

# **Environmental Monitoring Report**

---

**Public**  
**Project No. 55148-001**  
**Semestral Report (January-June 2024)**  
**August 2024**

**Bangladesh: Skills for Industry Competitiveness and Innovation Program**

Prepared by Skills Development Coordination and Monitoring Unit (SDCMU), Skills for Industry Competitiveness and Innovation Program (SICIP) under Finance Division, Ministry of Finance, Government of Bangladesh for the Asian Development Bank (ADB).

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

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

## **Semi-annual Environmental Monitoring Report (January to June 2024)**

---

Project No. 55148-001  
June 2024



**ASIAN DEVELOPMENT BANK**



**ADB Loan Number 4334-BAN (COL): Skills for Industry Competitiveness and  
Innovation Program (SICIP) Program (SICIP)**

### **Prepared by:**

Skills Development Coordination and Monitoring Unit (SDCMU), Skills for Industry Competitiveness and Innovation Program (SICIP) under Finance Division, Ministry of Finance and The Asian Development Bank.

## LIST OF ACRONYMS

|       |                                                 |
|-------|-------------------------------------------------|
| BMET  | Bureau of Manpower, Employment and Training     |
| CBLM  | Competency-Based Learning Material              |
| CS    | Competency Standard                             |
| DSC   | Design Supervision Consultant                   |
| EARF  | Environmental Assessment and Review Framework   |
| EMP   | Environmental Management Plan                   |
| IEE   | Initial Environmental Examination               |
| KOICA | Korea International Cooperation Agency          |
| MoU   | Memorandum of Understanding                     |
| NHRDF | National Human Resource Development Fund        |
| NSDC  | National Skills Development Council             |
| NSDP  | National Skills Development Policy              |
| PKSF  | Palli Karma-Sahayak Foundation                  |
| RF    | Resettlement Framework                          |
| SECPF | Small Ethnic Communities Planning Framework     |
| SECPP | Small Ethnic Communities Peoples Plan           |
| SEIP  | Skills for Employment Investment Program        |
| SPS   | Safeguard Policy Statement                      |
| SWAp  | Sector Wide Approach                            |
| TMS   | Training Management System                      |
| TTC   | Technical Training Center                       |
| TVET  | Technical and Vocational Education and Training |

## TABLE OF CONTENTS

|                                                                              |            |
|------------------------------------------------------------------------------|------------|
| <b>EXECUTIVE SUMMARY.....</b>                                                | <b>III</b> |
| <b>1 INTRODUCTION.....</b>                                                   | <b>1</b>   |
| 1.1 Background .....                                                         | 1          |
| 1.2 Impact and Outcome.....                                                  | 2          |
| 1.3 Outputs.....                                                             | 2          |
| 1.4 Scope of the project .....                                               | 2          |
| 1.5 Environmental Safeguards Category .....                                  | 2          |
| 1.6 Description civil works.....                                             | 3          |
| 1.7 Scope of the report & Reporting period .....                             | 3          |
| 1.8 Package and sub-project wise progress status .....                       | 4          |
| 1.9 Document preparation for IEE/EARF.....                                   | 5          |
| 1.10 Status on relevant GOB permits .....                                    | 6          |
| 1.11 Summary Qualitative and quantitative monitoring data .....              | 6          |
| 1.12 Progress of civil works .....                                           | 7          |
| 1.13 Preparation of monitoring checklist.....                                | 7          |
| 1.14 Implementation arrangements .....                                       | 8          |
| <b>2 ENVIRONMENTAL MONITORING .....</b>                                      | <b>10</b>  |
| 2.1 IEE, EARF & SEMP compliances .....                                       | 10         |
| 2.2 Status Monitoring parameters/Plan .....                                  | 10         |
| 2.3 Training and Capacity Building Activities .....                          | 35         |
| 2.4 Grievance Redress Mechanism (GRM).....                                   | 35         |
| <b>3 ENVIRONMENTAL MANAGEMENT .....</b>                                      | <b>36</b>  |
| 3.1 Compliance with Environmental Mitigation and Management Plan (EMP) ..... | 36         |
| 3.2 Compliance with ADB SPS 2009 policies.....                               | 68         |
| 3.3 Compliance with loan covenants .....                                     | 69         |
| <b>4 STRATEGY FOR COVID-19 PANDEMIC AND H&amp;S GUIDELINE.....</b>           | <b>72</b>  |
| <b>5 CONCLUSION AND RECOMMENDATION .....</b>                                 | <b>74</b>  |

## LIST OF FIGURS

-----

## LIST OF TABLES

|                                                                             |    |
|-----------------------------------------------------------------------------|----|
| Table 1-1: Civil works under SICIP .....                                    | 3  |
| Table 1-2: IEE/EARF Status.....                                             | 5  |
| Table 2-1: Status of Environmental Monitoring Plan .....                    | 10 |
| Table 3-1: Status of Environmental Management Plan.....                     | 36 |
| Table 3-2: The compliance status of SICIP with respect to ADB SPS 2009..... | 68 |
| Table 3-3: The compliance status with respect to loan covenants .....       | 69 |
| Table 4-1: The compliance status of SICIP with respect to COVID-19.....     | 72 |
| Annex-1: Pictures.....                                                      | 75 |

## EXECUTIVE SUMMARY

Finance Division, Ministry of Finance of the Government of Bangladesh is implementing the program titled “Skills for Industry Competitiveness and Innovation Program (SICIP)” with the financial assistance of the Asian Development Bank (ADB) to develop skilled workforce through advanced technical and competency-based training programs across the country. The SICIP will establish a complete quality assurance mechanism to facilitate collaborations between training institutes and industries which will ensure in developing human resources for the priority industry sectors.

More specifically, the outcome of the program will be an increased technology-oriented skilled workforce for priority and emerging industries across skill levels. The outcome will be measured by the following: (i) skilled workers across skill levels-from basic to advanced technical skill-produced for at least 10 priority and emerging industries, with 65% job placement for new job seekers and (ii) women and people from socially disadvantaged groups with employable and/or life skills increased through specially targeted programs. The program is expected to benefit about 220,000 new and existing workers over a 6-year implementation period.

Under SICIP program, various civil works such as setting up new training centers or renovating existing ones at different locations in Bangladesh will be implemented. For this project, the national and international consultants had been engaged to support the preparation of preliminary & detail engineering design works, that include equipment layouts for the proposed buildings; these design works will form technical specifications for preparation of bidding documents. The proposed buildings may include two smart textile technology labs (STTLs) under the Ministry of Textiles and Jute (MoTJ), classroom and lab buildings at selected universities, and other renovation works for polytechnics or TVET institutes. In this regard, the national consultant will be engaged to prepare detail engineering design and drawings including parts of feasibility reports for some of the proposed infrastructures.

This semi-annual report presents the status of project implementation, details of compliance with environmental regulations of the Government of Bangladesh and Safeguards Policies of ADB, details of compliance with environmental loan covenants and the status of compliance with various aspects of EMP as stated in the IEE reports.

It is noted that the intermittent type design consultants had been engaged for performing the detail drawings and Bill of quantities for STTL, NATI and the cost associated with EMPs included in the Biding documents. The tender for STTL-Chattogram, and Kumudinini hostel building have been floated and the contract will be awarded expecting in the next quarter.

Furthermore, several coordination meetings were held among SEIP, MoTJ, BMET and Kumudidni for implementing the civil works.

# 1 INTRODUCTION

## 1.1 Background

1. The Asian Development Bank (ADB) will finance the results-based lending (RBL) program to support the Government of Bangladesh's Skills Development Framework for Economic Competitiveness 2023, as envisaged in the Perspective Plan of Bangladesh 2021–2041 (PP2041) and the Eighth Five Year Plan July 2020–June 2025.<sup>2</sup> The program aims to (i) increase the technology-oriented skilled workforce across emerging and priority sectors, (ii) promote inclusive skilling and upskilling opportunities for women and socially disadvantaged groups, (iii) incentivize industry–university partnerships to nurture innovation capacity and improve industry competitiveness, and (iv) foster skills for climate-resilient manufacturing processes and green technologies.

2. Finance Division, Ministry of Finance of the Government of Bangladesh is implementing the program titled “Skills for Industry Competitiveness and Innovation Program (SICIP)” with the financial assistance of the Asian Development Bank (ADB) to develop skilled workforce through advanced technical and competency-based training programs across the country. The SICIP will establish a complete quality assurance mechanism to facilitate collaborations between training institutes and industries which will ensure in developing human resources for the priority industry sectors.

