



Environment and Social Due Diligence for Farakka-Raiganj Section of NH-12 (old NH-34) in the state of West Bengal, India

Indian Highways Company Pte Ltd (IHCPL)
 a Group company of Cube Highways
 and Infrastructure Pte. Ltd

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Indian Highways Company Pte Ltd (IHCPL): a Group company of Cube Highways and Infrastructure Pte. Ltd

Environment and Social Due Diligence for Farakka-Raiganj Section of NH-12 (old NH-34) in the state of West Bengal, India

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ACRONYMS

| | |
|-----------|--|
| BPL | Below Poverty Line |
| CA | Concessionaire Agreement |
| COD | Commercial Operation Date |
| CPCB | Central Pollution Control Board |
| CTE | Consent to Establish |
| CTO | Consent to Operate |
| CUP | Cattle Under Pass |
| DBFOT | Design Built Finance Operate and Transfer |
| DFO | Divisional Forest Office |
| DPR | Detailed Project Report |
| E&S | Environment and Social |
| E&S CAP | Environment and Social Corrective Action Plan |
| EC | Environment Clearance |
| EHS | Environment Health and Safety |
| EPC | Engineering and Procurement Consultant |
| ESAP | Environment and Social Action Plan |
| ESDD | Environmental and Social Due Diligence |
| ESIA | Environment and Social Impact Assessment |
| ESMP | Environment and Social Management Plan |
| RFCT LARR | Right to Fair Compensation and Transparency in Land Acquisition Resettlement and Rehabilitation |
| GHG | Green House Gas |
| GO | Government Order (Administrative) |
| GPS | Global Positioning System |
| HH | Household |
| HR | Human Resources |
| HTMS | Highway Traffic Management System |
| IBRD | International Bank for Re-construction and Development |
| IFC | International Finance Corporation |
| ITNL | IL&FS Transportation Network Limited |
| LA | Land Acquisition |
| LEP | Livelihood Enhancement Plan |
| LHS | Left Hand Side |
| MCW | Main Carriage Way |
| MoEF&CC | Ministry of Environment Forest and Climate Change |
| MoU | Memorandum of Understanding |
| NGO | Non-Government Organization |
| NOC | No Objection Certificate |
| O&M | Operation and Maintenance |
| OH&S | Occupational Health and Safety |
| PAF | Project Affected Family |
| PAP | Project Affected Persons |
| PDPs | Project Displaced Persons |
| PIL | Public Interest Litigation |
| PO | Project Office |
| PPP | Public Private Partnership |

| | |
|-------|--|
| PS | Performance Standard |
| PUP | People Under Pass |
| PWD | Public Works Department |
| R&R | Resettlement and Rehabilitation |
| RAP | Resettlement Action Plan |
| RDO | Revenue Division Office |
| RHS | Right Hand Side |
| ROB | Railway Over Bridge |
| RoW | Right of Way |
| RTO | Road and Transport Office |
| SDO | Sub-Division Office |
| SEIAA | State Environment Impact Assessment Authority |
| SH | State Highway |
| SIA | Social Impact Assessment |
| SPCB | State Pollution Control Board |
| SPV | Special Purpose Vehicle |
| SSR | Standard Schedule of Rates |
| ST | Scheduled Tribe |
| TRIPS | Team of Research Investigators & Processing Services |
| WBPCB | West Bengal State Pollution Control Board |

1.1**BACKGROUND**

Indian Highways Company Pte Ltd (IHCPL)¹ is presently evaluating an investment opportunity for four laned Farakka – Raiganj Section of National Highway NH-12 (old NH-34) from Km 294.800 to Km 394.980 (hereinafter referred to as “Project Road”) in the State of West Bengal. The road starts immediately after Farakka barrage and ends at Raiganj. ERM India has been commissioned by IHCPL to undertake an Environmental and Social Due Diligence (ESDD) of the Project Road.

Hindustan Construction Company Limited (hereinafter referred to as “HCCL”) was awarded the project (vide Letter of Award No. NHAI/BOT/WB/NH-34/2009/PQ-04/21 dated 08.02.2010) for development of the Project Road. Subsequently, Hindustan Construction Company Limited incorporated a Special Purpose Vehicle (SPV) in the name of Farakka Raiganj Highways Limited (hereinafter referred to as “FRHL”) to undertake the project on 11.03.2010. Post formation of the SPV, the Concession Agreement on 19.07.2010 entered into between the NHAI and Farakka Raiganj Highways Limited. Concession period for the project is 30 years (including construction period). IHCPL is presently evaluating the opportunity to acquire significant stake in the Project Road.

The project achieved Provisional Commercial Operation Date (PCOD) in October 2016 for 79.57 km of the road, as the construction of the remaining part of the road was not complete. The status of the land acquisition in Oct 2016 shows that the land acquisition process (upto Section 3H of NH Act under which payment of compensation is made to eligible land owners) was complete for 96.6% of the total land acquired. Hence, the land acquisition process for the project was at a significantly advanced stage. As the road has been operational for more than one year, but less than two years, the FRHL Toll Road is a Category 2: operating roads under IFC Screening Category (Refer, Section 1.3 for the detailed rationale for the categorization).

1.2**OBJECTIVES OF THE STUDY & SCOPE OF WORK**

The overall objective of the present assignment is to review the project against the applicable reference framework, identify gaps and provide recommendations in the form of an Action Plan to close these gaps and meet the requirements of the applicable framework. The specific objectives this assignment includes:

¹ Group Company of Cube Highways and Infrastructure Pte. Ltd.

- Categorizing the Project as Category 1,2 or 3 as defined in the screening/ESDD criteria defined in the Terms of Reference and to determine the screening requirements applicable to the Project;
- Undertaking the ESDD in line with the applicable requirements detailed in screening /ESDD criteria, which includes, where applicable, reviewing the adequacy of:
 - The Environmental and Social Impact (ESIA) process and report including the Environmental and Social Management Program (ESMP) and the Social Impact Assessment (SIA) and Resettlement Action Plan (RAP), if applicable;
 - The Environmental and Social management systems of the Project/ SPV to manage E&S risks and impacts on an ongoing basis in accordance with the provisions of the reference framework. A part of this review will include assessing the adequacy of the capacity and management structures in place to manage environmental and social risks and impacts through the life of the concession;
- Based on the assessment, providing a detailed evaluation on compliance with the reference framework; and
- Developing a detailed and time bound Environmental and Social Action Plan (ESAP) with clear delineation of tasks, implementation schedule, allocating responsibilities as well as defining parameters and outcome indicators to judge compliance to IFC Performance Standards requirements.

1.3

APPLICABLE STANDARDS

The assessment of all material environmental, health & safety and social aspects were carried out with reference to the standards below:

- Revised IFC Performance Standards (2012) as interpreted and applied through screening criteria as follows:
 - a. Category 1: Operating roads (2 or more years);
 - b. Category 2: Operating roads (1 or more years but less than 2 years); and
 - c. Category 3: Just operational (less than 1 year) or where there is any pending Land Acquisition (LA)
- World Bank Group/IFC EHS Guidelines specifically, the following World Bank Group EHS Guidelines, published on April 30, 2007:
 - a. IFC EHS General Guidelines;
 - b. IFC EHS Guideline for Toll Roads;
- Applicable local and national environmental and social legislation.

The approach adopted for this project is as per the ESDD approach for **Category 2** Project as per IFC-ISQ selection criteria.

Table 1-1 ESDD Approach for Category-2 Road Project as per IFC-ISQ Selection Criteria

| SN | Criteria | Approach and Scope |
|----|---|---|
| 1 | Litigation | Seek full information on any outstanding litigation or notices from regulatory authorities related to environmental impacts, land/RoW acquisition, labor working conditions, occupational health and safety, community health and safety. Take a risk based view on whether to proceed or not. |
| 2 | Other risks | Seek full information on any stakeholder concerns (employees, local communities, NGOs, regulatory authorities, contractors, contract workers): expressed in the public domain; through grievance mechanisms; and instances of protests or civil action related to environmental impacts, land/RoW acquisition, labor working conditions, occupational health and safety, community health and safety. Take a risk based view on whether to proceed or not. |
| 3 | Assessment and Management of Environment and Social risks and impacts | Ascertain that operational stage ESMP, compliant to PS, developed and implemented. An ESMS that meets the requirements of IFC PSs and applicable EHS Guidelines is in place. If not in place a time bound plan to develop and implement it. Review environment, health, safety, social, and labor working condition monitoring data to ensure that applicable provisions of IFC PSs and WBG EHS Guidelines are being met. |
| 4 | Resettlement Action Plan (RAP) | Establish that no pending land and R&R related cases/disputes pending before courts/authority or reported. Establish that there are no issues of the type mentioned at (2) above. If issues of the type mentioned at (1) and/or (2) material, then consider seeking and reviewing SIA and RAP to inform decision at (1) and/or (2) as relevant Review also status of implementation of the R&R Plan. Resettlement Completion Audit may be requested in cases. |
| 5 | Stakeholder/Community Engagement | Review operation stage Stakeholder Engagement Plan and its implementation for conformance to IFC PSs. If issues at (1) and/or (2) identified, may like to review evidence of Informed Consultation and Participation (ICP) process to inform decision at (1) and/or (2) as relevant If issues at (1) and/or (2) identified, may like to undertake procedures akin to Broad Community Support (BCS) for the project to inform decision at (1) and/or (2) as relevant. |
| 6 | Grievance Mechanism | Functional and effective Grievance Redress system in Place |
| 7 | Health & Safety | Operational stage health & safety management system in place/implemented (as a part of the ESMS). In case it is not in place a time bound plan to develop and implement an operational stage health & safety management system. Review monitoring data to assess efficacy |

| SN | Criteria | Approach and Scope |
|----|--|--|
| 8 | HR/ Contractor Management | HR/Contractor management system/practices compliant to PS 2 requirements. Time bound action plan for closure of gaps (in HR/Contractor management system/practices with respect to PS 2 requirements) and implementation of the same. Labor and employee accommodation meets PS2 provisions. |
| 9 | Pollution Prevention | Mitigation measures implemented for impacts from air/noise/vibration in accordance with PS3 and WBG EHS Guidelines. Monitoring data indicates compliance with above |
| 10 | Natural Habitats | <p>Where forest land diversion or roads in the vicinity of coastal areas or near large wetland areas, undertake review of literature, contact forest department and collect anecdotal information from communities for presence or migration of any IUCN or nationally specified vulnerable, endangered or critically endangered species. If present, establish whether critical habitat or not. If critical habitat, establish that CR related measures in accordance with PS 6 in place.</p> <p>If not critical habitat, review impact on natural habitat and whether measures meeting natural habitat requirements of PS6 in place. Obtain evidence of offset and “no net loss’ and preferably a “net gain” of biodiversity, for road stretches passing through legally “Protected Area” (like national park, wildlife corridor, reserved forest, critical habitat, Scheduled V, Ramsar sites, IBAs etc) or a Critical Habitat;</p> |
| 11 | Indigenous peoples, tribes and communities | <p>If road passes through scheduled areas, review process of land take in detail to understand impact on IPs, if any and whether they have been mitigated in accordance with PS7. If significant tribal population in the vicinity of the road, or significant tribal land taken or potential for loss of access to lands/resources on which tribal population dependent, assess if mitigation measures developed and implemented in accordance with PS7.</p> <p>Establish no adverse impact (either historical or residual) on lands and resources under traditional or customary use of IPs (including access related impacts); no relocation of IPs from land and resources under traditional or customary use; and no adverse impact on critical cultural heritage of IPs. If other adverse impact on IPs, demonstrate that consultation meets ICP. Review status of implementation of all mitigation measures for IPs.</p> |
| 12 | Cultural Heritage | If issues relating to cultural heritage identified at (1) and/or (2), review in detail to establish if measures implemented meet PS1 and PS8. |

ERM’s methodology to meet these requirements has been briefly described in the subsequent sub-sections.

1.4.1

Project Inception

An inception teleconference with IHCPL and IFC was undertaken on 22nd Mar 2018 in order to obtain an overview of the project status, present ERM’s scope of work and align the approach, information requirements and timelines. A

field trip was undertaken on 28th Mar 2018 to scope the issues and also the ESDD methodology, followed by a detailed assessment.

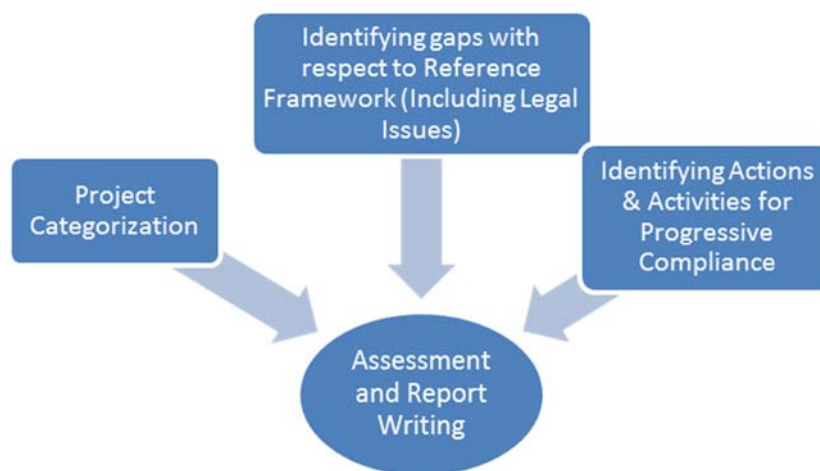
1.4.2 *Documentation Review*

ERM got the access to a digitally secured data room on 23rd Mar 2018. ERM carried out a desk-based review of documentation ahead of the detailed site assessment. Simultaneously, ERM undertook review of available public information on the Farakka to Raiganj Section of NH-12 (old NH-34). More documents and information were collected during the field visit and meeting with HCCL. *Annexure A* provides the list of documents that were made available.

1.4.3 *Site Assessment and Report Writing*

The assessment involved a three step approach (see *Figure 1.1*) screening project categorization, identifying gaps with respect to reference framework and finally identifying actions/activities for compliance. The gap assessment was done through an assessment protocol based on standards as in reference framework (see **Section 1.3** above).

Figure 1.1 Assessment and report writing process



The detailed assessment through this protocol helped in identifying gaps and considering risks (financial, reputational, operational, legal etc.) associated with them. The issues that represent significant risks (potential for regulatory action; reputational implication; higher financial risks, and potential to affect road operation and revenue) were identified as key issues (see Section-4).

The action plan recommended takes into account what is under FRHL's control as a concessionaire and what it can achieve through its sphere of influence with NHAI who is the owner of the road. The ESAP is structured to include: (a) summary of recommendations; (b) resources and responsibilities; (c) timeline for completion and (d) indicator of completion of the task.

1.5

LIMITATIONS

This due diligence exercise has been undertaken based on the documents made available by ERM's field survey and data collection, FRHL and IHCPL, consultations with FRHL and information available in public domain. Wherever ERM has not been able to make a judgement or assess any process, it has highlighted that as an information gap and suggested a way forward.

The assessment of the land acquisition linked project impacts is based on the information made available by FRHL and CALA officials.

The information about the encroachments along the project road are based on list provided by FRHL. ERM has provided its understanding of compliance to applicable EHS and labour laws, rules and regulation. However, the review should not be construed as a legal review of FRHL.

Professional judgements expressed herein are based on facts and information provided. Wherever ERM has not been able to make a judgement or assess any process, it has highlighted that as an information gap and suggested a way forward.

1.5.1

Uses of the Report

ERM is not engaged in consulting or reporting for the purpose of advertising, sales promotion, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes. Client acknowledges this report has been prepared for their and their clients' exclusive use and agrees that ERM reports or correspondence will not be used or reproduced in full or in part for such purposes, and may not be used or relied upon in any prospectus or offering circular. Client also agrees that none of its advertising, sales promotion, or other publicity matter containing information obtained from this assessment and report will mention or imply the name of ERM.

Nothing contained in this report shall be construed as a warranty or affirmation by ERM that the site and property described in the report are suitable collateral for any loan or that acquisition of such property by any lender through foreclosure proceedings or otherwise will not expose the lender to potential environmental or social liability.

1.6

LAYOUT OF THE REPORT

Section 1 (this section): Introduction: Background, Scope of the Independent Review & Approach and Methodology for the study;

Section 2: Reference Framework & Applicable Regulatory Compliance;

| | |
|-------------------|--|
| <i>Section 3:</i> | Project Description; |
| <i>Section 4:</i> | Key Environmental and Social Observations; and |
| <i>Section 5:</i> | Environmental and Social Action Plan (ESAP). |

Annexures

| | |
|---------------------|---|
| <i>Annexure-A:</i> | <i>Documents Reviewed by ERM for this ESDD</i> |
| <i>Annexure-B:</i> | <i>Photo-documentation of EHS issues during site visit</i> |
| <i>Annexure-C:</i> | <i>Encroachment Survey Details</i> |
| <i>Appendix A :</i> | <i>Critical Habitat Assessment Report for Farakka Raiganj Section of NH-12 (old NH-34) in the state of West Bengal, India</i> |

This section summarises applicable local, national environmental and social legislation, IFC Performance standards 2012 and World Bank Group/IFC EHS Guidelines with respect to which this ESDD is undertaken.

2.1 IFC PERFORMANCE STANDARDS

Following IFC Performance Standards (2012) were found to be applicable to the project:

Table 2-1 *Applicability of IFC Performance Standards, PS 1 to PS 8*

| SN. | IFC Performance Standards | Applicability to the Project |
|-----|---|--|
| 1. | PS 1: Assessment and Management of Environmental and Social Risks and Impacts | <p>Applicable</p> <p>This PS aims to assesses the existing social and environmental management systems and to identify the gaps with respect to their functioning, existence and implementation of an environmental and social management plan (ESMP), a defined EHS Policy, organization chart with defined roles and responsibilities, risk identification and management procedures as well as processes like stakeholder engagement and grievance management..</p> |
| 2. | PS 2: Labour and Working Conditions | <p>Applicable</p> <p>This PS is guided by a number of international conventions and instruments on labour and workers' rights. It recognises that the pursuit of economic growth through employment creation and income generation should be accompanied by protection of fundamental rights of workers. The PS covers following themes: human resource policy and management, workers' organization, non-discrimination and equal opportunity, retrenchment, protecting the workforce and occupational health and safety. This PS helps to assess the status of the employees and workers in FRHL and HCC O&M Ltd as well as the contractors and sub-contractors hired by them.</p> |
| 3. | PS 3: Resource Efficiency and Pollution Prevention | <p>Applicable</p> <p>PS-3 covers the use resources and materials as inputs and wastes that could affect human health. The objective of PS-3 are: to avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities; to promote more sustainable use of resources, including energy and water, and to reduce project related GHG emissions. Key themes covered under PS-3 are: pollution prevention, resource conservation and energy efficiency, wastes, hazardous materials, emergency preparedness and response, greenhouse emissions, pesticide use and management. This PS will assess how FRHL intends to minimize pollution related impacts, what management plans and</p> |

| SN. IFC Performance Standards | Applicability to the Project |
|---|---|
| | systems are in place, and what measures it plans to take to conserve and use resources more efficiently. |
| 4. PS 4: Community Health, Safety and Security | <p>Applicable</p> <p>This PS-4 requires due diligence to anticipate and avoid adverse impacts on the health and safety of the affected community during the project life from both routine and non-routine circumstances. It also requires to ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the affected Communities. Key areas of compliance screened under PS-4 includes: infrastructure/equipment safety, hazardous material safety, natural resource issues, exposure to disease, emergency preparedness and response, and security personnel requirements. The project is likely to affect the health and safety of the communities adjacent to it during both the construction and operations phases. In addition the safety of the road uses would also be a concern which needs to be looked into.</p> |
| 5. IFC PS 5: Land Acquisition and Involuntary Resettlement | <p>Applicable (limited to IFC-ISQ Screening Criteria for Category-2 Roads)</p> <p>PS-5 requires project proponents to anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use. The key themes covered under this are: compensation and benefits for displaced persons, consultation and grievance mechanism, resettlement planning and implementation, physical displacement, economic displacement. The PS-5 also prescribes private sector responsibility to supplement government actions and bridge the gap between government-assigned entitlements, procedures, and the requirements of PS-5.</p> <p>The development of Farakka-Raiganj road involved acquisition of 202.84ha of land. The process of Land Acquisition for Four-Laning has been carried out under the NH Act 1956. The land acquisition process was found to be complete to a significant extent (see Section 3.7) and the pending litigations are only few and do not pose material risk to FRHL (see Section 3.10 and 3.11). Therefore, the screening for PS-5 was limited to IFC-ISQ screening criteria (see Section 1.4, point 4 of Table 1.1).</p> |
| 6. IFC PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources | <p>Not Applicable</p> <p>The requirements of this Performance Standard are applied to projects (i) located in modified, natural, and critical habitats; (ii) that potentially impact on or are dependent on ecosystem services over which the client has direct management control or significant influence; or (iii) that include the production of living natural resources (e.g., agriculture, animal husbandry, fisheries, forestry). PS-6 screens relevant threats to biodiversity and ecosystem services, especially focusing on habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, and pollution. The key themes covered under PS-6 are: natural habitat, critical habitat, legally protected areas, international introduction of alien species, and living natural</p> |

| SN. IFC Performance Standards | Applicability to the Project |
|------------------------------------|---|
| | <p>resources (natural and plantation forest, aquatic resources etc.) are sustainably managed.</p> <p>The project road is not crossing any ecological sensitive areas like reserve forest, national park, wild life sanctuary, tiger reserve, biosphere reserves, lakes and wet lands. However, two Important Bird Areas (IBAs) are located in proximity to the road alignment. The Farakka Barrage and Adjoining Area IBA (IN-318) is located at a distance of 0.4 km from the road alignment near the starting point of the road alignment at Farakka. The Kulik (Raiganj) Bird Sanctuary IBA (IN 321) is located at a distance of 7 km from the end-point of the road alignment near Raiganj. However, none of the species reported in the area has been assessed to be potential critical habitat candidates.</p> |
| <p>7. PS 7: Indigenous Peoples</p> | <p>Not Applicable</p> <p>This Performance Standard applies to communities or groups of Indigenous Peoples who maintain a collective attachment, i.e., whose identity as a group or community is linked, to distinct habitats or ancestral territories and the natural resources therein. PS-7 endeavour to ensure that the development process fosters full respect for the human rights, dignity, aspirations, culture, and natural resource-based livelihoods of Indigenous Peoples. Key themes covered under PS-7 are: avoidance of adverse impacts, consultation and informed participation, impacts on traditional or customary lands under use, relocation of IPs from traditional or customary lands, and cultural resources.</p> <p>Consultations with FRHL and NHA I representatives indicated no land owned by scheduled tribes was acquired for the project, and none of the two districts, Malda and Uttar Dinajpur where the project is located, fall under Schedule V Area.</p> |
| <p>8. PS 8: Cultural Heritage</p> | <p>Applicable (limited to IFC-ISQ Screening Criteria for Category-2 Roads)</p> <p>For the purposes of PS-8, cultural heritage refers to (i) tangible forms of cultural heritage; (ii) unique natural features or tangible objects that embody cultural values; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes. The requirements of PS-8 apply to cultural heritage regardless of whether or not it has been legally protected or previously disturbed.</p> <p>Some structures of religious significance were impacted (partially deconstructed, shifted to another place etc.) during construction phase of the project as reported. However, the exact number of these structures are not known. However, no community opposition with regard to these impacts were neither reported during consultation nor were reported in media. Therefore, the screening for PS-8 was limited to IFC-ISQ screening criteria (see Section 1.4, point 12 of Table 1.1).</p> |

Source: IFC Website and ERM site assessment

2.2

WB/IFC EHS GUIDELINES

The EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP), as defined in IFC's Performance Standard 2: Labour & working Conditions (Occupational Health and Safety), Performance Standard 3: Resource Efficiency and Pollution Prevention. Following EHS Guidelines were referred for this ESDD:

- General EHS Guidelines, 2007; and
- EHS Guidelines for Toll Roads, 2007.

2.3

APPLICABLE INDIAN EHS REGULATIONS

Based on our understanding, the table below (*Table 2-2*) provides a list of applicable EHS regulations along with its applicability to the Project, status of the compliance, remarks and recommendations.

It is to be noted that current level of compliances are standard practices followed in road sector and improvements would be carried out to achieve full compliance once the project is taken over.

Table 2-2 Applicable EHS and Social Regulations

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
|---------|--|-------------------------|---|--|--|---|
| 1. | The Environment (Protection) Act, 1986 Environmental Impact Assessment Notification, 2006 | MoEFCC | Umbrella legislation to protect and improve overall Environment | Environmental Clearance (EC) to be obtained from Expert Appraisal Committee under the Notification prior to start of Construction by National Highway Authority of India (NHAI) As per Section 1.2 of Schedule-E of concession agreement, applicable permits, as required, relating to environmental protection and conservation shall have been procured by the NHAI as a Condition Precedent. | All highway projects in India prior to 22 nd August 2013 required a prior Environmental Clearance. For FRHL toll road, EC (No. 5-20/2008-IA-III) was obtained on 4 th June 2008. EC for the project was granted in the name of NHAI. The EIA was conducted through Consulting Engineering Services (I) Private Limited. As per the EC condition (General Condition No. xi), NHAI has to submit six monthly compliance reporting to the Regional Office of MoEFCC. Section 1.1.(j) of Schedule-E of CA states that the concessionaire (SPV) shall obtain “any other permits or clearances required under applicable laws”. However, there was no condition in CA which directly states that concessionaire has to fulfil condition requirements of applicable permits which was obtained by NHAI. In the above mentioned context, concessioner is not responsible for six monthly compliance reporting to NHAI. However, concessionaire need to provide all relevant information to NHAI, so that NHAI can prepare and submit six-monthly compliance reporting to MoEFCC. One of the component of six monthly reporting is monitoring of ambient environment quality (air, ground and surface water, noise and soil quality) near sensitive receptor adjacent to the project road. Currently, in every six month, FRHL is | Not fully in scope of FRHL However, environment monitoring should be strengthened and conducted near sensitive receptor for the project as outlined in the EIA report, and the same needs to be provided to NHAI for compliance reporting to MoEFCC. |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
|---------|---|-------------------------|--|---|--|---|
| | | | | | carrying out environment monitoring near sources of pollution e.g., DG sets, construction site etc. However, environment monitoring was not conducted near sensitive receptor (such as educational institutes, settlement areas, cultural sites etc.) for the project as outlined in the EIA report. | |
| 2. | The Air (Prevention and Control of Pollution) Act, 1981 | CPCB, WBPCB | To prevent, control and reduce air pollution including noise pollution | <ul style="list-style-type: none"> As per Schedule-E of concession agreement, concessionaire (SPV) shall obtain clearance from Pollution Control Board, as required under the Applicable Laws. Consent to Establish/Operate to be obtained from State PCB for the project road, hot mix plant, wet mix plant, stone quarry and batching plant. Consent to Establish/Operate to be obtained from State PCB for Stone Crusher, Consent to Establish / Operate to be obtained from State PCB for DG set. | <p>1. CTE and CTO was not obtained for the road project.</p> <p>2. Fifteen (15) diesel generator (DG) sets are used for road construction work. However, CTE and CTO was not obtained for these DG sets.</p> <p>2. Consent to Operate vide memo no. 64/m1-co-r/13/0340 (valid till 31st January 2022) issued by WBPCB for operation of hot mix plant, wet mix plant and batching plant at 18 Miles, Laxmipur.</p> <p>3. Total four DG sets (4 X 180 KVA) are provided at toll plazas for backup power supply. However, CTO for operation of these DG sets has not been obtained from the WBPCB.</p> <p>4. Quarry material is sourced from quarry mine operated by third party. Reportedly, these mines are operated with valid permission license of Mines & Geology department of Jharkhand Government. In addition, HCCL has a licensed quarry located in Jhumerabad, Pakur District, Jharkhand with Environmental Clearance dated 30/12/2017; Consent to Establish dated 28/01/2013 and CTO dated 17/05/2017. CTO is valid till 31/12/2018.</p> | <p>The matter regarding obtaining CTE/CTO for the project road was discussed with the WBPCB. WBPCB clarified that as the project has triggered EC requirement, thus it would also trigger CTE and CTO requirement. Therefore, CTE and CTO need to be obtained for the project road.</p> <p>It was also pointed by the WBPCB that, the case is a violation, as CTE and CTO was not obtained for the project. WBPCB is also of the opinion that in West Bengal, NHAI has a general practice not to obtain CTE & CTO for the road project, as it costs them 50-60 lakh as application fees (depending on the project cost). Thus, to avoid the expense (as fees to the WBPCB), NHAI does not obtain CTE & CTO for the road project. In this context, WBPCB has also given of several instance in West Bengal, where, they have</p> |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
|---------|--|-------------------------|---|---|--|--|
| | | | | | | served show cause notice to NHAI for not obtaining CTE & CTO. CTO should be obtained from WBPCB for DG sets. Refer Sl. No. 2 of this table |
| 3. | The Water (Prevention and Control of Pollution) Act, 1974 | CPCB, WBPCB | Prevention and control of water pollution as well as restoration of water quality | Consent to Establish/Operate to be obtained from State PCB for the Project Road, Batching Plant, Hot Mix Plant and Wet Mix Plant | Refer Sl. No. 2 of this table | Refer Sl. No. 2 of this table |
| 4. | Noise Pollution (Regulation and Control) Rules, 2000 | CPCB, WBPCB | Noise pollution regulation and control | As per the Act, ambient noise levels are to be maintained as stipulated in the rules for different categories of areas such as residential, commercial, industrial and silence zones. Considering the context of the project, FRHL as per the conditions laid down in the CTE by State PCB will need to abide by the limits prescribed for residential zones. | As per the Noise Rules, 2000 noise levels of 55 dBA and 45 dBA during daytime and night time respectively for residential area and 50 dBA and 40 dBA during daytime and night time respectively for silence zone ⁽¹⁾ would be adhered to. | Consent to Establish & Operate for DG sets should be obtained from State PCB |
| 5. | Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 | CPCB, WBPCB | Hazardous Waste Management | Authorization for hazardous waste generation and storage need to be obtained from the State Pollution Control Board. Hazardous waste e.g., used oil (diesel/lube oil) need to be disposed accordance to the guidelines stipulated by the Hazardous and Other Wastes (Management and | 1. Reportedly, authorization for hazardous waste generation was obtained for the construction camp at 18 Miles, Laxmipur, in the year 2014. The authorization was valid till 2016. In January 2017, EPC contractor of FRHL has applied for renewal of the authorization. Currently, the matter is with WBPCB. Nevertheless, since 2016, construction camp of the project has been generating hazardous waste (e.g., waste lube | 1. Authorization for hazardous waste at construction camp at 18 Miles, Laxmipur, should be renewed. 2. Authorization should be obtained for hazardous waste generated at toll plazas. |

(1) Silence zone is an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
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| | | | | Transboundary Movement) Rules, 2016. | oil, containers, cotton rags etc.) without valid authorization. | |
| | | | | | 2. Maintenance work of DG sets (4 X 180 KVA) available at toll plazas would generate hazardous waste (waste lube oil). However, for the same, authorization was not obtained. | |
| 6. | West Bengal Ground Water Resources (Management, Control and Regulation) Act, 2005; Central Ground Water Authority (CGWA) Public Notice dated 4th January 2017 | State Level Ground Water Resources Development Authority and Central Ground Water Authority | Groundwater abstraction permission | As per Schedule-E of concession agreement, concessionaire (SPV) shall obtain "any other permits or clearances required under applicable laws". Permission for installation of bore well and abstraction of ground water need to be obtain from State Level Ground Water Resources Development Authority and Central Ground Water Authority. | EPC and O&M contractor of FRHL installed bore wells at construction camps, construction sites, toll plazas, truck lay bay and rest areas. However, permission for the same was not obtained for bore well installation. | Permits should be obtained for all the bore wells constructed for the project from State Water Investigation Directorate (SWID). |
| 7. | The West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006 | West Bengal Forest Department | Regulate tree felling | Permission for felling of road side trees to be obtained from the forest department | As per EC letter of MoEFCC about 10000 nos. of trees were likely to be felled for the FRHL road, where 3 times of number of felled trees was proposed to be planted. As reported, the plantation would be carried out by forest department, for which NHAI has already paid the required money. As reported by EPC contractor of FRHL, avenue plantation is undertaken by the Forest Department. In this regards, necessary fees for avenue plantation was paid by NHAI to the Forest Department. | |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations | | | | | | | | | | |
|-------------|--|-------------------------------------|----------------------------|---|---|---------------------------|-------|-------------------------------------|------------------------|-------------|-------------|-----|----|-----------|------------|--|
| 8. | Contract Labour Regulation and Abolition Act, 1971 | Labour Department | Contract Labour Management | <p>FRHL has contracted HCC Infra Ltd as an EPC and HCC O&M Ltd as an O&M contractor for the project road.</p> <p>FRHL have less than ten employees at the site management level which include project managers and toll plaza managers. HCC Infra has 79 direct employees, approximately 350 contractual staff, and approximately 150 contractual workers that are engaged through sub-contractors.</p> <p>Principal Employer's Certificate: NHAI is the principle employer for the project and should be registered under Contract Labour (Regulation & Abolition) Act 1970. As a principle employer, NHAI should issue Form-V under CLRA Act to all contractors/sub-contractors engaged in this project, including the Concessionaire.</p> | <p><u>Principal Employer's Certificate under Contract Labour (Regulation and Abolition) Act, 1970 (CLA 1970)</u> NHAI has provided Form V under CLA 1970 to the Concessionaire and Contractors. The expiry date and names of contractors included under this form are not known, as the document is yet to be shared with ERM for review.</p> <p>NHAI has issued form V in the name of its O&M contractor. The form dated 08.02.2017 expires on 05.03.2019.</p> <p><u>Contract Labour License</u> The Project Managers at both the Toll plazas reported that all the contractors engaged for the project road have obtained and submitted their valid (renewed) contract labour licenses to the Concessionaire. Based on review of some of the sample licenses, following was observed:</p> <table border="1"> <thead> <tr> <th>Contractor</th> <th>Scope</th> <th>Upper limit of workers can be hired</th> <th>No. of workers engaged</th> <th>Expiry date</th> </tr> </thead> <tbody> <tr> <td>HCC O&M Ltd</td> <td>O&M</td> <td>20</td> <td>Not known</td> <td>05.03.2019</td> </tr> </tbody> </table> | Contractor | Scope | Upper limit of workers can be hired | No. of workers engaged | Expiry date | HCC O&M Ltd | O&M | 20 | Not known | 05.03.2019 | <p>Considering the penalties associated with contravention of the law¹, the principal employer should monitor the following compliances:</p> <ul style="list-style-type: none"> Number of workers employed at any given time should be less than the number authorised in registration under Contract Labour Act. payment of pre-scribed wages to workers in a manner that workers receive timely payment and without any undue deductions. |
| Contractor | Scope | Upper limit of workers can be hired | No. of workers engaged | Expiry date | | | | | | | | | | | | |
| HCC O&M Ltd | O&M | 20 | Not known | 05.03.2019 | | | | | | | | | | | | |

(1) If any person/company contravenes any of the provisions of this Act or any rules made thereunder for which no other penalty is elsewhere provided, the company and every person in-charge shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to one thousand rupees, or with both. -If any person contravenes any of the provisions of this Act or any rules made thereunder for which no other penalty is elsewhere provided, he shall be punishable with imprisonment for a term, which may extend to three months, or with fine which may extend to one thousand rupees, or with both.

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | | | | | Remarks & Recommendations |
|---------|-------------------------------------|-------------------------|-----------|---------------|--------------------------------|---|-----------|-----------|------------|---------------------------|
| | | | | | | | | | | |
| | | | | | Mark-O-line | Toll collection + Lane Assistance + Crane/Ambulance Drivers | 225 | 222 | 05.03.2019 | |
| | | | | | Humayun | Median cleaning + Shoulder repairing + Cold mix work + Housekeeping | 60 | 164 | 05.03.2019 | |
| | | | | | Clifford | Security | 62 | 62 | 21.03.2019 | |
| | | | | | Raja Construction | Concrete Work | 25 | Not known | 05.03.2019 | |
| | | | | | Jemini | Vaccum Dewater Flooring | Not known | 40 | 05.03.2019 | |

Responsibility of payment of wages:

The contractors pay the workers the pre-determined daily wages or piece rate wages on monthly basis. Most of the workers including those engaged by M/s Humayun and M/s Raja, are paid wages in cash, for which no wage slips are issued.

As per the law, the principal employer is required to nominate a representative to be present when the contractor disburses payment to the workers to ensure payment of prescribed amount. However, there are no representatives to monitor the process and amount of payment.

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Although some of the contractors maintain a wage sheet that is submitted to principal employer for verification; however, majority of them do not maintain or submit any such wage records. Therefore, in case of any discrepancies in payment of wages are not known by the principal employer to rectify the same. This forms a non-compliance to the law considering the principal employer is liable to pay the balance amount in case the contractor fails to do so.

9. Building and Other Construction Workers Act, 1996
Labour Department
Labour working conditions
Though major part of the road construction work is completed, yet some part of the construction work is still pending. Road maintenance work would also require engaging construction workers. The labour camp for construction workers are also covered under this act.

Registration of establishment and workers
FRHL has registered the establishment under the BOCW Act and has obtained a certificate. The certificate is valid for a period of 25 years and will expire on 18th October 2041. 20 workers are registered as beneficiaries of the welfare fund.

