Diesel**  
Vehicle Make : **JCB** Smk cell Temp : **00**  
Vehicle Model : **3DX** Oil Temp : **93.0**  
Type Of Engine : **OTHERS** Valid Up To : **15-02-2020**  
Type OF Vehicle: **OTHERS** Grade **32/D**

Test Result : Free Acceleration Validity 6 Months

	ideal Rpm	max Rpm	K Value	Hsu_val	Oil Temp
1	860	2900	5.37	90.06	61
2	860	2900	0.17	5.9	68
3	852	2700	0.12	6.9	66
Avg	860	2930	1.9	55.83	



Seal Of Testing Center

Certified that this Vehicle's K-Mean and hsu% value conforms to the standards prescribed under rule 113(2) of CMB rules 1989, Operator- MD RAMIZ RANA

*JCB*

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01</b>
	Site Specific Environmental Management Plan	<b>Last Revision No. 00 Last Revision Date : 00 Page 42 of 44 Original Issue Date :</b>

## Appendix P.2: Contractor's OHS Policy Statement

<p><b>NCC LIMITED</b></p> <p><b><i>Health, Safety &amp; Environment Policy</i></b>  For Construction/Erection and Commissioning, the General Strategic Objectives Listed Below are Followed:</p> <ul style="list-style-type: none"> <li>• A proactive, role model HSE at Site.</li> <li>• All Sites related activities and Office Work will result in no one getting injured or made unwell.</li> <li>• Early identification of hazards and risk and the decision or adequate measures.</li> <li>• Reduction of negative impact on the neighborhood are the the environment in particular on fauna and flora to a minimum.</li> <li>• Provide training in HSE knowledge and encourage continuous improvement and development of this.</li> <li>• Continuous monitoring of the HSE performance.</li> <li>• Promote the benefits of a healthy life-style amongst our employees.</li> <li>• Report and investigate accidents and incidents to take lessons and prevents similar events occurring again.</li> <li>• Preserve ecological balance and heritage.</li> </ul>				
Prepared by:	Copy No.	Date of Issue:	Approved by:	Issued by:

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 43 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

### Appendix P.3: 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 in touch with you for clarification and feedback.

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

Date	Place of registration	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:	

<b>NCC LIMITED</b>	<b>Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block</b>	<b>Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 44 of 44 Original Issue Date :</b>
	Site Specific Environmental Management Plan	

**অভিযোগ/ পরামর্শ/ মন্তব্য/ প্রশ্নাদি লিপিবদ্ধ করার নমুনা পত্র**

এই \_\_\_\_\_ প্রকল্পটি সৃষ্ট ও সুন্দরভাবে রূপায়নের উদ্দেশ্যে সকলের অভিযোগ, পরামর্শ, প্রশ্ন এবং মন্তব্য প্রত্যাশা করে। আপনার কোনও অভিযোগ থাকলে আপনার নাম ও যোগাযোগের ঠিকানা দিয়ে আমাদের সহযোগিতা করবেন। আপনার অভিযোগ / প্রশ্নের যথার্থ সদুত্তর ও আপনাকে পরিস্থিতি সম্পর্কে আমরা অবগত করবো।

যদি আপনি আপনার ব্যক্তি পরিচয় গোপন রাখতে চান তাহলে আপনার নামের উপরে " গোপনীয় " কথাটি লিখবেন।

ধন্যবাদান্তে

তারিখ	পঞ্জীকরণের বা <b>Registration</b> এর স্থানঃ	ব্লক- গ্রাম পঞ্চায়েত- গ্রাম সংসদ-	
যোগাযোগের ঠিকানা / ব্যক্তিগত তথ্য			
নাম		লিঙ্গ	বয়স
বাড়ির ঠিকানাঃ গ্রাম- ফোন নং-	পাড়া- ই-মেইল-	পুরুষ - মহিলা-	
অভিযোগ/ পরামর্শ/ মন্তব্য/ প্রশ্নাদি- দয়া করে কে, কি, কোথায় এবং কিভাবে - অভিযোগের এই বিশদ বিবরণ নিচে লিখুন-			
যদি কোন অতিরিক্ত কাগজ জুড়তে হয় / বা নোট থাকে বা চিঠি থাকে তাহলে এই ঘরে (✓) টীক দিন।			
আপনি কিভাবে আপনার অভিযোগ / মন্তব্য বিষয়ে অবগত হতে চান ?			

সুধুমাত্র অফিসের ব্যবহারের জন্যঃ

যে আধিকারিক অভিযোগ জমা নিলেন তার নামঃ
কিভাবে জানানো হল (✓) টীক দিনঃ নোট বা চিঠির মাধ্যমে – ই-মেইল- মুখে মুখে বা টেলিফোনে-
যিনি অভিযোগ পাবার পর খতিয়ে দেখেছেনঃ
(নাম / পদ)
কি ব্যবস্থা গ্রহণ করা হয়েছেঃ
ব্যবস্থা যা গৃহীত হয়েছে তা জানানো হয়েছে কি না - হ্যা / না
কিভাবে জানানো হলঃ

মন্তব্য-

প্রস্তুতকারক -

আনুমোদনকারী -

তারিখ-