### 3. Specifically, the objectives are:

i) The objectives of scheme 1 is to (i) develop the capacity for advanced technical skills training for emerging and priority industries and (ii) strengthen managerial capabilities, research and development (R&D) driven innovation, and green skills capacity in the industries. These objectives are expected to increase technology-oriented skilled workforce and boost the country's industry competitiveness and innovation capacity.

ii) The objectives of scheme 2 is to (i) deliver industry-relevant basic and mid-level skills training for priority and emerging industries and (ii) promote inclusive skilling and upskilling opportunities for women and socially disadvantaged groups through targeted training programs. These objectives are expected to enhance the job-ready skills and productivity of the country's workforce, contributing to economic diversification and competitiveness of industries.

iii) SICIP Scheme-3's activity coverage includes enhancing institutional capacity for skills monitoring and management by coordinating all training and other activities under the SICIP program. Objectives are:

- Establishment of an Industry Advisory Board in order to prepare a guideline for development of advanced technical skills courses
- Arrange for wide scale skills-gap analysis to facilitate program effectiveness
- Build and establish a IT based Trainee Management System to monitor training performance and put quality assurance in place
- Arrange for necessary analytic studies (e.g. tracer studies, skills trend analysis)
- Effective management and governance of overall skills development eco-systems.
- Strengthening skills institutions like NSDA, NHRDF
- Arrange for financial audits, internal audits and performance audits.
- Arrange for independent verification of attainment of performance indicators

## 1.2 Impact and Outcome

4. The impact will be increased income and productivity of the working population aged 15 and over, aligned with NSDP. The outcome will be increased employment in priority sectors and skills for males and females.

5. The outcome for this project is- Technology-oriented skilled workforce increased for priority and emerging industries across skill levels

## 1.3 Outputs

The outputs of this project are:

- (i) advanced technical skills and managerial capabilities for emerging and priority industries,
- (ii) industry–university collaborations for R&D projects with applications of advanced or green technologies,
- (iii) socially inclusive skilling and upskilling for women and people from disadvantaged groups, and
- (iv) enhanced skills monitoring and coordination.

## 1.4 Scope of the project

6. SICIP involves in various civil works, such as setting up new training centers or renovating existing ones at different locations in Bangladesh. For this new project, the pool of national and international consultants had been engaged to support the preparation of preliminary & detail engineering design works, that include equipment layouts for the proposed buildings; these design works form with technical specifications for preparation of bidding documents. The proposed buildings include two smart textile technology labs (STTLs) under the Ministry of Textiles and Jute (MoTJ), classroom and lab buildings at selected universities, and other renovation works for polytechnics or TVET institutes.

## 1.5 Environmental Safeguards Category

7. The SICIP program will support the construction of STTLs and construction or upgrading of other academic buildings. The potential adverse impacts of these civil works are expected insignificant, site-specific, short-term, and mitigation measures are readily available. Considering several civil works, an environmental assessment and review framework (EARF) has been developed to facilitate safeguards planning and implementation and to streamline safeguards compliance. The EARF will guide (i) subproject screening and environmental assessment for due diligence on eligible activities, (ii) initial environmental examination (IEE) including environmental management plan (EMP) for category B subprojects, and (iii) stakeholder consultation and information disclosure. The EMPs will be incorporated in the bidding and contract documents, implemented by contractors and monitored by SDCMU. The EARF will also ensure that grievance redress mechanism is in place and EMP implementation is monitored. Following the country system, an environmental clearance certificate for the eligible subprojects will be obtained from the Department of Environment with necessary documentation.



## 1.6 Description civil works

8. The list of civil works under SICIP project is described as below:

**Table 1-1: Civil works under SICIP**

| SL | Description of Works                                                                                           | Indicative area (Sqm) | Estimated value (USD) | Remarks  |
|----|----------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|----------|
| 1  | Renovation of Narsingdi Polytechnic Institute for the creation of Automotive technology training center (NATI) | 4,500 sqm             | 2.2 million           | Scheme-1 |
| 2  | Construction of STTL in textile college in Chattogram                                                          | 9,000 sqm             | 11.5 million          | Scheme-1 |
| 3  | Construction of STTL in new textile college in Gazipur                                                         | 9,000 sqm             | 11.0 million          | Scheme-1 |
| 4  | New EDC building at East West University(EWU)                                                                  | 1,700 sqm             | 2.0 million           | Scheme-1 |
| 5  | Renovation of EDC building at IBA                                                                              | 7,300 sqm             | 4.0 million           | Scheme-1 |
| 6  | New EDC building at BUTEX*                                                                                     | TBD                   | 5.0 million           | Scheme-1 |
| 7  | Kumudini nursing dormitory building                                                                            | 14,000 sqm            | 7.0 million           | Scheme-2 |
| 8  | Kumudini nursing academic building                                                                             | 12,000 sqm            | 5.0 million           | Scheme-2 |
| 9  | Extension of new training facilities in BG-TTC and other TTCs                                                  | 4,500 sqm             | 1.2 million           | Scheme-2 |

## 1.7 Scope of the report & Reporting period

9. The scope of this monitoring report is specific for the civil works under SICIP of NATI, STTL, EDCs Buildings and TTCs under BMET. The reporting period is January to June 2024.

10. The Semi-Annual Environmental Monitoring Report (EMR) presents the status of sub project implementation, details of compliance with environmental regulations of the Government of Bangladesh and safeguards policies of ADB, details of compliance with environmental loan covenants, details of complaints received and their redressal and the status of compliance with various aspects of EMP as stated in the IEE reports. In this report the performance indicators of environmental works under the proposed civil works of Tranche 2 have been summarized and analyzed to measure the monitoring parameters. This semi-annual environmental monitoring report consists of three main parts: an introduction section, Environmental monitoring, Environmental management and conclusion.

## 1.8 Package and sub-project wise progress status

11. SICIP consists of the four outputs and the progress according to the outputs are presented below:

### **Output-1: Capacity for advanced technical skills training developed for emerging and priority sectors.**

12. This output will cultivate higher-level technical skills for existing priority and newly emerging sectors, such as electronics, automotive, and pharmaceutical, through partnerships between industries and education and/or training institutes (DLI 3). The skill requirements will be identified by leading industries, particularly for high-demand technology-related skills. Industries will be involved in developing curricula and instructors as well. The Finance Division in the MOF is setting up an industry advisory board for the program, consisting of leading industries. Some polytechnics in industrial areas will be converted into specialized polytechnics to offer customized skills courses for emerging industries (e.g., automobiles, electronics). This output will also enhance the institutional capacity to produce skilled workers adept at emerging technologies, including green technologies (DLI 4). It will create an automotive skills training center at a polytechnic focusing on electric vehicles, establish smart textile technology living labs (STTLs) in two textile engineering colleges,<sup>14</sup> and set up high-demand technology-based courses in garments universities and in a light engineering institute. Many of these technical courses will have international partnerships for transfer of knowledge, training of instructors, and capacity development

**Progress:** Detail design and BOQ for STTL and NATI have been completed. Tender for STTL and Kumudinin hostel buildings have been floated which will be open on 11 July 2024.

### **Output-2: Managerial capabilities and green innovation capacity strengthened.**

13. Building on the SEIP's introduction of executive development centers (EDC) that impart customized mid-level managerial training through university–industry partnerships, the government will further institutionalize the EDCs in partnering universities (e.g., Bangladesh University of Textiles, BRAC University, Dhaka University, and East West University).<sup>16</sup> EDC courses will be redesigned to align with industry's technology trends and global environmental standards, including green technologies and business practices (DLI 5). This output will also promote applied R&D for industry solutions and incubation opportunities (DLI 6) by providing competitive grants. This initiative intends to foster collaborative innovations in industrial production processes and value-added product or service development. Applied R&D projects supporting the growth of small and medium-sized enterprises and climate-resilient products or services will be prioritized.<sup>17</sup> The government will make efforts to bring overseas scientists and engineers of Bangladeshi origin to contribute to the transfer of knowledge and skills, which will connect local industries and academies to the global network. This will become a basis of developing a government policy or program

**Progress:** Preparatory works-Business plan preparation have been started.

**Output-3: Access to socially inclusive skilling and upskilling expanded.**

14. This output will continue to support basic and mid-level skills training of new entrants or existing workers with industry partnerships, following the SEIP's sector-focused training models, covering at least nine priority sectors (DLI 7). These will be implemented in close coordination with the National Skills Development Authority (NSDA) and National Human Resource Development Fund (NHRDF). It will also create specially targeted skills programs for socially disadvantaged groups (e.g., people with disabilities, transgender people, and people in small ethnic communities); women garment sector workers who are at high risk of job loss because of automation; and those who may be negatively affected by the transition to a low-carbon economy. For women, upskilling and multi-skilling for future garment work or alternative livelihoods, community-based support for empowerment, and green entrepreneurship skills will be provided in partnership with the H&M Foundation and the Asia Foundation. The government will also scale up skills courses with international certification for potential migrant workers, which will enable them to gain better employment opportunities overseas and increase remittance flows (DLI 8).

**Progress:** Preparatory Works-Business plan preparation have been started.

**Output-4: Institutional capacity for skills monitoring and management enhanced**

15. This output will support the establishment of an industry advisory board for output 1 activities, which will guide the development of advanced technical skills courses by ensuring the coverage of emerging sectors and new skills requirements. The output will continue to enhance monitoring mechanisms, such as the online trainee management system (TMS) created under the SEIP to monitor training performance and track its outcomes. Analytic studies, such as a tracer study and industry skills trends analysis, will be undertaken to assess the effectiveness of new skills programs and to institutionalize effective training partnership models. The output will ensure effective management and governance of skills development systems overall, by undertaking financial audits, internal audits, and performance audits of the RBL program.