Registration under BOCW:
The expired BOCW Certificates should be renewed by contractors who will be engaged for completing the remaining construction work.

As reported, all the contractors hired by FRHL have obtained a certificate under BOCW. Verification of some sample certificates confirms the following:

Compliance to following key provisions of the BOCW Act to be ensured if construction work is ongoing after acquisition:

| Contractor | No. of workers registered | No. of workers engaged | E |
|-------------------|---------------------------|------------------------|---|
| HCC O&M Ltd | 20 | Not known | 1 |
| Humayun | 60 | 164 | 3 |
| Mostafa Hossain | 40 | Not known | 3 |
| Raja Construction | 25 | Not known | 3 |

- Overtime should be paid as twice the ordinary wages;
- Clean drinking water to all the workers at the site of work;
- There should be temporary lavatories constructed for workers engaged in various activities on the project road;
- Accommodation for workers should comply to BOCW Act, 1996. Some of

As given in the table above, the certificates of M/s Mostafa and M/s Raja Constructions were valid till 31st August 2017, after which they haven't been renewed. Considering, these contractors are functional in project

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
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| | | | | | <p>work, this forms a non-compliance under the BOCW Act.</p> <p><u>Working conditions under BOCW (in addition to what has not been discussed under CLA):</u></p> <p><i>Overtime payment:</i> The workers are required to work more than 8 hours a day, for nearly 10 days a month as reported. For such additional work they are entitled to wages at the rate of twice his ordinary rate of wages. However, as understood from discussions with the workers, there is set amount paid for additional work (INR 40-50 per hour) that is lower than twice their ordinary wage (INR 270-370/- daily wage/8hours = INR 33.75-46.25 per hour X 2). Therefore, the contractors have been forming non-compliance to the regulation.</p> <p><i>Drinking water:</i> For workers working at the toll plaza, there is sufficient availability of clean drinking water throughout their working time in every shift, as reported by the workers. ERM team observed water purifiers set up at every toll plaza office from where the workers filled water and carried to their work areas. For the workers engaged for median cleaning, road markings, construction activities, there is no arrangement for clean drinking water. Their contractors are required to arrange for portable water for them, which is not being done.</p> <p><i>Sanitation:</i></p> | <p>the key aspects to include (but not limited to):</p> <ol style="list-style-type: none"> a) Workers should have access to clean drinking water at the location of stay, b) The labour accommodation facilities (on and off the site premises) should be provided with adequate emergency response mechanisms including fire extinguishers, first-aid kits etc. c) There should be garbage storage containers for solid waste generated at the on-site accommodation facilities followed by disposal system in linkage to local community's waste disposal system, d) The kitchen/ pantry areas should either be separate from the living areas or divided by a partition to avoid fire hazards, e) The selection of off-site rooms should have adequate ventilation and access to natural lighting, and f) The workers should be provided with mosquito nets and repellent creams for protection against insect/ mosquito bites. |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
|---------|-------------------------------------|-------------------------|-----------|---------------|--|---------------------------|
| | | | | | <p>Similar to the situation of drinking water, the toll plaza workers have access to clean, urinals and lavatories whereas the workers engaged in activities on the road away from the toll plazas, don't have access to lavatories. The lavatories at most of the truck laybys are not operational.</p> <p><i>Accommodation:</i> FRHL has provided accommodation facilities to contractual staff including those working for HCC O&M Ltd. Some of the key features of these accommodation facilities include:</p> <ul style="list-style-type: none"> a) Only for bachelors, not for families, b) 2 members accommodated in one room, c) Separate lavatories, that are cleaned once every day, d) Canteen facility with both vegetarian and non-vegetarian food options, e) Drinking water purified from water filters installed at the canteen, f) Electricity with 2 ceiling fans and 1 tube-light in every room, g) Well ventilated rooms with windows and doors, h) Bed and mattress per person. <p>The casual workers including the daily wage and piece rate workers are provided accommodation by their respective contractors. Some of the key features of these facilities include:</p> <ul style="list-style-type: none"> a) These are made of either tin sheds or thick plastic material, b) Roofs that cannot provide protection from extreme weather conditions. E.g. some of the workers living at the sand mining area were drenched inside their | |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations | | | | | | |
|------------------|---|-------------------------|--------------|--|--|---------------------------|------|-------------|------------------|------------|-----|--|
| | | | | | <p>accommodation tent due to heavy rains and thunderstorms during the night,</p> <p>c) Dormitories that accommodate 8-10 workers in one room (approx. 50-60sq.m.) resulting in overcrowding,</p> <p>d) No provision of lavatories or drinking water,</p> <p>e) No division between the living area and pantry/cooking area, posing a fire risk,</p> <p>f) Table fans at some camps whereas no fans at others,</p> <p>g) Provision of 1 bulb for illumination inside the facility at night.</p> <p><i>First-aid:</i> First aid facility was provided at all the road construction sites and at camp sites. Further, at construction camp at 18 Miles, Laxmipur, one stand-by ambulance is made available.</p> <p><i>Canteen & Other:</i> On any given day there are more than 250 workers working on various activities of the project road. Two canteen facilities have been provided to the contractual staff and employees. The canteen management for both the facilities has been subcontracted to a third party. Maintenance of the canteens is carried out by FRHL staff based on HCC's Canteen at Project Policy.</p> | | | | | | | |
| 10. | Minimum Wages Act, 1948 and Rules 1980; Payment of Wages Act, 1936 Equal Remuneration Act, 1976 | Labour Department | Wage Payment | <p>These acts ensure payment of wages to labours without discrimination and devoid of any unjust deductions.</p> <ul style="list-style-type: none"> As per quarterly updated minimum wages notifications for West Bengal state, Payment without delay, | <p>As reported by workers during consultations, they are paid wages as per the statutory minimum wage requirements. The following are some examples that were reported during consultations:</p> <table border="1"> <thead> <tr> <th>Contractor</th> <th>Work</th> <th>Wages hours</th> </tr> </thead> <tbody> <tr> <td>Amit Chakraborty</td> <td>Civil work</td> <td>500</td> </tr> </tbody> </table> | Contractor | Work | Wages hours | Amit Chakraborty | Civil work | 500 | <p>It is recommended that FRHL monitors statutory deductions from the workers' wages by giving effect to account transfers of wages instead of the current practice of cash payments and monitoring the wage records on monthly basis.</p> |
| Contractor | Work | Wages hours | | | | | | | | | | |
| Amit Chakraborty | Civil work | 500 | | | | | | | | | | |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | | | Remarks & Recommendations |
|---------|--|-------------------------|---|--|--|-------------------|-------------------------|--|
| | | | | | | | | |
| | | | | <ul style="list-style-type: none"> Payment of overtime for more than 48hours a week as double the ordinary wages, Equal pay for equal work without any discrimination based on gender, age etc. | Clifford | Security services | 464 | |
| | | | | | Raja Ismail | Concreting work | 270 for helper | |
| | | | | | | | 370 for mason | |
| | | | | | | | 400 for wall concreting | |
| | | | | | <p>The payments (in cash) are distributed after first week of the month and as reported by some workers, payments are delayed further up to a month's period. As wage records are not maintained by contractors, and the payments are not made into bank accounts, it is difficult to provide proof of delays in payment of wages.</p> | | | |
| 11. | Child Labour (Prohibition and Regulation) Act, 1986 as amended in 2016; West Bengal Child Labour (Prohibition and Regulation) Rules 1995 | Labour Department | Protection of Child (<15 years) workers | The Act prohibits engagement of children who have not completed their 18 years of age in occupations and processes listed in Schedule attached to it and child below 14 years of age in hazardous occupations, again specified in the schedule attached to it Part-B (for processes) lists entry 11 mentions building and construction industry. | Two workers below the age of 18years, ranging between 15-17years (could not verify their identity cards) were identified to be engaged at work by m/s Raja Ismail. As per CLA 1986 (as amended in 2016), the employment to Adolescent workers (15-18 years) is prohibited in hazardous occupations and processes which includes roof works, steel erection, working under and over water, demolition, and working in confined spaces (Schedule -IX of BOCW Central Rules 1996) | | | It is recommended that the site Supervisors appointed by HCC O&M Contractor ensure no persons below legal age limit of 18years are engaged in works in Schedule-IX of BOCW 1996. |
| | | | | | During the site visit to the toll plazas, construction sites, labour camps there were no sign boards or instructions to abide by the Child Labour (Prohibition and Regulation) Act, 1986. | | | FRHL should ensure that signages prohibiting use of child and forced labour at site are exhibited across the sites in language that is understood by all the workers. |
| 12. | Bonded Labour System (Abolition) Act 1976 | Labour Department | Prohibition of forced labour system in any form | The act prohibits prevalence of a labourer who incurs, or has, or is presumed to have incurred bonded debt that is an advance obtained or | As reported, the following forms of forced/bonded labour are not prevalent at the project road: <ul style="list-style-type: none"> Retention of original documents of the workers, | | | FRHL should ensure that <ul style="list-style-type: none"> the workers are paid arrears for the non-compliance against their overtime payments, |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
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| | | | | presumed to have obtained under a bonded labour system. | <ul style="list-style-type: none"> Sanctioning loan on interest to the workers, Threat to not engage in future work opportunities, threat to life etc. | <ul style="list-style-type: none"> the statutory norms are applied for the payment of wages and overtime for the ongoing and future work for the project road. |
| 13. | Workmen's Compensation Act, 1923 Maternity Benefits Act, 1961 Public Provident Fund Act, 1968 Employees State Insurance Act, 1948 | Labour Department | Welfare | <p>These regulations ensure that all the workers engaged are provided entitlements (other than ordinary wages) as they are eligible for.</p> <ul style="list-style-type: none"> the company has to deduct PF at 12% on Rs.15,000 (12% of the Basic Salary or Rs.15,000 whichever is lower); females who have worked for 80 or more days in the past 12 months in the company, should receive, a paid leave of 26 weeks up to 2 children and of 12 weeks for children above 2; Reimbursement for death or permanent disability, medical expenses up to prescribed limits. | <p>As per the information made available, from January to December 2016, there was 13 first aid cases, 47 high severity first aid cases 139 near misses, 4 high severity misses, 803 unsafe acts and 803 unsafe acts.</p> <p>There are no records of any workmen receiving compensation or reimbursement for the medical treatment due to any accident or incident occurred at work or on site with him.</p> <p>Statutory deductions of PF are being made from the remuneration paid to the employees, contractual staff, as well as workers provided by some of the contractors. HCC O&M contractor also maintains the records of PF challans and EPFO registration of some of the contractors depositing the deducted amount into Employees Provident Fund Office (EPFO). For example - M/s Jemini, M/s Mark-O-line, M/s Clifford, and M/s Raja Constructions etc.</p> <p>However, the practice is not observed to be followed by all the sub-contractors as worker consultations indicated that many of them working under M/s Raja Ismail and M/s Humayun were not receiving benefits under PF and ESI.</p> | FRHL should inspect monthly wage records of all the contractors and sub-contractors to ensure statutory deductions of PF and ESI and its submission to the concerned EPFO. |

| Sr. no. | Applicable Policies and Regulations | Institution Responsible | Objective | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
|---------|---|-------------------------|------------------------------|--|---|---|
| 14. | Private Security Agency (Regulation) Act 2005 | Department of Police | Security Agencies Regulation | FRHL has engaged M/s Clifford Securities for security arrangements of two toll roads. There are 62 security workers at each toll road. These private security agencies are required to comply with this law. | <p>There are 62 security guards appointed at both the Toll Plazas and all of them are hired through sub-contractor named M/s Clifford.</p> <p>Forming compliance with the law, the agency has obtained a valid license from the controlling authority and joint commissioner of police, as reported. It is also registered under WB Shops and Establishments Act, 1963, as reported.</p> <p>The HCC O&M contractor before engaging the agency had verified all these documents along with the Character and Antecedent Certificates of the security personnel to be appointed, as reported.</p> | M/s Clifford Securities to obtain Registration with appropriate agency as per provisions of the PSARA Act 2005. |

The provision of the land acquisition and the process is illustrated in the figure below.

Figure 2.1 Land acquisition process under NH Act 1956

| | |
|--|---|
| 3A. 1 & 2: Gazette Notification | <ul style="list-style-type: none"> •Declaration of intention to acquire land. •Provides brief description of the land |
| 3A. (3) Publication in Local Newspaper | <ul style="list-style-type: none"> •Competent Authority publishes in two local news paper •One of them needs to be in a vernacular language |
| 3 B. Power to Enter for Survey | <ul style="list-style-type: none"> •Persons authorised by Central Government to survey •Survey includes measurement, valuation, setting out boundaries etc. |
| 3 C. Hearing of Objections | <ul style="list-style-type: none"> •Objections to be made to competent authority within 21 days from Gazette notification u/s 3A(1). •Order made by competent authority on the matters of objections will be final |
| 3 D. Declaration of Acquisition | <ul style="list-style-type: none"> •Competent Authority to submit report to Central Government with recommendation to acquire the land •On publication of the 3D (1) in official gazette, the land shall vest absolutely in the Central Government free from all encumbrances. •The 3D (1) notification should be within a year from the 3A(1) notification. |
| 3 E. Power to take Possession | <ul style="list-style-type: none"> •After 3D (2) gazette notification, Central Government Deposits the determined amount with Competent Authority. •CA gives written notice to owners to surrender possession of land to CA or persons authorised by it •CA may take help of Commissioner or District Collector to enforce surrender of land. |
| 3 F. Right to Build, maintain and operate National Highway | <ul style="list-style-type: none"> •After 3D notification it is lawful to enter and do other act necessary for building, maintenance, management or operation of NH. |
| 3 G. Determination of Compensation | <ul style="list-style-type: none"> •Competent Authority determines the compensation •Central Government appoints an Arbitrator if compensation determined by CA is not acceptable to either of the parties. |
| 3 H (4) Reference to Court | <ul style="list-style-type: none"> •Any dispute as to the apportionment of the amount is referred to the principal civil court of original jurisdiction |

Table 2-3 Land Acquisition Legal Framework

| Sr. no. | Applicable Policies and Regulations | Applicability | Status of Permits and Licenses | Remarks & Recommendations |
|---------|-------------------------------------|---|--|---|
| 1. | National Highways Act 1956 | The project road is a National Highway. The land acquisition for the additional RoW was undertaken under the land acquisition provisions under Section 3 of this Act. | <p>Additional land of 202.84 ha was acquired under Section 3 of this Act.</p> <p>The acquisition process was undertaken by the Land Acquisition Officer (LAO) appointed by the District Collector.</p> <p>The land acquired is vested in Government of India. Concessionaire has no direct responsibility in land acquisition process.</p> | <p>All objections raised against the land acquisition and demands for additional compensation have been met and closed by the NHAI for the said parcel of the project road, as reported.</p> <p>There is no further expansion of the road scheduled, as reported.</p> |

This section includes a brief description of the Project road that is under the scope of the concessionaire, i.e. Farakka Raiganj Highways Limited (FRHL). The description of the project is intended to provide the context of the ESDD within which the environmental and social impacts are screened.

3.1 **PROJECT BACKGROUND AND CURRENT STATUS**

Concession Agreement for the project was signed in 19th July, 2010, whereas appointed date of concessionaire was 3rd February 2011. Concession period of the project is 30 years from the appointed date including 910 days (30 months) Construction Period. The initial scheduled date of completion of construction was 1st August 2013. However, due to pending land acquisition issues which was the responsibility of NHAI, the commissioning was delayed multiple times. A Provisional Commercial Operation Date (COD) for 79.57km of the road was granted on 19th October 2016. When the project obtained Provisional COD, though the land acquisition was completed to the extent of 96.6 percent, more time was required to complete the remaining construction.

The cumulative physical progress of the road as of 31st May 2018 has been 91.37%. The work is expected to be completed by March 2019.

3.1.1 **Project Salient Features**

The project road of FRHL starts at Km. 294+800 (near Farakka Barrage) and ends at Km. 394+980 (after Itahar Junction). It passes through Malda and Uttar Dinajpur districts in the State of West Bengal. Some of the key salient features of the project are mentioned in table below.

Table 3-1 Project snapshot

| S. No | Project Feature | Details |
|-------|-----------------------|---|
| 1 | Length of the Project | 100.18 Kms [Existing Road = 90.10 Kms & Bypass Road =10.10 Kms] |
| 2 | Bypasses | 1 nos [Malda Bypass, 10.10 Km] |
| 3 | Toll Plaza | 2 nos [Km 297+867, Km 351+440] |
| 4 | Major Bridge | 7 nos [Km 293+668 (Deleted from Scope), Km 302+251, Km 316+155, Km 325+223, Km 360+132, Km 375+885, Km 381+333, Km 390+239] |
| 5 | Minor Bridge | 22 nos [Km 296+923, Km 303+940, Km 304+455, Km 308+489, Km 311+654, Km 315+318, Km 320+335, Km 321+700, Km 323+180, Km 329+030, Km 329+966, Km 341+584, Km 345+221, Km 350+638, Km 357+782, Km 364+149, Km |

| | | |
|----|--------------------------------|--|
| | | 371+740, Km 378+149, Km 379+963, Km 383+309, Km 386+075, Km 391+392] |
| 6 | Underpass | 4 nos [Km 326+147, Km 328+541, Km 334+847, Km 352+487] |
| 7 | ROB | 1 [Km 328+747] |
| 8 | Culverts | 89 nos |
| 9 | Truck Lay Bye | 4 |
| 10 | Rest Area | 2 |
| 11 | Medical Aid Post | 2 Medical Aid post at both the Toll Plazas |
| 12 | Traffic Aid Post | 2 Traffic Aid Post at both the Toll Plazas |
| 13 | CCTV Surveillance | At major junctions and toll plazas |
| 14 | Variable Message Sign (VMS) | At both the toll plazas |
| 15 | Emergency Call Box (ECB) | GSM based ECBs at every 2 kms interval on the road. . |
| 16 | Metrological Data System (MDS) | 1 at toll plaza (at Km 351+440) |

Source: FRHL

3.1.2 Commercial Operation Date and Status of Construction Work

The project was granted Provisional Commercial Operation Date (PCOD) certificate on 19th Oct 2016 vide the provision of Concession Agreement. The details of PCOD stretches are as follows

Table 3-2 PCOD Stretches

| Sl. No | From (Ch.) | To (Ch.) | Length (in Km) |
|--------|------------|-------------------|----------------|
| 1 | 295.250 | 306.57 | 11.32 |
| 2 | 315.10 | 321.19 | 6.09 |
| 3 | 331.69 | 334.47 | 2.78 |
| 4 | 335.40 | 394.98 | 59.58 |
| | | Total (Km) | 79.77 |

Source: The PCOD letter from NHAI

The status of the construction work at the time of PCOD (October 2016) and its progress reported in IE's Monthly Progress Reports (MPR) at different intervals is compiled in Table 3-3 below. The table intends to provide an idea about subsequent progress in construction works for different project components.

Table 3-3 Status of Construction Work as in April 2018

| Component | Item description | Planned as per scope | Unit (km) | 2016/Oct | 2016/ Nov | 2017/ Jan | 2017/ Aug | 2017/ Dec | 2018/ Apr |
|-----------|------------------|----------------------|------------|----------|-----------|-----------|-----------|-----------|-----------|
| MCW | BC | 100.18 | Km | 82.42 | 82.42 | 82.42 | 82.77 | 84.15 | 84.15 |
| | DBM | 100.18 | | 82.72 | 82.71 | 82.71 | 85.52 | 86.9 | 87.21 |
| | WMM | 100.18 | | 82.87 | 82.87 | 82.87 | 86.3 | 89.32 | 96.27 |
| | GSB | 100.18 | | 84.03 | 84.03 | 84.03 | 88.36 | 90.41 | 92.83 |
| | Subgrade | 100.18 | | 85.95 | 85.95 | 90.89 | 92.68 | 93.21 | 97.38 |
| | Earthwork | 100.18 | | 89.58 | 89.58 | 90.89 | 92.68 | 93.72 | 97.69 |
| | C&G | 100.18 | | 95.68 | 98.105 | 98.105 | 100.04 | 100.18 | 100.18 |
| | BC | 8.34 | Km | 6 | 6 | 6 | 7.24 | 7.24 | 7.24 |

| Component | Item description | Planned as per scope | Unit (km) | 2016/Oct | 2016/Nov | 2017/ Jan | 2017/ Aug | 2017/ Dec | 2018/ Apr |
|-----------------|------------------|----------------------|---------------------|----------|----------|-----------|-----------|-----------|-----------|
| Service Roads | DBM | 8.34 | | 6.62 | 6.62 | 6.62 | 7.24 | 7.24 | 7.24 |
| | WMM | 8.34 | | 6.62 | 6.62 | 6.62 | 7.24 | 7.24 | 7.24 |
| | GSB | 8.34 | | 6.62 | 6.62 | 6.62 | 7.24 | 7.24 | 7.24 |
| | Subgrade | 8.34 | | 6.62 | 6.62 | 6.62 | 7.24 | 7.24 | 7.24 |
| | Earthwork | 8.34 | | | | | | | |
| | C&G | 8.34 | | 7.24 | 7.24 | 7.24 | 8.34 | 8.34 | 8.34 |
| Structural work | Major bridges | 7 | % physical progress | 100 | 100 | 100 | 100 | 100 | 100 |
| | Minor bridges | 22 | | 90.91 | 90.91 | 93.41 | 97.95 | 97.95 | 97.95 |
| | ROB* | 1 | | NA | NA | NA | NA | 75 | NA |
| | Underpasses | 4 | | 50 | 50 | 50 | 65 | 80 | 80 |
| | CD work | 89 | | 88.76 | 88.76 | 88.76 | 89.89 | 90 | 93 |
| Other works | Toll Plaza | 2 | Km | - | - | - | - | - | 100.00% |
| | RE Wall | 2 | | - | - | - | - | - | 50.00% |
| | Traffic Signage | 100.18 | | - | - | - | - | - | 79.86% |
| | TMS | 100.18 | | - | - | - | - | - | 79.86% |
| | MCB | 48 | | - | - | - | - | - | 83.33% |

Source: Information shared by client

Note: * The construction progress of ROB was not reported in IE's report as it was constructed by Indian Railways.

The construction of Main Carriage Way (MCW) was complete (BC-Bituminous Cover) for 82.42kms out of the 100.18kms, which was more than the PCOD length of 79.77km. The Ground Clearance (C&G) which is the first step of construction of MCW was completed for 95.68kms in Oct 2016, and it was 100% completed by Dec 2017. Thus, it suggests that the land acquisition issues for the entire length of the MCW was resolved prior to Dec 2017.

Similarly, construction for 7.24kms out of the total 8.34km was completed at the time of PCOD though C&G work was completed for a length of 7.24kms. The C&G work for entire 8.34kms is reported to have been achieved by Aug 2017.

In terms of other significant components on which construction was reported incomplete includes one vehicle underpass and Railway Over Bridge (RoB).

3.1.3

Status of Construction Work in Non-PCOD Stretch

The status of the construction of the non-PCOD stretches at the time of achieving PCOD and at present is provided in table 3.3 below. There were three stretches where PCOD was not granted i.e i) Stretch I (Km 306.57 to 315.10)- Kaliachak Area ii) Stretch II (Km 321.19 to 331.69)-Malda Bypass and iii) Stretch III (334.47 to 335.40) - VUP.

Table 3-4 The progress of construction work in Non-PCOD Stretches Indicating Resolution of Land Acquisition Issues

| Phase | Length of Non PCOD (Km) | 2016-Oct | | | | | | 2017-May | | | | |
|--|-------------------------|---------------|---------------|----------------------|---------------|------------------|-------------------------|--------------|--|----------------------|------------------|-------------------------|
| | | Chainage (Km) | MCW | Structures | Service roads | Other hindrances | Work front availability | MCW | Structures | Service roads | Other hindrances | Work front availability |
| Stretch I (Km 306.57 to 315.10)- Kaliachak Area | 8.53 | 306.57 to 307 | BC completed | | | | work in progress | BC Completed | | | | |
| | | 307 to 308 | BC completed | | | | work in progress | BC Completed | | | | |
| | | 308 to 309 | No work | | | | work in progress | Yes | Completed C&G completed and subgrade in progress | | | |
| | | 309 to 310 | No work | | | | work in progress | Yes | C&G completed and subgrade in progress | | | |
| | | 311-312 | No work | MNB work not started | | | work in progress | Yes | BC completed | MNB work not started | | |
| | | 312 to 313 | No work | | | | work in progress | Yes | C&G completed and subgrade in progress | | | |
| Stretch II (Km 321.19 to 331.69)- Malda Bypass | 10.5 | 313 to 314 | No work | | | | work in progress | Yes | C&G completed and subgrade in progress | | | |
| | | 314 to 315 | BC completed | | | | work in progress | | BC Completed | | | |
| | | 321 to 322 | C&G completed | | | | work in progress | | DBM and WMM in progress | | | |
| | | 322 to 323 | C&G completed | MNB work not started | | | work in progress | Yes | DBM and WMM in progress | MNB work in progress | | |

| Phase | Length of Non PCOD (Km) | 2016-Oct | | | | | | 2017-May | | | | |
|---|-------------------------|------------------|---------------|----------------------|------------------|------------------|-------------------------|---|----------------------|----------------------------|------------------|-------------------------|
| | | Chainage (Km) | MCW | Structures | Service roads | Other hindrances | Work front availability | MCW | Structures | Service roads | Other hindrances | Work front availability |
| | | 323 to 324 | C&G completed | | work in progress | | Yes | C&G completed and subgrade in progress | | | | |
| | | 324 to 325 | C&G completed | | work in progress | | Yes | GSB in progress | | | | |
| | | 325 to 326 | C&G completed | | work not started | | Yes | GSB in progress | | work is not started on RHS | | Yes |
| | | 326 to 327 | C&G completed | | work in progress | | Yes | WMM in progress | | | | |
| | | 327 to 328 | C&G completed | VUP not started | work in progress | | | WMM in progress | VUP work in progress | | | |
| | | 328 to 329 | BC completed | | work in progress | | | BC completed | | | | |
| | | 329 to 330 | BC completed | ROB work in progress | work in progress | | | BC completed | | | | |
| | | 330 to 331.69 | BC completed | | work in progress | | | BC completed | | | | |
| Stretch III (334.47 to 335.40) - VUP on | 0.93 | 334.47 to 335.40 | C&G completed | VUP not started | work in progress | | Yes | C&G completed and subgrade work in progress | VUP not started | | | Yes |

The construction of MCW was pending from Chainage 308 to 314 in Oct 2016. The construction work in these stretches in Oct 2017 is reported as C&G completed and sub-grade work in progress. This is an indication that the land acquisition related issues with local communities were resolved.

In terms of service roads, the work on RHS between chainage 325 and 326, and the VUP work in chainage 334.47 to 335.40 had not started even by Oct 2017. Though the work was not started, but it is reported that the work-front in both these cases were available. Further, other hindrances which was reported in between 308 and 312 in Oct 2016 were removed by Oct 2017. Therefore, it would be safe to infer that the land acquisition and other hindrances which contributed to non-completion of the construction in Oct 2016 (PCOD date) were resolved within a year.

3.1.4 Construction Related Facilities

As part of the construction is pending, FRHL maintains a Lay down area and construction camp at 18 Miles, Laxmipur with facilities like hot mix plant (capacity of 15000 MT/month), wet mix plant (capacity of 30000 MT/month), batching plant (capacity of 3000 MT/month), store yard, labour camp, residential quarters etc. This camp is being operated by HCC Limited (EPC Contractor to FRHL). Aerial view of construction camp is provided in *Figure 3.2*.

Figure 3.2 Aerial view of Construction Camp (Batching Plant, Wet Mix Plant, Site Office) at Km 297+867



There are 15 DG sets of below capacity are presently being used for FRHL road construction work and 4 DG sets are presently installed at toll plazas (refer *Table 3-5*).

Table 3-5 Detail of DG Sets for FRHL Road

| SL. No. | DG Set Description |
|-----------------------------------|-----------------------------|
| <i>For road construction work</i> | |
| 1. | 500 KVA DG |
| 2. | 320 KVA DG |
| 3. | 200 KVA DG |
| 4. | 100 KVA DG |
| 5. | 125 KVA DG |
| 6. | 125 KVA DG |
| 7. | 15 KVA DG |
| 8. | 15 KVA DG |
| 9. | 30 KVA DG |
| 10. | 30 KVA DG |
| 11. | 30 KVA DG |
| 12. | 30 KVA DG |
| 13. | 30 KVA DG |
| 14. | 62.5 KVA DG |
| 15. | 75 KVA DG |
| <i>For toll plaza</i> | |
| 1. | 4 nos DG Sets @ 180 KV each |

Source: FRHL

Six (6) bore wells and one hand pump is installed for ground water abstraction at construction site, batching plant, hot mix plant and toll plazas. Two (2) bore wells are constructed at toll plazas. Also, fifteen (15) bore wells are constructed at truck lay bye and at rest area.

3.2 ENVIRONMENT AND SOCIAL MANAGEMENT SYSTEMS

HCC Limited is the parent company of FRHL and hence, the corporate management systems of HCC will apply to all their subsidiaries, i.e. HCC Infra as well as the FRHL. HCC has an Integrated Management System (IMS) Policy covering quality, environment and occupational health & safety. HCC is certified for ISO 14001:2004 Environmental Management Systems, ISO 9001: 2008 Quality Management Systems, and BS OHSAS 18001: 2007 Occupational, Health and Safety Systems HCC is also a signatory to the UN Global Compact CEO Water Mandate program at a corporate level.

As part of the management systems, project environment management plan (PEMP) was prepared for the project. This management plan includes environmental procedures (*Procedure for Environmental Aspect Impact Identification, Impact Assessment and Implementation of Control Measures, Procedure for Communication, Procedure for Corrective & Preventive action, Emergency Preparedness and Response Plan, Guidelines for Hazardous Substance Management, Procedure for Environmental Monitoring and Evaluation, Resource Conservation etc.*), formats (*Format for the Compliance Report- Other Contractual/ Legal Requirements, Format for recording of Other Contractual/ Legal Requirement, Legal compliance report to be submitted to Company Secretary etc.*) and guidelines on Water, Air, Noise and Waste Pollution - Prevention & Control Measures. From review of the PEMP, discussion with HSE officers and site visit, it was found that some of the elements of the PEMP (e.g., monitoring requirement,

resource conservation etc.) were not implemented (as outlined in the PEMP) at the site. Further, PEMP prepared for the project did not include any site specific environment management plan and monitoring plan. Management plan provided in the PEMP was found generic for all road construction projects. Here it should be noted that site specific environment management plan prepared as part of the DPR was not found at the project site. From consultation with HSE officers of the toll road, it appeared that he was unaware of any site specific plans.

There was no management system found in place for operation and maintenance of the toll road. Maintenance Manual prepared (*as per Section 17.3 of Concession Agreement*) for the toll road includes procedure for carriageway maintenance, carriageway cleaning, earthwork, drainage, bridge & structure, underpass, toll plaza, road appurtenances, safety appurtenance, rest area/truck lay bay/ traffic aid post/medical aid post/horticulture maintenance etc. However, environment management plan (e.g., carriage way management plan, storm water management plan, oil spill contingency plan etc.) on the operations and maintenance aspects of toll road were not included in this maintenance manual.

Both the EPC and O&M contractor have deployed Health, Safety & Environment (HSE) officer at the project site. Role of the HSE officers is to implement environment management system at the project site, provide training to workers, prepare project specific environment aspect identification, impact assessment and control measures, ensure that site specific all HSE measures and applicable legal issues for the project are compiled, conduct environmental monitoring, reporting to corporate office on HSE performance and legal issues etc. From consultation with site HSE officers and observation gathered from site visit, it was found that they mainly focus on safety aspects of the project roads. However, their awareness level was found lacking on environmental aspects of highway construction and operation. They were found unaware of some of the requirements of regulatory requirements, conditions of CTO, site specific environment management plans etc.

Presently, FRHL lack an effective mechanism to monitor and report on the EMP and on legal requirements. There is daily, weekly and monthly reporting of HSE aspects of the project roads from site office to corporate office of HCC. However, this reporting mechanism in place did not emphasize on environment aspects of the project. Reportedly, monthly water consumption is reported as part of the monthly monitoring and reporting protocol. Though, there are other environment aspects of the project roads like waste management, those are not captured in the reporting.

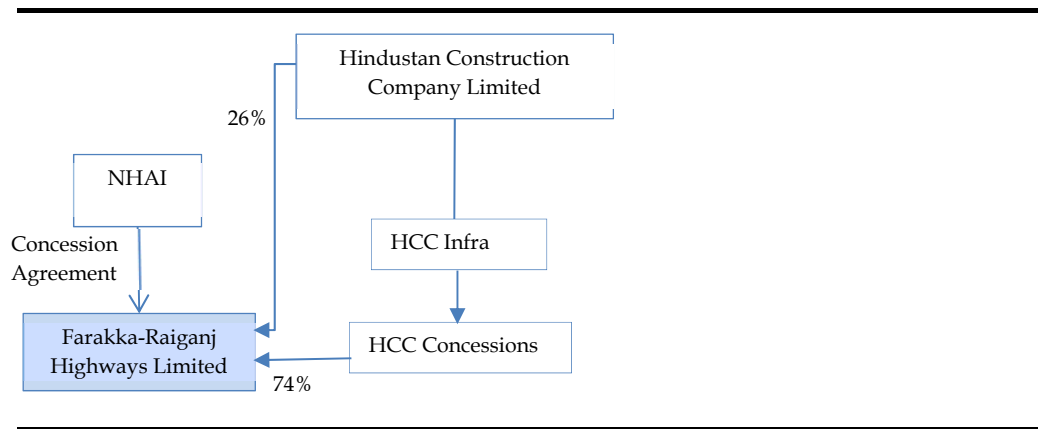
3.3

ORGANISATIONAL STRUCTURE

As discussed in above section, NHAI has appointed FRHL as Concessionaires for the two road projects on DFBOT basis. FRHL is Special Purpose Vehicle (SPV) of HCC Limited and HCC Concessions. The HCC Ltd. has sub-

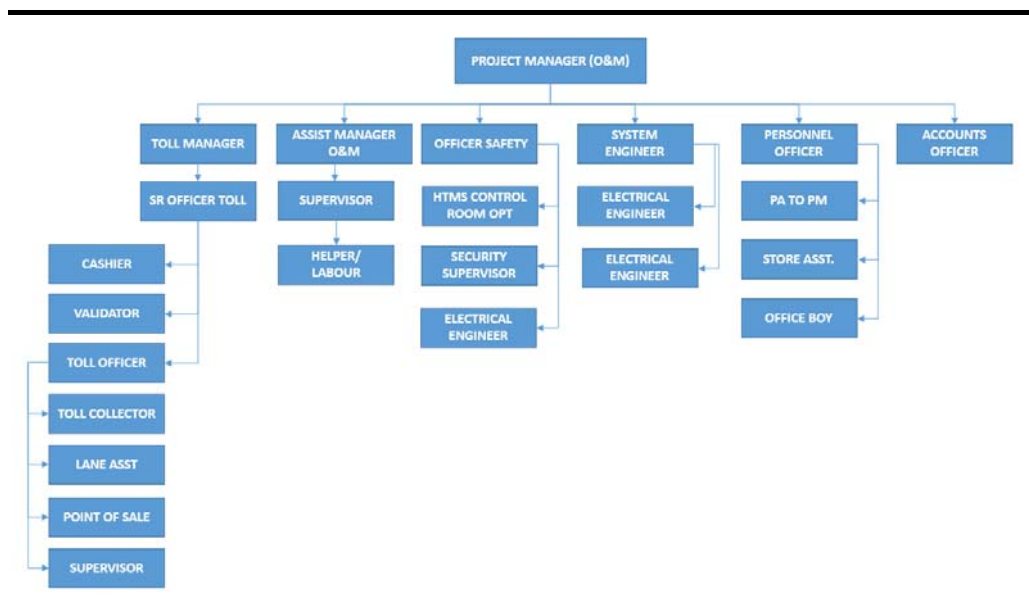
contracted HCC Limited for Engineering Procurement Construction (EPC) and Operation & Maintenance (O&M) work of the project road. Structure of SPVs is presented in *Figure 3.3*.

Figure 3.3 *Structure of SPV- FRHL*



Organization structure for Operation & Maintenance (O&M) work of the project road is presented below.

Figure 3.4 *Organization Structure - O & M*



3.4 HUMAN RESOURCES

The following table provides a summary of the workforce for the project.

Table 3-6 Project Manpower Details

| S. No | Category | Toll Plaza - 1 | Toll Plaza-2 | Common Resources between two Toll Plazas | HCCL Office | Total |
|----------------------------|---|----------------|--------------|--|-------------|------------|
| Direct | | | | | | |
| 1. | Permanent Employees | 14 | 14 | 07 | - | 35 |
| 2. | Employees on Short Term Contracts | 10 | 10 | 00 | - | 20 |
| Contractual Workers | | | | | | |
| 3. | Toll collection + Lane Assistance + Crane/Ambulance Drivers (M/s Mark-O-line) | 107 | 115 | - | - | 222 |
| 4. | Median cleaning + Shoulder repairing + Cold mix work + Housekeeping (M/s Raja Construction and M/s Humayun Chaudhary) | - | - | 100 | - | 100 |
| 5. | Security services (M/s Cliff Ford) | 30 | 32 | - | - | 62 |
| 6. | Vacuum Dewater Flooring (M/s Jemini) | 20 | 20 | - | - | 40 |
| 7. | | | | - | | |
| | Total (B) | 157 | 167 | 100 | - | 424 |
| | Grant Total (A +B) | 181 | 191 | 107 | - | 479 |

Source: Information shared by HCCL

There are total 31 employees on the payroll of HCCL and 24 on the payroll of HCC O&M. Out of these 55, 35 account for the permanent employees at manager and executive levels whereas there are 20 hired only for the purpose of Farakka-Raiganj Project Four Laning on temporary contract basis. Both the toll plazas have cumulatively appointed 424 contract workers through different contractors and sub-contractors. The nature of work for these workers is casual and may vary from daily wage basis to piece rate work.