**Progress:** Preparatory Works-Business plan preparation have been started.

**1.9 Document preparation for IEE/EARF**

16. The IEE for Kumudining Nursing Hostel and Technical Training Centers in Sylhet, STTL and NATI was prepared and updated EARF accordingly which were disclosed. As stated in the IEE, the project has been categorized as "B" considering environmental impact aspects as per ADB's Safeguards Policy Statement (SPS -2009).

**Table 1-2: IEE/EARF Status**

| SL | Description of Works                                                                                    | IEE  | EARF |
|----|---------------------------------------------------------------------------------------------------------|------|------|
| 1  | Renovation of Narsingdi Polytechnic Institute for the creation of Automotive technology training center | Done | Done |
| 2  | Construction of STTL in textile college in Chattogram                                                   | Done | Done |
| 3  | Construction of STTL in new textile college in Gazipur                                                  | -    | -    |
| 4  | New EDC building at East West University(EWU)                                                           | -    | -    |
| 5  | Renovation of EDC building at IBA                                                                       | -    | -    |

| SL | Description of Works                               | IEE  | EARF |
|----|----------------------------------------------------|------|------|
| 6  | New EDC building at BUTEX*                         | -    | -    |
| 7  | Kumudini nursing dormitory                         | Done | Done |
| 8  | Kumudini academic building                         | -    | -    |
| 9  | Extension of new training facilities in Sylhet TTC | Done | Done |

**Table 1-3: Status of IEE/EARF publications:**

| SL | Packages                                               | EARF          |                 | IEE           |                 |
|----|--------------------------------------------------------|---------------|-----------------|---------------|-----------------|
|    |                                                        | ADB's website | SICIP's website | ADB's website | SICIP's website |
| 1. | Renovation of Narsingdi Polytechnic Institute          | √             | x               | x             | x               |
| 2. | Construction of STTL in textile college in Chattogram  | √             | x               | x             | x               |
| 3. | Construction of STTL in new textile college in Gazipur | √             | x               | x             | x               |
| 4  | New EDC building at East West University(EWU)          | √             | x               | x             | x               |
| 5  | Renovation of EDC building at IBA                      | √             | x               | x             | x               |
| 6  | New EDC building at BUTEX*                             | √             | x               | x             | x               |
| 7  | Kumudini nursing dormitory                             | √             | x               | x             | x               |
| 8  | Kumudini academic building                             | √             | x               | x             | x               |
| 9  | Extension of new training facilities in Sylhet TTC     | √             | x               | x             | x               |

### 1.10 Status on relevant GOB permits

17. The work is renovations of TTCs at Sylhet and Other civil works belongs universities, so those works do not require permission for fire, DoE or other local authority's clearance.

### 1.11 Summary Qualitative and quantitative monitoring data

18. It is noted that the intermittent type design consultants have been engaged for performing the detail drawings and Bill of quantities for those civil works and the cost associated with EMPs had been included in the Bid documents. So far, the BOQ & design for STTL, NATI, Kumudini hostel and Sylhet TTC have been completed. The tender for STTL-Chattogram, and Kumudini hostel building have been floated and the contract award will be expecting in the next quarter. The ADB Safeguard Policy Statement, 2009 and EMPs have also been shared to avoid adverse impacts of projects on the environment and affected people where possible.

## 1.12 Progress of civil works

19. The detail progress is listed below:

**Table 1-3: Progress of Civil works under SICIP**

| SL | Description of Works                                                                                           | Indicative area (Sqm) | Financial Progress | Physical progress                                                 |
|----|----------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|-------------------------------------------------------------------|
| 1  | Renovation of Narsingdi Polytechnic Institute for the creation of Automotive technology training center (NATI) | 4,500 sqm             | -                  | Detail drawings & BOQ done.                                       |
| 2  | Construction of STTL in textile college in Chattogram                                                          | 9,000 sqm             | -                  | Detail drawings & BOQ done. Tender was also floated in June 2024. |
| 3  | Construction of STTL in new textile college in Gazipur                                                         | 9,000 sqm             | -                  | Site selection done                                               |
| 4  | New EDC building at East West University(EWU)                                                                  | 1,700 sqm             | -                  | Site selection done                                               |
| 5  | Renovation of EDC building at IBA                                                                              | 7,300 sqm             | -                  | Preliminary drawing done                                          |
| 6  | New EDC building at BUTEX*                                                                                     | TBD                   | -                  | Site selection done                                               |
| 7  | Kumudini nursing and dormitory building                                                                        | 14,000 sqm            | -                  | Detail drawings & BOQ done. Tender was also floated in June 2024. |
| 8  | Kumudini nursing academic building                                                                             | 12,000 sqm            | -                  | Preliminary drawing done                                          |
| 9  | Extension of new training facilities in BG-TTC and other TTCs                                                  | 4,500 sqm             | -                  | Detail drawings & BOQ done.                                       |

## 1.13 Preparation of monitoring checklist

20. The monitoring check list for EHS status, pollution status, grievance status, labour shed status, worksite traffic and accidents status etc. will be developed based on the following Monitoring parameters as described in the IEE.

**Table 1-4: Site Specific Environmental Monitoring Parameters to be monitored during Construction phase**

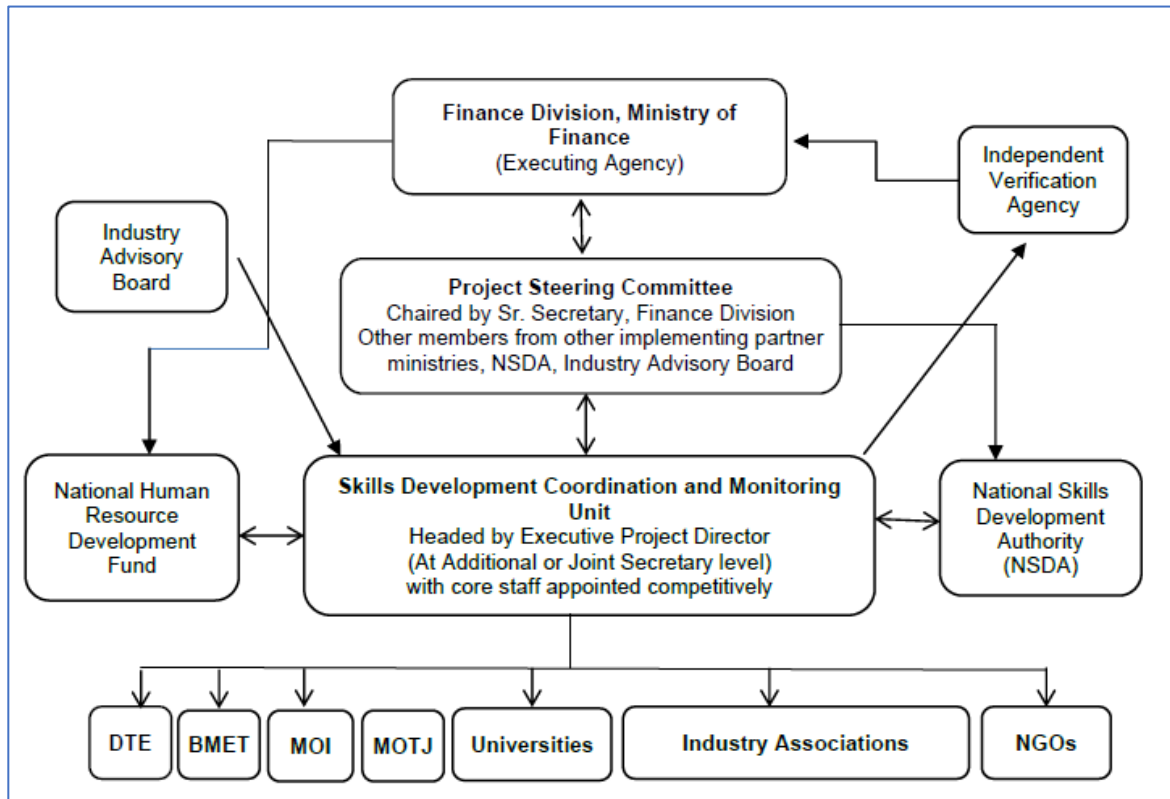
| Item                  | Parameters                                                                  | Location                                      |
|-----------------------|-----------------------------------------------------------------------------|-----------------------------------------------|
| Ambient Air Quality   | PM <sub>10</sub> , PM <sub>2.5</sub> , SPM, SO <sub>x</sub> NO <sub>x</sub> | Around the project site                       |
| Groundwater           | pH, TDS, Ammonia, Nitrate, Phosphate, As, Fe, Mn and Coliforms              | At the project site                           |
| Surface water quality | pH, TDS, Ammonia, Nitrate, Phosphate, As, Fe, Mn and Coliforms              |                                               |
| Noise Level           | Noise at different locations and to nearest receptors                       | Around the project site and nearest receptors |
| Health                | Health status of the workers, visual observation and record check           | At site                                       |