3.5 ENVIRONMENT CONTEXT OF THE ROAD

The project road of FRHL starts at Km. 294+800 (near Farakka Barrage) and ends at Km. 394+980 (after Itahar Junction). It passes through Malda and Uttar

Dinajpur districts in the State of West Bengal. Environmental setting of the project road is summarised below:

- The project road traverses through predominantly agricultural land followed by built-up area. Also, there are roadside plantation, mango orchard, waste land etc. located near the project road.
- The project road crosses river such as Mahananda (Km. 325+223) and Pagla (Km. 316+155) which are mostly perennial in nature;
- The soils in the project corridor have been formed from the alluvium deposited by Ganga and its tributaries and sub tributaries;
- Major settlement along the project road are Sultanganj, Kaliachak, Jadupur, Sujapur, Gajol, Itahar etc;
- There are a number of sensitive receptors (schools, colleges, health centres) and religious structures (temples, mosques, burial ground and burning ghat etc.) located along the project road;
- The road traverses approximately 3.0 km away from the Reserve Forest (Adina Forest) near km 346.500 of NH-34; and
- General appearance of the area is flat, sloping gently southwards,

3.6

TRAFFIC SAFETY AND ACCIDENT/INCIDENT ANALYSIS

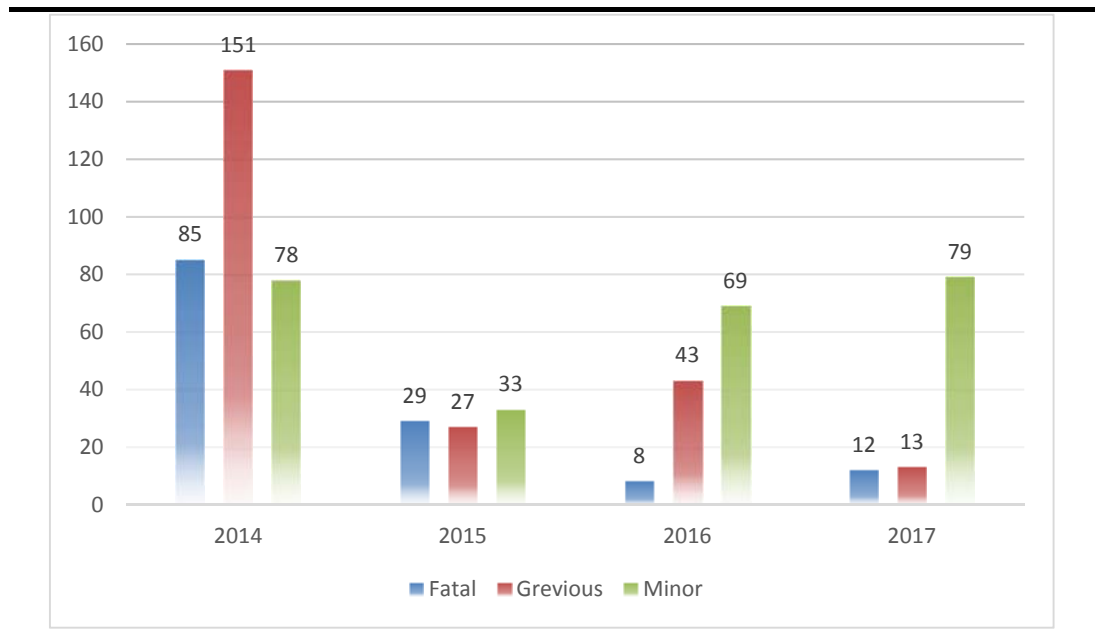
Road accident data from January 2014 till December 2017 is presented in *Table 3-7* and *Figure 3.5*). This accident data indicated gradual decrease of number of affected (fatal) person over the period from 2014 to 2016. However, in 2017, there was slight increase of fatal accident. Further, it can also be noticed from the figure that number of affected (minor) person has increased significantly from 2014 to 2017.

Table 3-7 Accident from January 2014 to December 2016

| S No. | Year | Total Accident | No of affected persons | | |
|-------|------|----------------|------------------------|---------------------------------|------------------------------------|
| | | | Fatal | Grievous (Need Hospitalization) | Minor (No Need of Hospitalization) |
| 1. | 2014 | 156 | 85 | 151 | 78 |
| 2. | 2015 | 50 | 29 | 27 | 33 |
| 3. | 2016 | 85 | 8 | 43 | 69 |
| 4. | 2017 | 59 | 12 | 13 | 79 |

Source: <http://nhai.org.in/malda-frs/AccidentData.aspx>

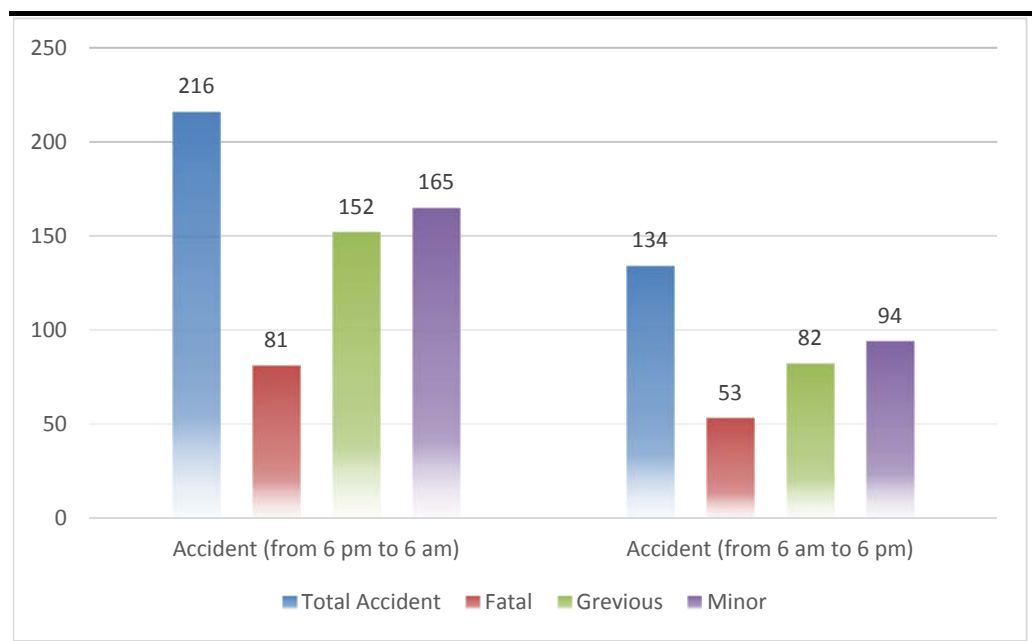
Figure 3.5 *Accidents from 2014 to 2017*



Source: <http://nhai.org.in/malda-frs/AccidentData.aspx>

Number of road accident and classification of accident (fatal/grievous /minor/ injured) occurred from 6 pm to 6 am and from 6 am to 6 pm is depicted in **Figure 3.6**. This figure also shows considerably higher number of road accident from 6 pm to 6 am. During this time, fatal accident is also recorded to be high.

Figure 3.6 *Road Accidents (from 2014 to 2017) during Day/Night*



3.7 *LAND REQUIREMENT AND LAND ACQUISITION PROCESS*

As per the Project Feasibility Report of FRHL, the ROW of the project road prior to 2008 (before four-laning started) generally ranged between 25 and 60

meters throughout the road section. After completion of the ongoing four laning of the project road, the same is estimated to range between 75 and 100 meters.

The total land requirement for the project estimated during DPR preparation (3rd February 2011), was 673.541ha. Out of this 70% of land (472.5 ha) was available (in existing RoW) and remaining 30% of land was proposed for acquisition. Out of this 30% of land (232ha), 29.16ha was reduced from the scope due to exclusion of proposed Kaliachak Bypass (requirement of 19.8ha for 3.3km) and realignment of Malda Bypass (9.36ha out of total was government land). As a result, at the time of granting PCOD the total area to be acquired was revised to 202.84ha.

3.7.1 *Status of Land Acquisition*

This land was acquired under NH Act, 1956 and NHAI granted FRHL the access to land between Aug 2012 and Oct 2014. The table below presents the timeline of land acquisition as well as current status.

The land acquisition process with respect to the final land requirement for the project (202.84ha) shows that by Oct 2016, 3G notification for 197.568ha (97.4%) and 3H or compensation distribution for 196.026ha (96.6%) was achieved. At present, May 2018, the compensation distribution is completed with respect to 202.735ha (99.95%). Hence, the status of the land acquisition process is inferred to have been completed to a significant extent on the date of PCOD and complete at present.

Table 3-8 Status of land acquisition

| Month/year | Total land to be acquired | 3A | | | 3D | | | 3G | | | 3H (2) | | |
|------------|---------------------------|-----------|-------------|----------|-----------|-------------|----------|-----------|-------------|----------|-----------|-------------|----------|
| | | Completed | In progress | Balanced | Completed | In progress | Balanced | Completed | In progress | Balanced | Completed | In progress | Balanced |
| 2014/May | 232 | 225.625 | 6.375 | 6.375 | 225.625 | | 6.375 | 169.11 | 32.849 | 62.89 | 144.32 | 24.79 | 87.68 |
| 2014/June | 232 | 225.625 | 6.375 | 6.375 | 225.625 | | 6.375 | 169.11 | 32.849 | 62.89 | 144.32 | 24.79 | 87.68 |
| 2014/Oct | 232 | 225.625 | 6.375 | 6.375 | 225.625 | | 6.375 | 201.959 | 30.041 | 30.041 | 169.11 | 24.79 | 62.89 |
| 2016/Oct | 202.84 | 202.84 | 0 | 0 | 202.84 | 0 | 0 | 197.568 | 0 | 5.2725 | 196.026 | | 6.8144 |
| 2017/Sep | 202.84 | 202.84 | 0 | 0 | 202.84 | 0 | 0 | 197.568 | 0 | 5.2725 | 196.026 | | 6.8144 |
| 2018/April | 202.84 | 202.84 | 0 | 0 | 202.84 | 0 | 0 | 197.568 | 0 | 5.2725 | 196.026 | | 6.8144 |
| 2018/May | 202.84 | 202.84 | 0 | 0 | 202.84 | 0 | 0 | 202.747 | 0 | 0.093 | 202.735 | 0 | 0.1051 |

Source: Information provided by the client

3.7.2

Litigations

From the consultation it was learnt that the demand of land owners to higher compensation was resolved in Dec 2015 through an Award passed in the Arbitration process. NHAI agreed to pay enhanced compensations (different rates for different revenue villages) to all impacted land owners, which helped in resolving the entire bulk of arbitration cases. As per the statement available on court cases dated Apr 2016, there were only 6 pending cases. As no stay order was passed by the court with respect to these cases, they were not impediment to progress of construction works. As per information provided by PD, there were only 1 or 2 pending cases in March 2018. Based on further discussions held in April 2018 with the CALA officials, we infer that there are no pending litigations concerning the stretch of project road.

3.7.3

Project Impacted Families (PAFs)

As per the information reported in IIFCL DD Report (Mar 2013), the widening and strengthening of the project road affected 2401 families. The details are given in the table below:

Table 3-9 *Project Affected Families (as per type of structure)*

| S. No | Type of structure | Number of affected families |
|-------|---------------------------------------|-----------------------------|
| 1 | Residential Structures | 922 |
| 2 | Commercial Structures | 50 |
| 3 | Residential cum commercial structures | 1429 |
| | Total | 2401 |

Source: Table-11, page-33 of IIFCL DD Report,

3.7.4

Land for Construction Facilities

Beside the RoW (and all the facilities on the RoW including the median, bus shelters, truck laybys, highway nests¹, sanitation facilities etc.) land for following facilities are also been obtained on long term lease by FRHL:

- Construction phase –
 - Batching plant,
 - Hot mix plant,
 - Soil burrow area,
- Operations phase –
 - Toll Plazas,
 - Toll plaza offices,
 - Staff quarters,
 - Worker accommodation/labour camps,

The total area of land covered under each of these facilities is not available at present.

Burrow areas are taken on a quantity basis with a fixed amount agreement (INR/cubic metre) of sandy soil. Access to land is only granted with written permission from the gram panchayat as reported. The NoC from concerned Gram Panchayat for the functional soil burrow area is yet to be shared for

(1) <http://pib.nic.in/newsite/PrintRelease.aspx?relid=175760>

review. Land for all other facilities is obtained on lease basis. The land for toll plaza offices, staff quarters is leased by HCCL whereas, land for other facilities are leased by respective contractors. The sample lease deeds are yet to be shared for review.

3.8 STATUS OF ENCROACHMENTS

3.8.1 Encroachment in PCOD stretches in Feb 2018

NHAI is obliged (as per Concession Agreement) to hand over all required land free of any encumbrances to the concessionaire(s) i.e. FRHL. As per an updated list of encroachments prepared by FRHL dated 28th February 2018 there are total 660 structures on the sections of the road that have received PCOD. Following are the details of these encroachments in PCOD stretch as of February 2018:

Table 3-10 Status of Encroachments in PCOD stretch as in Feb 2018

| Sr. no. | Section of the road | | | Total |
|---------|---------------------|-----------|-----------|-------|
| | | Temporary | Permanent | |
| 1 | Km 295 to Km 306 | 62 | 26 | 88 |
| 2 | Km 316 to Km 321 | 14 | 17 | 31 |
| 3 | Km 331 to Km 395 | 428 | 113 | 541 |
| | Total | 504 (76%) | 156 (24%) | 660 |

Source: Information shared by HCCL

Majority of the encroachments (76%) are temporary in nature and include tea stalls, *paan* shops, mobile repair shops, electronic item repair shops, mechanic shops, hotels, bill boards etc. The remaining 24% encroachment structures include both commercial as well as residential structures. Moreover, these structures were reportedly part of the land acquisition process and their owners have been compensated. The list did not cover the three non-PCOD stretches of the project road.

3.8.2 Encroachment Survey (June 2018) Findings

The encroachment survey of the project road RoW (including both PCOD and Non-PCOD stretches) was carried out by ERM from 18th to 21st June 2018 as part of the present study. The permanent and semi-permanent structures were geo-referenced whereas the temporary structures were only enumerated and their current use was noted.

Number of encroachments in PCOD was observed to have marginally increased to 667 in June 2018 which was 660 in Feb 2018. In addition, there were 145 encroachment cases in Non-PCOD stretches. Overall, encroachment cases in PCOD stretch constitute 82.29% and remaining 17.7% are located in Non-PCOD stretch. The overview of the encroachments enumerated is provided in Table 3.11 below.

Table 3-11 Overview of Encroached Structures Enumerated in June 2018

| Structure Category | PCOD | | Non-PCOD | | Total | |
|--------------------|--------|------|----------|------|--------|------|
| | Number | % | Number | % | Number | % |
| Temporary | 471 | 70% | 136 | 94% | 607 | 74% |
| Semi-permanent | 101 | 15% | 4 | 3% | 105 | 13% |
| Permanent | 102 | 15% | 5 | 3% | 107 | 13% |
| Total | 674 | 100% | 145 | 100% | 819 | 100% |
| Percentage | 82.29% | | 17.70% | | 100% | |

Source: Encroachment Survey June 2018

Further breakdown of the encroachments in PCOD and non-PCOD stretches are presented in sections below.

Encroachment Status in PCOD Stretches as in June 2018

The distribution of the encroachments in LHS and RHS of the road for PCOD stretches shows that almost 60% of them are in LHS side of the road and RHS side has the remaining 40%. In PCOD stretch ~70% structures are temporary. Half of the remaining encroachments are semi-permanent and other half permanent structures.

Table 3-12 Distribution of Encroachments in LHS and RHS for PCOD stretches as on June 2018

| | LHS | RHS | | |
|----------------|--------|--------|-----|--------|
| Temporary | 292 | 179 | 471 | 69.80% |
| Semi-permanent | 56 | 45 | 101 | 14.90% |
| Permanent | 56 | 46 | 102 | 15.10% |
| Total | 404 | 270 | 674 | 100% |
| Percentage | 59.90% | 40.05% | | |

Source: Encroachment Survey June 2018

Out of the 102 permanent structures, 8 structures are 2 storied and 1 structure is 3-storied. The 3 storey structure is a residential cum commercial structure of 190 sqm located on the LHS of the PCOD section of the project road in Itahar block of Uttar Dinajpur District.

Table 3-13 Years of Existence of Permanent and Semi-Permanent Structures as on Jun 2018

| Years of Existence | Number of Permanent/ Semi-permanent Structure | Percentage |
|-------------------------|--|------------|
| 1 - 5 Year | 66 | 33% |
| 5 - 10 Year | 15 | 7% |
| 10 - 15 Year | 17 | 8% |
| 15 - 20 Year | 25 | 12% |
| >20 Years | 80 | 39% |
| Total structures | 203 | 100 |

Source: Encroachment Survey June 2018

The response to the question on the status of the compensation received by the respondents available at these 203 permanent and semi-permanent structures shows that 62% have not received payment and 14% have received partial payments. The claims made by respondents is contrary to the information provided by NHAI and Land Acquisition Officer.

Table 3-14 Compensation status of the permanent and semi-permanent structures in PCOD stretches as on Jun 2018

| Compensation Status | Permanent | Semi-permanent | Total | % of Total |
|--|------------|----------------|------------|-------------|
| Not Received | 58 | 67 | 125 | 63% |
| Not willing to receive | 2 | | 2 | 1% |
| Partially Received | 19 | 9 | 28 | 14% |
| Received | 8 | 16 | 24 | 12% |
| Received and willing to clear anytime asked to | 13 | 9 | 22 | 11% |
| Received but not willing to evacuate | 2 | | 2 | 1% |
| Total | 102 | 101 | 203 | 100% |

Source: Encroachment Survey June 2018

Encroachment Status in Non-PCOD Stretches as in June 2018

The distribution of the encroachments in LHS and RHS of the road for Non-PCOD stretches shows that almost 47% of them are in LHS side of the road and RHS side has the remaining 53%. In Non-PCOD stretch ~94% structures are temporary. There are only 5 permanent and 4 semi-permanent structures.

Table 3-15 Distribution of Encroachment in LHS and RHS of the Road Corridor for Non-PCOD Stretches as on Jun 2018

| | LHS | RHS | | |
|----------------|-----------|-----------|------------|-------------|
| Temporary | 66 | 70 | 136 | 93.70% |
| Semi-permanent | 0 | 4 | 4 | 2.70% |
| Permanent | 2 | 3 | 5 | 3.40% |
| Total | 68 | 77 | 145 | 100% |
| Percentage | 46.60% | 53.10% | | |

Source: Encroachment Survey June 2018

Out of these 9 permanent and semi-permanent structures, respondents at 5 structures reported that their structures are 1 to 5 year old. The remaining 4 structures are reported to be more than 20 years old.

Table 3-16 Years of existence of these structures in Non-PCOD stretches as on Jun 2018

| Years of Existence | Number of Permanent/ Semi-permanent Structure | Percentage |
|-------------------------|---|-------------|
| 1 - 5 Year | 5 | 56% |
| 5 - 10 Year | 0 | 0% |
| 10 - 15 Year | 0 | 0% |
| 15 - 20 Year | 0 | 0% |
| >20 Years | 4 | 44% |
| Total structures | 9 | 100% |

7 out of the 9 structures in Non-PCOD stretch reported that they have not received compensation. One respondent said he is not willing to receive compensation, and one of them reported that he has received compensation and will vacate the structure as and when he is asked.

Table 3-17 Compensation status reported by semi-permanent and permanent structures in Non-PCOD stretch as on Jun 2018

| Compensation Status | Permanent | Semi-permanent | Grand Total | % of Total |
|--|-----------|----------------|-------------|------------|
| Not Received | 3 | 4 | 7 | 78% |
| Not willing to receive | 1 | | 1 | 11% |
| Received and willing to clear anytime asked to | 1 | | 1 | 11% |
| Total | 5 | 4 | 9 | 100% |

Source: Encroachment Survey June 2018

Conclusively, 125 out of 203 encroachment cases in PCOD stretch reported they have not received compensation. Similarly, 7 out of 9 respondents of encroached structures in Non-PCOD stretch also reported to have not received compensation.

As no documents supported these assertions, the status reported by NHA and LAO are considered more reliable.

3.9

EXTERNAL FACTORS AND MEDIA REPORT REVIEW

Review of news and articles available in public domain indicate that lack of funds have been a major issue in continuation of project work and has caused multiple delays. Secondly, land acquisition has also been a major issue in completion of FRHL, and the entire NH-34 stretch in general. There are also several news articles on road accidents and in some cases there have been community protests against the project proponents. Some of these have been highlighted below:

Table 3-18 External Factors Review

| S. No | Content | Source | Date | Nature of information |
|-----------------------------|---|--|-----------------------------|---------------------------------|
| Project related information | | | | |
| 1. | <p>“Unemployed HCC Workers To Stage Massive Protest Against Central Government On May 7”</p> <p>The article informs that the employees of Hindustan Construction Company Limited (HCC) are going to stage a protest against the wrong policies of the Central Government on May 7 at Delhi’s iconic Ramlila Maidan. Federation of All India Hindustan Construction Workers Union has</p> | <p>http://tennews.in/unemployed-hcc-workers-to-stage-massive-protest-against-central-government-on-may-7/</p> | 9 th April, 2018 | Non payment of wages to workers |

| S. No | Content | Source | Date | Nature of information |
|-------|---|--|--------------------------------|--------------------------------|
| | <p>been discussed in the article for reporting that HCC is suffering from acute financial crisis as the NHAI has not cleared crores of rupees of dues for the projects. This has lead to consistent delays in payment of wages to the workers and job insecurity.</p> | | | |
| 2. | <p>“Flood situation deteriorates in Bengal’s Malda and South Dinajpur”</p> <p>The news articles talks about the flood situation in Malda region that disrupted the regular human life with parts of National Highway 34 submerged under water.</p> | <p>https://www.theweekend.com/article/flood-situation-deteriorates-bengals-malda-and-south-dinajpur-67087</p> | 20th August 2017 | Damage due to Natural Disaster |
| 3. | <p>“HCC Concessions starts toll ops of Farakka Raiganj highway”</p> <p>The article informs about the partial commissioning of the Farakka-Raiganj road by HCC Concessions Ltd. It also mentions some key information related to the project road and provides for a quote by HCC’s Chairman of Board on reduced travel time of road users giving a positive aspect of the project.</p> | <p>http://www.business-standard.com/article/pti-stories/hcc-concessions-starts-toll-ops-of-farakka-raiganj-highway-116102000459_1.html</p> | 20 th October, 2016 | Commercial Operation Started |
| 4. | <p>“Three students die, 6 battling for life after pool car collides with lorry at Farakka”</p> <p>This news is regarding death of three students and serious injuries to six others in an accident near Farakka. The accident was cause due to wrong side driving by the car driver.</p> | <p>http://www.newsmint.com/news-item/three-students-die-6-battling-for-life-after-pool-car-collides-with-lorry-at-farakka/</p> | 05 May 2016 | Fatal Road Accident |
| 5. | <p>“NHAI may extend loans to clear stuck road projects”</p> <p>The article discloses a proposal by NHAI to extend loans to four-laning road projects that are near completion but stuck due to lack of equity or funding. The HCC Farakka-Raiganj project is one such projects that is anticipated to get loan from NHAI.</p> | <p>https://www.thehindubusinessline.com/economy/logistics/nhai-may-extend-loans-to-clear-stuck-road-projects/article7220391.ece</p> | 18 th May 2015 | Financial Crisis |

| S. No | Content | Source | Date | Nature of information |
|-------|---|--|------------------|-----------------------|
| 6. | <p>“HC asks WB govt to sort out issues over NH-34 land acquisition. “</p> <p>The news is regarding Calcutta High Court asking government to take urgent steps to sort out issues over land acquisition and compensation to owners to facilitate completion of widening of National Highway 34.</p> | <p>http://www.businesstandard.com/article/pti-stories/hc-asks-wb-govt-to-sort-out-issues-over-nh-34-land-acquisition-115120800821_1.html</p> | 08 December 2015 | Land Acquisition |

Company related information

| | | | | |
|----|--|--|-----------------------------|-----------------|
| 7. | <p>“HCC workers again go on strike, work suspended”</p> <p>The workers engaged for development of the Ramban-Banihal road in the state of Jammu & Kashmir have reportedly called a strike against the 4 months delay in payment of remuneration by HCC. Despite of a written commitment from the management to pay the remuneration till November 2017, the company was not able to meet the target as described in the article. Subsequently the workers again stopped the work of under construction tunnels, batching plant and at workshop.</p> | <p>https://www.earlytimes.in/m/newsdetail.aspx?q=229239</p> | 4 th April, 2018 | Worker’s Strike |
|----|--|--|-----------------------------|-----------------|

3.10

RESETTLEMENT AND REHABILITATION

There is a reference to Resettlement Action Plan in IIFCL DD Report (Mar 2013) which was prepared by Consulting Engineering Services (I) Pvt Ltd. The RAP was in compliance to the National Policy on Resettlement and Rehabilitation and PD of PIU Malda was responsible for its implementation. A copy of this RAP was not available for review, hence information available in the IIFCL DD Report is presented here.

The project affected titleholders were paid compensation for land and structures along with damage to standing crops in any and shifting allowance. From the review of the media it was found that in December 2015, Kolkata High Court instructed Government of West Bengal to sort out the long standing land acquisition issues which was hampering the timely completion of the project. As per consultations, it was found that subsequent to that NHAI agreed to pay enhanced compensation and thereby resolving all arbitration proceedings claiming higher compensation. At the time of issuing PCOD in October 2016, the land acquisition compensation distribution (3H) was completed for 96.6%. Further, the construction work for most part of the MCW and Service Roads have been initiated and most of the hindrances are cleared.

Considering the low risks linked to litigation and other EHS issues at present, reviewing SIA and RAP or necessity of a Resettlement Completion Audit is not recommended.

This section provides a detailed analysis of the gaps identified pertaining to environmental, social and health and safety of the project based on the IFC ESDD screening criteria for operational toll roads. As illustrated through the Table 4-1, the project road falls under “Category 2: Operating roads (1 or more years but less than 2 years)”. The project was screened using the reference framework detailed out in Section 2 above.

4.1 SCREENING OF NO-GO CRITERIA

4.1.1 *Impact on Critical Habitat*

A standalone Critical Habitat screening as per IFC PS-6 was conducted for the project which is enclosed as Appendix A. The brief findings are as presented below:

Two Important Bird Areas (IBAs) are located in proximity to the road alignment. The Farakka Barrage and Adjoining Area IBA (IN-318) is located at a distance of 0.4 km from the road alignment near the starting point of the road alignment at Farakka. The Kulik (Raiganj) Bird Sanctuary IBA (IN 321) is located at a distance of 7 km from the end-point of the road alignment near Raiganj.

The factsheets of Farakka Barrage and Adjoining Area IBA¹ and Kulik (Raiganj) Bird Sanctuary IBA² have been reviewed for identification of species that could potentially trigger critical habitats.

In addition, a study conducted by Chowdhury & Nandi (2014)³ on avifaunal distribution at five waterbodies in Malda district (from November 2008– March 2011) also reviewed species that could potentially trigger critical habitats. Out of the five waterbodies studied by Chowdhury & Nandi (2014); avifaunal distribution at four waterbodies located in close proximity to the highway alignment were reviewed. The waterbodies include- Farakka Barrage, Sagardighi Wetland (1.7 km from the highway alignment), Gabgachi-Bhatia Wetland (0.90 km from the highway alignment) and Belatuli Wetland (3.6 km from the highway alignment).

List of species that could potentially trigger Critical Habitats has been discussed below.

¹ BirdLife International (2018) Important Bird Areas factsheet: Farakka Barrage and adjoining area. Downloaded from <http://www.birdlife.org> on 10/04/2018.

² BirdLife International (2018) Important Bird Areas factsheet: Kulik (Raiganj) Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 10/04/2018.

³ Monoranjan Chowdhury & Bidyut Nandi (2014). Avifauna in five wetlands of Diara and Barind region in Maldah District of West Bengal, India. *Journal of Threatened Taxa* 6(4): 5660–5666; <http://dx.doi.org/10.11609/JoTT.o2736.5660-6>

A. *IUCN Critically Endangered Species (Critical Habitat Criterion 1: Tier 2c,e)*

White Rumped Vulture (*Gyps bengalensis*) and Indian Vulture (*Gyps indicus*):

Both the vulture species are reported from the IBA Factsheets of Farakka IBA and Kulik IBA (year of assessment 2003). Discussion with Forest Department Officials and local villagers reveal that the vultures are rarely sighted in the area near Farakka barrage and regular occurrence of vultures are not reported from the area. Discussion with local villagers and forest department officials reveal that the vultures are currently not sighted in the area in proximity to the Kulik IBA. Records of Mr. Samiran Jha (local ecologist and author of several papers on birds from Malda and Farakka area) documented in e-bird website for Old Panchanandapur Chaur, Farakka IBA (till December 2017)¹ and Bara Sagardighi Fish Farm/Sagardighi Wetland (till February 2016)² did not reveal presence of both the species in the area.

As regular occurrence of even a single individual of both vulture species are not reported from both the IBAs, the habitat cannot be considered a discrete management unit for either species (Criteria 1 Tier 2c). These species thereby cannot be considered potential critical habitat candidates

Baer's Pochard (*Aythya baeri*)

The species is reported from the IBA Factsheets of Farakka IBA (year of assessment 2003). Jha (2006)³ also reported the species from the Farakka barrage area. Chowdhury & Nandi (2014) reported presence of the species from Farakka Barrage, Sagardighi Wetland, Gabgachi-Bhatia Wetland and Belatuli Wetland.

Discussion with local experts Dr. Manoranjan Chowdhury (first author of the Choudhury & Nandi paper) revealed that the species was not so frequently recorded in the area. Records of Mr. Samiran Jha documented in e-bird website for Old Panchanandapur Chaur, Farakka IBA (till December 2017)⁴ and Bara Sagardighi Fish Farm/Sagardighi Wetland (till February 2016)⁵ did not reveal presence of the species in the area. Discussion with Mr. Samiran Jha also revealed that the species was not recorded from Farakka and Malda area recently.

As the species is not recently recorded (within 5 years) from Farakka barrage and other wetlands of Malda, conclusive evidence of regular occurrence of a single individual of the species in the area could not be established and thereby the species cannot be considered a potential critical habitat candidate (Criteria 1 Tier 2c).

¹ <https://ebird.org/taiwan/hotspot/L3287993>

² <https://ebird.org/taiwan/hotspot/L3287963>

³ Jha. S. 2006. Records of some rare birds from Farakka Barrage (West Bengal, India). Indian Birds Vol. 2 No. 4 (July-August 2006)

⁴ <https://ebird.org/taiwan/hotspot/L3287993>

⁵ <https://ebird.org/taiwan/hotspot/L3287963>

White-bellied Heron (*Ardea insignis*)

The species is reported by Choudhury and Nandi (2014) from Farakka Barrage and the wetlands Sagardighi, Belatuli and Gabgachi-Bhatia during their study period 2008-2011. However, discussion with Dr. Manoranjan Chowdhury revealed that the species was not so frequently recorded in the area. Records of Mr. Samiran Jha documented in e-bird website for Old Panchanandapur Chaur Farakka IBA (till December 2017) and Bara Sagardighi Fish Farm/Sagardighi Wetland (till February 2016) did not reveal presence of the species in the area. Discussion with Mr. Samiran Jha also revealed that the species was not recorded from Farakka and Malda area recently.

As the species is not recently recorded (within 5 years) from Farakka barrage and other wetlands of Malda, conclusive evidence of regular occurrence of a single individual of the species in the area could not be established and thereby the species cannot be considered a potential critical habitat candidate (Criteria 1 Tier 2c).

Gharial (*Gavialis gangeticus*)

The species is reported from the IBA Factsheets of Farakka IBA. Discussion with forest department officials and local villagers reveal that species is not currently reported from the Farakka barrage area.

As regular occurrence of even a single individual of the species is not reported from Farakka area, the species thereby cannot be considered a potential critical habitat candidate (Criteria 1 Tier 2c).

B. IUCN Endangered Species (Critical Habitat Criterion 1: Tier 2c,e)

Pallas's Fish-eagle (*Haliaeetus leucoryphus*)

The species is reported from the IBA Factsheet of Kulik IBA¹ (year of assessment 2003). However, discussion with forest officials of Raiganj (Kulik) Wildlife sanctuary and local villagers did not reveal the presence of the species in the area. The species was also reported from Belatuli and Gabgachi-Bhatia Wetlands (Chowdhury & Nandi, 2014). The global population of the species is estimated to be 1,000–2,499 mature individuals². The species reportedly breeds in northern India (apparent strongholds in Assam and Uttarakhand)³.

¹ BirdLife International (2018) Important Bird Areas factsheet: Kulik (Raiganj) Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 10/04/2018.

^{2,3} BirdLife International. 2017. *Haliaeetus leucoryphus*. The IUCN Red List of Threatened Species 2017: e.T22695130A119358956. <http://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T22695130A119358956.en>. Downloaded on 11 April 2018.

As the species is recorded only from a few wetlands in proximity to the highway alignment, the habitat cannot be considered holding regionally important concentrations for the species and is thereby not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).

Greater Adjutant- Stork (*Leptoptilos dubius*)

The species is reported by Choudhury & Nandi (2014) from Gabgachi-Bhatia wetland. However, the species is not reported from other wetlands studied by Choudhury & Nandi (2014). Moreover, discussions with forest officials at Raiganj Wildlife Sanctuary did not reveal presence of the species.

The total population of the species is estimated to be 800-1,200 mature individuals, roughly equivalent to 1,200-1,800 individuals¹ in total, which included 650-800 birds reported from Assam and about 156 birds from Bihar.

As the species is recorded from a single wetland in proximity to the highway alignment, the habitat cannot be considered holding regionally important concentrations for the species and thereby is not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).

Black-bellied Tern (*Sterna acuticauda*)

The species is not reported in the IBA factsheet of Farakka Barrage. However, Choudhury & Nandi (2014) reported the species from Farakka Barrage, Gabgachi-Bhatia wetland and Belatuli Wetland.

The population estimate is reported to be 10,000-25,000 individuals with approximately 6,700-17,000 mature individuals². In India, the population distribution is widespread and the species is reported from protected areas throughout its range, including Bhitarkanika National Park, Satkosia Tiger Reserve, Harike Wildlife Sanctuary, Keoladeo National Park, Rajiv Gandhi National Park, Dibru-Saikhowa National Park, Kaziranga National Park etc.

As the species distribution in India is widespread, the individuals recorded in Farakka Barrage and the few other wetlands in the proximity of the proposed road alignment cannot be considered holding regionally important concentrations for the species and the species is thereby not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).

Gangetic Dolphin (*Platanista gangetica*)

The species is reported from the IBA Factsheets of Farakka IBA. Gangetic dolphin was also reported from Farakka area by Sinha *et al.* (2000)³. Presence

¹ BirdLife International. 2016. *Leptoptilos dubius*. The IUCN Red List of Threatened Species 2016: e.T22697721A93633471. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22697721A93633471.en>. Downloaded on 11 April 2018.

² BirdLife International. 2017. *Sterna acuticauda* (amended version of 2016 assessment). The IUCN Red List of Threatened Species 2017: e.T22694711A110488626. <http://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22694711A110488626.en>. Downloaded on 11 April 2018.

³ Sinha RK, Smith BD, Sharma G, Prasad K, Choudhury BC, Sapkota K, Sharma RK, Behera SK (2000) Status and distribution of the Ganges susu. *Platanista Gangetica*, in the Ganges river system of India and Nepal. In: Reeves RR, Smith BD, Kasuya T (eds) Biology and conservation of freshwater cetaceans in Asia, Occasional papers of the IUCN Species Survival Commission no. 23. IUCN, Gland, pp 54-61

of the species in Farakka barrage and feeder canal was also reported by the forest department officials and local villagers.

The Conservation Action Plan for the Gangetic Dolphin (2010-2020) prepared by the Ministry of Environment, Forests and Climate Change (MoEFCC) reports that Gangetic dolphins occur in three subpopulations bounded by the Bijnor (Middle Ganga Barrage in Uttar- Pradesh), Narora (lower Ganga Barrage in Uttar Pradesh) and Farakka Barrage¹. The report also identified some “Critical Stretches for Gangetic Dolphins” as part of the conservation plan and Farakka Barrage is not identified as a critical stretch. The only protected area for Gangetic Dolphin, the Vikramshila Gangetic Dolphin Sanctuary in Bihar, is more than 100 km upstream of Farakka barrage.

The Dolphin population in Farakka barrage area cannot be considered holding regionally important concentrations for the species and thereby is not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).