## 1.14 Implementation arrangements

21. The Finance Division in the MOF will be the executing and implementing agency. The SDCMU—established under SEIP—will continue to serve as the program management unit to facilitate, coordinate, and monitor all project activities. The SDCMU is headed by the executive project director (EPD). The national project director (currently senior secretary of the Finance Division) will continue to provide policy advice, review funding, and release funds for the RBL program. All the staff of the SDCMU are recruited competitively with required expertise and experience. The SDCMU is responsible for facilitating, coordinating, and monitoring the implementation of the RBL program.
22. An inter-ministerial project steering committee (PSC), chaired by secretary of the Finance Division, includes selected senior officials from key ministries, institutions, and NSDA, with the EPD of the RBL program as the member-secretary. The PSC will provide overall policy advice and oversight, approve annual operation plans, review achievements against targets, and ensure compliance with fiduciary oversight arrangements.
23. The key implementing partner ministries include the Technical and Madrasah Education Division in the Ministry of Education; Bureau of Manpower, Employment and Training in the Ministry of Expatriates' Welfare and Overseas Employment; Ministry of Industries; and Ministry of Textiles and Jute. The Skills Development Implementation Committee (SDIC) headed by the EPD with representatives from all the public and private partner agencies will provide a common forum to discuss implementation issues and to make joint efforts to resolve problems emanating from implementation. If problems cannot be resolved at this level, these will be escalated to the PSC level for resolution.
24. The Project Implementation Unit (PIU), headed by a National Program Director (NPD), is established to coordinate policy issues and monitor implementing activities of the project.
25. Project management and coordination functions for the project are provided by the Skills Development Coordination and Monitoring Unit (SDCMU). SDCMU is also responsible for providing secretarial support to the PSC and ensuring overall coordination for implementation of the project. The SDCMU is headed by an Executive Program Director (EPD), supported by 4 Deputy Executive program Directors and 10 Assistant Executive Project Directors.
26. In SDCMU, DEPD (Public) is the focal person for monitoring and reporting the safeguard related components. With the assistance of Environmental Expert, Construction firms will implement the EMPs.

| Srl | Name                       | Designation            | Email Address                     | Contact no.     |
|-----|----------------------------|------------------------|-----------------------------------|-----------------|
| 1.  | Mr. Md. Mahfuzul Alam Khan | DEPD(Public)           | depd.public1@seip-fd.gov.bd       | +880255138753-5 |
| 2.  | Ms. Mahbuba Farjana        | Gender & SD Specialist | gender.specialist1@seip-fd.gov.bd | +880255138753-5 |
| 3.  | Mr. Md. Badruzzaman        | Civil Engineer         | civil.engineer1@seip-fd.gov.bd    | +880255138753-5 |

27. The project operational organogram of SICIP is presented below.





## 2 ENVIRONMENTAL MONITORING

### 2.1 IEE, EARF & SEMP compliances

28. The detail design work with bid documents have been completed for NATI, STTL, Syl TTC & Kumudinind and the physical works are not started yet. The environmental management plan (EMP) considering IEE for them have been prepared during that time and will ensure the applicable compliances.

### 2.2 Status Monitoring parameters/Plan

29. In this reporting period, no significant issues were noticed for reporting. As the works are not started yet, so there is no issue of tree cutting or any other significant construction work which can degraded the existing environment of proposed construction sites and surrounding areas.

**Table 2-1: Status of Environmental Monitoring Plan**

**a) Monitoring Plan for NATI and STTL**

| Parameter type                      | Prescribed measures                                                                                                                                | Monitoring entity             | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | When to monitor                                                                                                                                     | Estimated monitoring cost in BDT                 |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>A. PRE-CONSTRUCTION PHASE</b>    |                                                                                                                                                    |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                     |                                                  |
| <b>(i) IMPLEMENTATION READINESS</b> |                                                                                                                                                    |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                     |                                                  |
| 1. Environmental baseline           | - Collect and analyze samples for key environmental parameters to establish a pre-project environmental baseline for development site              | ESFP<br>SDCMU<br><br>ESFP NPI | <ul style="list-style-type: none"> <li>- Ambient air quality (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>2</sub>); compare to the Environment Conservation Rules, 2023 (minimum 8 hr sampling period)</li> <li>- Adjacent surface waters (pH, BOD<sub>5</sub>, COD, DO, SS, total coliform, Total P, Total N, turbidity); compare to the Environment Conservation Rules, 2023</li> <li>- Groundwater in wells on site or nearby (pH, TDS, EC, DO, BOD<sub>5</sub>, COD, Chloride, SS, As, Fe, Total-N, Total-P, Total coliform, turbidity, temperature); compare to the Environment Conservation Rules, 2023</li> <li>- Ambient noise (dBA daytime, dBA night); compare to the Environment Conservation Rules, 2023</li> </ul> | <p>One sample prior to start of site clearing</p> <p>Sampling locations: to be set by the environmental specialist employed by CSC and TMED SOU</p> | BDT 300,000 for sampling and laboratory analysis |
| 2. IEE and EMP update               | - Review IEE and EMP to ensure any post-approval changes are properly accounted for and addressed, by addition of mitigation measures if necessary | ESFP<br>SDCMU                 | <ul style="list-style-type: none"> <li>- IEE and EMP confirmed still fully applicable</li> <li>- New measures added to EMP if needed to cover any changes in alignment, design or local conditions</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Once before start of procurement                                                                                                                    | NQC (Included in SDCMU budget)                   |
| 3. Verification of                  | - Confirm Site Clearance Certificate (SCC) and Environmental Clearance Certificate (ECC) have been                                                 | ESFP<br>SDCMU                 | <ul style="list-style-type: none"> <li>- SCC and ECC granted.</li> <li>- New measures added to EMP, EMoP and CEMP if needed to meet any condition of approval specified by DOE</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Once before start of procurement                                                                                                                    | NQC (Included in SDCMU budget)                   |



| Parameter type                    | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Monitoring entity | Monitoring parameters                                                                                                            | When to monitor                                                              | Estimated monitoring cost in BDT |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------|
| environmental clearances          | granted, and that any conditions imposed by DOE on approval have been reflected in EMP and EMoP, as well as CEMP as applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                                                                                                                  |                                                                              |                                  |
| 4. CEMP verification              | - Review CEMP to ensure all primary Contractor responsibilities are fully reflected, including monitoring and reporting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CSC               | - Any necessary changes requested and made by Contractor.<br>- CEMP confirmed adequate by reviewers                              | Once before start of construction                                            | NQC (Included in CSC amount)     |
| 5. Specialized plans verification | - Confirm that the following specialized plans have been prepared by the Contractor:<br>- site-specific Construction Camp Management Plan(s)<br>- site-specific Waste Management Plans (embedded within CEMP)<br>- site-specific Emergency Response Plans (embedded within CEMP)<br>- Compensatory Tree Planting Plan<br>- Construction Traffic Management Plan<br>- Asbestos-Containing Materials Removal and Disposal Plan<br>- Soil Erosion Prevention Plan<br>- Site Reinstatement Plan<br>- Occupational Health and Safety Plan (including COVID-19 measures stipulated by ADB and Government of Bangladesh Guidance for Social and Institutional Containment and Prevention)<br>- Laboratory Waste Management Plan | CSC               | - All required specialized plans prepared to adequate standard and approved by relevant authority (as required in some cases)    | Once before start of construction                                            | NQC (Included in CSC amount)     |
| 6. Grievance Redress Mechanisms   | - Confirm that a central GRM and workers' GRM have been established and publicized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ESFP<br>SDCMU     | - Central GRM established and publicized<br>- Workers' GRM established and explained to workers before the start of construction | Once before start of construction                                            | NQC (Included in PIU budget)     |
| 7. Acoustic environment           | - Convene a workshop with participation of people living and operating businesses along polytechnic Road, local ward Council representatives, RHD/LGED, police and other government agencies to discuss                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ESFP<br>SDCMU     | - Workshop convened and action plan formulated if consensus for action found                                                     | Once before end of design phase, quarterly thereafter until action confirmed | NQC (Included in PIU budget)     |

| Parameter type                                | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Monitoring entity                                     | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                | When to monitor                                                              | Estimated monitoring cost in BDT |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------|
|                                               | feasibility of limiting vehicle horn use in the NATI zone and formulate action as appropriate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                       |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                              |                                  |
| 8. Induced development and cumulative impacts | <ul style="list-style-type: none"> <li>- Arrange multi-stakeholder workshop at Police Plaza Road with participation of local, upazila and district governments, all relevant government agencies, and concerned business interests (from gravel, trading, agricultural and tourism sectors, at a minimum) to initiate a broad-based public dialogue regarding the livelihoods of the local people and the people living near the site.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ESFP<br>SDCMU                                         | <ul style="list-style-type: none"> <li>- Multi-stakeholder workshop with suitable broad participation convened by MoF through SDCMU</li> </ul>                                                                                                                                                                                                                                       | Once before end of design phase, quarterly thereafter until action confirmed | NQC (Included in PIU budget)     |
| <b>(ii) DESIGN</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                       |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                              |                                  |
| 9. Climate change mitigation                  | <ul style="list-style-type: none"> <li>- Integrate GHG-limiting measures into facility designs, including:</li> <li>- substitute other materials for concrete where feasible</li> <li>- use low-carbon concrete as much as possible</li> <li>- maximize use of building materials available locally</li> <li>- integrate photovoltaic generation into the electrical plan</li> <li>- specify only high-efficiency electrical and mechanical equipment</li> <li>- specify most fuel-efficient backup generator available</li> <li>- maximize cross-ventilation by use of courtyards, openable windows and favorable building orientation</li> <li>- incorporate hollow wall structures where feasible</li> <li>- Use overhangs above large windows to prevent excessive solar penetration</li> <li>- Prioritize shade in the landscaping plan, with plentiful wide-crowned shade trees on all parts of site</li> <li>- Maximize interior natural light by use of favorable building orientation and courtyards</li> </ul> | SOU-<br>SDCMU,<br><br>ESFP-<br>SDCMU,<br><br>ESFP-NPI | <ul style="list-style-type: none"> <li>- All feasible GHG-reduction design measures incorporated in facility designs</li> <li>- Soft landscaping plan (covering all site areas not occupied by structures, roadways or walkways, and including ample shade trees and dense ground cover) included in detailed site design, with plantings specified in Bill of Quantities</li> </ul> | Once before approval of detailed designs                                     | NQC (included in SDCMU budget)   |

| Parameter type                | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Monitoring entity                     | Monitoring parameters                                                                                                                                                                                            | When to monitor                          | Estimated monitoring cost in BDT |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------|
|                               | <ul style="list-style-type: none"> <li>- Specify water-saving toilets, faucets and showerheads</li> <li>- Design dedicated plumbing system for drinking and cooking water</li> <li>- Aim to meet all water heating needs with solar heaters</li> <li>- Specify high-intensity, full-time lighting only where strictly necessary</li> <li>- Specify solar-powered lighting for outdoor applications</li> <li>- Base landscape plan around drought-tolerant perennial native species</li> <li>- Design site layout and inspection process to minimize the length of time vehicles have their engines running during the border-crossing process</li> <li>- Incorporate green roofs wherever roof area is not needed for solar panels and solar water heaters</li> <li>- Maximize carbon sequestration potential, micro-climatic cooling and runoff retention by specifying a landscaping plan covering all site areas not occupied by structures, roadways or walkways, including ample shade trees (especially near buildings) and dense ground cover in open areas</li> </ul> |                                       |                                                                                                                                                                                                                  |                                          |                                  |
| 10. Climate change adaptation | <ul style="list-style-type: none"> <li>- Design facilities so that critical components (including laboratory, backup generator and fuel tanks) are well above maximum flood level foreseen under climate change projections specified in Climate Risk and Adaptation Assessment (CRA) report and detailed hydrological study</li> <li>- Incorporate temperature-moderating features in NPI facility designs, including:</li> <li>- green roofs where feasible</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- All critical facility components above maximum expected flood level</li> <li>- All feasible temperature-moderating features incorporated in facility designs</li> </ul> | Once before approval of detailed designs | NQC (included in SDCMU budget)   |

| Parameter type            | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Monitoring entity                     | Monitoring parameters                                                                                                                                                                                                                                             | When to monitor                          | Estimated monitoring cost in BDT |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------|
|                           | <ul style="list-style-type: none"> <li>- maximize use of wide-crowned shade trees in site landscaping plans, including around buildings and parking area medians</li> <li>- maximize cross-ventilation by use of courtyards, openable windows and favorable building orientation</li> </ul>                                                                                                                                                                                                                                                           |                                       |                                                                                                                                                                                                                                                                   |                                          |                                  |
| 11. Flora and fauna       | <ul style="list-style-type: none"> <li>- Avoid removal of trees to the greatest extent possible</li> <li>- Incorporate existing trees as site features whenever possible, and include them in site designs</li> <li>- When trees must be removed, compensatory trees should be planned elsewhere on site and marked in the design drawings, and included in the Bill of Quantities, in accordance with approved Compensatory Tree Planting Plan</li> </ul>                                                                                            | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Existing trees preserved in site designs to the greatest extent feasible</li> <li>- Compensatory trees included in design drawings and Bill of Quantities, in accordance with Compensatory Tree Planting Plan</li> </ul> | Once before approval of detailed designs | NQC (included in SDCMU budget)   |
| 12. Groundwater resources | <ul style="list-style-type: none"> <li>- Maximize opportunities to limit water consumption and increase groundwater recharge, including adoption of:</li> <li>- rain capture on all roofs and use of stored water for non-potable uses in and around facilities</li> <li>- high-efficiency faucets and toilets throughout the facilities</li> <li>- plant species with low water needs in site landscaping plans</li> <li>- stormwater infiltration swales for all runoff from paved and impervious surfaces (objective: zero site runoff)</li> </ul> | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- All feasible and applicable water conservation measures incorporated in detailed designs for NATI facilities</li> </ul>                                                                                                  | Once before approval of detailed designs | NQC (included in SDCMU budget)   |
| 13. Public health         | <ul style="list-style-type: none"> <li>- Design NATI building internal layout to maintain adequate space between individual users and prevent formation of long lines in indoor spaces</li> <li>- Design NATI building ventilation system to maximize turnover of indoor air</li> </ul>                                                                                                                                                                                                                                                               | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- NATI building design enables social distancing</li> <li>- NATI building ventilation system designed to maximize turnover of indoor air</li> </ul>                                                                        | Once before approval of detailed designs | NQC (included in SDCMU budget)   |

| Parameter type                     | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Monitoring entity                     | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                     | When to monitor                          | Estimated monitoring cost in BDT |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------|
| 14. Water quality                  | <ul style="list-style-type: none"> <li>- Include designated storage with secondary containment for noxious substances (fuels, lubricants, paints, etc.) used in NATI operations in detailed design</li> <li>- Slightly raise surface of site minerals storage area above level of rest of site to prevent runoff from other site areas from washing through stockpiles</li> <li>- Include sediment traps and porous drainage channels in final drainage design for minerals storage area, to limit discharge of sediments</li> </ul> | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Storage spaces with secondary containment for noxious substances included in detailed designs for NATI</li> <li>- Surface of NATI site's minerals storage area slightly raised above rest of site in detailed design</li> <li>- Sediment traps and porous drainage channels included in detailed design of site minerals storage area</li> </ul> | Once before approval of detailed designs | NQC (included in SDCMU budget)   |
| 15. Air quality                    | <ul style="list-style-type: none"> <li>- Include water supply to minerals storage area, with hose spigots in several locations around the perimeter to enable use of mobile misting apparatus</li> </ul>                                                                                                                                                                                                                                                                                                                             | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Detailed design includes water supply to minerals storage area, with multiple hose spigots spaced around perimeter</li> </ul>                                                                                                                                                                                                                    | Once before approval of detailed designs | NQC (included in SDCMU budget)   |
| 16. Occupational health and safety | <ul style="list-style-type: none"> <li>- Design canopies over areas used by heavy laboratory machineries designed with extra headroom and good cross ventilation or fans to evacuate emissions efficiently</li> </ul>                                                                                                                                                                                                                                                                                                                | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Canopies over areas used by heavy laboratory machineries designed with extra headroom and good cross ventilation or fans to evacuate emissions efficiently</li> </ul>                                                                                                                                                                            | Once before approval of detailed designs | NQC (included in SDCMU budget)   |
| 17. Occupational health and safety | <ul style="list-style-type: none"> <li>- Design interior layout of the NATI building to maximize space between users and prevent the formation of long lines in indoor spaces.</li> <li>- Design NATI building ventilation system for maximum feasible turnover of indoor air</li> </ul>                                                                                                                                                                                                                                             | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Internal layout of the NATI building is designed to maximize space between users and prevent the formation of long lines in indoor spaces</li> <li>- NATI building ventilation system is designed for maximum feasible turnover of indoor air</li> </ul>                                                                                         |                                          |                                  |
| 18. Occupational health and safety | <ul style="list-style-type: none"> <li>- Engage qualified laboratory specialist to contribute to design of laboratory and associated structures, as well as preparation of operation protocols including waste management plans, to adhere to international laboratory design</li> </ul>                                                                                                                                                                                                                                             | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Suitable laboratory design specialist engaged to ensure design and operations of laboratory adhere to international laboratory design and operation standards and best practice</li> </ul>                                                                                                                                                       | At beginning of detailed design work     | NQC (included in SDCMU budget)   |