C. Migratory Species (Critical Habitat Criterion 3: Tier 2b,e)

Many migratory bird species are reported from the Farakka Barrage IBA (IBA is triggered for Farakka on the basis of presence of greater than 20000 waterbirds) areas and wetlands in the proximity to the highway alignment, however, occurrence of regular basis of $\geq 1\%$ the global population of any migratory bird species is not expected, hence, Criteria 3; Tier 2b,e is not triggered

D. Congregatory Species (Critical Habitat Criterion 3: Tier 2b,e)

Asian Openbill (*Anastomus oscitans*)

The Raiganj (Kulik) wildlife sanctuary is known for congregation of Asian Openbill (*Anastomus oscitans*) and mentioned in the IBA Factsheet of Kulik IBA² (year of assessment 2003). Congregation of Asian openbill is only noted within the Raiganj Wildlife Sanctuary, which is more than 7.5 km from the road alignment, thereby Criteria 3: Tier 2b,e is not triggered

Fulvous Whistling-duck (*Dendrocygna bicolor*)

This congregatory species is listed as an IBA triggering criterion for Farakka Barrage. About 8,000 individuals were reported from the Farakka Barrage by (Jha & Sengupta 1999)³. More recent surveys conducted by Chowdhury & Nandi (2014) also reported the species from Farakka Barrage, Belatuli Wetland and Sagardighi Wetland. Discussion with local experts Mr. Samiran Jha and Dr. Manoranjan Chowdhury revealed that overall the birds visiting Farakka area has been reduced significantly. Mr. Samiran Jha reported that the maximum number of individuals of the species visiting the Farakka area

¹ Sinha, R. K., Behera, S. and Choudhary, B.C. 2010. The Conservation Action Plan for the Gangetic Dolphin 2010-2020. Ministry of Environment and Forests, Government of India. 44 pp.

² BirdLife International (2018) Important Bird Areas factsheet: Kulik (Raiganj) Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 10/04/2018.

³ Jha, S. and Sengupta, S. (1999) Proposed IBA Sites of Malda and Uttar Dinajpur report. Green Peoples India, Malda. Pp. 8

would be approximately 1000 currently. It was also reported by Mr. Jha that the number of birds visiting the satellite wetlands (Gabgachi-Bhatia, Sagardighi, Belatuli etc.) would be much less compared to the birds visiting the Farakka area.

The global population of the species is estimated to be 1,300,000-1,500,000 individuals¹ and the 1% threshold value for triggering the critical habitat is **13000** individuals. As the threshold figure to trigger critical habitat is 13000 hence exceeding that figure is unlikely based on current records hence, Criteria 3, Tier 2b is not likely to be triggered.

Tufted Duck (*Aythya fuligula*)

This congregatory species is listed as an IBA triggering criterion for Farakka Barrage. About 70,000 individuals were reported from the Farakka Barrage by (Sharma, 1998)². More recent survey conducted by Chowdhury & Nandi (2014) also reported the species from Farakka Barrage.

The global population is estimated to be 2,600,000-2,900,000 individuals for the species³ and 1% threshold value for triggering the critical habitat is **26000** individuals. The individuals recorded during 1998 (approx. 70000 individuals), exceeded the 1% threshold value.

Discussion with local experts Mr. Samiran Jha and Dr. Manoranjan Chowdhury revealed that overall birds visiting Farakka area has been reduced significantly. Dr. Manoranjan Chowdhury reported that the tufted duck is quite rare in the area. Mr. Samiran Jha reported that approximately 2000-3000 birds visit the Farakka area currently. It was also reported by Mr. Jha that the number of birds visiting the satellite wetlands (Gabgachi-Bhatia, Sagardighi, Belatuli etc.) would be much less compared to the birds visiting the Farakka area.

As the threshold figure to trigger critical habitat is 26000 hence exceeding that figure is unlikely based on current records hence, Criteria 3, Tier 2b is not likely to be triggered.

Conclusion

The road alignment is in close proximity to the Farakka Barrage and Adjoining Areas IBA, however, none of the species reported in the area has been assessed to be potential critical habitat candidates.

¹ BirdLife International. 2016. *Dendrocygna bicolor*. The IUCN Red List of Threatened Species 2016: e.T22679746A92827620. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22679746A92827620.en>. Downloaded on 11 April 2018.

² Sharma, A. (1998) More than 70,000 Tufted Duck (*Aythya fuligula*) sighted again on the river Ganges, Malda district, West Bengal. Newsletter for Birdwatchers 38(3): 57

³ BirdLife International. 2016. *Aythya fuligula*. The IUCN Red List of Threatened Species 2016: e.T22680391A86013549. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22680391A86013549.en>. Downloaded on 11 April 2018.

4.1.2

Requirement of Free, Prior and Informed Consent (FPIC)

The state of West Bengal does not have any Schedule-V or Tribal Areas¹. The project corridor does not have significant presence of Scheduled Tribe population. Less than 7% of population in each of the blocks/tehsils and less than 8% of the total population at the district level is comprised of Scheduled Tribes. Hence, impact on land and natural resources traditionally owned or used by the Scheduled Tribe population is less likely. Similarly, as reported by the Concessionaire and CALA officials the project does not involve physical displacement of Scheduled Tribes from land and natural resources under traditional ownership or customary use. Therefore, FPIC triggers were not identified for the project.

4.2

PROJECT CATEGORIZATION

IFC categorizes road projects into the following three types:

- Category 1: Operating roads (2 or more years);
- Category 2: Operating roads (1 or more years but less than 2 years); and
- Category 3: Just operational (less than 1 year) or where there is any pending Land Acquisition (LA)

Based on ERM's site assessment, review of documents and discussions with the regulatory authorities, the Project Corridor has been categorized as **"Category 2: Operating roads (1 or more years but less than 2 years)** under IFC Screening criteria on the basis of the following:

- A. The Project achieved Provisional Commercial Operation (PCOD) in October 2016 for 79.57 km of the road.
- B. It was found that main carriageway work was commenced in Oct 2016 and C&G work were at completion level by Sep 17 at most of the Non-PCOD locations and it was found that (refer table 3.4) social impacts related to construction works were resolved same time as evident with following details:

| Sl No. | Work stage | Main carriageway (%) | | Service Roads (%) | | Structures (%) | |
|--------|---------------|----------------------|--------|-------------------|--------|----------------|--------|
| | | Oct 16 | Sep 17 | Oct 16 | Sep 17 | Oct 16 | Sep 17 |
| 1 | C&G work | 95.50 | 99.86 | 79.37 | 100 | - | |
| 2 | DBM | 82.27 | 85.80 | 79.37 | 86.81 | - | |
| 3 | Major Bridges | - | | - | | 100 | 100 |
| 4 | Minor bridges | - | | - | | 90.91 | 97.95 |
| 5 | CD works | - | | - | | 88.76 | 89.89 |

- C. It would be worth mention that work front was available in Oct 2016 (at the time of PCOD) at the locations where construction work could not be commenced

(1) http://pesadarpan.gov.in/en_US/fifth-schedule-areas/-/asset_publisher/LmZ9LplaCh7b/content/fifth-schedule-areas?inheritRedirect=false&redirect=http%3A%2F%2Fpesadarpan.gov.in%2Fen_US%2Ffifth-schedule-areas%3Fp_p_id%3D101_INSTANCE_LmZ9LplaCh7b%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-1%26p_p_col_count%3D1

- D. It has been observed that C&G completion of main carriageway and service roads were 95.5 and 79.37 percent in Oct 2016 which was further raised to 99.86 and 100 percent in Sep 2017. Similarly, major and minor bridge completion were 100 and 90.91 percent in Oct 2016 which has been further raised to 100 and 97.95 percent in Sep 17. The cumulative physical progress of the road as of 31st May 2018 has been 91.37% against scheduled progress of 100%. The work is now expected to be completed by October 2018.
- E. The land acquisition process with respect to the final land requirement for the project (202.84ha) shows that by Oct 2016, 3G notification for 197.568ha (97.4%) and 3H or compensation distribution for 196.026ha (96.6%) was achieved. At present, May 2018, the compensation distribution is completed with respect to 202.735ha (99.95%). Hence, the status of the land acquisition process is inferred to have been completed to a significant extent on the date of PCOD and complete at present.
- F. No obstruction due to encroachments in the Main Carriageway at Non-PCOD stretch though there are 9 structures within the RoW.
- G. As per analysis of litigation risks and social agitation/civil society opposition, there is no risk on this front.
- H. Demand of land owners to higher compensation was resolved in Dec 2015 through an Award passed in the Arbitration process. NHAI agreed to pay enhanced compensations (different rates for different revenue villages) to all impacted land owners, which helped in resolving the entire bulk of arbitration cases and there are no pending litigations concerning the stretch of project road.
- I. As per the Concession Agreement, the Farrakah Barrage formed part of the original scope of the Project. However, as per the letter dated August 26, 2013, NHAI informed the Company that the 4-laning of the barrage was taken out from the scope of the Project. As informed NHAI has already awarded the construction work to another company therefore no opportunity of reversal of negative change of scope.

Based on land acquisition and construction status at the time of PCOD evident that social impacts due to pre-construction activities were largely concluded at the time of PCOD. As land acquisition was completed to a significant extent at the time of PCOD, the road is ruled out to be a Category-3 road. The PCOD has been obtained from the road for more than 1 year and 8 months and therefore falls into a Category-2 road.

4.3

KEY OBSERVATIONS, IMPLICATIONS AND RECOMMENDATIONS

Observations on these aspects along with their implications or risk to the project are discussed in this section. *Table 4-1* provides summary of key observations, implications and recommendations to close gaps if any.

Table 4-1 Key Gaps as per the IFC Screening Criteria

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|--------------------------------|---|---|---|---|
| Legal or Regulatory Compliance | <p>1. CTE and CTO was not obtained for the road project.</p> <p>2. Fifteen(15) diesel generator (DG) sets are used for road construction work. However, CTE and CTO was not obtained for these GD sets.</p> <p>3. Four DG sets (4 X 180 KVA) were provided at toll plazas for backup power supply. However, CTE & CTO for operation of these DG sets were not obtained from the WBPCB.</p> <p>4. Authorization for hazardous waste generation was obtained for the construction camp at 18 Miles, Laxmipur, in the year 2014. The authorization was valid till 2016. In January 2017, EPC contractor of FRHL has applied for renewal of the authorization. Currently, the matter is with WBPCB. Nevertheless, since 2016, construction camp of the project has been generating hazardous waste (e.g., waste lube oil, containers, cotton rags etc.) without valid authorization.</p> <p>5. Maintenance work of DG sets (4 X 180 KVA) available at toll plazas would generate hazardous waste (waste lube oil). However, for the same, authorization was not obtained.</p> <p>6. EPC and O&M contractor of FRHL installed bore wells at construction camps, construction sites, toll plazas, truck lay bay and rest areas. However, permission for the same was not obtained from for bore well installation.</p> <p>7. As per the CTO (issued by WBPCB for operation of hot mix plant, wet mix plant and batching plant at 18 Miles, Laxmipur) condition requirement for above mentioned facility, three rows of spreading crown and fast growing varieties of evergreen broad leaf trees should be planted all along the boundary of the plant. However, the same was not followed.</p> | <p>IFC Performance Standard 1- Assessment for Social and Environment Management Systems for litigations on environment and social.</p> | <p>Operating without required permission/consents pose the business interruption risk</p> | <p>1. CTE & CTO should be obtained for the project road</p> <p>2. CTE & CTO should be obtained for the diesel generator sets used at construction site.</p> <p>3. CTE & CTO should be obtained from WBPCB for DG sets at toll plazas.</p> <p>4. Authorization for hazardous waste at construction camp at 18 Miles, Laxmipur, should be immediately renewed.</p> <p>5. Authorization should be obtained for hazardous waste at toll plazas.</p> <p>6. Permits should be obtained for all the bore wells constructed for the project from State Water Investigation Directorate (SWID).</p> <p>7. As per the CTO condition, green belt should be developed around the hot mix plant, wet mix plant and batching plant at 18 Miles, Laxmipur.</p> |
| EHS Management System | <p>HCC Limited is the parent company of FRHL and hence, the corporate management system of HCC will apply to all their subsidiaries, i.e. HCC Infra (engaged in O&M work) as well</p> | <p>IFC Performance Standard 1- Assessment for</p> | <p>Inadequate management system and programme would lead to</p> | <p>Project environment management plan (PEMP) prepared for the project should be extended for O&M stage of the</p> |

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|----------|---|---|---|--|
| | <p>as FRHL. Some elements of the existing management system have not been implemented, while some provisions were found to be inadequate. The key gaps observed are summarised below;</p> <ol style="list-style-type: none"> 1. Project environment management plan (PEMP) prepared for the project did not include any site specific environment management plan and monitoring plan. Management plan provided in the PEMP was found generic for all road construction projects. Further PEMP only covers construction phase of the project. 2. Presently, in O&M phase, there is only one safety office for the entire stretch of the road. However, there is no environment officer for O&M phase of the project to implement and monitor environment management plan related to O&M phase of the project 3. Existing management system was lacking to monitor and record progress on the EMP implementation. There was no system in place to report on EMP implementation from EPC and O&M subcontractor to FRHL. 4. Maintenance Manual has been prepared (as per Section 17.3 of Concession Agreement) for the FRHL toll road for PCOD. This manual includes procedure for carriageway maintenance, carriageway cleaning, earthwork, drainage, bridge & structure, underpass, toll plaza, road appurtenances, safety appurtenance, rest area/truck lay bay/ traffic aid post/medical aid post/horticulture maintenance etc. However, environment management plan (e.g., carriage way waste management plan, oil spill contingency plan) focused on the operations and maintenance aspects of toll road were not prepared and included in this maintenance manual. There was also no record maintained on progress on EMP implementation for O&M phase of the project. 5. Neither EPC nor O&M Contractor has a Stakeholder Engagement Plan (SEP) or External Grievance Redressal System (EGRS) with focus on handling concerns of external stakeholders such as community representatives, | Social and Environment Management Systems | inappropriate management of environmental, health and safety aspects of the road. | <p>project. Further, PEMP should be revised to capture site specific environment management plan and monitoring plan. Following plans should be prepared and included in the PEMP.</p> <ul style="list-style-type: none"> • Carriageway Waste Management Plan; • Oil/Chemical Spill Contingent Plan; • Contractor Management Plan; • Stakeholder Engagement Plan (SEP) <p>Mechanism need to be developed to report progress on EMP implementation from EPC and O&M subcontractor to FRHL.</p> <p>Responsibility for implementation and monitoring of environment management plan related to O&M phase of the project should be assigned to qualified person.</p> |

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|--------------------------------------|---|--|--|-----------------|
| | government authorities, vendors/suppliers etc. At both the toll Plazas there is a Complaint Register for road users to register their concerns and grievances. However, there is no such system for any other external stakeholder. | | | |
| Labour Rights and Working Conditions | <p>HCC has corporate level HR policies that are applicable to all its employees in FRHL and HCC O&M. The HR Policy Manual of HCC includes:</p> <ul style="list-style-type: none"> o Recruitment and Selection Policy o Leave and Attendance Policy o Rewards and Recognition Policy o Mobile Telephone Policy o Canteen at Project Policy o Accommodation at Project Site Policy o Guidelines for Mentoring o Internal Transfer Policy o Travel and Procedure o Welfare and Benefits <ul style="list-style-type: none"> • There is an HR Team at a corporate level and dedicated HR staff at project level. • As part of the recruitment process, the employees receive joining/appointment letters which highlights the terms and conditions of employment, working hours, compensation and benefits and salary break-up etc. • Based on a review of sample documentation the employees were found to have an appointment letter, which contains the following: <ul style="list-style-type: none"> o Appointment and conditions of employment o Duties and obligations of the employee o Employee’s covenants o Confidentiality obligations o Intellectual Property Rights o Internet Usage o Compensation and Benefits o Indemnity o Term, termination and consequences of termination | IFC Performance Standard 2: Labour and Working Conditions | - | - |

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|----------|---|---|--|--|
| | <ul style="list-style-type: none"> Employees are provided with salary slips, which include details on salary, applicable Provident Fund and tax deductions etc. The terms of employment of the union members are governed by the Union Settlement between Federation of All India HCC Workers' Union and HCC Group. <p>The HR staff at the project level is also responsible for contractors' management, labour welfare, and labour dispute resolution as reported.</p> <p>The contractor management at FRHL is carried out through inspection of records and site supervision. For inspection of records, the contractors are required to submit monthly reports that include information such as number of workers engaged, tasks performed, registers maintained, renewal of licenses from time to time etc. For site supervision the company has appointed safety officers, despite of which, many workers were not distributed PPEs, many were not wearing any PPEs, overtime of work has not been adequately compensated for as per legal norms, PF and ESI benefits are provided to many workers etc.</p> <p>Based on review of documents, the contract agreements and service agreements signed between the Concessionaire, HCC O&M Contractor and sub-contractors have included clauses on labour and working conditions such as workmen's compensation, working in shifts, and workers' safety as per GIPs.</p> <p>However, these agreements do not include some pertinent elements, such as: overtime work, overtime payment, PF, ESI, grievance redressal, maternity benefit, collective bargaining etc.</p> | IFC Performance Standard 2: Labour and Working Conditions | <p>Lack of supervision by the company has led to various non-compliances mentioned in table 2.1 of this report including overtime, PF and ESI benefits, use of PPEs etc.</p> <p>Moreover, the inadequacy of contract terms and conditions reflects into non-conformance of the contractors with applicable labour laws as well as IFC PSs.</p> | <p>The site supervisors should maintain records of their observations on daily basis including – worker concerns, wages, overtime, labour camp conditions, use of PPEs etc. These records should be submitted to the management regularly for monitoring purposes.</p> <p>The management should check these records against the monthly reports submitted by contractors to identify uniformity in data provided by supervisors and contractors.</p> |

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|----------------------|---|--|--|---|
| Pollution Prevention | <p>During construction and O&M phase of the project, waste is being generated in the form of gaseous pollution from construction activity, operation of DG set, operation of hot mix and batching plant; waste water from camp site, toll plazas etc. Key gaps in pollution prevention for the project road are described below:</p> <ol style="list-style-type: none"> 1. Few DG sets at the road construction site were fitted with stack. However, most of the DG sets installed at the construction sites and at toll plazas were not fitted with stack. 2. Four DG sets located at toll plazas were not fitted with stack to disperse air pollutants. 3. At construction camp (18 Miles, Laxmipur hazardous waste e.g., used oil, grease were observed to be stored in open area without impervious floor and bunding. Spillage of oil from these diesel drums were noticed during site visit. Also, oil spillage on the open ground was observed at ROB construction site. This has a likelihood of potential soil pollution. 4. Waste management seemed inadequate along the project road. At some sections of the road, domestic solid waste, debris etc. was found to be scattered on the ROW edge. General practice of the local people was observed to store and dispose solid waste on the road side. 5. The project does not carry out noise monitoring near sensitive receptor (such as educational institutes, settlement areas, cultural sites etc.) along the project road. Ambient noise monitoring needs to be carried out near sensitive receptor along the project roads and the data needs to be compared with baseline monitoring data to understand compliance with the CPCB standard. 6. Based on the document review, it is understood that though environmental monitoring programme was implemented for the project, it was not adequate. In every six month, environment monitoring was conducted mainly keeping in view occupation health and safety aspects of the project. Noise monitoring was conducted near DG sets (noise | IFC Performance Standard 3: Resource Efficiency and Pollution Prevention | Inadequate pollution prevention measures will lead to environment pollution. | <ol style="list-style-type: none"> 1. All the DG sets at construction site and toll plazas would be provided with stack (as per CPCB standard). 2. Hazardous waste such as used oil, grease would be stored at properly covered area with secondary containment and bunding. For hazardous waste storage area, CPCB guidelines need to be followed. Spill kit would be made available at the storage facility. 3. Debris and Solid Waste from the ROW would be removed periodically. 4. Ambient environment quality (air, ground and surface water, noise and soil quality) should be monitored near sensitive receptor adjacent to the project road. 5. Air emission from the DG sets would be monitored. |

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|--------------------------------------|--|---|---|---|
| | generating source). Also, stack emission from hot mix plant was monitored in every six month to comply with the CTO condition. Further, ambient air quality was monitored near project construction site, road junctions, construction site. However, environment monitoring (e.g., air, noise, soil, water etc.) was not conducted near sensitive receptor (educational institutes, settlement areas, cultural sites, surface water bodies etc.) along the project road. Further, air emission from the DG sets located at toll plazas were not monitored. | | | |
| Resource Efficiency | <p>1. There is no procedure to measure utilization of water resource for the project. Bore wells are constructed and used for ground water abstraction at construction camp, toll plazas and at road side amenities (track lay-bay, rest areas etc.). However, none of these bore wells are reported to have water meters to measure water abstraction for the project purpose. Without water meter, quantity of ground water abstracted and utilized for the project could not be measured.</p> <p>2. The project does not calculate, estimate and account for the GHG emissions due to the mobile sources of transportation, based on the average number of motorized vehicles plying on the road on monthly and annual basis.</p> | IFC Performance Standard 3: Resource Efficiency and Pollution Prevention | Over utilization of natural resource | <p>1. Water flow meter should be installed with bore wells installed at the project site and water consumption should be monitored regularly. Effort would be given to reduce water consumption.</p> <p>2. FRHL should endeavor to undertake GHG accounting for their respective project.</p> |
| Community Health Safety and Security | <p>During site walkthrough, following observations are made, and might act as potential risk to local communities and road user;</p> <p>1. Sensitive receptors like schools are located beside the road. However, adequate signage was not provided near some of the schools. Further, noise barrier in the form of plantation was not observed near sensitive receptors (schools).</p> <p>2. Significant number of multi-axle vehicles parked in the corridor on both sides. Vehicle parking, thereby reducing the road width for traffic movement;</p> <p>3. Significant numbers of vehicles are observed driving in the opposite direction on the main expressway, for e.g., tractors,</p> | IFC Performance Standard 4: Community Health, Safety, and Security | The safety of the road users and road-side communities is paramount for smooth operation of the road. | FRHL to carry out root cause analysis of accidents. Road safety audit should be conducted by a competent agency after construction is completed and the Improvement Plan should be implemented for safety and security of nearby community. |

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|----------|---|--------------------------------|--|-----------------|
| | <p>motorcycles etc. This type of practice was observed at places where median opening was not available nearby, and vehicle were trying shortcut to reach their destination. There seems to be lax traffic control to prevent such occurrences;</p> <p>4. At number of places, median of the toll road is observed to be used by local community for feeding domestic cattle. Local community also used the median for drying of cow dung cake.</p> <p>5. Unauthorized median opening was observed at number of places. Some of the unauthorized are blocked by road maintenance team by placing concrete slabs.</p> <p>6. Absence of hazard marker at the culvert parapet wall was observed during site walkthrough. Further, hazard marker was not observed at median opening. This practice is not in compliance with IRC 79-1981.</p> <p>7. During site walkthrough, metal crash barrier was observed to be damaged at sections of the road.</p> <p>8. Road construction sites were observed not barricaded properly. Work zones were not properly protected per the IRC SP 055 (Guidelines on Traffic Management in Work Zones).</p> <p>9. Branches of the trees in rights of way of the road came inside the road. This has potential to restrict motorist visibility and fall onto the road;</p> <p>10. Presently 6 truck lay byes are constructed along the road. However, facilities like sanitation, availability of drinking water, rest areas are not completely developed yet.</p> <p>11. During the site visit, sparse median plantation was observed at some stretches of both the road. Two community rest area is planned for the project. One rest area is already functional, and the remaining one is in development stage.</p> <p>Based on the above observation, it is found that IRC guidelines and codes are not followed at some stretches of the road. However, as per the CA (Schedule-L), FRHL need to abide by the relevant IRC standards/ guidelines.</p> | | | |

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|--------------------------------|---|---|--|--|
| Occupational Health and Safety | <p>Based on the site walk through, visit at construction and O & M camp and consultation with site personnel, following observations are made:</p> <ol style="list-style-type: none"> 1. At both the toll plazas, high speed diesel (petroleum class B) was stored in 200 l drum inside store room. However, fire extinguisher was not provided at these flammable liquid storage area. 2. Road maintenance workers have been provided with reflective jacket. However, safety shoes were not provided to them. Further, workers involved in grass cutting and waste cleaning works were not provided with gloves; 3. Road construction workers were not provided with appropriate PPEs. At river bridge construction site on Malda bypass, construction workers were observed without PPEs such as helmet, safety shoe, jacket etc. Also, construction workers working at height were not provided with safety harness. | IFC Performance standard 2: Labour & Working Conditions on occupational Health & Safety | Occupation health and safety hazard | <ol style="list-style-type: none"> 1. All workers engaged in construction and O&M work should be provided with adequate PPEs. 2. Monitoring and supervision should be strengthened to ensure use of PPEs. 3. Adequate fire extinguisher should be made available at high speed diesel storage area. |

IFC PS 5: Land Acquisition and Involuntary Resettlement

The land has been acquired under appropriate sub-sections of NH act 1956. And R&R of project affected persons was done as the provisions of NH Act 1956. The majority of the land acquisition was completed at the time of PCOD when commercial operation was started i.e. Oct 2016 (96.6%). There are number of encroachments in project's ROW which don't make hindrances to project operations (not located on MCW, service roads and shoulders). It has been learnt that they have been provided with compensation as per government policies. However, PS-5 can be triggered under specific conditions as given below:

| | | | | |
|---|---|--|--|--|
| Private Sector Responsibilities Under Government-Managed Resettlement | <p>At the time of issuing PCOD in October 2016, the land acquisition compensation distribution (3H) was completed for 96.6%. Further, the construction work for most part of the MCW and Service Roads have been initiated and most of the hindrances are cleared.</p> <p>There were a large number of encroachments though most of them were temporary structures. However, there were 214 permanent structures in Oct 2017, at the time of PCOD. The number of permanent structures were reduced to 156 in Feb 2018 and the encroachment survey in June 2018 as part of this ESDD revealed that there is further reduction in number of permanent structures to 107 (102 in PCOD stretch and 5 in Non-PCOD stretch). Similarly, there are 101 semi-</p> | IFC Performance standard 5: Land Acquisition and Involuntary Resettlement | <ul style="list-style-type: none"> - The eviction of encroached structures without due process of law can potentially disrupt the road operation. | <ul style="list-style-type: none"> • The client will collaborate with the responsible government agency, to the extent permitted by the agency, to achieve outcomes that are consistent with this Performance Standard • In the case of acquisition of land rights or access to land through compulsory means or negotiated settlements involving physical displacement, the client will identify and describe to government resettlement measures. If these measures do not meet the relevant requirements of |
|---|---|--|--|--|

| Criteria | Key Gaps and Issues | Applicable Reference Framework | Implications/Risks to Project Operations | Recommendations |
|----------|---|--------------------------------|--|--|
| | <p>permanent structures in PCOD stretch and 4 in Non-PCOD Stretch.</p> <p>Currently MCW work at remaining location is in progress and utility shifting is completed hence none of the encroachments from ROW nor does any notice for eviction have been given to them currently status quo is maintained.</p> | | | <p>this Performance Standard, the client will prepare a Supplemental Resettlement Plan</p> |

5.1*ENVIRONMENT AND SOCIAL CORRECTIVE ACTION PLAN*

Keeping the magnitude of the environment and social action impacts, the recommended Environment and Social Corrective Action Plan (E&S CAP) is provided separately for construction and O&M phases in Table 5-1 and Table 5.2 respectively. The ESAP during construction phase will be applicable in case IHCPL acquires present project under construction otherwise only ESAP during O&M phase will be applicable.

Table 5-1 Environmental and Social Corrective Action Plan (Construction Phase)

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | Reference | Responsibility and Resources | Measurable Outcome/ Documentation | Target Timelines for Completion after closing |
|--|---|---|--|---|---|
| Construction Phase of the Project | | | | | |
| 1 Compliance | | | | | |
| 1.1 | Develop environmental and social legal register for the project to ensure compliance to all applicable environmental clearance and permit conditions | Refer Table 4.1 Legal or Regulatory Compliance | FRHL | Legal Register | 3 month |
| 1.2 | Obtain CTE for the project road through NHAI | - | FRHL to regularly follow up with NHAI | CTE & CTO | No timeline can be given as it is NHAI's responsibility |
| 1.3 | Apply CTE & CTO for diesel generator sets used at construction site. | - | FRHL through EPC contractor | CTE & CTO | 3 months |
| 1.4 | Renew authorization for hazardous waste handling and management at construction camp at 18 Miles, Laxmipur | - | FRHL through EPC contractor | Renewed authorization | 3 months |
| 1.5 | Obtain permits for all the bore wells constructed for the project from State Water Investigation Directorate (SWID) | - | FRHL through EPC contractor | Permits for bore well | 6 months |
| 2 EHS Management System | | | | | |
| 2.1 | Progress on EMP implementation from EPC contractor to be monitored at the corporate office. | - | FRHL through EPC contractor | Monitoring report | During Construction period |
| 3 Labour and working conditions | | | | | |
| 3.1 | <p>Strengthening of Contractor Management System</p> <ul style="list-style-type: none"> The site supervisors should maintain records of their observations on daily basis including - worker concerns, wages, overtime, labour camp conditions, use of PPEs etc. These records should be submitted to the management periodically for monitoring purposes. The management should check these records against the monthly reports submitted by contractors to identify uniformity in data provided by supervisors and contractors. | Refer Table 4.1 Labour Rights and Working Conditions Refer Table 2.1 Rows 9, 13, 14, 15 and 16; Table 4.1 | FRHL and HCC O&M appointed Supervisors and sub-contractors | <ul style="list-style-type: none"> Periodic records by Supervisors; Monthly reports by Contractors. Grievance Redressal Mechanism should be formulated where contract workers can raise their concerns over working conditions, Monthly reports submitted by contractors, | Within 1 months |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | Reference | Responsibility and Resources | Measurable Outcome/ Documentation | Target Timelines for Completion after closing |
|-----|---|------------------------|--|---|---|
| | <ul style="list-style-type: none"> provide a platform for contract workers to collectively raise their concerns regarding working conditions, all contractors and sub-contractors engaged for the project should submit their monthly records (wages paid, leaves granted, overtime performed, overtime paid, PF and ESI challans etc.) to management for verification, ensure that wages are transferred to each workers' bank account instead of current practice of cash payments, the contract agreements should be amended to include terms and conditions of overtime work and payment, maternity benefit for female workers, provide clean drinking water and hygienic lavatories at each construction site, the labour accommodation whether temporary or long-term should be designed and maintained as per IFC Worker Accommodation: Processes and Standards and BOCW Act 1996, ensure that only persons above 18years of age are engaged in work. Their ID proofs should be checked before allowing them to work on the site. | | | <ul style="list-style-type: none"> Wage records and bank transaction proofs, Amended contract agreements/service agreements with contractors/ sub-contractors, Improved labour accommodation facilities, Photocopies of all workers' identity proofs with age records, Clean drinking water storage tanks and clean lavatories at each working site. | |
| 3.2 | License of Clifford Agency under the private security law, | Refer Table 2.1 Row 17 | FRHL and HCC O&M appointed Supervisors and sub-contractors | <ul style="list-style-type: none"> Registration of Clifford Agency under PSARA 2005, | 1 month |
| 3.3 | Expired BOCW registration certificates should be renewed by respective sub-contractors. | Table 2.1 Row 11 | FRHL and HCC O&M appointed sub-contractors | BOCW renewal certificates | Within 2 months |
| 3.4 | Principal employer's registration under Inter-state Migrant Workmen Act should be obtained by NHAI. | Table 2.1 Row 10 | FRHL to follow up with NHAI to meet this requirement | Principal employer's registration of NHAI under the law | Obtain within 4 months - application to be made immediately |
| 3.5 | Statutory deductions should be made from wages/salaries of all eligible workers under PF and ESI legislations. | Table 2.1 Row 15 | FRHL and HCC O&M appointed Supervisors and sub-contractors | PF Challans, ESI cards, Disposition of amount at EPFO. | Monthly basis - ongoing |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | Reference | Responsibility and Resources | Measurable Outcome/ Documentation | Target Timelines for Completion after closing |
|----------|--|--|------------------------------|---|---|
| 4 | Pollution Prevention and Resource Efficiency | | | | |
| 4.1 | Provide stack with all the DG sets (as per CPCB standard) located at construction site | - | FRHL through EPC contractor | Stack with DG set | 3 month (for ongoing construction) |
| 4.2 | FRHL through EPC contractor should ensure that hazardous waste such as used oil, grease would be stored at properly covered area with secondary containment and bunding. For hazardous waste storage area, CPCB guidelines need to be followed. Spill kit would be made available at the storage facility. | - | FRHL through EPC contractor | Physical Verification | 6 months |
| 4.3 | Ambient environment quality (air, ground and surface water, noise and soil quality) should be monitored near sensitive receptor adjacent to the project road. | - | FRHL through EPC contractor | Monitoring result | 6 months |
| 4.4 | Air emission from the DG sets would be monitored. | - | FRHL through EPC contractor | Monitoring result | 6 months |
| 4.5 | Water flow meter should be installed with bore wells installed at the project construction site and water consumption should be monitored regularly. Effort would be given to reduce water consumption. | - | FRHL through EPC contractor | Physical Verification, quantity of water consumed | 6 months |
| 6 | Community Health Safety and Security | | | | |
| 5.1 | Barrier/fencing should be provided at road construction site as per IRC SP 055. | - | FRHL through EPC contractor | Physical Verification | During Construction Period |
| 6 | Occupational Health and Safety | | | | |
| 6.1 | All workers engaged in construction work should be provided with adequate PPEs. | Refer Table 4.1 Occupational Health and Safety | FRHL through EPC contractor | Physical Verification | 3 month (for ongoing construction) |
| 6.2 | Monitoring and supervision should be strengthened to ensure use of PPEs by construction workers. | - | FRHL through EPC contractor | Physical Verification, monitoring report | 3 month (for ongoing construction) |

Table 5-2 Environment and Social Action Plan (Operation and Maintenance)

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | Reference | Responsibility and Resources | Measurable Outcome/ Documentation | Target Timelines for Completion after closing |
|---|---|--|--|--|---|
| Operation & Maintenance Phase of the Project | | | | | |
| 1 Compliance | | | | | |
| 1.1 | Develop environmental and social legal register for the project to ensure compliance to all applicable environmental clearance and permit conditions | Refer Table 4.1 Legal or Regulatory Compliance | FRHL | Legal Register | 3 month |
| 1.2 | Obtain CTO from WBPCB for Project Road and DG sets at toll plazas | - | FRHL through O&M contractor | CTO | 3 months |
| 1.3 | Obtain authorization for hazardous waste handling and management at toll plazas. | - | FRHL through O&M contractor | Authorization for hazardous waste | 3 months |
| 1.4 | Obtain permits for all the bore wells constructed for the project from State Water Investigation Directorate (SWID) | - | FRHL through O&M contractor | Permits for bore well | 6 months |
| 2 EHS Management System | | | | | |
| 2.1 | Environmental and Social Management System (ESMS) to be prepared for the project incorporating Standard Operating Procedures (SOPs) for O&M stage of the project. Following plans should be prepared and included in the ESMS. <ul style="list-style-type: none"> • Carriageway Waste Management Plan; • Oil/Chemical Spill Contingent Plan; • Contractor Management Plan; • Stakeholder Engagement Plan (SEP) • Emergency Response Plan | Refer Table 4.1 EHS Management System | FRHL | ESMS and SOPs | Within 6 months |
| 2.2 | Progress on EMP implementation from O&M contractor to be monitored at the corporate office. | - | FRHL through O&M contractor | Monitoring plan | Within 6 months |
| 2.3 | Responsibility for implementation and monitoring of environment management plan related to O&M phase of the project should be assigned to qualified person. | - | FRHL | Through qualified staff | Within 6 months |
| 3 Labour and working conditions | | | | | |
| 3.1 | Strengthening of Contractor Management System <ul style="list-style-type: none"> • The site supervisors should maintain records of their observations on daily basis including - | Refer Table 4.1 Labour Rights and Working Conditions | FRHL and HCC O&M appointed Supervisors and sub-contractors | <ul style="list-style-type: none"> • Regular records by Supervisors; • Monthly reports by Contractors. | Within 3 months |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | Reference | Responsibility and Resources | Measurable Outcome/ Documentation | Target Timelines for Completion after closing |
|-----|---|--|--|---|---|
| | <p>worker concerns, wages, overtime, labour camp conditions, use of PPEs etc. These records should be submitted to the management every week for monitoring purposes.</p> <ul style="list-style-type: none"> • The management should check these records against the monthly reports submitted by contractors to identify uniformity in data provided by supervisors and contractors. • provide a platform for contract workers to collectively raise their concerns regarding working conditions, • all contractors and sub-contractors engaged for the project should submit their monthly records (wages paid, leaves granted, overtime performed, overtime paid, PF and ESI challans etc.) to management for verification, • ensure that wages are transferred to each workers' bank account instead of current practice of cash payments, • the contract agreements should be amended to include terms and conditions of overtime work and payment, maternity benefit for female workers, • provide clean drinking water and hygienic lavatories close to work site, • Ensure that only persons above 18years of age are engaged in work. Their ID proofs should be checked before allowing them to work on the site. | Refer Table 2.1 Rows 9, 13, 14, 15 and 16; Table 4.1 | | <ul style="list-style-type: none"> • Grievance Redressal Mechanism should be formulated where contract workers can raise their concerns over working conditions, • Monthly reports submitted by contractors, • Wage records and bank transaction proofs, • Amended contract agreements/service agreements with contractors/ sub-contractors, • Improved labour accommodation facilities, • Photocopies of all workers' identity proofs with age records, • Clean drinking water storage tanks and clean lavatories at each working site. | |
| 3.2 | License of Clifford Agency under the private security law. | Refer Table 2.1 Row 17 | FRHL and HCC O&M appointed Supervisors and sub-contractors | Registration of Clifford Agency under PSARA 2005, | 1 month |
| 3.3 | Statutory deductions should be made from wages/salaries of all eligible workers under PF and ESI legislations. | Table 2.1 Row 15 | FRHL and HCC O&M appointed Supervisors and sub-contractors | PF Challans, ESI cards, Disposition of amount at EPFO. | Monthly basis - ongoing |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | Reference | Responsibility and Resources | Measurable Outcome/ Documentation | Target Timelines for Completion after closing |
|----------|---|--|------------------------------|---|--|
| 4 | Pollution Prevention and Resource Efficiency | | | | |
| 4.1 | Provide stack with all the DG sets (as per CPCB standard) located at toll plazas | - | FRHL through O&M contractor | Stack with DG set | 4 month |
| 4.2 | Hazardous waste storage area would be provided as per CPCB guidelines. Spill kit would be made available at the storage facility. | - | FRHL through O&M contractor | Physical Verification | 6 months |
| 4.3 | FRHL through O&M contractor should ensure that debris and solid waste from the ROW are removed periodically. | - | FRHL through O&M contractor | Physical Verification | Regular |
| 4.4 | Ambient environment quality (air, ground and surface water, noise and soil quality) should be monitored near sensitive receptor adjacent to the project road. | - | FRHL through O&M contractor | Monitoring result | 6 months |
| 4.5 | Air emission from the DG sets would be monitored. | - | FRHL through O&M contractor | Monitoring result | 6 months |
| 4.6 | Water flow meter should be installed with bore wells installed at the project site (toll plazas, rest areas, truck lay by etc.) and water consumption should be monitored regularly. Effort would be given to reduce water consumption. | - | FRHL through O&M contractor | Physical Verification, quantity of water consumed | 6 months |
| 4.7 | FRHL should endeavor to undertake GHG accounting for their respective project. The ESMS to be prepared for the project would include requirement GHG accounting. | - | FRHL | GHG accounting report | 1 year |
| 5 | Community Health Safety and Security | | | | |
| 5.1 | FRHL to carry out root cause analysis of accidents. Road safety audit should be conducted by a competent agency after construction is completed and the Improvement Plan should be implemented. | Refer Table 4.1 Community Health Safety and Security | FRHL | Road safety audit and Improvement Plan | Road Safety Audit within 6 months and Implementation of proposals - within 18 months and continued |
| 6 | Occupational Health and Safety | | | | |
| 6.1 | All workers engaged in construction and O&M work should be provided with adequate PPEs. | Refer Table 4.1 Occupational Health and Safety | FRHL through O&M contractor | Physical Verification | 3 months and Continuous |
| 6.2 | Monitoring and supervision should be strengthened to ensure use of PPEs by road maintenance workers. | - | FRHL through O&M contractor | Physical Verification, monitoring report | 3 month |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | Reference | Responsibility and Resources | Measurable Outcome/ Documentation | Target Timelines for Completion after closing |
|----------|--|-----------|------------------------------|--|---|
| 6.3 | Adequate fire extinguisher should be made available at high speed diesel storage area at toll plaza. | - | FRHL through O&M contractor | Physical Verification | 1 month |
| 7 | Land Acquisition and Involuntary Resettlement | | | | |
| 7.1 | <p>The eviction of existing encroachments is not planned in near future and could be undertaken when further widening program is materialize.</p> <p>Compensation issues for any future displacement of the occupants will entail a need for an SIA and RAP and</p> <p>A. In case of informal dwellers if removed in future the company needs to work with NHAI/other govt departments to ensure that the provisions of PS 5 are met.</p> <p>B. For encroachments being removed, the company needs to monitor and document the process (to the extent possible), and ensure that in case there are reasons for grievances, the affected person is provided access to the GR mechanism.</p> | Table-4.1 | FRHL/NHAI | SIA/RAP if eviction of encroachers is planned or taken up. | Before any future eviction/displacement/acquisition |

5.2

TENTATIVE BUDGET ESTIMATE FOR ESAP

The budget estimate for the construction phase ESAP is provided in Table 5.3 below and for O&M phase is provided in Table 5.4. If the project investment takes place while construction of the remaining components of the road is going on, the ESAP as in Table 5.1 and the corresponding budget in 5.3 will be applicable. If the project investment takes place after construction is over, then the ESAP as in Table 5.2 and the corresponding budget as per 5.4 will be applicable.

Table 5-3 Tentative Budget Estimate for ESAP Implementation for Construction Phase

| | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | One Time/ Recurring Annual | Units | Unit Cost | Estimated Cost |
|----------|--|-----------------------------------|---|------------------|-----------------------|
| 1 | Compliance | | | | |
| 1.1 | Develop environmental and social legal register for the project to ensure compliance to all applicable environmental clearance and permit conditions | One Time | Staff Time | | No extra cost |
| 1.2 | Obtain CTE for the project road through NHAI | One Time | Application fee as prescribed by WBPCB depending upon capital investment. Cannot be estimated at this point in time | | |
| 1.3 | Apply CTE & CTO for diesel generator sets used at construction site. | One Time | Application fee as prescribed by WBPCB depending upon capital investment. Cannot be estimated at this point in time | | |
| 1.4 | Authorization for hazardous waste handling and management at construction camp at 18 Miles, Laxmipur | One Time | As per the prescribed fee by WBPCB. | | |
| 1.5 | Obtain permits for all the bore wells constructed for the project from State Water Investigation Directorate (SWID) | One Time | Cannot be estimated at this point in time | | |
| 2 | EHS Management System | | | | |
| 2.1 | Progress on EMP implementation from EPC contractor to be monitored at the corporate office. | Recurring | Staff Time | | No extra cost |
| 3 | Labour and working conditions | | | | |
| 3.1 | Strengthening of Contractor Management System | | | | |
| | The site supervisors should maintain records of their observations on daily basis including - worker concerns, wages, overtime, labour camp conditions, use of PPEs etc. These records should be submitted to the management periodically for monitoring purposes. | Recurring | Staff Time | | No extra cost |

| | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | One Time/Recurring Annual | Units | Unit Cost | Estimated Cost |
|-----|---|---|------------|---|----------------|
| | The management should check these records against the monthly reports submitted by contractors to identify uniformity in data provided by supervisors and contractors. | Recurring | Staff Time | | No extra cost |
| | Provide a platform for contract workers to collectively raise their concerns regarding working conditions, | Recurring | Staff Time | | No extra cost |
| | All contractors and sub-contractors engaged for the project should submit their monthly records (wages paid, leaves granted, overtime performed, overtime paid, PF and ESI challans etc.) to management for verification) | Recurring | Staff Time | | No extra cost |
| | Ensure that wages are transferred to each workers' bank account instead of current practice of cash payments. | Recurring | Staff Time | | No extra cost |
| | The contract agreements should be amended to include terms and conditions of overtime work and payment, maternity benefit for female workers, | One Time | Staff Time | | No extra cost |
| | Provide clean drinking water and hygienic lavatories at each construction site. | Recurring | | Already part of the sub-contractor contract and covered under their obligation to compliance to indian laws | |
| | The labour accommodation whether temporary or long-term should be designed and maintained as per IFC Worker Accommodation: Processes and Standards and BOCW Act 1996. | One Time (Difference between BOCW 1996 and IFC EBRD Standard) | 300 labour | 1000 | 3,00,000 |
| | Ensure that only persons above 18years of age are engaged in work. Their ID proofs should be checked before allowing them to work on the site. | Recurring | Staff Time | | No extra cost |
| 3.2 | License of Clifford Agency under the private security law | One Time | | Cost to Sub-consultant as part of obligation to comply to Indian laws | |
| 3.3 | Expired BOCW registration certificates should be renewed by respective sub-contractors. | One Time | | Cost to Sub-consultant as part of obligation to comply to Indian laws | |
| 3.4 | Principal employer's registration under Inter-state Migrant Workmen Act should be obtained by NHAI. | One Time | | Cost to NHAI | |
| 3.5 | Statutory deductions should be made from wages/salaries of all eligible workers under PF and ESI legislations. | Recurring | Staff Time | | No extra cost |

| | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | One Time/ Recurring Annual | Units | Unit Cost | Estimated Cost |
|----------|--|---|---------------------------------------|-----------|----------------|
| 4 | Pollution Prevention and Resource Efficiency | | | | |
| 4.1 | Provide stack with all the DG sets (as per CPCB standard) located at construction site | One Time | 15 | 10000 | 150000 |
| 4.2 | FRHL through EPC contractor should ensure that hazardous waste such as used oil, grease would be stored at properly covered area with secondary containment and bunding. For hazardous waste storage area, CPCB guidelines need to be followed. Spill kit would be made available at the storage facility. | One Time | 1 | 500000 | 500000 |
| 4.3 | Ambient environment quality (air, ground and surface water, noise and soil quality) should be monitored near sensitive receptor adjacent to the project road. | Annual | Lump Sum (for 10 locations as per EC) | | 400000 |
| 4.4 | Air emission from the DG sets would be monitored. | Annual | Lump sum (for 15 DG sets) | | 1,50,000 |
| 4.5 | Water flow meter should be installed with bore wells installed at the project construction site and water consumption should be monitored regularly. Effort would be given to reduce water consumption. | One Time | 6 | 35000 | 210000 |
| 5 | Community Health Safety and Security | | | | |
| 5.1 | Barrier/fencing should be provided at road construction site as per IRC SP 055. | One Time | 100 | 350 | 35000 |
| 6 | Occupational Health and Safety | | | | |
| 6.1 | All workers engaged in construction work should be provided with adequate PPEs. | One Time | 300 | 1700 | 510000 |
| 6.2 | Monitoring and supervision should be strengthened to ensure use of PPEs by construction workers. | Recurring (Monthly) | Staff Time | | No extra cost |
| | One Time Expenses | 19,55,000 | | | |
| | | (Plus fees for permits for CTE, Hazardous waste Authorisation , NOC for bore wells) | | | |
| | Recurring Expenses | Management time for ESDDs development and implementation | | | |

Table 5-4: Tentative Cost Estimate for ESAP Implementation for O&M Phase

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | One Time/ Recurring Annual | Units | Unit Cost | Estimated Cost |
|-------------------------|--|----------------------------|--|-----------|----------------|
| 1 | Compliance | | | | |
| 1.1 | Develop (update construction phase legal register if prepared) environmental and social legal register for the project to ensure compliance to all applicable environmental clearance and permit conditions | One Time | Staff Time | | No Extra Cost |
| 1.2 | Obtain CTO from WBPCB for Project Road and DG sets at toll plazas | One Time | Application fee as prescribed by WBSPCB depending upon capital investment. Cannot be estimated at this point in time | | |
| 1.3 | Obtain authorization for hazardous waste handling and management at Toll plazas. | One Time | As per the prescribed fee by WBPCB. | | |
| 1.4 | Obtain permits for all the bore wells constructed for the project from State Water Investigation Directorate (SWID) | One Time | Cannot be estimated at this point in time | | |
| 2 | EHS Management System | | | | |
| 2.1 | Environmental and Social Management System (ESMS) to be prepared for the project incorporating Standard Operating Procedures (SOPs) for O&M stage of the project. Following plans should be prepared and included in the ESMS. | One Time | Staff Time | | No Extra Cost |
| | Carriageway Waste Management Plan | | | | |
| | Oil/Chemical Spill Contingent Plan | | | | |
| | Contractor Management Plan | | | | |
| | Stakeholder Engagement Plan (SEP) | | | | |
| Emergency Response Plan | | | | | |
| 2.2 | Progress on EMP implementation from O&M contractor to be monitored at the corporate office. | Recurring | Staff Time | | No Extra Cost |
| 2.3 | Responsibility for implementation and monitoring of environment management plan related to O&M phase of the project should be assigned to qualified person. | Recurring | Staff Time | | No Extra Cost |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | One Time/ Recurring Annual | Units | Unit Cost | Estimated Cost |
|----------|---|----------------------------|------------|---|----------------|
| 3 | Labour and working conditions | | | | |
| 3.1 | Strengthening of Contractor Management System | | | | |
| | The site supervisors should maintain records of their observations including – worker concerns, wages, overtime, labour camp conditions, use of PPEs etc. These records should be submitted to the management every week for monitoring purposes. | Recurring | Staff Time | | No Extra Cost |
| | The management should check these records against the monthly reports submitted by contractors to identify uniformity in data provided by supervisors and contractors. | Recurring | Staff Time | | No Extra Cost |
| | Provide a platform for contract workers to collectively raise their concerns regarding working conditions, | Recurring | Staff Time | | No Extra Cost |
| | All contractors and sub-contractors engaged for the project should submit their monthly records (wages paid, leaves granted, overtime performed, overtime paid, PF and ESI challans etc.) to management for verification, | Recurring | Staff Time | | No Extra Cost |
| | Ensure that wages are transferred to each workers' bank account instead of current practice of cash payments, | Recurring | Staff Time | | No Extra Cost |
| | The contract agreements should be amended to include terms and conditions of overtime work and payment, maternity benefit for female workers, | One Time | Staff Time | | No Extra Cost |
| | Provide clean drinking water and hygienic lavatories close to work site, | Recurring | | Already part of the sub-contractor contract and covered under their obligation to compliance to Indian laws | |
| | Ensure that only persons above 18years of age are engaged in work. Their ID proofs should be checked before allowing them to work on the site. | Recurring (Monthly) | Staff Time | | No Extra Cost |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | One Time/ Recurring Annual | Units | Unit Cost | Estimated Cost |
|----------|---|--------------------------------------|---|---|----------------|
| 3.2 | License of Clifford Agency under the private security law. | One Time | | Cost to Sub-consultant as part of obligation to comply to Indian laws | |
| 3.3 | Statutory deductions should be made from wages/salaries of all eligible workers under PF and ESI legislations. | Recurring (Monthly) | Staff Time | | No Extra Cost |
| 4 | Pollution Prevention and Resource Efficiency | | | | |
| 4.1 | Provide stack with all the DG sets (as per CPCB standard) located at toll plazas | One Time | 15 | 10000 | 150000 |
| 4.2 | Hazardous waste storage area would be provided as per CPCB guidelines. Spill kit would be made available at the storage facility. | One Time | 1 | 500000 | 500000 |
| 4.3 | FRHL through O&M contractor should ensure that debris and solid waste from the ROW are removed periodically. | One Time | Cost covered under contract with O&M Contractor | | |
| 4.4 | Ambient environment quality (air, ground and surface water, noise and soil quality) should be monitored near sensitive receptor adjacent to the project road. | Once a Year (10 Locations as per EC) | | Lumpsum | 400000 |
| 4.5 | Air emission from the DG sets would be monitored. | One Time | 15 | Lumpsum | 150000 |
| 4.6 | Water flow meter should be installed with bore wells installed at the project site (toll plazas, rest areas, truck lay by etc.) and water consumption should be monitored regularly. Effort would be given to reduce water consumption. | One Time | 6 | 35000 | 210000 |
| 4.7 | FRHL should endeavour to undertake GHG accounting for their respective project. The ESMS to be prepared for the project would include requirement GHG accounting. | Staff Time | | No Extra Cost | |

| SN. | Recommendation Action/Corrective Measure against the ESDD Screening Criteria | One Time/ Recurring Annual | Units | Unit Cost | Estimated Cost |
|----------|---|---|---|-----------|----------------|
| 5 | Community Health Safety and Security | | | | |
| 5.1 | FRHL to carry out root cause analysis of accidents. Road safety audit should be conducted by a competent agency after construction is completed and the Improvement Plan should be implemented. | One Time | (For Study Only) The cost of implementation as per study recommendations | Lumpsum | 15,00,000 |
| 5.2 | Road Safety Awareness Campaign | Annual | | Lumpsum | 2,50,000 |
| 6 | Occupational Health and Safety | | | | |
| 6.1 | All workers engaged in O&M work should be provided with adequate PPEs. | Recurring (Annual) | 60 | 1350 | 81000 |
| 6.2 | Monitoring and supervision should be strengthened to ensure use of PPEs by road maintenance workers. | Recurring (Monthly) | Staff Time | | No Extra Cost |
| 6.3 | Adequate fire extinguisher should be made available at high speed diesel storage area at toll plaza. | One Time | | | No Extra Cost |
| 6.4 | Safety training and Drills for toll workers (in house) | Recurring (Annual) | 4 (Quarterly) | 25000 | 100000 |
| | One Time Expenses | 25,10,000 | | | |
| | | (Plus fees for permits for CTO, Hazardous waste Authorisation , NOC for bore wells) | | | |
| | Recurring Expenses (Annual) | 4,31,000 | | | |

Annex A

Documents Reviewed
by ERM for this ESDD

Annexure-A: List of Documents Reviewed by ERM for this ESDD

| <i>Title of the Document</i> | <i>Date/Year</i> | <i>Source/Department</i> |
|---|---------------------------|--|
| Concession Agreement | March 2018 | FRHL |
| IE Monthly Progress Report | June 2018 | FRHL |
| Emergency Management Plan | August 2016 | FRHL |
| Project Environmental Management Plan | August 2016 | FRHL |
| Monthly HSE statics | January 2018 | FRHL |
| CTO for plant | March 2018 | FRHL |
| Form 13 for Scrap Oil | March 2018 | FRHL |
| Petroleum storage license | March 2018 | FRHL |
| HTMS-Compliance of toll expert's comments | March 2018 | FRHL |
| CTO for stone crusher | March 2018 | FRHL |
| Environment and Social Due Diligence Report prepared by India Infrastructure Finance Company Limited for the Asian Development Bank | March 2013 | Finance Company Limited for the Asian Development Bank |
| O&M Manual | April 2018 | FRHL |
| Safety Audit | April 2018 | FRHL |
| Road Accident Report from January 2014 to December 2016 | April 2018 | NHAI PIU (Malda) |
| Court Cases (Pkg-4) as on Apr 2016 | April 2016 | NHAI PIU web-site |
| Contract Labour Licence | Mar 2018 | FRHL |
| Building and Other Construction Workers (Regulation) Act | Mar 2018 | FRHL |
| Employee Grievance Redress Mechanism | | FRHL |
| O&M Organizational Structure | | FRHL |
| Group Personal Accident Policy | | HCCL |
| Group Life Insurance Policy | | HCCL |
| PF Registration for HOML | | HCC O&M Ltd |
| Policy on Prevention and Redress of Sexual Harassment | | HCCL |
| Sub-Contractor and Employees | | HCCL |
| FRHL Encroachment List | 15 th Feb 2018 | FRHL |
| Environment Clearance Pkg-4 | Aug 2008 | FRHL |
| Code of Conduct and Work Ethics | | HCCL |
| HSE Statistics | Jan 2018 | FRHL |
| Trade Licenses for Toll Plaza | | FRHL |
| Wage Sheet | Feb 2018 | FRHL |
| Service Agreements of Sub-contractors | | FRHL |
| Emergency Management Plan | Dec 2015 | HCCL |

| <i>Title of the Document</i> | <i>Date/Year</i> | <i>Source/Department</i> |
|--|------------------|--------------------------|
| Environment Aspect and Impact Registers- Electrical, Fabrication, Mechanical Workshop, Office Activities, QC Lab, Running of Concrete Plant, Running of Hot-mix Plant, Running of Wet-mix Plant, Store and Procurement | Dec 2016 | HCCL |
| Govt Touch Points | | HCCL |
| HR Induction Material | | HCCL |
| FRHL Traffic FY 17 and FY 18 | | HCCL |

Annex B

Photo-documentation
of EHS issues during
site visit

Photo-documentation



Photo 1: Project Road



Photo 2: Project Road



Photo 3: Bus shelter



Photo 4: Temple along project road

Project : Project East 2

Client : IHCPL

ERM India Private Limited

Building 10, 4th Floor,
Tower A, DLF Cyber City
Gurgaon - 122 002, India
Board: +91- 0124 4170300
Fax: + 91-0124 - 4170301



Photo-documentation



Photo 5: Uncovered drain



Photo 6: Workers working without PPE



Photo 7: Workers working without appropriate PPE



Photo 8: Absence of barrier/fencing at construction site

Project : Project East 2

Client : IHCPL

ERM India Private Limited

Building 10, 4th Floor,
Tower A, DLF Cyber City
Gurgaon - 122 002, India
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Fax: + 91-0124 - 4170301



Photo-documentation



Photo 9: Worker working at height without safety harness



Photo 10: Workers working without PPE



Photo 11: Batching plant



Photo 12: HM Plant

Project : Project East 2

Client : IHCPL

ERM India Private Limited

Building 10, 4th Floor,
Tower A, DLF Cyber City
Gurgaon - 122 002, India
Board: +91- 0124 4170300
Fax: + 91-0124 - 4170301



Photo-documentation



Photo 13: Bitumen storage area near HM Plant



Photo 14: DG set without stack at toll plaza



Photo 15: DG set without stack at construction site



Photo 16: Emergency helpline number displayed along project road

Project : Project East 2

Client : IHCPL

ERM India Private Limited

Building 10, 4th Floor,
Tower A, DLF Cyber City
Gurgaon - 122 002, India
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Fax: + 91-0124 - 4170301



Photo-documentation



Photo 17: HCCL labour camp



Photo 18: Drainage channel constructed at labour camp



Photo 19: Local people has stored sand on the project road



Photo 20: Diversion at road construction site

Project : Project East 2

Client : IHCPL

ERM India Private Limited

Building 10, 4th Floor,
Tower A, DLF Cyber City
Gurgaon - 122 002, India
Board: +91- 0124 4170300
Fax: + 91-0124 - 4170301



Photo-documentation



Photo 21: Solid waste within the ROW of project road



Photo 22: Solid waste within the ROW of project road



Photo 23: Bore well at labour camp



Photo 24: Bore well at toll plaza

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Photo-documentation

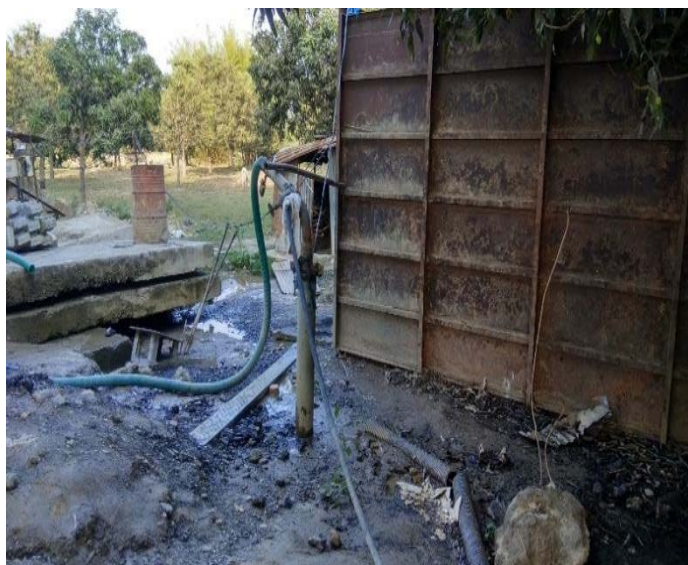


Photo 25: Bore well at construction site



Photo 26: Toilet at truck lay bye



Photo 27: Incomplete water connection inside toilet at truck lay bye



Photo 28: HTMS room at toll plaza

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Photo-documentation



Photo 29: Inside labour camp of contractor



Photo 30: Inside labour camp of contractor



Photo 31: Unauthorized median opening



Photo 32: Unauthorized median opening temporarily blocked by road maintenance team

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ERM India Private Limited



















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Annex C



























Encroachment survey



| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compensation Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
|---------------------|--------------|----------|------------------|----------------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Raiganj | Raiganj | Raiganj | LHS | Tea shop | PCOD | 394.42 | 29.333 | 4 | 5 | 1 | 20 | Room | 4 | 5 | 1 | 20 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 108 | No | Received and willing to Clear | 1 |  |  | 25°33'42.00881"N | 88°08'42.00164"E |
| Abhisari club | Gazol | Malda | RHS | Unknown | PCOD | 354.04 | 30 | 48 | 6.45 | 1 | 309.6 | Room | 18 | 6.45 | 1 | 116.1 | 37.5 | Permanent | Residential | NA | Encroacher | 180 | No | Not Received | 0 |  |  | 25°13'01.45233"N | 88°10'52.85071"E |
| Ahora | Gazol | Malda | LHS | Unknown | PCOD | 359.28 | 52 | 5.6 | 4.6 | 1 | 25.76 | Room | 5.6 | 4.6 | 1 | 25.76 | 100 | Semi-Permanent | Religious | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 25°15'40.52771"N | 88°09'55.47276"E |
| Ahora | Gazol | Malda | LHS | Unknown | PCOD | 359.28 | 41 | 4.6 | 3 | 1 | 13.8 | Room | 4.6 | 3 | 1 | 13.8 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 25°15'40.75486"N | 88°09'55.77888"E |
| Akonda | Gazol | Malda | LHS | Bikash mandal | PCOD | 354.28 | 19 | 4 | 12 | 1 | 48 | Room | 4 | 12 | 1 | 48 | 100 | Permanent | Mixed | NA | Titleholder | 24 | No | Not Received | 0 |  |  | 25°13'09.23279"N | 88°10'50.64658"E |
| Akonda | Gazol | Malda | RHS | Biswanath chowdhury | PCOD | 354.18 | 19 | 2.9 | 2.65 | 1 | 7.685 | Room | 2.9 | 2.65 | 1 | 7.685 | 100 | Semi-Permanent | Residential | NA | Encroacher | 240 | No | Not Received | 0 |  |  | 25°13'06.16086"N | 88°10'50.75369"E |
| Akonda | Gazol | Malda | LHS | Gajol horidas milon songho | PCOD | 354.80 | 19 | 4.2 | 5.62 | 1 | 23.604 | Room | 4.2 | 5.62 | 1 | 23.604 | 100 | Semi-Permanent | Other- Club | Club | Encroacher | 672 | No | Not Received | 0 |  |  | 25°13'24.70497"N | 88°10'43.72174"E |
| Akonda | Gazol | Malda | RHS | Jirihiri | PCOD | 353.92 | 13.67 | 1 | 3.8 | 2 | 3.8 | Room | 1 | 3.8 | 2 | 7.6 | 100 | Permanent | Residential | NA | Titleholder | 348 | No | Received and willing to Clear | 0 |  |  | 25°12'58.13013"N | 88°10'54.81116"E |
| Akonda | Gazol | Malda | RHS | Mohonbasi sannal | PCOD | 354.32 | 18 | 5 | 6.5 | 1 | 32.5 | Room | 5 | 6.5 | 1 | 32.5 | 100 | Semi-Permanent | Residential | NA | Encroacher | 480 | No | Partially Received | 1 |  |  | 25°13'09.26419"N | 88°10'49.14446"E |
| Akonda | Gazol | Malda | LHS | Nitai sarkar | PCOD | 354.28 | 18 | 4 | 8 | 1 | 32 | Room | 4 | 8 | 1 | 32 | 100 | Permanent | Residential | NA | Titleholder | 360 | Yes | Received | 0 |  |  | 25°13'08.22102"N | 88°10'49.68622"E |
| Akonda | Gazol | Malda | RHS | Paran roy | PCOD | 344.40 | 15 | 2.3 | 3 | 1 | 6.9 | Room | 2.3 | 3 | 1 | 6.9 | 100 | Semi-Permanent | Residential | NA | Encroacher | 216 | No | Received | 0 |  |  | 25°13'12.00626"N | 88°10'47.68765"E |
| Akonda | Gazol | Malda | LHS | Probitro kumar saha | PCOD | 354.06 | 20 | 10.4 | 6 | 1 | 62.4 | Room | 10.4 | 6 | 1 | 62.4 | 100 | Permanent | Commercial | NA | Encroacher | 480 | No | Received and willing to Clear | 0 |  |  | 25°13'02.22733"N | 88°10'54.13974"E |
| Akonda | Gazol | Malda | RHS | Rabindranath sarkar | PCOD | 354.20 | 18 | 9 | 5.45 | 1 | 49.05 | Room | 9 | 5.45 | 1 | 49.05 | 100 | Semi-Permanent | Residential | NA | Encroacher | 216 | No | Not Received | 1 |  |  | 25°13'05.95431"N | 88°10'50.75369"E |
| Akonda | Gazol | Malda | RHS | Rajen singha | PCOD | 354.28 | 18 | 4.45 | 13 | 1 | 57.85 | Room | 4.45 | 13 | 1 | 57.85 | 100 | Permanent | Mixed | NA | Titleholder | 360 | Yes | Not Received | 0 |  |  | 25°13'08.16233"N | 88°10'49.85553"E |


| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compensation Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
|---------------------|--------------|----------|------------------|------------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Akonda | Gazol | Malda | RHS | Sochis mandal | PCOD | 354.42 | 13 | 5.1 | 3.6 | 1 | 18.36 | Room | 5.1 | 3.6 | 1 | 18.36 | 100 | Semi-Permanent | Residential | NA | Titleholder | 300 | No | Partially Received | 0 |  |  | 25°13'12.54812"N | 88°10'47.62486"E |
| Akonda | Gazol | Malda | LHS | Tarun sarkar | PCOD | 354.24 | 18 | 5.2 | 10 | 1 | 52 | Room | 5.2 | 10 | 1 | 52 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 300 | Yes | Received | 0 |  |  | 25°13'07.09326"N | 88°10'51.73166"E |
| Akonda | Gazol | Malda | RHS | Unknown | PCOD | 353.94 | 13.44 | 1.6 | 8 | 1 | 12.8 | Room | 1.6 | 8 | 1 | 12.8 | 100 | Permanent | Residential | NA | Titleholder | 300 | No | Partially Received | 0 |  |  | 25°12'58.67739"N | 88°10'54.01154"E |
| Akonda | Gazol | Malda | LHS | Unknown | PCOD | 354.20 | 20 | 5.9 | 4 | 1 | 23.6 | Temporary Extension | 5.9 | 4 | 1 | 23.6 | 100 | Semi-Permanent | Religious | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 25°13'06.12821"N | 88°10'52.43435"E |
| Akonda | Gazol | Malda | RHS | Unknown | PCOD | 354.28 | 18 | 10 | 18 | 1 | 180 | Room | 10 | 18 | 1 | 180 | 100 | Semi-Permanent | Residential | NA | Encroacher | 120 | No | Partially Received | 0 |  |  | 25°13'08.67729"N | 88°10'49.00703"E |
| Alampur | Gazol | Malda | RHS | Buchiya saha | PCOD | 348.12 | 34.036 | 15 | 10 | 1 | 150 | Room | 15 | 10 | 1 | 150 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 480 | Yes | Not Received | 0 |  |  | 25°10'02.52232"N | 88°10'21.00581"E |
| Alampur | Gazol | Malda | RHS | Jagadiah saha | PCOD | 348.42 | 34.211 | 13 | 11 | 1 | 143 | Room | 13 | 11 | 1 | 143 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 360 | No | Not Received | 0 |  |  | 25°10'11.02642"N | 88°10'24.91338"E |
| Alampur | Gazol | Malda | RHS | Kedarnath saha | PCOD | 348.40 | 34.095 | 25 | 30 | 2 | 750 | Room | 25 | 30 | 2 | 1500 | 100 | Permanent | Commercial | NA | Encroacher | 600 | Yes | Not Received | 0 |  |  | 25°10'10.30508"N | 88°10'24.20897"E |
| Alampur | Gazol | Malda | RHS | Laxmi vagat | PCOD | 348.12 | 34.036 | 15 | 8 | 1 | 120 | Room | 15 | 8 | 1 | 120 | 100 | Permanent | Residential | NA | Titleholder | 420 | Yes | Partially Received | 0 |  |  | 25°10'03.02596"N | 88°10'22.21043"E |
| Alampur | Gazol | Malda | RHS | Naraprasad singh gupta | PCOD | 348.70 | 31.096 | 12 | 60 | 2 | 720 | Room | 12 | 60 | 2 | 1440 | 100 | Permanent | Commercial | NA | Encroacher | 300 | Yes | Not willing to Receive | 0 |  |  | 25°10'08.22551"N | 88°10'24.04092"E |
| Alampur | Gazol | Malda | RHS | Santash Haldar | PCOD | 344.80 | 33.115 | 20 | 8 | 1 | 160 | Room | 20 | 8 | 1 | 160 | 100 | Semi-Permanent | Residential | NA | Titleholder | 420 | Yes | Not Received | 0 |  |  | 25°09'51.09161"N | 88°10'18.96031"E |
| Alampur | Gazol | Malda | RHS | Santosh saha | PCOD | 348.14 | 33.922 | 10 | 20 | 2 | 200 | Room | 10 | 20 | 2 | 400 | 100 | Permanent | Mixed | NA | Titleholder | 336 | Yes | Partially Received | 0 |  |  | 25°10'03.03348"N | 88°10'22.12414"E |
| Alampur | Gazol | Malda | RHS | Susila saha | PCOD | 348.12 | 34.036 | 15 | 7 | 1 | 105 | Room | 15 | 7 | 1 | 105 | 100 | Permanent | Mixed | NA | Titleholder | 480 | Yes | Partially Received | 0 |  |  | 25°10'03.38761"N | 88°10'21.88862"E |
| Baghardighi | Itahar | Malda | LHS | Dr latifur rahaman | PCOD | 366.96 | 18 | 5.85 | 9.9 | 1 | 57.915 | Room | 5.85 | 9.9 | 1 | 57.915 | 100 | Permanent | Mixed | NA | Encroacher | 576 | No | Received and willing to Clear | 0 |  |  | 25°19'48.93568"N | 88°09'48.21148"E |




| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compensation Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
|---------------------|--------------|----------------|------------------|----------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Baghardighi | Itahar | Malda | LHS | Sofikul islam | PCOD | 368.30 | 18 | 4 | 6 | 1 | 24 | Room | 4 | 6 | 1 | 24 | 100 | Semi-Permanent | Residential | NA | Titleholder | 600 | No | Partially Received | 0 |  |  | 25°20'32.53185"N | 88°09'44.59171"E |
| Baishnab Nagar | Kaliachak | Malda | LHS | Dr.Abdus Salam | PCOD | 300.76 | 27.551 | 3 | 15 | 1 | 45 | Room | 3 | 15 | 1 | 45 | 100 | Permanent | Commercial | NA | Titleholder | 12 | No | Not Received | 0 |  |  | 24°51'22.00566"N | 87°59'09.00019"E |
| Baliapara | Itahar | Malda | LHS | Unknown | PCOD | 372.58 | 18 | 5.12 | 11 | 1 | 56.32 | Room | 5.12 | 11 | 1 | 56.32 | 100 | Permanent | Religious | NA | Encroacher | 120 | No | Not Received | 0 |  |  | 25°20'50.30947"N | 88°09'44.81379"E |
| Bangar | Itahar | Malda | RHS | Barkat ali | PCOD | 367.04 | 29 | 12 | 13.5 | 1 | 162 | Room | 12 | 13.5 | 1 | 162 | 100 | Permanent | Residential | NA | Titleholder | 60 | Yes | Partially Received | 0 |  |  | 25°19'52.08488"N | 88°09'46.73533"E |
| Bangar | Itahar | Malda | RHS | Hamedur rahaman | PCOD | 368.32 | 18 | 8.3 | 15 | 1 | 124.5 | Room | 8.3 | 15 | 1 | 124.5 | 100 | Permanent | Residential | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 25°20'33.36483"N | 88°09'44.73866"E |
| Bangar | Itahar | Malda | RHS | Haridas roy | PCOD | 367.60 | 19 | 12.8 | 19 | 1 | 243.2 | Room | 12.8 | 19 | 1 | 243.2 | 100 | Permanent | Residential | NA | Titleholder | 300 | Yes | Received and willing to Clear | 0 |  |  | 25°20'09.03455"N | 88°09'45.43238"E |
| Bangar | Itahar | Malda | LHS | Sekh nur islam | PCOD | 367.04 | 18 | 7 | 10 | 1 | 70 | Room | 7 | 10 | 1 | 70 | 100 | Permanent | Residential | NA | Titleholder | 360 | Yes | Partially Received | 0 |  |  | 25°19'47.98789"N | 88°09'48.41184"E |
| Bangar | Itahar | Malda | LHS | Sujaruddin sk | PCOD | 368.28 | 19 | 12.6 | 10 | 1 | 126 | Room | 12.6 | 10 | 1 | 126 | 100 | Permanent | Residential | NA | Encroacher | 240 | No | Received and willing to Clear | 0 |  |  | 25°20'32.00219"N | 88°09'44.90039"E |
| Chitkamahal | Gazol | Malda | RHS | Fara kisku | PCOD | 339.68 | 31.98 | 8 | 10 | 1 | 80 | Room | 8 | 10 | 1 | 80 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 360 | Yes | Not Received | 0 |  |  | 25°07'04.17288"N | 88°08'50.94452"E |
| Churamon (Itahar) | Itahar | North Dinajpur | LHS | Public temple | PCOD | 380.50 | 22.757 | 10 | 12 | 1 | 120 | Room | 10 | 12 | 1 | 120 | 100 | Permanent | Religious | NA | Encroacher | 1200 | No | Not Received | 0 |  |  | 25°27'00.00023"N | 88°10'05.00587"E |
| Dashmath | Itahar | Malda | LHS | Gopal chandra mandal | PCOD | 376.70 | 17 | 10.1 | 7 | 1 | 70.7 | Room | 10.1 | 7 | 1 | 70.7 | 100 | Permanent | Residential | NA | Titleholder | 360 | Yes | Not Received | 0 |  |  | 25°24'58.07101"N | 88°10'24.96474"E |
| Dashmath | Itahar | Malda | LHS | Kanka paul | PCOD | 376.84 | 18 | 6 | 8 | 1 | 48 | Room | 6 | 8 | 1 | 48 | 100 | Permanent | Residential | NA | Encroacher | 480 | Yes | Not Received | 0 |  |  | 25°25'04.08446"N | 88°10'26.22833"E |
| Dashmath | Itahar | Malda | LHS | Mitton mandal | PCOD | 376.88 | 18 | 3.8 | 7.5 | 1 | 28.5 | Room | 3.8 | 7.5 | 1 | 28.5 | 100 | Semi-Permanent | Residential | NA | Titleholder | 480 | No | Partially Received | 1 |  |  | 25°25'05.03339"N | 88°10'26.32805"E |
| Dashmath | Itahar | Malda | LHS | Nithula bala mandal | PCOD | 376.90 | 18 | 3 | 9 | 1 | 27 | Room | 3 | 9 | 1 | 27 | 100 | Permanent | Residential | NA | Titleholder | 600 | Yes | Received | 0 |  |  | 25°25'05.65814"N | 88°10'26.06946"E |