| Parameter type              | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Monitoring entity                             | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | When to monitor                          | Estimated monitoring cost in BDT |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------|
|                             | standards and best practices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                          |                                  |
| 19. Waste management        | <ul style="list-style-type: none"> <li>- Anticipate waste streams and incorporate design features to collect, sort and safely dispose of each class of waste</li> <li>- Specify segregated collection bins in strategic indoor and outdoor locations where wastes are generated</li> <li>- Include waste storage and sorting areas in facility designs</li> <li>- Incorporate easy access for waste and recyclables collection vehicles</li> <li>- Designate outdoor space for thermophilic composting of organic waste from kitchens and canteens</li> <li>- Design laboratory for appropriate segregation of hazardous and non-hazardous waste streams</li> <li>- Engage qualified laboratory specialist to contribute to design of laboratory and associated structures, as well as preparation of operation protocols including waste management plans, to adhere to international laboratory design standards and best practices</li> </ul> | SOU-SDCMU,<br><br>ESFP-SDCMU,<br><br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Facility designs include spaces and features for waste management, including collection, sorting, composting, storage and out-shipment</li> <li>- Suitable laboratory design specialist engaged to ensure design and operations of laboratory adhere to international laboratory design and operation standards and best practice laboratory</li> <li>- Laboratory design provides for at-source segregation of hazardous liquid and solid wastes</li> </ul> | Once before approval of detailed designs | NQC (included in SDCMU budget)   |
| <b>(ii) PROCUREMENT</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                          |                                  |
| 20. Selection of Contractor | <ul style="list-style-type: none"> <li>- Prioritize selection of Contractor with strong compliance track record, as verified by references from previous CSCs</li> <li>- Select only Contractors registered with MOLE</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SOU-SDCMU,<br><br>ESFP-SDCMU,<br><br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Selected Contractor has verified track record of good performance on safeguards compliance</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | Once during procurement                  | NQC (included in SDCMU budget)   |
| 21. Selection of Contractor | <ul style="list-style-type: none"> <li>- Require prospective Contractors to provide information on the age, condition and fuel-efficiency of their machinery and vehicle fleets in their bids, and consider this in the selection process</li> <li>- Include provision in contract giving the employer the right to require removal of</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SOU-SDCMU,<br><br>ESFP-SDCMU,<br><br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Detailed machinery and fleet information required in bids</li> <li>- Emissions potential of fleets considered in Contractor selection</li> <li>- Provision included in contract giving the employer the right to require removal of equipment and vehicles it deems to be unacceptably polluting from work sites at any time during construction, even if these are the property of sub-Contractors</li> </ul>                                               | Once during procurement                  | NQC (included in SDCMU budget)   |

| Parameter type                     | Prescribed measures                                                                                                                                                                                                                                                                      | Monitoring entity                     | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                         | When to monitor                                                                 | Estimated monitoring cost in BDT                                                                                 |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
|                                    | equipment and vehicles it deems to be unacceptably polluting from work sites at any time during construction, even if these are the property of sub-Contractors                                                                                                                          |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |                                                                                                                  |
| 22. Labor                          | - Hire exclusively or mostly local workers                                                                                                                                                                                                                                               | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | - Workers from Chattagram and around Chattagram given first priority in hiring for construction jobs                                                                                                                                                                                                                                                                                                                                                                          | Once prior to start of construction                                             | NQC (included in SDCMU budget)                                                                                   |
| 23. Materials sourcing             | - Obtain valid Certificate of BSTI from suppliers of bulk materials                                                                                                                                                                                                                      | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | - Certificate of BSTI obtained and filed for each purchase of bulk materials                                                                                                                                                                                                                                                                                                                                                                                                  | Prior to approval of each purchase order                                        | NQC (included in SDCMU budget)                                                                                   |
| 24. Materials sourcing             | - Prioritize bulk materials suppliers using less distant sources                                                                                                                                                                                                                         | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | - Materials sourced from within reasonable distance                                                                                                                                                                                                                                                                                                                                                                                                                           | Prior to approval of each purchase order                                        | NQC (included in SDCMU budget)                                                                                   |
| 25. Materials Sourcing             | - Select suppliers with strong green credentials (verified by review of certifications received)                                                                                                                                                                                         | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | - International suppliers of materials have favorable environmental certifications                                                                                                                                                                                                                                                                                                                                                                                            | Prior to approval of each purchase order                                        | NQC (included in SDCMU budget)                                                                                   |
| <b>B. CONSTRUCTION PHASE</b>       |                                                                                                                                                                                                                                                                                          |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |                                                                                                                  |
| <b>(i) BIOPHYSICAL ENVIRONMENT</b> |                                                                                                                                                                                                                                                                                          |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |                                                                                                                  |
| 26. Surface water                  | - Implement approved Soil Erosion Prevention Plan, including (inter alia):<br>- Protect disturbed soil from rain by keeping exposed areas covered with mulches, fiber mats and other temporary coverings<br>- Keep all stockpiles of erodible materials covered with tarpaulins whenever | EHSO<br><br>CSC<br><br>Contractor     | - Prescribed soil protection measures effectively implemented at all work sites in accordance with approved Soil Erosion Prevention Plan<br>- Sediment traps installed in appropriate places, and maintained properly<br>- Lack of evidence of elevated turbidity in water draining to adjacent water bodies<br>- Vegetative cover promptly established when construction activity complete on each part of work sites<br>- Silt curtains properly deployed where appropriate | Monthly for duration of construction<br><br><br>Quarterly surface water quality | NQC (included in SDCMU budget)<br><br>BDT 100,000<br><br>for water quality monitoring for each monitoring period |

| Parameter type                           | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Monitoring entity                        | Monitoring parameters                                                                                                                                                                                                                                                                             | When to monitor                                                             | Estimated monitoring cost in BDT                                                                                                                                |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | <ul style="list-style-type: none"> <li>they are not in active use</li> <li>- Arrange work site drainage to prevent concentration of surface runoff in the vicinity of exposed soils and materials stockpiles</li> <li>- Install and regularly maintain sediment traps in site runoff channels</li> <li>- Promptly reinstate disturbed ground surfaces and establish vegetative cover in locations where construction activity has been completed</li> <li>- Deploy silt curtains and sediment traps when earthworks are carried out near ponds and other standing water</li> </ul>                                                                                                                                                    |                                          | <ul style="list-style-type: none"> <li>- Adjacent surface water quality (pH, BOD<sub>5</sub>, COD, DO, SS, total coliform, Total P, Total N, turbidity) meets standard in the Environment Conservation Rules, 2023</li> </ul>                                                                     | <p>monitoring by EHSO at</p> <p>locations dictated by work activity</p>     | <p>(included in Contractor cost as EMP cost)</p> <p>Given 24 months construction period + one baseline sample = estimated 9 times of sampling = BDT 900,000</p> |
| 27. Surface water, groundwater and soils | <ul style="list-style-type: none"> <li>- Keep all motorized equipment in good repair</li> <li>- Maintain a regiment of systematic daily checks to detect leaks, following up with prompt repair as needed</li> <li>- Strictly require use of drip mats and pans during refueling and servicing to catch spills and drips</li> <li>- Store fuels and other noxious fluids within roofed, rain-exclusive containment structures with capacity at least 115% of the volume of the largest container stored, constructed only in locations with zero probability of flooding during heavy rains</li> <li>- Provide training in spill prevention and spill response to all workers involved in refueling or equipment servicing</li> </ul> | <p>EHSO</p> <p>CSC</p> <p>Contractor</p> | <ul style="list-style-type: none"> <li>- Fuels, lubricants and other noxious fluids stored in appropriate structure</li> <li>- Lack of evidence of leaks from construction equipment</li> <li>- Lack of oil patches on soil surface</li> <li>- Lack of oily sheen on site runoff water</li> </ul> | Monthly for duration of construction                                        | NQC (included in SDCMU budget)                                                                                                                                  |
| 28. Surface water                        | <ul style="list-style-type: none"> <li>- Install an adequate number of toilets to accommodate all workers, and septic systems of sufficient capacity for the expected effluent volume, in accordance with Construction Camp Management Plan</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>EHSO</p> <p>CSC</p> <p>Contractor</p> | <ul style="list-style-type: none"> <li>- At least one working toilet per 10 resident workers installed</li> <li>- Absence of visual evidence of enrichment</li> </ul>                                                                                                                             | Once at beginning of construction, and monthly for duration of construction | <p>NQC (included in SDCMU budget + Contractor costs)</p> <p>BDT 200,000 lump sum for toilet construction</p>                                                    |