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| Dashmath | Itahar | Malda | LHS | Shyam mandal | PCOD | 376.60 | 19 | 7 | 10 | 1 | 70 | Room | 7 | 10 | 1 | 70 | 100 | Permanent | Residential | NA | Titleholder | 72 | Yes | Partially Received | 0 |  |  | 25°24'56.93899"N | 88°10'24.72969"E |
| Dashmath | Itahar | Malda | LHS | Sushil mandal | PCOD | 376.86 | 18 | 5.65 | 7 | 1 | 39.55 | Room | 5.65 | 7 | 1 | 39.55 | 100 | Permanent | Residential | NA | Titleholder | 360 | Yes | Partially Received | 0 |  |  | 25°25'04.16842"N | 88°10'26.36139"E |
| Dashmath | Itahar | Malda | LHS | Waresh tulla | PCOD | 375.58 | 16 | 7.9 | 10.4 | 1 | 82.16 | Room | 7.9 | 10.4 | 1 | 82.16 | 100 | Permanent | Residential | NA | Titleholder | 168 | Yes | Not Received | 0 |  |  | 25°24'22.84473"N | 88°10'16.45786"E |
| Dhoadighi | Gazol | Malda | LHS | Nepal Sadhu | PCOD | 344.50 | 27.012 | 12 | 11 | 1 | 132 | Room | 12 | 11 | 1 | 132 | 100 | Permanent | Religious | NA | Encroacher | 480 | Yes | Not Received | 0 |  |  | 25°08'15.35543"N | 88°09'29.09749"E |
| Durgapur | Itahar | North Dinajpur | LHS | Brijendra nath saha | PCOD | 390.58 | 27.953 | 6 | 11 | 1 | 66 | Room | 6 | 11 | 1 | 66 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 1 | No | Not Received | 0 |  |  | 25°32'00.00026"N | 88°09'00.00024"E |
| Durgapur | Itahar | North Dinajpur | LHS | Debanita bhaban | PCOD | 390.60 | 24.055 | 19 | 10 | 3 | 190 | Room | 19 | 10 | 3 | 570 | 100 | Permanent | Mixed | NA | Titleholder | 240 | Yes | Not Received | 0 |  |  | 25°32'00.00039"N | 88°09'48.00020"E |
| Durgapur | Itahar | North Dinajpur | LHS | Dhaneswari Mandir | PCOD | 390.90 | 28.328 | 3 | 4 | 1 | 12 | Room | 3 | 4 | 1 | 12 | 100 | Semi-Permanent | Religious | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 25°20'32.00190"N | 88°08'44.00992"E |
| Durgapur | Itahar | North Dinajpur | LHS | Dragland | PCOD | 390.52 | 34.171 | 14 | 10 | 2 | 140 | Room | 14 | 10 | 2 | 280 | 100 | Permanent | Mixed | NA | Titleholder | 240 | Yes | Not Received | 0 |  |  | 25°32'00.00069"N | 88°09'00.00005"E |
| Durgapur | Itahar | North Dinajpur | LHS | Gitarabi Das | PCOD | 390.94 | 28.482 | 5 | 7 | 1 | 35 | Room | 5 | 7 | 1 | 35 | 100 | Semi-Permanent | Residential | NA | Encroacher | 360 | No | Not Received | 0 |  |  | 25°20'32.00241"N | 88°08'44.00984"E |
| Durgapur | Itahar | North Dinajpur | LHS | Samiran Sarkar | PCOD | 391.00 | 28.482 | 6 | 7 | 1 | 42 | Room | 6 | 7 | 1 | 42 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 600 | Yes | Received and willing to Clear | 0 |  |  | 25°20'32.00240"N | 88°08'44.00977"E |
| Durgapur | Itahar | North Dinajpur | LHS | Samiron sarkar | PCOD | 390.98 | 28.482 | 18 | 9 | 1 | 162 | Room | 18 | 9 | 1 | 162 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 552 | Yes | Not Received | 0 |  |  | 25°32'00.00236"N | 88°08'00.00981"E |
| Durgapur | Itahar | North Dinajpur | RHS | Santash mahanto | PCOD | 390.76 | 30.761 | 14 | 16 | 1 | 224 | Room | 14 | 16 | 1 | 224 | 100 | Semi-Permanent | Residential | NA | Encroacher | 348 | No | Not Received | 0 |  |  | 25°32'00.00095"N | 88°08'00.00989"E |
| Durgapur | Itahar | North Dinajpur | LHS | Timber storage | PCOD | 390.92 | 28.603 | 10 | 9 | 1 | 90 | wall | 10 | 9 | 1 | 90 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 168 | No | Not Received | 0 |  |  | 25°32'00.00206"N | 88°08'00.00985"E |
| Farakka | Kaliachak | Malda | LHS | Amar Ghosh | PCOD | 295.75 | 29.6 | 10.2 | 15 | 1 | 153 | Room | 10.2 | 15 | 1 | 153 | 100 | Permanent | Commercial | NA | Encroacher | 480 | No | Not Received | 0 |  |  | 24°48.34.00572"N | 87°57'10.00171"E |






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| Farakka | Kaliachak | Malda | RHS | Babu Lal | PCOD | 295.70 | 29.7 | 15 | 5.2 | 1 | 78 | Room | 15 | 5.2 | 1 | 78 | 100 | Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 24'48'33.30992"N | 87'57'06.66278"E |
| Farakka | Kaliachak | Malda | LHS | Biltu Mandal | PCOD | 295.666 | 29.7 | 3.02 | 3 | 1 | 9.06 | Room | 3.02 | 3 | 1 | 9.06 | 100 | Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 1 |  |  | 24'48.33.00547"N | 87'57'06.00098"E |
| Farakka | Kaliachak | Malda | LHS | Biswanath Halder | PCOD | 295.97 | 38.8 | 7.5 | 18 | 1 | 135 | Room | 7.5 | 18 | 1 | 135 | 100 | Permanent | Commercial | NA | Encroacher | 480 | No | Not Received | 0 |  |  | 24'48.34.00575"N | 87'57'10.00273"E |
| Farakka | Kaliachak | Malda | LHS | Biswanath Mandal | PCOD | 295.65 | 29.7 | 11.85 | 14 | 1 | 165.9 | Room | 11.85 | 14 | 1 | 165.9 | 100 | Permanent | Commercial | NA | Encroacher | 300 | No | Not Received | 0 |  |  | 24'48.33.00567"N | 87'57'07.00160"E |
| Farakka | Kaliachak | Malda | RHS | Hanuman mandir | PCOD | 295.302 | 61 | 3.3 | 2.48 | 1 | 8.184 | Room | 3.3 | 2.48 | 1 | 8.184 | 100 | Permanent | Religious | NA | Encroacher | 12 | No | Not Received | 0 |  |  | 24'48'32.10647"N | 87'56'53.00255"E |
| Farakka | Kaliachak | Malda | LHS | Joy Gopal Sarkar | PCOD | 295.85 | 38.8 | 6 | 13 | 1 | 78 | Room | 6 | 13 | 1 | 78 | 100 | Permanent | Residential | NA | Encroacher | 312 | No | Not Received | 0 |  |  | 24'48.34.00554"N | 87'57'10.00205"E |
| Farakka | Kaliachak | Malda | LHS | Joy Ma Tara Entar Prise | PCOD | 295.97 | 38.8 | 5 | 3.4 | 1 | 17 | Room | 5 | 3.4 | 1 | 17 | 100 | Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 24'48'34.80259"N | 87'57'17.00080"E |
| Farakka | Kaliachak | Malda | RHS | Mahammad Sabim | PCOD | 295.97 | 38.8 | 12 | 10.3 | 1 | 123.6 | Room | 12 | 10.3 | 1 | 123.6 | 100 | Semi-Permanent | Mixed | NA | Encroacher | 120 | No | Not Received | 0 |  |  | 24'48'34.00606"N | 87'57'10.00263"E |
| Farakka | Kaliachak | Malda | RHS | Mandir | PCOD | 295.310 | 61 | 3.7 | 2.6 | 1 | 9.62 | Room | 3.7 | 2.6 | 1 | 9.62 | 100 | Permanent | Religious | NA | Encroacher | 5 | No | Not Received | 0 |  |  | 24'48'32.03041"N | 87'56'53.30725"E |
| Farakka | Kaliachak | Malda | RHS | No ronsece | PCOD | 295.81 | 55.6 | 8 | 10.1 | 1 | 80.8 | Room | 8 | 10.1 | 1 | 80.8 | 100 | Permanent | Residential | NA | Encroacher | 60 | No | Not willing to Receive | 0 |  |  | 24'48'34.15091"N | 87'57'10.38286"E |
| Farakka | Kaliachak | Malda | LHS | Pradhan Mandal | PCOD | 295.75 | 29.7 | 7 | 3 | 1 | 21 | Room | 7 | 3 | 1 | 21 | 100 | Permanent | Commercial | NA | Encroacher | 12 | Yes | Not Received | 0 |  |  | 24'48'33.00561"N | 87'57'07.00139"E |
| Farakka | Kaliachak | Malda | LHS | Prodip Saha | PCOD | 295.630 | 29.3 | 6.5 | 5.3 | 1 | 34.45 | Room | 6.5 | 5.3 | 1 | 34.45 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 12 | No | Not Received | 1 |  |  | 24'48'31.19023"N | 87'57'04.17001"E |
| Farakka | Kaliachak | Malda | RHS | Prosanta | PCOD | 295.80 | 55.6 | 5 | 3 | 1 | 15 | Room | 5 | 3 | 1 | 15 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 24'48'34.28066"N | 87'57'10.03923"E |
| Farakka | Kaliachak | Malda | LHS | Raju Saha | PCOD | 295.635 | 29.3 | 6.2 | 2.3 | 1 | 14.26 | Room | 6.2 | 2.3 | 1 | 14.26 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 72 | No | Not Received | 1 |  |  | 24'48'31.45709"N | 87'57'04.38229"E |

| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compensation Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
|---------------------|--------------|----------|------------------|-------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Farakka | Kaliachak | Malda | RHS | Ranjit | PCOD | 295.775 | 55.6 | 14 | 11.7 | 1 | 163.8 | Room | 14 | 11.7 | 1 | 163.8 | 100 | Permanent | Residential | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 24'48'33.57314"N | 87'57'09.19565"E |
| Farakka | Kaliachak | Malda | RHS | Sadhu Ghosh | PCOD | 295.656 | 29.7 | 4 | 3 | 1 | 12 | Room | 4 | 3 | 1 | 12 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 36 | No | Not Received | 0 |  |  | 24'48'31.00547"N | 87'57'04.00094"E |
| Farakka | Kaliachak | Malda | RHS | Sankar mandal | PCOD | 295.330 | 61 | 13.8 | 8.9 | 1 | 122.82 | Room | 13.8 | 8.9 | 1 | 122.82 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 2 | No | Not Received | 0 |  |  | 24'48'31.78627"N | 87'56'53.50334"E |
| Farakka | Kaliachak | Malda | RHS | Susanta mandal | PCOD | 295.80 | 55.6 | 3 | 6 | 1 | 18 | Room | 3 | 6 | 1 | 18 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 240 | No | Not Received | 0 |  |  | 24'48'33.94156"N | 87'57'09.82511"E |
| Farakka | Kaliachak | Malda | RHS | Tushar Sarkar | PCOD | 295.74 | 29.7 | 6 | 4 | 1 | 24 | Room | 6 | 4 | 1 | 24 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 24'48'33.38778"N | 87'57'07.88702"E |
| Gas factory | Gazol | Malda | LHS | Ma kali mandir | PCOD | 353.06 | 24.64 | 5.3 | 4.6 | 1 | 24.38 | Room | 5.3 | 4.6 | 1 | 24.38 | 100 | Semi-Permanent | Religious | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 25'12'32.08356"N | 88'11'08.31153"E |
| Goalbari | Gazol | Malda | LHS | Jainur islam | PCOD | 363.02 | 55 | 6.6 | 5.1 | 1 | 33.66 | Room | 6.6 | 5.1 | 1 | 33.66 | 100 | Permanent | Commercial | NA | Encroacher | 180 | No | Received and willing to Clear | 1 |  |  | 25'17'42.46669"N | 88'09'42.01447"E |
| Goalbari | Gazol | Malda | LHS | Jibon roy | PCOD | 362.72 | 21 | 3 | 7 | 1 | 21 | Room | 3 | 7 | 1 | 21 | 100 | Permanent | Residential | NA | Titleholder | 360 | No | Not Received | 0 |  |  | 25'17'42.00538"N | 88'09'42.00722"E |
| Goalbari | Gazol | Malda | LHS | Malati karmakar | PCOD | 362.72 | 21 | 3 | 5 | 1 | 15 | Room | 3 | 5 | 1 | 15 | 100 | Semi-Permanent | Residential | NA | Titleholder | 480 | No | Not Received | 0 |  |  | 25'17'42.00539"N | 88'09'42.00722"E |
| Goalbari | Gazol | Malda | LHS | Paresh sarkar | PCOD | 362.58 | 21 | 4.3 | 2.2 | 1 | 9.46 | Room | 4.3 | 2.2 | 1 | 9.46 | 100 | Permanent | Commercial | NA | Titleholder | 420 | No | Not Received | 0 |  |  | 25'17'42.00452"N | 88'09'42.00727"E |
| Goalbari | Gazol | Malda | LHS | Ramnaryan prosad | PCOD | 362.60 | 21 | 3.85 | 3 | 1 | 11.55 | Room | 3.85 | 3 | 1 | 11.55 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 540 | No | Not Received | 0 |  |  | 25'17'42.00471"N | 88'09'42.00727"E |
| Goalbari | Gazol | Malda | LHS | Santosh sarkar | PCOD | 362.72 | 9 | 9 | 3 | 1 | 27 | Room | 9 | 3 | 1 | 27 | 100 | Semi-Permanent | Residential | NA | Encroacher | 240 | No | Not Received | 0 |  |  | 25'17'42.00539"N | 88'09'42.00723"E |
| Goalbari | Gazol | Malda | LHS | Unknown | PCOD | 362.74 | 20 | 7 | 9 | 1 | 63 | Room | 7 | 9 | 1 | 63 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 25'17'42.00561"N | 88'09'42.00715"E |
| Goalbari | Gazol | Malda | LHS | Unknown | PCOD | 362.68 | 20 | 3 | 6 | 1 | 18 | Room | 3 | 6 | 1 | 18 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 25'17'42.00515"N | 88'09'42.00720"E |





















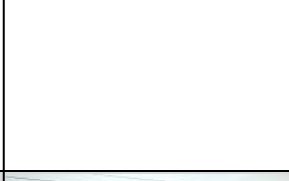
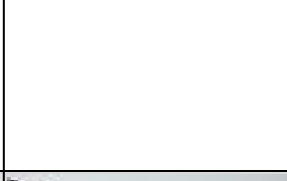






| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compensation Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
|---------------------|--------------|----------------|------------------|-----------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Gour malda | Malda | Malda | LHS | Green India Dhaba | PCOD | 317.70 | 6.25 | 9 | 0 | 1 | 0 | Room | 9 | 0 | 1 | 0 | 100 | Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 24°56'00.00128"N | 88°06'42.00378"E |
| Haridas | Gazol | Malda | LHS | Haridas pry school | PCOD | 354.80 | 19 | 7.25 | 8.85 | 1 | 64.1625 | Room | 7.25 | 8.85 | 1 | 64.1625 | 100 | Permanent | Public Building-School | School | Encroacher | 660 | No | Not Received | 0 |  |  | 25°13'25.03432"N | 88°10'43.82313"E |
| Haridas | Gazol | Malda | RHS | Sushil sarkar | PCOD | 354.46 | 11 | 1.8 | 2.9 | 1 | 5.22 | Room | 1.8 | 2.9 | 1 | 5.22 | 100 | Permanent | Mixed | NA | Titleholder | 480 | Yes | Received | 0 |  |  | 25°13'13.38655"N | 88°10'46.00922"E |
| Itahar | Itahar | North Dinajpur | LHS | Basak steel furniture | PCOD | 380.90 | 22.385 | 10 | 7 | 1 | 70 | Room | 10 | 7 | 1 | 70 | 100 | Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 25°27'00.00212"N | 88°09'48.10461"E |
| Itahar | Itahar | North Dinajpur | LHS | Unknown | PCOD | 380.86 | 23.742 | 10 | 15 | 1 | 150 | Room | 10 | 15 | 1 | 150 | 100 | Permanent | Residential | NA | Titleholder | 600 | Yes | Not Received | 0 |  |  | 25°27'00.00185"N | 88°10'05.00485"E |
| Jagannath Pally | Gazol | Malda | LHS | Anata haldar | PCOD | 353.24 | 22.79 | 4.9 | 2.65 | 1 | 12.985 | Room | 4.9 | 2.65 | 1 | 12.985 | 100 | Semi-Permanent | Residential | NA | Encroacher | 1 | No | Received | 0 |  |  | 25°12'37.54968"N | 88°11'06.46287"E |
| Jagannath Pally | Gazol | Malda | LHS | Dihendra biswas | PCOD | 353.10 | 23.6 | 8.6 | 16 | 1 | 137.6 | Room | 8.6 | 16 | 1 | 137.6 | 100 | Permanent | Residential | NA | Titleholder | 360 | Yes | Partially Received | 0 |  |  | 25°12'33.06388"N | 88°11'08.55642"E |
| Jagannath Pally | Gazol | Malda | RHS | Mohon biswas | PCOD | 353.16 | 15.72 | 2.5 | 6.4 | 1 | 16 | Room | 2.5 | 6.4 | 1 | 16 | 100 | Permanent | Residential | NA | Titleholder | 480 | No | Not Received | 0 |  |  | 25°12'34.03796"N | 88°11'06.19827"E |
| Jagannath Pally | Gazol | Malda | RHS | Unknown | PCOD | 353.30 | 16.66 | 1 | 4 | 1 | 4 | Room | 1 | 4 | 1 | 4 | 100 | Permanent | Residential | NA | Titleholder | 48 | No | Not Received | 0 |  |  | 25°12'39.47422"N | 88°11'03.84656"E |
| Jalanga | Old malda | Malda | RHS | Shyam Agarwal | PCOD | 332.30 | 30.816 | 30 | 18 | 1 | 540 | Room | 30 | 18 | 1 | 540 | 100 | Permanent | Commercial | NA | Titleholder | 60 | Yes | Not Received | 0 |  |  | 25°55'28.47216"N | 88°09'34.53979"E |
| Jhimuli | Old malda | Malda | LHS | Dr.Muktar | PCOD | 332.40 | 28.03 | 4 | 6 | 1 | 24 | Room | 4 | 6 | 1 | 24 | 100 | Permanent | Commercial | NA | Encroacher | 24 | Yes | Not Received | 0 |  |  | 25°02'11.59451"N | 88°09'35.69288"E |
| Jhimuli | Old Malda | Malda | RHS | Pradip Mahanta | PCOD | 332.78 | 20.802 | 10 | 5 | 1 | 50 | Room | 10 | 5 | 1 | 50 | 100 | Permanent | Commercial | NA | Encroacher | 120 | Yes | Received and willing to Clear | 0 |  |  | 25°02'22.41139"N | 88°09'31.31626"E |
| Joy kalibari para | Itahar | North Dinajpur | LHS | Computer academy | PCOD | 380.73 | 28 | 12 | 8 | 1 | 96 | Room | 12 | 8 | 1 | 96 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 25°27'00.00108"N | 88°10'00.00561"E |
| Kaliachak | Kaliachak | Malda | LHS | Lakiur Rahaman | PCOD | 302.00 | 44.434 | 14 | 3.8 | 1 | 53.2 | Room | 14 | 3.8 | 1 | 53.2 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 48 | Yes | Not Received | 0 |  |  | 24°51'22.00391"N | 88°00'09.00261"E |










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|---------------------|--------------|----------------|------------------|---------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Kaliachak | Kaliachak | Malda | LHS | Md kunnu Sk | PCOD | 303.48 | 44.323 | 2 | 410 | 1 | 820 | Room | 2 | 410 | 1 | 820 | 100 | Permanent | Commercial | NA | Titleholder | 60 | No | Not Received | 1 |  |  | 24°51'22.00397"N | 88°00'09.00274"E |
| Kaliachak | Kaliachak | Malda | RHS | Saiom Ali | PCOD | 302.96 | 27.152 | 7.7 | 7 | 1 | 53.9 | Room | 7.7 | 7 | 1 | 53.9 | 100 | Permanent | Mixed | NA | Titleholder | 240 | Yes | Received and willing to Clear | 2 |  |  | 24°51'22.00297"N | 87°59'09.00992"E |
| Kalinagar | Gazol | Malda | LHS | Amiya sarkar | PCOD | 344.74 | 31.166 | 8 | 6 | 1 | 48 | Room | 8 | 6 | 1 | 48 | 100 | Semi-Permanent | Residential | NA | Titleholder | 420 | Yes | Not Received | 0 |  |  | 25°09'47.57162"N | 88°10'17.83751"E |
| Kalinagar | Gazol | Malda | LHS | Krishna sarkar | PCOD | 344.76 | 31.169 | 20 | 15 | 1 | 300 | Room | 20 | 15 | 1 | 300 | 100 | Semi-Permanent | Residential | NA | Titleholder | 420 | Yes | Not Received | 0 |  |  | 25°09'46.38694"N | 88°10'17.58958"E |
| Kalinagar | Gazol | Malda | LHS | Puspha sarkar | PCOD | 344.76 | 31.169 | 15 | 9 | 1 | 135 | Room | 15 | 9 | 1 | 135 | 100 | Semi-Permanent | Residential | NA | Titleholder | 600 | Yes | Not Received | 0 |  |  | 25°09'47.43475"N | 88°10'17.57215"E |
| Kalomati stand | Itahar | Malda | LHS | Mobarok hosan | PCOD | 375.53 | 16 | 3.4 | 9.3 | 1 | 31.62 | Room | 3.4 | 9.3 | 1 | 31.62 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 60 | No | Partially Received | 0 |  |  | 25°24'22.19371"N | 88°10'16.09968"E |
| Kalua dighi | Old malda | Malda | RHS | Bimala jaiswal | PCOD | 339.20 | 36.388 | 20 | 8 | 1 | 160 | Room | 20 | 8 | 1 | 160 | 100 | Permanent | Residential | NA | Titleholder | 180 | Yes | Partially Received | 0 |  |  | 25°05'37.13744"N | 88°08'10.80982"E |
| Kalua dighi | Old malda | Malda | RHS | Gopal ch. Haldar | PCOD | 391.22 | 30.696 | 15 | 10 | 1 | 150 | Room | 15 | 10 | 2 | 300 | 100 | Permanent | Residential | NA | Titleholder | 132 | Yes | Partially Received | 0 |  |  | 25°05'39.01574"N | 88°08'10.04861"E |
| Kalua dighi | Old malda | Malda | RHS | Kalachad saha | PCOD | 339.34 | 31.027 | 20 | 5 | 1 | 100 | Room | 20 | 5 | 1 | 100 | 100 | Permanent | Mixed | NA | Titleholder | 576 | Yes | Partially Received | 0 |  |  | 25°05'39.80908"N | 88°08'10.81086"E |
| Kalua dighi | Old malda | Malda | LHS | Rabindra nath gupta | PCOD | 339.20 | 22.389 | 8 | 10 | 1 | 80 | Room | 8 | 10 | 1 | 80 | 100 | Permanent | Residential | NA | Titleholder | 216 | Yes | Partially Received | 0 |  |  | 25°05'38.05415"N | 88°08'12.22336"E |
| Kalua dighi | Old malda | Malda | LHS | Rubi Bhakat | PCOD | 339.44 | 27.699 | 10 | 8 | 1 | 80 | Room | 10 | 8 | 1 | 80 | 100 | Permanent | Residential | NA | Titleholder | 180 | Yes | Partially Received | 0 |  |  | 25°05'41.09581"N | 88°08'11.17763"E |
| Kalua dighi | Old malda | Malda | LHS | Rubi Bhakat | PCOD | 339.44 | 27.699 | 10 | 8 | 1 | 80 | Room | 10 | 8 | 1 | 80 | 100 | Permanent | Residential | NA | Titleholder | 180 | Yes | Partially Received | 0 |  |  | 25°05'41.09581"N | 88°08'11.17763"E |
| Karmanpur | Itahar | North Dinajpur | LHS | Harendranath das | PCOD | 377.70 | 31.975 | 18 | 10 | 1 | 180 | Room | 18 | 10 | 1 | 180 | 100 | Semi-Permanent | Residential | NA | Titleholder | 240 | Yes | Not Received | 0 |  |  | 25°25'00.00051"N | 88°10'05.00048"E |
| Kasimpur | Itahar | Malda | LHS | Golam rabbani | PCOD | 371.42 | 23 | 5.5 | 8.7 | 1 | 47.85 | Room | 5.5 | 8.7 | 1 | 47.85 | 100 | Permanent | Residential | NA | Titleholder | 120 | Yes | Received | 0 |  |  | 25°22'15.99117"N | 88°09'42.81531"E |










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|---------------------|---------------|----------------|------------------|--------------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Katagar | English Bazar | Malda | LHS | Hamidur Rahaman | PCOD | 318.60 | 38.522 | 4 | 3 | 1 | 12 | Room | 4 | 3 | 1 | 12 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 36 | No | Not Received | 0 |  |  | 24°56'00.00128"N | 88°06'00.00378"E |
| Kishahar para | Itahar | Malda | RHS | Baharuddin Sarkar | PCOD | 368.30 | 23 | 6.5 | 4.65 | 1 | 30.225 | Room | 6.5 | 4.65 | 1 | 30.225 | 100 | Permanent | Residential | NA | Titleholder | 360 | Yes | Not Received | 0 |  |  | 25°20'32.02264"N | 88°09'43.26944"E |
| Kishahar para | Itahar | Malda | RHS | Masjit | PCOD | 368.30 | 23 | 8.8 | 13.71 | 1 | 120.648 | Room | 8.8 | 13.71 | 1 | 120.648 | 100 | Permanent | Religious | Mosque | Encroacher | 432 | No | Received | 1 |  |  | 25°20'32.48448"N | 88°09'43.35635"E |
| Kishahar para | Itahar | Malda | LHS | Sambaru sk | PCOD | 368.28 | 18 | 4 | 12 | 1 | 48 | Room | 4 | 12 | 1 | 48 | 100 | Permanent | Residential | NA | Encroacher | 240 | Yes | Received and willing to Clear | 0 |  |  | 25°20'31.94224"N | 88°09'44.96678"E |
| Kodalbhanga | Itahar | Malda | LHS | Md. Golam mortuja | PCOD | 374.62 | 20 | 5.8 | 5.85 | 1 | 33.93 | Room | 5.8 | 5.85 | 1 | 33.93 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 180 | No | Received and willing to Clear | 0 |  |  | 25°23'54.06928"N | 88°10'04.02522"E |
| Kodubari more | Gazol | Malda | RHS | Kali mandir | PCOD | 353.82 | 21 | 9.3 | 5.4 | 1 | 50.22 | Room | 9.3 | 5.4 | 1 | 50.22 | 100 | Semi-Permanent | Religious | NA | Encroacher | 240 | No | Not Received | 0 |  |  | 25°12'37.00407"N | 88°10'24.00904"E |
| Kurakunda | Itahar | North Dinajpur | LHS | Dipak das | PCOD | 387.20 | 28.581 | 3 | 4 | 1 | 12 | Room | 3 | 4 | 1 | 12 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 96 | No | Not Received | 0 |  |  | 25°30'00.00425"N | 88°09'55.00992"E |
| Kurmanpur | Itahar | North Dinajpur | LHS | Ananda Das | PCOD | 377.84 | 32.236 | 5 | 7 | 1 | 35 | Room | 5 | 7 | 1 | 35 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 180 | Yes | Not Received | 0 |  |  | 25°25'00.00578"N | 88°10'52.00573"E |
| Kurmanpur | Itahar | North Dinajpur | LHS | Bajrangbali Satya Sangha | PCOD | 377.75 | 32.039 | 3 | 15 | 1 | 45 | Room | 3 | 15 | 1 | 45 | 100 | Permanent | Religious | NA | Titleholder | 540 | Yes | Partially Received | 0 |  |  | 25°25'00.00548"N | 88°10'52.00559"E |
| Kurmanpur | Itahar | North Dinajpur | LHS | Bela das | PCOD | 377.68 | 32.578 | 8 | 7 | 1 | 56 | Room | 8 | 7 | 1 | 56 | 100 | Semi-Permanent | Residential | NA | Titleholder | 720 | Yes | Received | 0 |  |  | 25°25'00.00500"N | 88°10'47.00539"E |
| Kurmanpur | Itahar | North Dinajpur | RHS | Dwijen das | PCOD | 377.84 | 27.633 | 3 | 5 | 1 | 15 | Room | 3 | 5 | 1 | 15 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 336 | Yes | Not Received | 0 |  |  | 25°25'00.00583"N | 88°10'52.00550"E |
| Kurmanpur | Itahar | North Dinajpur | RHS | Gabinda nath das | PCOD | 377.80 | 27.633 | 4 | 4 | 1 | 16 | Room | 4 | 4 | 1 | 16 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 72 | No | Not Received | 0 |  |  | 25°25'00.00561"N | 88°10'00.00540"E |
| Kurmanpur | Itahar | North Dinajpur | LHS | Mamata Das | PCOD | 377.70 | 31.975 | 8 | 5 | 1 | 40 | Room | 8 | 5 | 1 | 40 | 100 | Semi-Permanent | Residential | NA | Titleholder | 600 | Yes | Partially Received | 0 |  |  | 25°55'01.00509"N | 88°10'52.00542"E |
| Kurmanpur | Itahar | North Dinajpur | LHS | Nimay das | PCOD | 377.70 | 31.975 | 7 | 6 | 1 | 42 | Room | 7 | 6 | 1 | 42 | 100 | Semi-Permanent | Residential | NA | Titleholder | 600 | Yes | Received | 3 |  |  | 25°25'00.00512"N | 88°10'05.00544"E |
















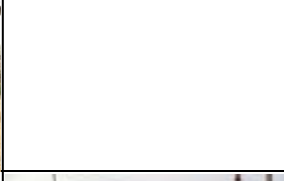




| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compenstion Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
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| Kurmanpur | Itahar | North Dinajpur | LHS | Patani Das | PCOD | 377.69 | 32.578 | 10 | 8 | 1 | 80 | Room | 10 | 8 | 1 | 80 | 100 | Semi-Permanent | Residential | NA | Titleholder | 600 | Yes | Received | 1 |  |  | 25'25'00.00507"N | 88'10'52.00541"E |
| Kurmanpur | Itahar | Malda | LHS | Sadhu chorn mandal | PCOD | 376.88 | 18 | 5.67 | 7 | 1 | 39.69 | Room | 5.67 | 7 | 1 | 39.69 | 100 | Semi-Permanent | Residential | NA | Titleholder | 480 | No | Partially Received | 1 |  |  | 25'25'04.74749"N | 88'10'26.29094"E |
| Kurmanpur | Itahar | North Dinajpur | RHS | Sobha mandal | PCOD | 377.80 | 28.826 | 7 | 6 | 1 | 42 | Room | 7 | 6 | 1 | 42 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 600 | Yes | Not Received | 0 |  |  | 25'25'00.00573"N | 88'10'05.00545"E |
| Kurmanpur | Itahar | North Dinajpur | RHS | Ulka shakti sangha Kali temple | PCOD | 377.78 | 28.221 | 6 | 7 | 1 | 42 | Room | 6 | 7 | 1 | 42 | 100 | Permanent | Religious | NA | Encroacher | 600 | No | Not Received | 0 |  |  | 25'25'00.00550"N | 88'10'00.00537"E |
| Kurmanpur | Itahar | Malda | RHS | Unknown | PCOD | 373.54 | 15 | 3.85 | 6.6 | 1 | 25.41 | Room | 3.85 | 6.6 | 1 | 25.41 | 100 | Permanent | Religious | NA | Encroacher | 120 | No | Not Received | 0 |  |  | 25'23'23.08706"N | 88'09'49.01828"E |
| Machhni kandar | Malda | Malda | RHS | Tapas sarkar | PCOD | 394.00 | 20 | 20 | 15 | 2 | 300 | Room | 20 | 15 | 1 | 300 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 12 | No | Received and willing to clear anytime asked to | 0 | | | 25'09'46.02841"N | 88'10'17.58958"E |
| Machhni kandar | Malda | Malda | RHS | tapas sarkar | PCOD | 394.10 | 20 | 2 | 3 | 1 | 6 | Room | 2 | 3 | 1 | 6 | 100 | Permanent | Commercial | NA | Encroacher | 12 | No | Received | 0 | | | 25'09'46.02841"N | 88'10'17.58958"E |
| Mahadapur | Raiganj | North Dinajpur | LHS | Alada Barman | PCOD | 394.20 | 29.293 | 4 | 12 | 1 | 48 | Room | 4 | 12 | 1 | 48 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 0 | | | 25'33'00.00483"N | 88'08'00.00460"E |
| Mahasunda(i tahar) | Itahar | North Dinajpur | RHS | Babaji hotel | PCOD | 390.76 | 30.761 | 7 | 8 | 1 | 56 | Room | 7 | 8 | 1 | 56 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 120 | No | Not Received | 0 |  |  | 25'32'04.00111"N | 88'08'26.00984"E |
| Marnai more | Itahar | Malda | LHS | Atabuddin sekh | PCOD | 368.62 | 16 | 6.3 | 7 | 1 | 44.1 | Room | 6.3 | 7 | 1 | 44.1 | 100 | Permanent | Residential | NA | Encroacher | 48 | Yes | Received and willing to Clear | 0 |  |  | 25'20'42.01771"N | 88'09'43.60951"E |
| Marnai more | Itahar | Malda | LHS | Najimul hoque | PCOD | 368.70 | 17 | 6.6 | 11 | 1 | 72.6 | Room | 6.6 | 11 | 1 | 72.6 | 100 | Semi-Permanent | Residential | NA | Titleholder | 192 | No | Received and willing to Clear | 1 |  |  | 25'20'45.41033"N | 88'09'43.29147"E |
| Mayna | Gazol | Malda | RHS | Harendranath mandal | PCOD | 362.74 | 27.049 | 10 | 12 | 1 | 120 | Room | 10 | 12 | 1 | 120 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 144 | No | Not Received | 0 |  |  | 25'17'42.00558"N | 88'09'42.00692"E |
| Mayna | Gazol | Malda | LHS | Market | PCOD | 362.44 | 21 | 13 | 8 | 1 | 104 | Room | 13 | 8 | 1 | 104 | 100 | Permanent | Commercial | NA | Encroacher | 36 | No | Not Received | 0 | | | 25'17'42.00382"N | 88'09'42.00740"E |
| Mayna | Gazol | Malda | LHS | Paritosh singha | PCOD | 362.42 | 21 | 1.9 | 2.9 | 1 | 5.51 | Room | 1.9 | 2.9 | 1 | 5.51 | 100 | Permanent | Mixed | NA | Encroacher | 360 | Yes | Received and willing to Clear | 0 | | | 25'17'42.00380"N | 88'09'42.00743"E |





| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compensation Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
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| Mayna | Gazol | Malda | RHS | Ram sarkar | PCOD | 362.58 | 21 | 4.1 | 4.2 | 1 | 17.22 | Room | 4.1 | 4.2 | 1 | 17.22 | 100 | Permanent | Mixed | Garage | Titleholder | 360 | Yes | Not Received | 0 | | | 25°17'42.00452"N | 88°09'42.00727"E |
| Mayna | Gazol | Malda | RHS | Ratan das | PCOD | 362.66 | 20 | 8.8 | 8 | 1 | 70.4 | Room | 8.8 | 8 | 1 | 70.4 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 180 | No | Not Received | 1 |  |  | 25°17'42.00497"N | 88°09'42.00726"E |
| Mayna | Gazol | Malda | RHS | Sanatan sarkar | PCOD | 362.70 | 20 | 2.8 | 5 | 1 | 14 | Room | 2.8 | 5 | 1 | 14 | 100 | Semi-Permanent | Residential | NA | Encroacher | 240 | No | Not Received | 0 |  |  | 25°17'42.00527"N | 88°09'42.00724"E |
| Mayna | Gazol | Malda | LHS | Sushil majumdar | PCOD | 362.48 | 22 | 2.8 | 9.45 | 1 | 26.46 | Room | 2.8 | 9.45 | 1 | 26.46 | 100 | Permanent | Mixed | NA | Titleholder | 240 | No | Not Received | 0 | | | 25°17'42.00406"N | 88°09'42.00738"E |
| Mayna | Gazol | Malda | RHS | Thakur das sarkar | PCOD | 362.52 | 27.824 | 5 | 6 | 1 | 30 | Room | 5 | 6 | 1 | 30 | 100 | Permanent | Commercial | NA | Encroacher | 144 | No | Received and willing to Clear | 0 |  |  | 25°17'42.00404"N | 88°09'42.00709"E |
| Mayna | Gazol | Malda | LHS | Unknown | PCOD | 362.74 | 20 | 14.4 | 12 | 1 | 172.8 | Room | 14.4 | 12 | 1 | 172.8 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 36 | No | Not Received | 0 | |  | 25°17'42.00565"N | 88°09'42.00715"E |
| Mayna | Gazol | Malda | RHS | Wasim | PCOD | 363.02 | 55 | 6.6 | 2.8 | 1 | 18.48 | Room | 6.6 | 2.8 | 1 | 18.48 | 100 | Permanent | Residential | NA | Encroacher | 240 | No | Partially Received | 0 |  |  | 25°17'42.68425"N | 88°09'42.05279"E |
| Mirja dighi | Itahar | North Dinajpur | LHS | Himangshu Banik | PCOD | 382.20 | 34.967 | 15 | 8 | 1 | 120 | Room | 15 | 8 | 1 | 120 | 100 | Permanent | Mixed | NA | Titleholder | 360 | Yes | Not Received | 0 |  |  | 25°21'00.00673"N | 88°10'55.00425"E |
| Mirja dighi | Itahar | Malda | LHS | Sisoi primary school | PCOD | 369.90 | 17 | 3.6 | 6.43 | 1 | 23.148 | Room | 3.6 | 6.43 | 1 | 23.148 | 100 | Permanent | Public Building- School | School | Encroacher | 600 | No | Not Received | 0 |  |  | 25°21'24.74883"N | 88°09'43.04736"E |
| Mirja dighi | Itahar | Malda | RHS | Unknown | PCOD | 369.91 | 18 | 6 | 8 | 1 | 48 | Room | 6 | 8 | 1 | 48 | 100 | Permanent | Public Building- Sub centre | Sub centre | Encroacher | 240 | No | Not Received | 0 |  |  | 25°21'24.89397"N | 88°09'42.65539"E |
| Mirja dighi | Itahar | Malda | LHS | Unknown | PCOD | 396.34 | 20 | 7.45 | 9 | 1 | 67.05 | Room | 7.45 | 9 | 1 | 67.05 | 100 | Permanent | Residential | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 25°21'06.44341"N | 88°09'42.86842"E |
| Moasonda | Itahar | North Dinajpur | RHS | Buddhadeb pal | PCOD | 390.80 | 30.761 | 8 | 7 | 1 | 56 | Room | 8 | 7 | 1 | 56 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 180 | No | Not Received | 0 |  |  | 25°32'04.00121"N | 88°08'26.00983"E |
| Mohasonda | Itahar | North Dinajpur | RHS | Monatash Mahanta | PCOD | 390.60 | 30.761 | 6 | 8 | 1 | 48 | Room | 6 | 8 | 1 | 48 | 100 | Semi-Permanent | Mixed | NA | Encroacher | 240 | No | Not Received | 0 |  |  | 25°32'00.00107"N | 88°08'00.00985"E |
| Moyna | Gazol | Malda | RHS | Anita singha | PCOD | 362.54 | 27.894 | 6 | 7 | 1 | 42 | Room | 6 | 7 | 1 | 42 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 120 | No | Received | 0 |  |  | 25°17'42.00445"N | 88°09'42.00702"E |