| Parameter type  | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Monitoring entity         | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                                                           | When to monitor                                                                                                                              | Estimated monitoring cost in BDT                                                                                                                                                                                                                        |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 29. Air quality | <ul style="list-style-type: none"> <li>- Implement a regimen of misting all dust-generating surfaces throughout the work day during dry weather</li> <li>- Tightly cover stockpiles of fine materials with tarpaulins whenever they are not in active use to prevent wind erosion</li> <li>- Equip all haul trucks with tightly-fitting tarpaulins and enforce their use</li> </ul>                                                                                                                                                                                                                                                                                                                                                                 | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Levels of airborne dust are below nuisance level in roadside communities</li> <li>- No significant dust accumulation observed on roadside crops and structures</li> <li>- No complaints from public registered</li> <li>- Ambient air quality (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>2</sub>) meets standards indicated in the Environment Conservation Rules, 2023</li> </ul> | Weekly for duration of construction (observation)<br><br>(Quantitative measurement quarterly by EHSO at locations dictated by work activity) | NQC (Contractor cost)<br><br>BDT 100,000 for each monitoring period (quantitative sampling)<br><br>(Included in Contractor cost as EMP cost)<br>Given 24 months construction period + one baseline sample = estimated 9 times of sampling = BDT 900,000 |
| 30. Air quality | <ul style="list-style-type: none"> <li>- Maintain all motorized equipment used in construction to a high standard</li> <li>- Use only fuel-efficient equipment</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Absence of black smoke in construction equipment exhaust</li> <li>- No complaints from public</li> <li>- Air quality at perimeter of work sites meets standards indicated in the Environment Conservation Rules, 2023</li> </ul>                                                                                                                                                                       | Weekly for duration of construction<br><br>(Quantitative measurement quarterly by EHSO)                                                      | NQC (observation)<br><br>(Quantitative sampling cost included in previous item)                                                                                                                                                                         |
| 31. Soil        | <ul style="list-style-type: none"> <li>- Implement approved Soil Erosion Prevention Plan, including (inter alia):</li> <li>- Protect disturbed soil from rain by keeping exposed areas covered with mulches, fiber mats and other temporary coverings</li> <li>- Arrange work site drainage to prevent concentration of surface runoff in the vicinity of exposed soils</li> <li>- Promptly establish vegetative cover on soil surfaces in locations where construction activity has been completed</li> <li>- Implement approved Site Reinstatement Plan, including (inter alia):</li> <li>- Reserve topsoil and store separately for later use</li> <li>- Promptly prepare soil surfaces for plantings once construction work has been</li> </ul> | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Prescribed soil protection measures effectively implemented at all work sites, in accordance with Soil erosion Prevention Plan</li> <li>- Lack of evidence of soil erosion</li> <li>- Vegetative cover promptly established when construction activity complete on each part of work sites</li> </ul>                                                                                                  | Weekly for duration of construction                                                                                                          | NQC<br><br>(Method: visual inspection)                                                                                                                                                                                                                  |

| Parameter type                                     | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Monitoring entity         | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                    | When to monitor                                                     | Estimated monitoring cost in BDT                                                       |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|                                                    | <ul style="list-style-type: none"> <li>completed in each part of site</li> <li>- Establish vegetative cover in accordance with landscaping plan in detailed site design, Bill of Quantities and Compensatory Tree Planting Plan</li> <li>- Implement a watering and tending regimen to help ensure success of plantings</li> <li>- Monitor progress of vegetation establishment until end of defects period, and implement infill planting as necessary to achieve full coverage</li> </ul> |                           |                                                                                                                                                                                                                                                                                                                                                                          |                                                                     |                                                                                        |
| 32. Flora and fauna                                | <ul style="list-style-type: none"> <li>- Clearly mark trees that are to be preserved prior to clearing</li> <li>- Establish a fenced buffer around trees that are to be preserved to protect them from damage by equipment, excavation and materials stockpiles</li> </ul>                                                                                                                                                                                                                  | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Trees clearly marked prior to site clearing</li> <li>- Fenced buffers established, maintained and observed around preserved trees for duration of works</li> </ul>                                                                                                                                                              | Once before site clearing, and monthly for duration of construction | NQC (included in SDCMU, CSC, and Contractor costs)                                     |
| 33. Flora and fauna                                | <ul style="list-style-type: none"> <li>- Establish a 10-m buffer with temporary fencing along any permanent or seasonal watercourses found on site, and enforce a prohibition on any construction-related activity within the buffer for the duration of the works</li> <li>- Deploy silt curtains and temporary sediment traps where runoff from active work areas is directed to creeks</li> </ul>                                                                                        | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- 10-m buffer established with temporary fencing along any permanent or seasonal watercourses on site</li> <li>- Prohibition on construction-related activities within the buffer enforced</li> <li>- Silt curtains and sediment traps deployed as appropriate to limit silt delivery to on-site watercourses</li> </ul>          | Weekly for duration of construction                                 | NQC (included in SDCMU, CSC, and Contractor costs)                                     |
| 34. Flora and fauna                                | <ul style="list-style-type: none"> <li>- Implement approved Compensatory Tree Planting Plan as soon as schedule of works permits</li> </ul>                                                                                                                                                                                                                                                                                                                                                 | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Compensatory trees planted and tended in conformance with the approved Compensatory Tree Planting Plan</li> <li>- Planted trees healthy and seem assured of long-term survival</li> </ul>                                                                                                                                       | Twice during final 3 months of construction phase                   | NQC (included in SDCMU budget)                                                         |
| <b>(ii) SOCIOECONOMIC AND CULTURAL ENVIRONMENT</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                                                                                                                                                                                                                                                                                                                                                                          |                                                                     |                                                                                        |
| 35. Acoustic environment                           | <ul style="list-style-type: none"> <li>- Conduct work only during daylight hours</li> <li>- Impose and enforce low speed limits on haul trucks through the roads nearby the site</li> <li>- Maintain all motorized equipment and haul</li> </ul>                                                                                                                                                                                                                                            | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Noise and vibration are below nuisance level for local residents and roadside small businesses</li> <li>- No construction work or hauling is conducted between dusk and dawn</li> <li>- No complaints from the public registered</li> <li>- Noise levels at roadside around the site meets standard indicated in the</li> </ul> | Weekly for duration of construction (observation)                   | NQC (observation)<br><br>BDT 20,000 for each monitoring period (quantitative sampling) |

| Parameter type    | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Monitoring entity         | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                           | When to monitor                                                   | Estimated monitoring cost in BDT                                                                                                                  |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | trucks to a high standard, and inspect exhaust systems regularly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           | Environment Conservation Rules, 2023 (during heavy haul periods)                                                                                                                                                                                                                                                                                                                                                | (Quantitative measurement by EHSO only during heavy haul periods) | (Included in Contractor cost as EMP cost) given 24 months construction period + one baseline sample = estimated 8 times of sampling = BDT 180,000 |
| 36. Public safety | <ul style="list-style-type: none"> <li>- Ensure that the construction sites are adequately fenced and security is provided to prevent members of the public from entering the sites</li> <li>- Establish safe, marked routes for staff and facility users to continue to use the NATI facilities without having to cross active construction zones</li> <li>- Impose and enforce low speed limits on haul trucks through roads near the site area</li> <li>- Prepare Construction Traffic Management Plan, and implement as appropriate during hauling periods (Contractor)</li> </ul>                                                                                                | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Adequate fencing and security maintained at construction site.</li> <li>- Construction zone is configured to maintain safe access for NATI/NPI staff.</li> <li>- Construction Traffic Management Plan prepared and observed to be implemented as appropriate.</li> <li>- Haul trucks not observed or reported to speed through the nearby roads of the site</li> </ul> | Weekly for duration of construction                               | NQC (included in SDCMU, CSC, Contractor costs)                                                                                                    |
| 37. Public safety | <ul style="list-style-type: none"> <li>- Give preference to local laborers to avoid the need for, or limit the size of, a construction camp</li> <li>- Conduct proactive outreach with leaders of nearby communities to educate women and girls about the risks posed by an all-male camp in the neighborhood</li> <li>- Give resident workers regular training on appropriate behavior in and around the camp</li> <li>- Adopt a zero-tolerance policy around aggression or violence against local women and girls</li> <li>- When women must enter the camp for employment or selling produce, limit their entry to times when resident workers are out at the work site</li> </ul> | EHSO<br>CSC<br>Contractor | <ul style="list-style-type: none"> <li>- Lack of reports of worker-involved abuse or harassment</li> <li>- Lack of complaints from public about violence or prostitution at camp</li> <li>- Female access to camp for employment allowed only when workers are out at work sites</li> <li>- Construction Camp Management Plan implemented as approved</li> </ul>                                                | Monthly for duration of construction                              | NQC (included in SDCMU, CSC, Contractor costs)                                                                                                    |

| Parameter type               | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                          | Monitoring entity         | Monitoring parameters                                                                                                                                                                                                                                                                                                                                      | When to monitor                                                                                   | Estimated monitoring cost in BDT               |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------|
|                              | - Prohibit prostitution on the site, and monitor activity in this regard and work with community leaders to address the problem as needed                                                                                                                                                                                                                                                    |                           |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                   |                                                |
| 38. Public safety            | - Provide regular training and enforcement to minimize bad worker behavior off site, including public drunkenness, sexual harassment, and theft of crops                                                                                                                                                                                                                                     | EHSO<br>CSC<br>Contractor | - Construction Camp Management Plan implemented as approved<br>- Lack of complaints from public about behavior of resident workers                                                                                                                                                                                                                         | Monthly for duration of construction                                                              | NQC (included in SDCMU, CSC, Contractor costs) |
| 39. Public health            | - Install and maintain adequate toilet and septic systems to prevent discharge of raw sewage from camps to local water bodies or fields<br>- Educate resident workers about sexually transmitted diseases and responsible sexual behavior<br>- Work with local community leaders to prohibit prostitution in and around construction camps                                                   | EHSO<br>CSC<br>Contractor | - Construction Camp Management Plan implemented as approved<br>- At least one working toilet per 10 resident workers installed, with septic treatment<br>- Absence of visual evidence of raw sewage discharge<br>- Lack of reports of prostitution around camp<br>- Lack of concerns expressed by local community leaders about workers' off-site behavior | Once at start of construction (toilets)<br><br>Monthly for duration of construction (other items) | NQC (included in SDCMU, CSC, Contractor costs) |
| 40. Worker health and safety | - Implement approved Occupational Health and Safety Plan<br>- Provide regular safety training for all workers<br>- Provide task-appropriate PPE to all workers and enforce its use<br>- Closely monitor works at all times to ensure strong worker compliance with safety practices                                                                                                          | EHSO<br>CSC<br>Contractor | - Low incidence of workplace injuries<br>- Workers observed using appropriate PPE<br>- All aspects of Occupational Health and Safety Plan implemented as approved                                                                                                                                                                                          | Weekly for duration of construction                                                               | NQC (included in SDCMU, CSC, Contractor costs) |
| 41. Worker health            | - Implement approved Occupational Health and Safety Plan<br>- Institute temperature checks (at least daily) for all workers and supervisory personnel on site<br>- Provide each worker with an appropriate face mask daily or as needed and require mask use at all times.<br>- Position hand washing and sanitizing stations at canteens and other eating areas, kitchens, and near toilets | EHSO<br>CSC<br>Contractor | - Temperature check regimen implemented consistently.<br>- Workers supplied facemasks.<br>- Workers consistently use facemasks.<br>- Hand washing and sanitizing stations provided in appropriate locations and kept stocked at all times.<br>- All aspects of Occupational Health and Safety Plan implemented as approved                                 | Weekly for duration of construction                                                               | NQC (included in SDCMU, CSC, Contractor costs) |