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| Moyna | Gazol | Malda | RHS | Bichitra Sarkar | PCOD | 362.60 | 28.103 | 10 | 3 | 1 | 30 | Room | 10 | 3 | 1 | 30 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 60 | Yes | Received | 0 |  |  | 25°17'42.00468"N | 88°09'42.00705"E |
| Moyna | Gazol | Malda | RHS | Bisakha Roy | PCOD | 362.56 | 27.964 | 14 | 9 | 1 | 126 | Room | 14 | 9 | 1 | 126 | 100 | Semi-Permanent | Residential | NA | Titleholder | 312 | Yes | Partially Received | 0 |  |  | 25°17'42.00437"N | 88°09'42.00703"E |
| Moyna | Gazol | Malda | RHS | Nibaran kr.Roy | PCOD | 362.54 | 27.894 | 18 | 10 | 1 | 180 | Room | 18 | 10 | 1 | 180 | 100 | Permanent | Mixed | NA | Titleholder | 420 | Yes | Received | 0 |  |  | 25°17'42.00445"N | 88°09'42.00702"E |
| Moyna | Gazol | Malda | RHS | Nikhil sarkar | PCOD | 362.08 | 42.091 | 11 | 10 | 1 | 110 | Room | 11 | 10 | 1 | 110 | 100 | Semi-Permanent | Residential | NA | Encroacher | 420 | Yes | Received and willing to Clear | 0 |  |  | 25°17'42.00187"N | 88°09'42.00722"E |
| Moyna | Gazol | Malda | RHS | Nittaranjan mandal | PCOD | 362.50 | 27.745 | 6 | 8 | 1 | 48 | Room | 6 | 8 | 1 | 48 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 300 | Yes | Received | 0 |  |  | 25°17'42.00419"N | 88°09'42.00708"E |
| Moyna | Gazol | Malda | LHS | Protab datta | PCOD | 362.32 | 21 | 5.5 | 6.5 | 1 | 35.75 | Room | 5.5 | 6.5 | 1 | 35.75 | 100 | Semi-Permanent | Residential | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 25°17'42.00344"N | 88°09'42.00733"E |
| Moyna | Gazol | Malda | RHS | Samiran Sarkar | PCOD | 362.64 | 28.243 | 10 | 12 | 1 | 120 | Room | 10 | 12 | 1 | 120 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 360 | Yes | Received | 0 |  |  | 25°17'42.00497"N | 88°09'42.00700"E |
| Narayanpur | Old Malda | Malda | LHS | Hazrat makidiom tauheed bukhari r.a | PCOD | 333.06 | 23.291 | 10 | 10 | 1 | 100 | Room | 10 | 10 | 1 | 100 | 100 | Permanent | Religious | NA | Titleholder | 1200 | Yes | Not Received | 0 |  |  | 25°03'15.07367"N | 88°09'10.26065"E |
| Narayanpur | Old Malda | Malda | RHS | Jaliyur Rahman | PCOD | 331.98 | 31.401 | 5 | 4 | 1 | 20 | Room | 5 | 4 | 1 | 20 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 240 | No | Not Received | 0 |  |  | 25°01'57.40615"N | 88°09'34.90621"E |
| Narayanpur | Old Malda | Malda | RHS | Kali Temple | PCOD | 332.840 | 21.648 | 15 | 6 | 1 | 90 | Room | 15 | 6 | 1 | 90 | 100 | Permanent | Religious | NA | Titleholder | 60 | Yes | Received and willing to Clear | 0 |  |  | 25°02'31.34872"N | 88°09'27.75362"E |
| Narayanpur | Old Malda | Malda | RHS | Pritam | PCOD | 332.82 | 20 | 4 | 2 | 1 | 8 | Room | 4 | 2 | 2 | 8 | 100 | Semi-Permanent | Residential | NA | Encroacher | 12 | No | Received and willing to clear anytime asked to | 2 |  |  | 25°02'50.81961"N | 88°09'17.64531"E |
| Narayanpur | Old Malda | Malda | LHS | Sakir Hossain | Non-PCOD | 330.4 | 32.549 | 50 | 12.5 | 1 | 625 | Room | 17.451 | 12.5 | 1 | 218.138 | 34.902 | Permanent | Commercial | NA | Encroacher | 36 | Yes | Received and willing to Clear | 0 |  |  | 25°01'54.70651"N | 88°09'36.83189"E |
| Narayanpur | Old Malda | Malda | RHS | Subhankar mandal | PCOD | 394.00 | 20 | 20 | 15 | 2 | 300 | Room | 20 | 15 | 1 | 300 | 100 | Semi-Permanent | Mixed | NA | Encroacher | 12 | No | Received and willing to Clear | 0 |  |  | 25°15'40.75486"N | 88°09'55.77888"E |
| Narayanpur | Old Malda | Malda | RHS | Tapan Roy | PCOD | 333.08 | 23.13 | 22 | 15 | 1 | 330 | Room | 22 | 15 | 1 | 330 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 300 | Yes | Not Received | 0 |  |  | 25°03'14.32559"N | 88°09'09.56214"E |

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| Narayanpur | Old Malda | Malda | RHS | Uma Chaudhuri | Non-PCOD | 330.40 | 23.442 | 20 | 12 | 1 | 240 | Room | 20 | 12 | 1 | 240 | 100 | Permanent | Mixed | NA | Titleholder | 480 | Yes | Not Received | 0 |  |  | 25°03'07.08188"N | 88°09'02.09888"E |
| Narayanpur | Old Malda | Malda | RHS | Uma Chaudhuri | Non-PCOD | 330.40 | 23.442 | 20 | 12 | 1 | 240 | Room | 20 | 12 | 1 | 240 | 100 | Permanent | Mixed | NA | Titleholder | 480 | Yes | Not Received | 0 |  |  | 25°03'07.08188"N | 88°09'02.09888"E |
| Narayanpur | Old Malda | Malda | RHS | Uma Chaudhuri | Non-PCOD | 330.40 | 23.442 | 20 | 12 | 1 | 240 | Room | 20 | 12 | 1 | 240 | 100 | Permanent | Mixed | NA | Titleholder | 480 | Yes | Not Received | 0 |  |  | 25°03'07.08188"N | 88°09'02.09888"E |
| Old 16 Mile | Kaliachak | Malda | RHS | Maya Ghosh | PCOD | 301.908 | 43 | 9.2 | 15 | 1 | 138 | Room | 9.2 | 15 | 1 | 138 | 100 | Permanent | Mixed | NA | Encroacher | 480 | No | Not Received | 0 |  |  | 24°51'22.00023"N | 87°59'09.00485"E |
| Paharajpur (Itahar) | Itahar | North Dinajpur | RHS | Rasmany academy school | PCOD | 388.84 | 40.051 | 20 | 10 | 1 | 200 | Room | 20 | 10 | 1 | 200 | 100 | Permanent | Commercial | NA | Titleholder | 72 | Yes | Not Received | 0 |  |  | 25°21'04.00243"N | 88°09'26.00564"E |
| Raiganj | Raiganj | Raiganj | LHS | Shyamal Kumar Bramha | PCOD | 388.75 | 29.351 | 15 | 17 | 2 | 255 | Room | 15 | 17 | 2 | 510 | 100 | Permanent | Public Building | NA | Titleholder | 120 | Yes | Not Received | 0 |  |  | 25°15'31.00191"N | 88°09'55.00629"E |
| Rajbari | Itahar | North Dinajpur | RHS | Abdul mahamed | PCOD | 391.20 | 30.67 | 18 | 14 | 1 | 252 | Room | 18 | 14 | 1 | 252 | 100 | Semi-Permanent | Commercial-6 Shops | Total-6 shops | Encroacher | 180 | No | Not Received | 2 |  |  | 25°32'00.00343"N | 88°08'00.00943"E |
| Rajbari | Itahar | North Dinajpur | LHS | Bapi Shil | PCOD | 390.18 | 29.819 | 15 | 10 | 1 | 150 | Room | 15 | 10 | 1 | 150 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 7 | Yes | Not Received | 0 |  |  | 25°20'32.00334"N | 88°08'44.00963"E |
| Rajbari | Itahar | North Dinajpur | LHS | Biplab Das | PCOD | 391.38 | 29.972 | 6 | 8 | 1 | 48 | Room | 6 | 8 | 1 | 48 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | Yes | Received | 0 |  |  | 25°20'32.00297"N | 88°08'44.00963"E |
| Rajbari | Itahar | North Dinajpur | LHS | Biswajit furniture | PCOD | 392.00 | 29.331 | 8 | 11 | 1 | 88 | Room | 8 | 11 | 1 | 88 | 100 | Permanent | Commercial | NA | Encroacher | 240 | No | Partially Received | 1 |  |  | 25°32'00.00787"N | 88°08'00.00888"E |
| Rajbari | Itahar | North Dinajpur | LHS | Dashrath choudhury | PCOD | 390.90 | 28.643 | 5 | 6 | 1 | 30 | Room | 5 | 6 | 1 | 30 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 25°32'00.00198"N | 88°08'00.00984"E |
| Rajbari | Itahar | North Dinajpur | LHS | Goutam sarkar | PCOD | 391.00 | 28.441 | 9 | 11 | 1 | 99 | Room | 9 | 11 | 1 | 99 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 240 | Yes | Received | 1 |  |  | 25°32'00.00251"N | 88°08'00.00979"E |
| Rajbari | Itahar | North Dinajpur | LHS | Hodla barman | PCOD | 390.98 | 28.482 | 11 | 10 | 1 | 110 | Room | 11 | 10 | 1 | 110 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 360 | Yes | Received | 1 |  |  | 25°32'00.00224"N | 88°08'00.00985"E |
| Rajbari | Itahar | North Dinajpur | RHS | Rubin kr chaki | PCOD | 931.00 | 30.144 | 10 | 4 | 1 | 40 | Room | 10 | 4 | 1 | 40 | 100 | Semi-Permanent | Mixed | NA | Titleholder | 300 | Yes | Not Received | 0 |  |  | 25°32'00.00321"N | 88°08'00.00943"E |

| Name Of The Village | Block Taluka | District | Side Of The Road | Name Of The Owner | PCOD or NON-PCOD | Chainage | Available Row From Central Line (In Meters) | Total Structure Length (In Meters) | Total Structure Width (In Meters) | Number Of Floors | Total Area Of Structure (In Sq.M.) | Which Part Of The Structure Is Within Row | Structure Length Within Row (In Meters) | Structure Width Within Row (In Meters) | Number Of Floors Within Row | Area Within Row (In Sq.M.) | Percentage Of Structure Within Row | Construction Type Of Structure | Usage Of The Structure | Specify Of Other | Claim on Legal Status | Since When Have You Occupied? (Months) | Were You The Previous Owner? | Compenstion Status | No.Of Written Notices Received From NHAI Since 2016 For Evicting The Current Structure | Photo No.Frontal View | Photo No.Side View | Latitude | Longitude |
|---------------------|--------------|----------------|------------------|--------------------------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|--|--|---|---|------------------|------------------|
| Rajbari | Itahar | North Dinajpur | RHS | Suramdra math barman | PCOD | 390.98 | 28.781 | 2 | 2 | 1 | 4 | Room | 2 | 2 | 1 | 4 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 420 | No | Not Received | 0 |  |  | 25°32'00.00297"N | 88°08'00.00985"E |
| Rajbari | Itahar | North Dinajpur | RHS | Unknown (mou studio) | PCOD | 390.88 | 27.965 | 8 | 2 | 1 | 16 | Room | 8 | 2 | 1 | 16 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 0 |  |  | 25°32'00.00295"N | 88°08'00.00947"E |
| Rarayanpur poprapur | Old malda | Malda | LHS | Emai sekh | PCOD | 333.06 | 23.291 | 4 | 5 | 1 | 20 | Room | 4 | 5 | 1 | 20 | 100 | Semi-Permanent | Commercial | NA | Titleholder | 60 | Yes | Not Received | 0 |  |  | 25°03'14.91167"N | 88°09'10.26551"E |
| Rupahar | Raiganj | North Dinajpur | LHS | Khitish ch Roy | PCOD | 394.86 | 27.64 | 10 | 6 | 1 | 60 | Room | 10 | 6 | 1 | 60 | 100 | Semi-Permanent | Residential | NA | Titleholder | 360 | No | Not Received | 0 |  |  | 25°20'34.00147"N | 88°08'43.00024"E |
| Rupahar | Raiganj | North Dinajpur | LHS | Narayan Mandal | PCOD | 394.95 | 26.552 | 5 | 7 | 1 | 35 | Room | 5 | 7 | 1 | 35 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Received | 0 |  |  | 25°20'34.00137"N | 88°08'44.00028"E |
| Sahapur | Old malda | Malda | RHS | B Haladar | PCOD | 331.87 | 20 | 2 | 4 | 1 | 8 | Room | 2 | 4 | 1 | 8 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 12 | No | Received and willing to clear anytime asked to | 2 |  |  | 25°02'50.87461"N | 88°00'09.00170"E |
| Sarai | Raiganj | North Dinajpur | LHS | Swapan mandal | PCOD | 394.80 | 29.271 | 5 | 8 | 1 | 40 | Room | 5 | 8 | 1 | 40 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 48 | No | Received | 0 |  |  | 25°20'34.00070"N | 88°08'43.00072"E |
| Sarai | Raiganj | North Dinajpur | LHS | Unknown | PCOD | 394.42 | 29.333 | 6 | 4 | 1 | 24 | Room | 6 | 4 | 1 | 24 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 48 | No | Received | 1 |  |  | 25°33'00.00895"N | 88°08'00.00159"E |
| Shyamapally | Itahar | North Dinajpur | LHS | Itahar Thana Fiseerment co-operative | PCOD | 380.84 | 24.135 | 15 | 6 | 1 | 90 | Room | 15 | 6 | 1 | 90 | 100 | Permanent | Public Building | NA | Titleholder | 732 | Yes | Not Received | 0 |  |  | 25°27'00.00182"N | 88°10'55.00486"E |
| Shyamapally | Itahar | North Dinajpur | LHS | Mrinal kanti Das | PCOD | 380.768 | 21.911 | 4 | 5 | 1 | 20 | Room | 4 | 5 | 1 | 20 | 100 | Permanent | Commercial | NA | Titleholder | 180 | Yes | Not Received | 0 |  |  | 25°27'00.00156"N | 88°10'00.00513"E |
| Sripur | Itahar | North Dinajpur | LHS | Bimal barman | PCOD | 385.20 | 30.541 | 8 | 6 | 1 | 48 | Room | 8 | 6 | 1 | 48 | 100 | Semi-Permanent | Residential | NA | Encroacher | 360 | No | Not Received | 0 |  |  | 25°29'00.00475"N | 88°10'00.00545"E |
| Sripur | Itahar | North Dinajpur | LHS | Gita barman | PCOD | 385.14 | 30.541 | 3 | 8 | 1 | 24 | Room | 3 | 8 | 1 | 24 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 36 | No | Not Received | 0 |  |  | 25°29'00.00456"N | 88°10'55.00560"E |
| Sripur | Itahar | North Dinajpur | LHS | Kalyan Roy | PCOD | 385.20 | 30.541 | 7 | 12 | 1 | 84 | Room | 7 | 12 | 1 | 84 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 192 | Yes | Not Received | 0 |  |  | 25°29'00.00479"N | 88°10'55.00544"E |
| Sripur | Itahar | North Dinajpur | RHS | Shripur prathamik vidyalaya | PCOD | 384.90 | 30.83 | 20 | 40 | 1 | 800 | Room | 20 | 40 | 1 | 800 | 100 | Permanent | Public Building | NA | Titleholder | 96 | Yes | Not Received | 0 |  |  | 25°29'00.00341"N | 88°10'43.00611"E |

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|-----------------------|--------------|----------|------------------|-------------------|------------------|----------|---|------------------------------------|-----------------------------------|------------------|------------------------------------|---|---|--|-----------------------------|----------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------------|--|------------------------------|-------------------------------|--|---|---|------------------|------------------|
| Sujapur | Kaliachak | Malda | RHS | Alamin Sk | PCOD | 351.18 | 34.3 | 32 | 3.02 | 1 | 96.64 | Room | 32 | 3.02 | 1 | 96.64 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 24°55'09.00146"N | 88°00'05.00520"E |
| Sujapur | Kaliachak | Malda | RHS | Unknown | Non-PCOD | 325.20 | 34.03 | 3 | 4 | 1 | 12 | Room | 3 | 4 | 1 | 12 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 24°55'09.02478"N | 88°05'31.22232"E |
| Sujapur | Kaliachak | Malda | RHS | Unknown | Non-PCOD | 315.21 | 34.03 | 3 | 4 | 1 | 12 | Room | 3 | 4 | 1 | 12 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 24°55'09.00163"N | 88°05'31.00531"E |
| Sujapur | Kaliachak | Malda | RHS | Unknown | Non-PCOD | 315.20 | 34.03 | 2 | 3.5 | 1 | 7 | Room | 2 | 3.5 | 1 | 7 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 0 |  |  | 24°09'55.00163"N | 88°05'18.00531"E |
| Sujapur hospital more | Sujapur | Malda | RHS | Pan biri | Non-PCOD | 315.16 | 34.3 | 1.5 | 3 | 1 | 4.5 | Room | 1.5 | 3 | 1 | 4.5 | 100 | Semi-Permanent | Commercial | NA | Encroacher | 24 | No | Not Received | 2 |  |  | 24°55'76.00553"N | 88°05'30.99592"E |
| Sultanganj | Kaliachak | Malda | LHS | Ajmir Hotel | PCOD | 303.45 | 34 | 10 | 6 | 1 | 60 | Room | 10 | 6 | 1 | 60 | 100 | Permanent | Commercial | NA | Encroacher | 60 | No | Not Received | 1 |  |  | 24°51'22.10592"N | 88°00'15.63975"E |
| Sultanganj | Kaliachak | Malda | RHS | Chanu Sk | PCOD | 303.20 | 34 | 6.4 | 3.1 | 1 | 19.84 | Room | 6.4 | 3.1 | 1 | 19.84 | 100 | Permanent | Mixed | NA | Encroacher | 60 | No | Received Not willing to Clear | 2 |  |  | 24°51'22.00339"N | 88°00'09.00122"E |
| Sultanganj | Kaliachak | Malda | RHS | Hossan Ali | PCOD | 303.24 | 34 | 6.5 | 6.8 | 1 | 44.2 | Room | 6.5 | 6.8 | 1 | 44.2 | 100 | Permanent | Commercial | NA | Titleholder | 240 | No | Not Received | 2 |  |  | 24°51'22.00681"N | 88°00'09.00933"E |
| Sultanganj | Kaliachak | Malda | LHS | Mangrul Sk | PCOD | 303.48 | 34 | 4.8 | 4.9 | 1 | 23.52 | Room | 4.8 | 4.9 | 1 | 23.52 | 100 | Permanent | Commercial | NA | Titleholder | 2 | Yes | Received | 0 |  |  | 24°51'22.55659"N | 88°00'17.34161"E |
| Sultanganj | Kaliachak | Malda | LHS | Md. Naimuddin | Non-PCOD | 308.17 | 31.673 | 4.2 | 2.8 | 1 | 11.76 | Room | 4.2 | 2.8 | 1 | 11.76 | 100 | Permanent | Commercial | NA | Encroacher | 420 | No | Not willing to Receive | 0 |  |  | 24°51'22.00340"N | 88°00'09.00002"E |
| Sultanganj | Kaliachak | Malda | RHS | Mohammad Sk | PCOD | 303.17 | 31.673 | 5.35 | 5.45 | 1 | 29.1575 | Room | 5.35 | 5.45 | 1 | 29.1575 | 100 | Permanent | Commercial | NA | Encroacher | 300 | No | Not Received | 0 |  |  | 24°51'22.00334"N | 88°00'09.00101"E |
| Sultanganj | Kaliachak | Malda | RHS | Nasiul Sk | PCOD | 303.25 | 34 | 10.5 | 12 | 1 | 126 | Room | 10.5 | 12 | 1 | 126 | 100 | Permanent | Residential | NA | Titleholder | 36 | No | Not Received | 2 |  |  | 24°51'22.72859"N | 88°08'66.00212"E |
| Sultanganj | Kaliachak | Malda | RHS | Unknown | PCOD | 303.45 | 33 | 2.76 | 4 | 1 | 11.04 | Room | 2.76 | 4 | 1 | 11.04 | 100 | Permanent | Commercial | NA | Encroacher | 12 | No | Not Received | 0 |  |  | 24°51'22.00461"N | 88°00'09.00869"E |
| Sultanganj | Kaliachak | Malda | RHS | Yousuf Sk | PCOD | 303.20 | 34 | 4.35 | 6.4 | 1 | 27.84 | Room | 4.35 | 6.4 | 1 | 27.84 | 100 | Permanent | Commercial | NA | Encroacher | 60 | No | Received Not willing to Clear | 2 |  |  | 24°51'22.00339"N | 88°00'09.00122"E |

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| Sunkuarpur | Itahar | Malda | RHS | Joia abedi | PCOD | 373.54 | 15 | 5.3 | 7.7 | 1 | 40.81 | Room | 5.3 | 7.7 | 1 | 40.81 | 100 | Semi-Permanent | Mixed | NA | Encroacher | 420 | No | Not Received | 0 |  |  | 25°23'22.06714"N | 88°09'48.80381"E |
| Unknown | Raiganj | North Dinajpur | LHS | Unknown | PCOD | 391.98 | 29.641 | 7 | 10 | 1 | 70 | Room | 7 | 10 | 1 | 70 | 100 | Permanent | Residential | NA | Encroacher | 240 | No | Partially Received | 1 |  |  | 25°32'42.00759"N | 88°08'42.00891"E |

Temporary Structures

| Sr. No | Chanaige | RHS | LHS |
|--------|----------|-----|-----|
| 1 | 334.000 | 3 | 0 |
| 2 | 334.200 | 2 | 3 |
| 3 | 334.240 | 1 | 2 |
| 4 | 334.400 | 10 | 1 |
| 5 | 336.000 | 0 | 2 |
| 6 | 336.200 | 1 | 2 |
| 7 | 336.240 | 0 | 1 |
| 8 | 336.640 | 0 | 1 |
| 9 | 338.220 | 1 | 1 |
| 10 | 338.840 | 1 | 0 |
| 11 | 339.000 | 0 | 1 |
| 12 | 340.240 | 2 | 0 |
| 13 | 348.800 | 1 | 0 |
| 14 | 349.600 | 0 | 2 |
| 15 | 350.840 | 1 | 0 |
| 16 | 372.600 | 2 | 0 |
| 17 | 377.780 | 4 | 3 |
| 18 | 379.500 | 3 | 2 |
| 19 | 380.200 | 0 | 1 |
| 20 | 380.300 | 1 | 0 |
| 21 | 380.900 | 0 | 1 |
| 22 | 380.460 | 1 | 1 |
| 23 | 380.560 | 1 | 2 |
| 24 | 380.620 | 1 | 0 |
| 25 | 380.720 | 1 | 1 |
| 26 | 380.760 | 0 | 1 |
| 27 | 380.800 | 0 | 6 |
| 28 | 380.730 | 3 | 0 |
| 29 | 380.900 | 5 | 0 |
| 30 | 381.100 | 0 | 1 |
| 31 | 381.140 | 5 | 0 |
| 32 | 381.500 | 0 | 5 |
| 33 | 381.600 | 1 | 0 |
| 34 | 381.700 | 1 | 0 |
| 35 | 381.720 | 2 | 0 |
| 36 | 381.900 | 0 | 1 |
| 37 | 382.000 | 3 | 0 |
| 38 | 382.100 | 1 | 0 |
| 39 | 383.400 | 1 | 0 |
| 40 | 383.500 | 1 | 2 |
| 41 | 383.775 | 1 | 1 |
| 42 | 384.100 | 1 | 1 |
| 43 | 384.176 | 0 | 1 |
| 44 | 384.271 | 0 | 2 |
| 45 | 384.300 | 0 | 1 |
| 46 | 384.400 | 0 | 4 |
| 47 | 384.900 | 0 | 4 |

Temporary Structures

| | | | |
|----|-----------|----|----|
| 48 | 385.100 | 0 | 1 |
| 49 | 385.200 | 4 | 1 |
| 50 | 387.000 | 0 | 4 |
| 51 | 387.100 | 1 | 2 |
| 52 | 387.600 | 0 | 1 |
| 53 | 380.650 | 0 | 2 |
| 54 | 380.720 | 0 | 2 |
| 55 | 380.200 | 0 | 3 |
| 56 | 390.980 | 5 | 1 |
| 57 | 394.560 | 0 | 1 |
| 58 | 318.800 | 0 | 1 |
| 59 | 317.700 | 0 | 1 |
| 60 | 318.600 | 10 | 0 |
| 61 | 316.000 | 2 | 0 |
| 62 | 316.900 | 2 | 0 |
| 63 | 315.700 | 2 | 0 |
| 64 | 315.720 | 6 | 0 |
| 65 | 315.500 | 4 | 0 |
| 66 | 315.300 | 12 | 6 |
| 67 | 315.100 | 15 | 7 |
| 68 | 315.120 | 12 | 3 |
| 69 | Non.C.O.D | 6 | 12 |
| 70 | Non.C.O.D | 0 | 4 |
| 71 | Non.C.O.D | 0 | 7 |
| 72 | Non.C.O.D | 0 | 6 |
| 73 | Non.C.O.D | 0 | 8 |
| 74 | 305.250 | 4 | 2 |
| 75 | 305.200 | 2 | 1 |
| 76 | 305.160 | 0 | 1 |
| 77 | 305.100 | 3 | 12 |
| 78 | 353.160 | 1 | 0 |
| 79 | 353.240 | 1 | 0 |
| 80 | 353.420 | 1 | 0 |
| 81 | 353.820 | 1 | 0 |
| 82 | 354.100 | 5 | 0 |
| 83 | 354.180 | 1 | 0 |
| 84 | 354.22 | 1 | 0 |
| 85 | 354.680 | 0 | 2 |
| 86 | 354.680 | 1 | 0 |
| 87 | 354.000 | 1 | 0 |
| 88 | 357.100 | 0 | 1 |
| 89 | 358.700 | 2 | 0 |
| 90 | 376.500 | 1 | 0 |
| 91 | 375.480 | 5 | 5 |
| 92 | 369.900 | 2 | 0 |
| 93 | 332.400 | 0 | 2 |
| 94 | 332.860 | 0 | 2 |
| 95 | 323.100 | 1 | 2 |
| 96 | 327.310 | 1 | 0 |

Temporary Structures

| | | | |
|-----|----------|----|----|
| 97 | 319.100 | 1 | 0 |
| 98 | 319.100 | 0 | 1 |
| 99 | 318.500 | 10 | 0 |
| 100 | 318.800 | 1 | 0 |
| 101 | 317.700 | 1 | 0 |
| 102 | 316.900 | 0 | 2 |
| 103 | 362.440 | 0 | 1 |
| 104 | 316.700 | 0 | 2 |
| 105 | 315.700 | 0 | 11 |
| 106 | 315.500 | 0 | 3 |
| 107 | 315.300 | 0 | 4 |
| 108 | 315.100 | 0 | 11 |
| 109 | NON -COD | 0 | 59 |
| 110 | 306.000 | 0 | 4 |
| 111 | 305.950 | 0 | 1 |
| 112 | 306.100 | 0 | 5 |
| 113 | 306.050 | 0 | 5 |
| 114 | 306.300 | 10 | 0 |
| 115 | 306.150 | 3 | 0 |
| 116 | 305.700 | 1 | 1 |
| 117 | 300.350 | 2 | 0 |
| 118 | 305.6 | 1 | 0 |
| 119 | 305.400 | 0 | 1 |
| 120 | 305.700 | 0 | 2 |
| 121 | 305.750 | 0 | 4 |
| 122 | 305.700 | 0 | 1 |
| 123 | 305.650 | 0 | 21 |
| 124 | 305.650 | 0 | 2 |
| 125 | 305.600 | 4 | 0 |
| 126 | 305.550 | 7 | 0 |
| 127 | 305.500 | 3 | 0 |
| 128 | 305.450 | 9 | 0 |
| 129 | 305.400 | 13 | 0 |
| 130 | 305.350 | 2 | 0 |
| 131 | 305.300 | 0 | 4 |
| 132 | 305.250 | 0 | 4 |
| 133 | 305.200 | 0 | 4 |
| 134 | 305.150 | 0 | 33 |
| 135 | 360.300 | 0 | 3 |
| 136 | 306.150 | 0 | 3 |
| 137 | 306.100 | 0 | 2 |
| 138 | 306.950 | 4 | 0 |
| 139 | 305.900 | 0 | 4 |

Appendix A

Critical Habitat
Assessment Report
For Farakka Raiganj
Section Of Nh-12
(Old Nh-34) In The
State Of West Bengal,
India



Critical Habitat Assessment Report for Farakka-Raiganj Section of National Highway- 12 (Old NH-34) in the State of West Bengal, India

**Indian Highways Company
Pte Ltd (IHCPL): a Group
company of Cube
Highways and
Infrastructure Pte. Ltd.**

Final Report

July 2018

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The business of sustainability



Indian Highways Company Pte Ltd (IHCPL) : a Group company of Cube Highways and Infrastructure Pte. Ltd.

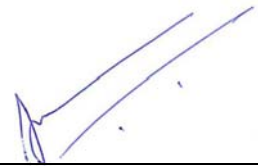
Critical Habitat Assessment Report for Farakka-Raiganj Section of National Highway- 12 (Old NH-34) in the State of West Bengal, India

18 July 2018

Reference # I13232/0454665

Prepared by : Abhishek Roy Goswami

Reviewed by **Arun Venkataraman**
Technical Director



Approved by: **Neena Singh**
Partner



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1 CRITICAL HABITAT SCREENING OF FARAKKA-RAIGANJ SECTION OF NATIONAL HIGHWAY- 12 (OLD NH-34)

1.1 INTRODUCTION

Environmental Resources Management India Private Limited (ERM) has been commissioned by Indian Highways Company Pte Ltd. (IHCPL) to conduct a Critical Habitat Assessment (CHA) of a national highway segment in West Bengal, India. IHCPL is looking to invest in the widening of the National Highway 34 from Farakka-Raiganj that passes through Malda and Uttar Dinajpur district of West Bengal (henceforth referred to as 'Project'). The purpose of the CHA is to identify species of conservation importance (i.e. endangered ⁽¹⁾, critically endangered ⁽¹⁾, restricted range ⁽²⁾, migratory and congregatory ⁽³⁾ species) and habitats of conservation importance (i.e. unique ecosystems and habitats that are key for evolutionary processes) found within the project's area of influence and assess these against the Critical Habitat criteria as elaborated in the International Finance Corporation (IFC) Performance Standard 6.

1.2 PROJECT SITE

The details of the project road has been given in Table 1.1 below. The project road is to be widened as per the National Highways Authority of India (NHAI)'s National Highway Development Project (NHDP), which aims to upgrade, rehabilitate and widen major highways in India.

Table 1.1 Road segments of the highway segment

| S. N. | State | Districts | NH No. | Project Segment | Length (km) |
|-------|-------------|--------------------------|-------------------|-----------------|-------------|
| 1. | West Bengal | Malda and Uttar Dinajpur | NH-12 (old NH 34) | Farakka-Raiganj | 100 |

1.2.1 Area of Influence (AoI)

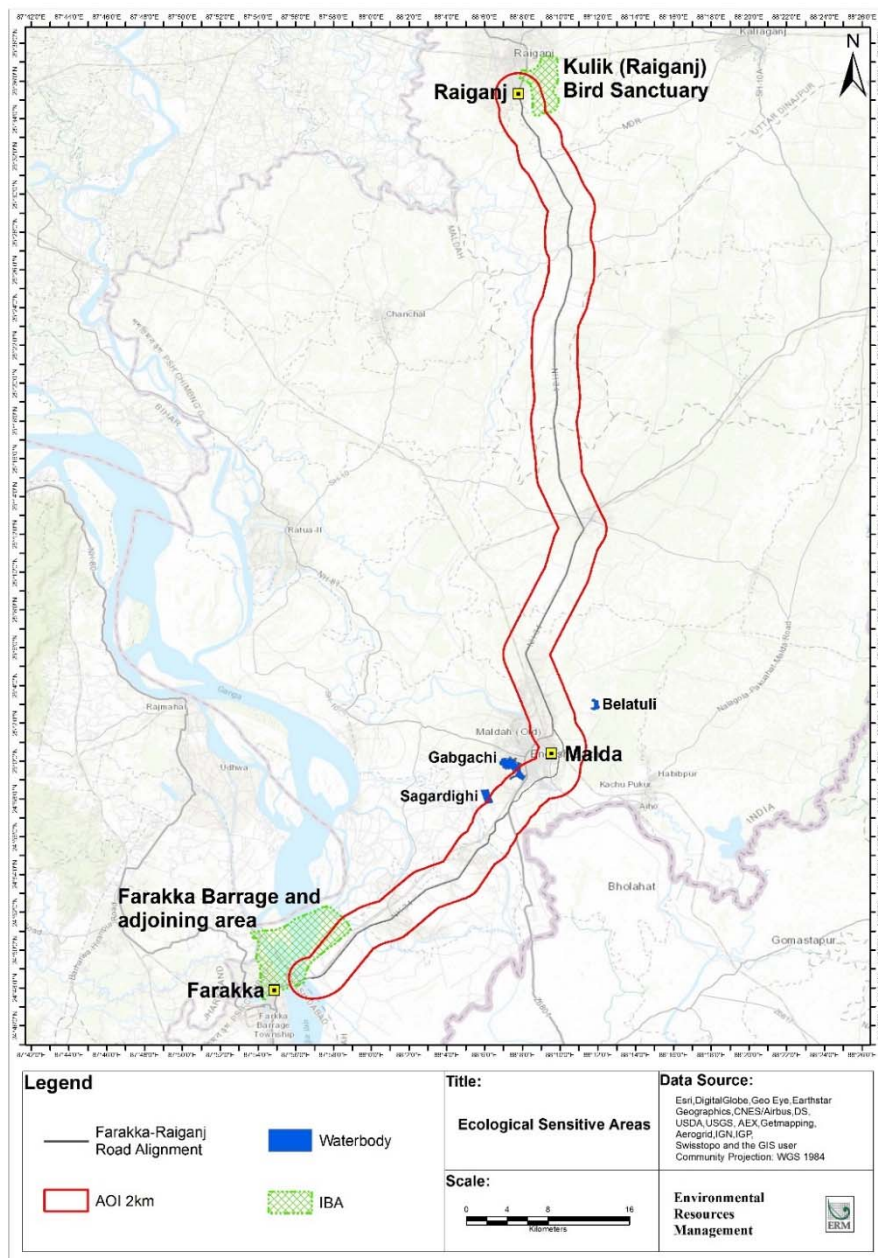
The Area of Influence (AoI) for the Project was a 2 km width measured from either side of the highway segment, to identify any impacts associated with vehicular and anthropogenic movement across the highway segment. All species found in this AoI or potentially found in this AoI are therefore considered potential critical habitat candidates for the study. The road stretches and their AoIs are shown in *Figure 1.1*.

(1) Endangered and Critically Endangered species are defined as per the IUCN Red List (Online Version 2017-2), which measures the extinction risk of species based on several environmental and anthropogenic stressors.

(2) Species who have a global distribution range of less than or equal to 50,000 km²

(3) Congregatory species refers to species that gather in globally significant numbers at a specific site and at a specific time (e.g. migration) for feeding, breeding or roosting.

Figure 1.1 Farakka-Raiganj Road showing the location of the IBAs



Note: The location of the Kulik (Raiganj) Bird Sanctuary IBA was obtained from BirdLife International website (<http://datazone.birdlife.org/site/factsheet/kulik-raiganj-bird-sanctuary-iba-india>). However, there is a discrepancy in the location marked at the BirdLife International website as the Kulik Wildlife Sanctuary is located approximately 7 km from the highway segment.

1.2.2 Ecological Sensitivities

A desktop screening exercise was undertaken in the highway segment shown in to determine if there are any ecological sensitivities around the Project sites including national parks, wildlife sanctuaries, forested areas, wetlands of conservation importance and key biodiversity areas. **No National Park, Wildlife Sanctuary, Ramsar Site, are present within the AoI of the road segment.**

Two Important Bird Areas (IBAs) are located in proximity to the road alignment. The Farakka Barrage and Adjoining Area IBA (IN-318) is located at a distance of 0.4 km from the road alignment near the starting point of the road alignment at Farakka. The Kulik (Raiganj) Bird Sanctuary IBA (IN 321) is located at a distance of 7 km from the end-point of the road alignment near Raiganj.

In addition, a study conducted by Chowdhury & Nandi (2014)¹ on avifaunal distribution at five waterbodies in Malda district (from November 2008– March 2011) also reviewed species that could potentially trigger critical habitats. Out of the five waterbodies studied by Chowdhury & Nandi (2014); avifaunal distribution at four waterbodies located in close proximity to the highway alignment were reviewed. The waterbodies include Farakka Barrage, Sagardighi Wetland (1.7 km from the highway alignment), Gabgachi-Bhatia Wetland (0.90 km from the highway alignment) and Belatuli Wetland (3.6 km from the highway alignment).

IBAT Critical Habitat Screening Reports² were also used to find out relevant threatened species that could possibly occur in the area for Critical Habitat Screening.

1.3

CRITICAL HABITAT ASSESSMENT SCREENING

A list of priority species⁽³⁾ was determined from secondary sources. The list of species has been provided in *Table 1.2*. For each of the species, the following information has been provided:

- Common name and scientific name of the species;
- Conservation status as per the latest IUCN red list (version 2017-3);
- Protected status as per the Indian Wildlife Protection Act, 1972 (IWP)(4);
- If the species is restricted range species (5);
- Reason for selection;
- CHA Criteria/Tier
- Distribution Map; and
- Qualitative assessment of species.

Based on the above factors, a species is determined to be screened in as a potential critical habitat assessment candidate or not. The conclusion is colour coded with **red** representing a species that is not screened-in and **green** representing a species that is screened-in.

¹ Monoranjan Chowdhury & Bidyut Nandi (2014). Avifauna in five wetlands of Diara and Barind region in Maldah District of West Bengal, India. *Journal of Threatened Taxa* 6(4): 5660–5666; <http://dx.doi.org/10.11609/JoTT.o2736.5660-6>

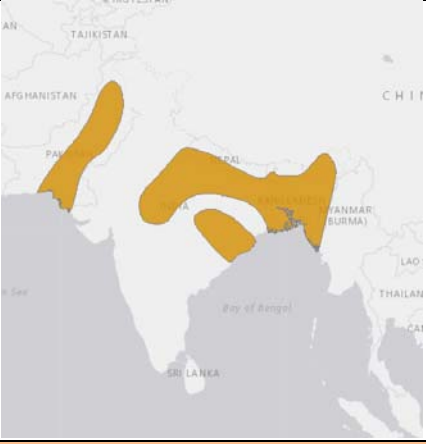

² Longitude: 88.135 Latitude: 25.56638888888889, date of analysis 13th March 2018; Longitude 87.91805555555555 Latitude: 24.798333333333335, date of analysis 27th February 2018

³ species of conservation importance as per the Critical Habitat Assessment criteria in IFC PS 6



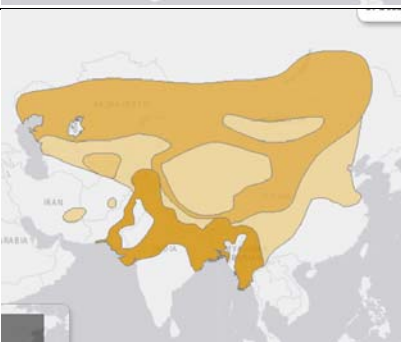
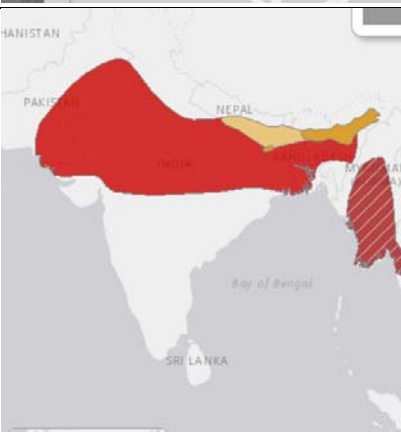
⁴The Wildlife Protection Act, 1972 is a law released by MoEFCC for the protection of rare, endangered and threatened species as well as species of cultural importance. The law divides species into schedules that accord varying degrees of protection and penalties. The highest level of protection is accorded to Schedule I species that have therefore been classified as “protected” for the remainder of the report.

⁵ Species that are endemic to a certain region or state are more likely to meet the requirements of “restricted range” as defined by IFC PS 6. Restricted range is defined for terrestrial vertebrates as an extent of occurrence (EOO) of 50,000km² or less

Table 1.2 Critical habitat assessment screening

| S. N. | Common Name (Scientific Name) | Conservation Status | Reason for Selection | CHA Criteria/Tier* | Distribution Map** | Qualitative assessment of the species |
|---|--|--|---|--------------------|---|--|
| Road Stretch: Farakka to Raiganj | | | | | | |
| Reptiles | | | | | | |
| 1. | Gharial (<i>Gavialis gangeticus</i>) | IUCN: CR (IUCN v2017-3) IWP: I Restricted Range?: No | The species is reported from the IBA Factsheets of Farakka IBA ¹ . The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 1 [2c,e] |  | The Farakka barrage is an area where Gharial has been reported historically. The species has been screened-in as a potential critical habitat assessment candidate |
| Avifauna | | | | | | |
| 2. | White-rumped Vulture (<i>Gyps bengalensis</i>) | IUCN: CR (IUCN v2017-3) IWP: I Restricted Range?: No | The species is reported from the IBA Factsheets of Farakka IBA ² and Kulik (Raiganj) Bird Sanctuary IBA ³ . The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 1 [2c,e] |  | The White-rumped Vulture has a widespread but patchy distribution across India. The species occurs mostly in plains, light woodland, villages, cities, and open areas ⁴ . Such habitats are present within the AoI of the highway segment, hence presence of the species in the AoI cannot be ruled out. The species has been screened-in as a potential critical habitat assessment candidate |
| 3. | Indian Vulture (<i>Gyps indicus</i>) | IUCN: CR (IUCN v2017-3) IWP: I Restricted Range?: No | The species is reported from the IBA Factsheets of Farakka IBA ⁵ and Kulik (Raiganj) Bird Sanctuary IBA ⁶ . The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 1 [2c,e] |  | The Indian Vulture has a widespread but patchy distribution across India. It is found in cities, towns and villages near cultivated areas, and in open and wooded areas ⁷ . Such habitats are present within the AoI of the highway segment, hence presence of the species in the AoI cannot be ruled out. The species has been screened-in as a potential critical habitat assessment candidate |

¹ BirdLife International (2018) Important Bird Areas factsheet: Farakka Barrage and adjoining area. Downloaded from <http://www.birdlife.org> on 10/04/2018.
² BirdLife International (2018) Important Bird Areas factsheet: Farakka Barrage and adjoining area. Downloaded from <http://www.birdlife.org> on 10/04/2018.
³ BirdLife International (2018) Important Bird Areas factsheet: Kulik (Raiganj) Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 10/04/2018.
⁴ <http://www.iucnredlist.org/details/22695194/0>
⁵ BirdLife International (2018) Important Bird Areas factsheet: Farakka Barrage and adjoining area. Downloaded from <http://www.birdlife.org> on 10/04/2018.
⁶ BirdLife International (2018) Important Bird Areas factsheet: Kulik (Raiganj) Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 10/04/2018.
⁷ <http://www.iucnredlist.org/details/22729731/0>

| | | | | | | |
|----|--|---|---|----------|---|--|
| 4. | Baer's Pochard (<i>Aythya baeri</i>) | IUCN: CR (IUCN v2017-3) IWP: IV Restricted Range?: No | The species is reported from the IBA Factsheets of Farakka IBA (year of assessment 2003). The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 1 [2c,e] |  | The species is usually found in near rivers and ponds surrounded by forested areas ¹ . Such habitats are present in the AoI of the highway segment. Jha (2006) ² also reported the species from the Farakka barrage area. Chowdhury & Nandi (2014) ³ reported presence of the species from Farakka Barrage, Sagardighi Wetland, Gabgachi-Bhatia Wetland and Belatuli Wetland. The species has been screened-in as a potential critical habitat assessment candidate. |
| 5. | White-bellied Heron (<i>Ardea insignis</i>) | IUCN: CR (IUCN v2017-3) IWP: I Restricted Range?: No | The species is reported by Choudhury and Nandi (2014) from Farakka Barrage and the wetlands Sagardighi, Belatuli and Gabgachi-Bhatia during their study period 2008-2011. | 1 [2c,e] |  | The species is reported by Choudhury and Nandi (2014) from Farakka Barrage and the wetlands Sagardighi, Belatuli and Gabgachi-Bhatia during their study period 2008-2011. The species has been screened-in as a potential critical habitat assessment candidate. |
| 6. | Pallas's Fish-eagle (<i>Haliaeetus leucoryphus</i>) | IUCN: EN (IUCN v2017-3) IWP: I Restricted Range?: No | The species is reported from the IBA Factsheet of Kulik IBA ⁴ (year of assessment 2003). The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 1 [2c,e] |  | The species has been closely associated with wetlands, principally large lakes and rivers ⁵ . Such habitats are present in the AoI of the highway segment. The species has been screened-in as a potential critical habitat assessment candidate. |
| 7. | Greater Adjutant (<i>Leptoptilos dubius</i>) | IUCN: EN (IUCN v2017-3) IWP: IV Restricted Range?: No | The distribution map of the species indicate that the species is largely extinct from Malda and Uttar Dinajpur area, however, the species is reported by Choudhury & Nandi (2014) from Gabgachi-Bhatia wetland. | 1 [2c,e] |  | The species inhabits wetlands, nesting in tall trees with closed canopies and bamboo clumps around nesting trees. It also occurs close to and within urban areas ⁶ . Such habitats are present in the AoI of the highway segment. The species has been screened-in as a potential critical habitat assessment candidate. |

¹ <http://www.iucnredlist.org/details/22680384/0>


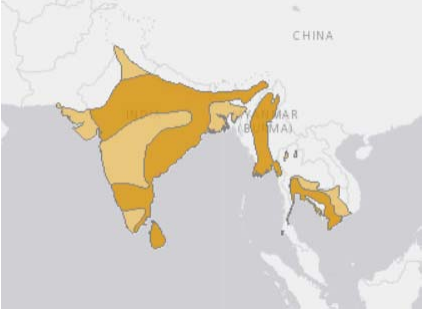
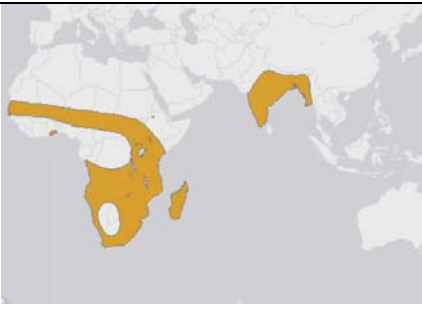
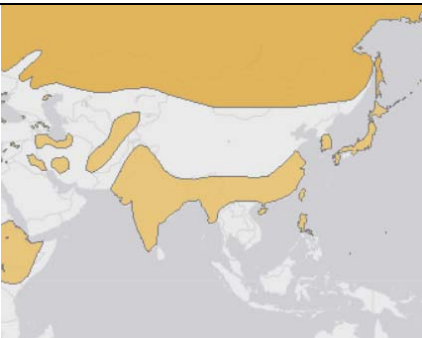
² Jha. S. 2006. Records of some rare birds from Farakka Barrage (West Bengal, India). Indian Birds Vol. 2 No. 4 (July-August 2006)

³ Monoranjan Chowdhury & Bidyut Nandi (2014). Avifauna in five wetlands of Diara and Barind region in Maldah District of West Bengal, India. Journal of Threatened Taxa 6(4): 5660-5666; <http://dx.doi.org/10.11609/JoTT.o2736.5660-6>

⁴ BirdLife International (2018) Important Bird Areas factsheet: Kulik (Raiganj) Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 10/04/2018.

⁵ <http://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T22695130A119358956.en>.


⁶ <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22697721A93633471.en>

| | | | | | | |
|-----|--|---|---|----------|---|--|
| 8. | Black-bellied Tern (<i>Sterna acuticauda</i>) | IUCN: EN (IUCN v2017-3) IWP: IV Restricted Range?: No | The species is not reported in the IBA factsheet of Farakka Barrage, however, Choudhury & Nandi (2014) reported the species from Farakka Barrage, Gabgachi-Bhatia wetland and Belatuli Wetland. | 1 [2c,e] |  | The Black-bellied Tern is widespread across India and is known to occur in rivers and marshes. Hence, there is a probability of this species occurring in the AoI of the road segment. The species has been screened-in as a potential critical habitat assessment candidate |
| 9. | Asian Openbill (<i>Anastomus oscitans</i>) | IUCN: LC (IUCN v2017-3) IWP: IV Restricted Range?: No | The Raiganj (Kulik) wildlife sanctuary is known for congregation of the species and mentioned in the IBA Factsheet of Kulik IBA ¹ (year of assessment 2003). The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 3 [2b,e] |  | Congregation of Asian Openbill is noted within the Raiganj Wildlife Sanctuary. The species has been screened-in as a potential critical habitat assessment candidate |
| 10. | Fulvous Whistling-duck (<i>Dendrocygna bicolor</i>) | IUCN: LC (IUCN v2017-3) IWP: IV Restricted Range?: No | This congregatory species is listed as an IBA triggering criterion for Farakka Barrage. The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 3 [2b,e] |  | About 8,000 individuals were reported from the Farakka Barrage by (Jha & Sengupta 1999) ² . More recent surveys conducted by Chowdhury & Nandi (2014) also reported the species from Farakka Barrage, Belatuli Wetland and Sagardighi Wetland. The species has been screened-in as a potential critical habitat assessment candidate |
| 11. | Tufted Duck (<i>Aythya fuligula</i>) | IUCN: LC (IUCN v2017-3) IWP: IV Restricted Range?: No | This congregatory species is listed as an IBA triggering criterion for Farakka Barrage. The distribution map shown to the right indicates that West Bengal is within the distribution range of the species. | 3 [2b,e] |  | About 70,000 individuals were reported from the Farakka Barrage by (Sharma, 1998) ³ . The species has been screened-in as a potential critical habitat assessment candidate |

¹ BirdLife International (2018) Important Bird Areas factsheet: Kulik (Raiganj) Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 10/04/2018.

² Jha, S. and Sengupta, S. (1999) Proposed IBA Sites of Malda and Uttar Dinajpur report. Green Peoples India, Malda. Pp. 8

³ Sharma, A. (1998) More than 70,000 Tufted Duck (*Aythya fuligula*) sighted again on the river Ganges, Malda district, West Bengal. Newsletter for Birdwatchers 38(3): 57

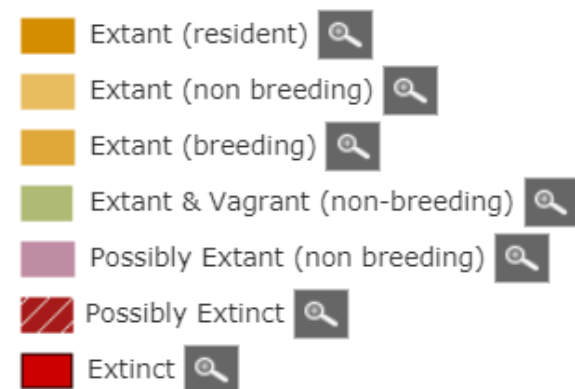
| Mammal | | | | | | |
|--------|---|--|---|----------|---|---|
| 12. | Gangetic Dolphin (<i>Platanista gangetica</i>) | IUCN: EN (IUCN v2017-3) IWP: I Restricted Range?: No | The species is reported from the IBA Factsheets of Farakka IBA. The distribution map shown to the right indicates that the species is reported from the Ganges River. | 1 [2c,e] |  | Gangetic dolphin was reported from Farakka area by Sinha <i>et al.</i> (2000) ¹ . Presence of the species in Farakka barrage and feeder canal was also reported by the forest department officials and local villagers. The species has been screened-in as a potential critical habitat assessment candidate |

Note: CR = Critically Endangered, EN = Endangered, LC = Least Concern, I = Schedule I, II = Schedule II, III = Schedule III, IV = Schedule IV, EN-WB = Endemic to West Bengal, NE= Not Evaluated

(*) As per the quantitative thresholds provided in IFC PS 6 Guidance Note (GN 89)

(**) As provided in IUCN Red List Online Version 2017-2: <http://www.iucnredlist.org/>

Key to colour codes for distribution maps (<http://www.iucnredlist.org/>)



1 CHA Criterion 1: Critically Endangered or Endangered Species

2 CHA Criterion 3: Migratory species and/or congregatory species.

¹ Sinha RK, Smith BD, Sharma G, Prasad K, Choudhury BC, Sapkota K, Sharma RK, Behera SK (2000) Status and distribution of the Ganges susu. *Platanista Gangetica*, in the Ganges river system of India and Nepal. In: Reeves RR, Smith BD, Kasuya T (eds) *Biology and conservation of freshwater cetaceans in Asia*, Occasional papers of the IUCN Species Survival Commission no. 23. IUCN, Gland, pp 54–61

The above species that have been screened as critical habitat candidates, (shown in **green** in *Table 1.2*) need further assessment through the quantitative thresholds as provided in the IFC PS 6 Critical Habitat Assessment Criteria 1 shown in *Table 1.3*. Species that have been screened-out of the critical habitat assessment (shown in **red** in *Table 1.2*) have not been taken forward for the quantitative assessment of the CHA.

Table 1.3 *Critical habitat assessment quantitative thresholds*

| Criteria | Tier 1 | Tier 2 |
|---|---|--|
| Criteria 1: Critically Endangered(CR)/Endangered (EN) Species | Habitat required to sustain ≥ 10 percent of the global population of an IUCN Red-listed CR or EN species where there are known, regular occurrences of the species and where that habitat could be considered a discrete management unit for that species. | Habitat that supports the regular occurrence of a single individual of an IUCN Red-listed CR species and/or habitat containing regionally-important concentrations of an IUCN Red-listed EN species where that habitat could be considered a discrete management unit for that species. |
| | Habitat with known, regular occurrences of CR or EN species where that habitat is one of 10 or fewer discrete management sites globally for that species. | Habitat of significant importance to CR or EN species that are wide-ranging and/or whose population distribution is not well understood and where the loss of such a habitat could potentially impact the long-term survivability of the species. As appropriate, habitat containing nationally/regionally-important concentrations of an EN, CR or equivalent national/regional listing. |
| Criterion 3: Migratory and Congregatory Species | Habitat known to sustain, on a cyclical or otherwise regular basis, ≥ 95 percent of the global population of a migratory or congregatory species at any point of the species' life-cycle where that habitat could be considered a discrete management unit for that species. | Habitat known to sustain, on a cyclical or otherwise regular basis, ≥ 1 percent but < 95 percent of the global population of a migratory or congregatory species at any point of the species' life-cycle and where that habitat could be considered a discrete management unit for that species, where adequate data are available and/or based on expert judgment. For birds, habitat that meets BirdLife International's Criterion A4 for congregations and/or Ramsar Criteria 5 or 6 for Identifying Wetlands of International Importance. For species with large but clumped distributions, a provisional threshold is set at ≥ 5 percent of the global population for both terrestrial and marine species. Source sites that contribute ≥ 1 percent of the global population of recruits. |

The assessment of critical habitat using quantitative thresholds (See *Table 1.3*) provided in IFC PS 6 has been undertaken for species screened-in from *Table 1.2*. The summary of the screening has been provided in the table below.

Table 2.1 *Summary of critical habitat screening*

| IFC PS 6 Criteria | Species to be assessed |
|--|---|
| 1: Critically Endangered (CR) and Endangered (EN) Species (IUCN v2017-3) | Gharial, White-rumped Vulture, Indian Vulture, Black-bellied Tern, Greater Adjutant, Pallas Fish Eagle, Baer's Pochard and Gangetic Dolphin |
| 3: Migratory and Congregatory Species | Asian Openbill, Fulvous whistling duck, Tufted Duck |

2.1

METHODOLOGY

The following methodology was undertaken for assessing critical habitat candidates in the region.

- Review of research papers, books, periodicals indicating presence of the species in the districts, particularly in proximity to the highway stretch.
- Review of newspaper articles indicating reports of the species observed in the district and in proximity to the highway stretch.
- Visit along the road stretch, particularly to Farakka Barrage, Kulik Wildlife Sanctuary and other wetland areas;
- Discussion with locals to determine the occurrence of threatened bird species in the area;
- Discussion with Assistant Conservator of Forest, Malda Forest Division on the presence of IUCN Critically Endangered, Endangered and migratory species in Malda Division;
- Discussion with University Professors, local experts on the presence of IUCN Critically Endangered, Endangered and migratory species

Photo documentation of Farakka barrage and other wetlands within the AoI is presented in **Annex 1**.

2.2

CRITICAL HABITAT ASSESSMENT

The critical habitat assessment is provided in *Table 2.2*. The quantitative thresholds regularly utilize the term – 'Discrete Management Unit (DMU)', which has been defined below.

“Discrete Management Unit: an area with a clearly demarcated boundary within which the biological communities and/or management issues have more in common with each other than they do with those in adjacent areas.”⁽¹⁾

¹ As defined in paragraph 65 of the IFC PS 6 Guidance Note

Table 2.2 Critical Habitat Quantitative Thresholds Assessment

| IFC PS 6 Criterion | Quantitative Threshold Requirements for Criterion | Screening for all species |
|---|---|---|
| <p>Criterion 1: Habitat of significant importance to Critically Endangered and/or Endangered species</p> | <p>Tier 1</p> | <p>CRITICALLY ENDANGERED SPECIES (IUCN v2017-3)</p> |
| | <p>(a) Habitat required to sustain $\geq 10\%$ of the global population of a IUCN red-listed CR or EN species where there are known, regular occurrences of the species and where that habitat could be considered a discrete management unit for that species</p> | <p>White-rumped Vulture, Indian Vulture Both the vulture species are reported from the IBA Factsheets of Farakka IBA and Kulik IBA (year of assessment 2003). Discussion with Forest Department Officials and local villagers reveal that the vultures are rarely sighted in the area near Farakka barrage and regular occurrence of vultures are not reported from the area. Discussion with local villagers and forest department officials reveal that the vultures are currently not sighted in the area in proximity to the Kulik IBA. Records of Mr. Samiran Jha (Local ecologist and author of several papers on birds from Malda and Farakka area) documented in e-bird website for Old Panchanandapur Chaur, Farakka IBA (till December 2017)¹ and Bara Sagardighi Fish Farm/Sagardighi Wetland (till February 2016)² did not reveal presence of both the species in the area. Conclusive evidence of regular occurrence of a single individual of the species in the area could not be established and thereby the species cannot be considered a potential critical habitat candidate (Criteria 1 Tier 2c).</p> <p>White Bellied Heron Discussion with Dr. Manoranjan Chowdhury revealed that the species was not so frequently recorded in the area. Records of Mr. Samiran Jha documented in e-bird website for Old Panchanandapur Chaur Farakka IBA (till December 2017) and Bara Sagardighi Fish Farm/Sagardighi Wetland (till February 2016) did not reveal presence of the species in the area. Discussion with Mr. Samiran Jha also revealed that the species was not recorded from Farakka and Malda area recently. As the species is not recently recorded (within 5 years) from Farakka barrage and other wetlands of Malda, conclusive evidence of regular occurrence of a single individual of the species in the area could not be established and thereby the species cannot be considered a potential critical habitat candidate (Criteria 1 Tier 2c).</p> <p>Baer's Pochard Discussion with local experts Dr. Manoranjan Chowdhury (first author of the Choudhury & Nandi paper) revealed that the species was not so frequently recorded in the area. Records of Mr. Samiran Jha documented in e-bird website for Old Panchanandapur Chaur, Farakka IBA (till December 2017)³ and Bara Sagardighi Fish Farm/Sagardighi Wetland (till February</p> |
| | <p>(b) Habitat with known, regular occurrences of CR or EN species where that habitat is one of 10 or fewer discrete management sites globally for that species</p> | |
| | <p>Tier 2</p> | |
| | <p>(c) Habitat that supports the regular occurrence of a single individual of an IUCN red-listed CR species and/or habitat containing regionally-important concentration of an IUCN red-listed EN species where that habitat could be considered a discrete management unit for that species.</p> | |
| <p>(d) Habitat of significant importance to IUCN red-listed CR or EN species that are wide-ranging and/or whose population distribution is not well understood and where the loss of such a habitat could potentially impact the long-term survivability of the species</p> | | |
| <p>(e) As appropriate, habitat containing nationally/regionally important</p> | | |

¹ <https://ebird.org/taiwan/hotspot/L3287993>

² <https://ebird.org/taiwan/hotspot/L3287963>

³ <https://ebird.org/taiwan/hotspot/L3287993>

| IFC PS 6 Criterion | Quantitative Threshold Requirements for Criterion | Screening for all species |
|-----------------------|---|---|
| | concentration of an IUCN red-listed EN, CR or equivalent national/regional listing. | <p>2016)1 did not reveal presence of the species in the area. Discussion with Mr. Samiran Jha also revealed that the species was not recorded from Farakka and Malda area recently. As the species is not recently recorded (within 5 years) from Farakka barrage and other wetlands of Malda, conclusive evidence of regular occurrence of a single individual of the species in the area could not be established and thereby the species cannot be considered a potential critical habitat candidate (Criteria 1 Tier 2c).</p> <p><u>ENDANGERED SPECIES (IUCN v2017-3)</u></p> <p>Pallas Fish Eagle Discussion with forest officials of Raiganj (Kulik) Wildlife sanctuary and local villagers did not reveal the presence of the species in the area. The species was also reported from Belatuli and Gabgachi-Bhatia Wetlands (Chowdhury & Nandi, 2014). The global population of the species is estimated to be 1,000–2,499 mature individuals². The species reportedly breeds in northern India (apparent strongholds in Assam and Uttarakhand)³. As the species is recorded only from a few wetlands in proximity to the highway alignment, the habitat cannot be considered regionally or nationally important concentrations for the species and is thereby not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).</p> <p>Greater Adjutant Stork The species is reported by Choudhury & Nandi (2014) from Gabgachi-Bhatia wetland. However, the species is not reported from other wetlands studied by Choudhury & Nandi (2014). Moreover, discussions with forest officials at Raiganj Wildlife Sanctuary did not reveal presence of the species. The total population of the species is estimated to be 800-1,200 mature individuals, roughly equivalent to 1,200-1,800 individuals⁴ in total, which included 650-800 birds reported from Assam and about 156 birds from Bihar. As the species is recorded from a single wetland in proximity to the highway alignment, the habitat cannot be considered regionally or nationally important concentrations for the species and thereby is not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).</p> <p>Black Bellied Tern The species is not reported in the IBA factsheet of Farakka Barrage, however, Choudhury & Nandi (2014) reported the species from Farakka Barrage, Gabgachi-Bhatia wetland and</p> |

¹ <https://ebird.org/taiwan/hotspot/L3287963>

^{2,3} BirdLife International. 2017. *Haliaeetus leucoryphus*. The IUCN Red List of Threatened Species 2017: e.T22695130A119358956. <http://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T22695130A119358956.en>. Downloaded on 11 April 2018.

⁴ BirdLife International. 2016. *Leptoptilos dubius*. The IUCN Red List of Threatened Species 2016: e.T22697721A93633471. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22697721A93633471.en>. Downloaded on 11 April 2018.

| IFC PS 6 Criterion | Quantitative Threshold Requirements for Criterion | Screening for all species |
|---|---|--|
| | | <p>Belatuli Wetland. The population estimate is reported to be 10,000-25,000 individuals with approximately 6,700-17,000 mature individuals¹. In India, the population distribution is widespread and the species is reported from protected areas throughout its range, including Bhitarkanika National Park, Satkosia Tiger Reserve, Harike Wildlife Sanctuary, Keoladeo National Park, Rajiv Gandhi National Park, Dibru-Saikhowa National Park, Kaziranga National Park etc. As the species distribution in India is widespread, the individuals recorded in Farakka Barrage and the few other wetlands in the proximity of the proposed road alignment cannot be considered regionally or nationally important concentrations for the species and the species is thereby not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).</p> <p>Gangetic Dolphin The Conservation Action Plan for the Gangetic Dolphin (2010-2020) prepared by the Ministry of Environment, Forests and Climate Change (MoEFCC) reports that Gangetic dolphins occur in three subpopulations bounded by the Bijnor (Middle Ganga Barrage in Uttar- Pradesh), Narora (lower Ganga Barrage in Uttar Pradesh) and Farakka Barrage². The report also identified some “Critical Stretches for Gangetic Dolphins” as part of the conservation plan and Farakka Barrage is not identified as a critical stretch. The only protected area for Gangetic Dolphin, the Vikramshila Gangetic Dolphin Sanctuary in Bihar, is more than 100 km upstream of Farakka barrage. The Dolphin population in Farakka barrage area cannot be considered regionally or nationally important concentrations for the species and thereby is not considered a potential critical habitat candidate (Criteria 1 Tier 2c and e).</p> |
| Criterion 3: | Tier 1 | |
| Habitat supporting globally significant concentrations of migratory species and/or congregatory species | (a) Habitat known to sustain on a cyclical or otherwise regular basis, $\geq 95\%$ of the global population of a migratory or congregatory species at any point of the species’ lifecycle where that habitat could be considered a discrete management unit for that species. | This criterion is not applicable for the project. |
| | Tier 2 | |
| | (b) Habitat known to sustain, on a cyclical or otherwise regular basis, $\geq 1\%$ but $< 95\%$ of the global population of a migratory or congregatory species at any point of the | <p><u>MIGRATORY OR CONGREGATORY SPECIES</u></p> <p>Asian Openbill Congregation of Asian openbill is only noted within the Raiganj Wildlife Sanctuary, which is more than 7.5 km from the road alignment, thereby Criteria 3: Tier 2b,e is not triggered</p> |

¹ BirdLife International. 2017. *Sterna acuticauda* (amended version of 2016 assessment). The IUCN Red List of Threatened Species 2017: e.T22694711A110488626. <http://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22694711A110488626.en>. Downloaded on 11 April 2018.

² Sinha, R. K., Behera, S. and Choudhary, B.C. 2010. The Conservation Action Plan for the Gangetic Dolphin 2010-2020. Ministry of Environment and Forests, Government of India. 44 pp.

| IFC PS 6 Criterion | Quantitative Threshold Requirements for Criterion | Screening for all species |
|-----------------------|---|--|
| | <p>species' lifecycle and where that habitat could be considered a discrete management unit for that species, where adequate data are available and/or based on expert judgement.</p> | <p>Fulvous Whistling Duck Discussion with local experts Mr. Samiran Jha and Dr. Manoranjan Chowdhury revealed that overall birds visting Farakka area has been reduced significantly. Mr. Samiran Jha reported that the maximum number of individuals of the species visiting the Farakka area would be approximately 1000 currently. It was also reported by Mr. Jha that the number of birds visiting the satellite wetlands (Gabgachi-Bhatia, Sagardighi, Belatuli etc.) would be much less compared to the birds visiting the Farakka area. The global population of the species is estimated to be 1,300,000-1,500,000 individuals¹ and the 1% threshold value for triggering the critical habitat is 13000 individuals. As the threshold figure to trigger critical habitat is 13000 hence overshooting that figure is unlikely based on current records hence, Criteria 3, Tier 2b is not likely to be triggered.</p> <p>Tufted Duck More recent survey conducted by Chowdhury & Nandi (2014) also reported the species from Farakka Barrage. The global population is estimated to be 2,600,000-2,900,000 individuals for the species² and 1% threshold value for triggering the critical habitat is 26000 individuals. The individuals recorded during 1998 (approx. 70000 individuals), exceeded the 1% threshold value. Discussion with local experts Mr. Samiran Jha and Dr. Manoranjan Chowdhury revealed that overall birds visting Farakka area has reduced significantly. Dr. Manorajan Chowdhury reported that the tufted duck is quite rare in the area. Mr. Samiran Jha reported that approximately 2000-3000 birds visit the Farakka area currently. It was also reported by Mr. Jha that the number of birds visiting the satellite wetlands (Gabgachi-Bhatia, Sagardighi, Belatuli etc.) would be much less compared to the birds visiting the Farakka area. As the threshold figure to trigger critical habitat is 26000 hence exceeding that figure is unlikely based on current records hence, Criteria 3, Tier 2b is not likely to be triggered.</p> |

¹ BirdLife International. 2016. *Dendrocygna bicolor*. The IUCN Red List of Threatened Species 2016: e.T22679746A92827620. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22679746A92827620.en>. Downloaded on 11 April 2018.

² BirdLife International. 2016. *Aythya fuligula*. The IUCN Red List of Threatened Species 2016: e.T22680391A86013549. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22680391A86013549.en>. Downloaded on 11 April 2018.

The road alignment is in close proximity to the Farakka Barrage and Adjoining Areas IBA, however, as shown in *Table 2.2*, none of the species reported in the area have been assessed to trigger critical habitats.

However, in view of the presence of Farakka IBA in proximity to the road the following recommendations could be followed

- i. Any repair work if needed, should be conducted prior to the migratory season particularly near Farakka area and other satellite wetlands viz. Gabgachi-Bhatia, Sagardighi etc.
- ii. Implementation of code of conduct for all workers; the workers need to follow a strict “no hunting policy” and can be removed from duty if they default.

Annex 1: Photo documentation of Farakka Barrage and the Other Wetlands



Farakka Barrage



Gabgachi- Bhatia Wetland



Sagardighi-Wetland



Belatuli Wetland

Annex A

Photo-documentation

Annex 1: Photo documentation of Farakka Barrage and the Other Wetlands



Farakka Barrage



Gabgachi- Bhatia Wetland



Sagardighi-Wetland



Belatuli Wetland



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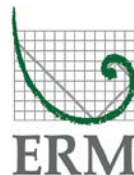
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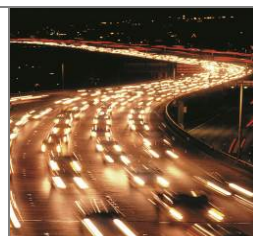
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