| Parameter type               | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Monitoring entity                        | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | When to monitor                                                                                                                  | Estimated monitoring cost in BDT                                                                                                                                                                                                                                                                 |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 42. Worker health and safety | <ul style="list-style-type: none"> <li>- Implement approved Construction Camp Management Plan</li> <li>- Conduct monthly safety audit of camp to identify fire risks, electrocution hazards and other unsafe conditions, and assess adequacy of fire extinguishers and first aid provisions</li> <li>- Institute a regular cleaning and disinfection regimen for camp kitchens, latrines, wash-up areas, eating areas and sleeping sheds</li> <li>- Provide adequate sleeping space with good cross-ventilation to avoid overcrowding and consequent spread of communicable illnesses and infestations (at least 4m<sup>2</sup> per worker)</li> <li>- Provide each worker with a raised sleeping platform with mattress or mat, bedding and mosquito netting</li> <li>- Ensure that each sleeping space has at least two working exits that remain functional at all times</li> <li>- Provide unlimited drinking water that meets the standards indicated in the Environment Conservation Rules, 2023</li> <li>- Provide indoor eating space separate from sleeping areas;</li> <li>- Provide kitchens with off-floor food storage, raised working surfaces of a material that can be easily sanitized, and a ready supply of clean water;</li> <li>- Provide toilet facilities with at least one functional toilet (protected from the elements and affording full visual privacy to the user) per ten resident workers, with a ready water source for washing;</li> <li>- Provide roofed and partitioned wash-up areas with floors and proper drainage</li> </ul> | <p>EHSO</p> <p>CSC</p> <p>Contractor</p> | <ul style="list-style-type: none"> <li>- Safety audit results included in monthly progress reports and quarterly monitoring reports</li> <li>- Lack of outbreaks of infectious illnesses (e.g., influenza, pneumonia, tuberculosis) and ailments associated with unsanitary conditions (e.g., dysentery, lice, scabies)</li> <li>- Living conditions meet standards specified in Construction Camp Management Plan</li> <li>- Drinking water quality (pH, TDS, EC, DO, BOD<sub>5</sub>, COD, Chloride, SS, As, Fe, Total-N, Total-P, Total coliform, turbidity, temperature) meets standards indicated in the Environment Conservation Rules, 2023</li> </ul> | <p>Monthly for duration of construction (observation)</p> <p>Quantitative measurement quarterly by Contractor at source well</p> | <p>NQC (observation)</p> <p>BDT 200,000 for worker shed + BDT 120,000 for per sampling period.</p> <p>(Quantitative sampling)</p> <p>(Included in Contractor cost as EMP cost)<br/>Given 24 months construction period + one baseline sample = estimated 9 times of sampling = BDT 1,080,000</p> |

| Parameter type                  | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Monitoring entity         | Monitoring parameters                                                                                                                                                                                                                                                | When to monitor                                                     | Estimated monitoring cost in BDT               |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------|
| 43. Livelihoods                 | - Hire mostly or exclusively local workers on construction sites                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EHSO<br>CSC<br>Contractor | - Workers from Chattagram or nearby area given priority in hiring for construction jobs                                                                                                                                                                              | In advance of any new crews or subcontractors being brought on site | NQC (included in SDCMU, CSC, Contractor costs) |
| 44. Physical cultural resources | - Establish a chance find procedure and provide training to all workers regarding its triggering conditions, and to site engineers on its implementation                                                                                                                                                                                                                                                                                                                                                                 | CSC                       | - Chance finds procedure included in CEMP and training provided to workers and site engineers                                                                                                                                                                        | Once before start of construction                                   | NQC (included in SDCMU costs)                  |
| <b>(iii) WASTE MANAGEMENT</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                                                                                                                                                                                                                                                                      |                                                                     |                                                |
| 45. Demolition waste            | - If there is any reason to suspect presence of asbestos-containing materials (ACM), implement approved ACM Removal and Disposal Plan<br>- Ensure salvage of recyclable and reusable items<br>- Use rubble in site development or dispose of in a site identified and approved in accordance with the Waste Management Plan embedded within the CEMP                                                                                                                                                                     | EHSO<br>CSC<br>Contractor | - Any ACM assessed and removed and disposed of in accordance with approved ACM Removal and Disposal Plan<br>- Recyclable materials salvaged<br>- Rubble appropriately used as fill on site, or disposed of in accordance with Waste Management Plan embedded in CEMP | Before and during site clearing                                     | NQC (included in SDCMU, CSC, Contractor costs) |
| 46. Construction waste          | - Implement all provisions in the Waste Management Plan embedded in CEMP, including:<br>- Provide waste receptacles on the work sites and collect their contents daily or weekly as needed<br>- Recycle all recyclables through local providers of this service<br>- Compost organic wastes generated by construction camp kitchens<br>- Dispose of non-recyclable and non-organic wastes as directed in the Waste Management Plan embedded within the CEMP, as based on locally available and approved disposal options | EHSO<br>CSC<br>Contractor | - All classes of waste managed in accordance with Waste Management Plan embedded in CEMP                                                                                                                                                                             | Monthly for duration of construction                                | NQC (included in SDCMU, CSC, Contractor costs) |

| Parameter type                     | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                     | Monitoring entity                     | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | When to monitor                                                                         | Estimated monitoring cost in BDT                                        |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 47. Waste oils                     | <ul style="list-style-type: none"> <li>- Recycle waste oils through a reputable business providing this service, as identified in the Waste Management Plan</li> </ul>                                                                                                                                                                                                                                  | EHSO<br>CSC<br>Contractor             | <ul style="list-style-type: none"> <li>- No evidence of waste oil dumping or burning</li> <li>- Documentation of transfers to identified service provider available</li> </ul>                                                                                                                                                                                                                                                                                                                                                                         | Monthly for duration of construction                                                    | NQC (included in SDCMU, CSC, Contractor costs)                          |
| <b>C. OPERATION PHASE</b>          |                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                         |                                                                         |
| <b>(i) BIOPHYSICAL ENVIRONMENT</b> |                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                         |                                                                         |
| 48. Water quality                  | <ul style="list-style-type: none"> <li>- Store fluids only within dedicated indoor storage spaces with secondary containment capacity equaling or exceeding 115% of the volume of the largest container stored</li> <li>- Routinely inspect storage spaces and tanks for leakage, and take immediate corrective action as needed</li> </ul>                                                             | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Proper storage observed</li> <li>- Absence of evidence of spills and leaks</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                         | Quarterly<br><br>Once prior to start of operations (Spill Prevention and Response Plan) | NQC (Included in SDCMU and NPI budgets)                                 |
| 49. Water quality                  | <ul style="list-style-type: none"> <li>- Remove sludge at least once per year from all septic tanks installed, and work into the soil around on-site tree plantations for fertilization</li> </ul>                                                                                                                                                                                                      | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Sludge removed from all septic tanks at least annually, and appropriately used to fertilize on-site tree plantations</li> </ul>                                                                                                                                                                                                                                                                                                                                                                               | Annually                                                                                | NQC (Included in SDCMU and NPI budgets)                                 |
| 50. Water quality                  | <ul style="list-style-type: none"> <li>- Prepare and implement Spill Prevention and Response Plan for the site.</li> <li>- Provide personnel training necessary for effective implementation of the plan prior to start of operations and annually thereafter</li> </ul>                                                                                                                                | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Spill Prevention and Response Plan prepared for the site prior to the start of operations</li> <li>- Personnel training necessary for effective implementation of the Spill Prevention and Response Plan delivered before start of operations and repeated annually during operation phase</li> </ul>                                                                                                                                                                                                         | Once before start of operations, annually thereafter                                    | NQC (Included in SDCMU and NPI budgets)                                 |
| 51. Water quality                  | <ul style="list-style-type: none"> <li>- Purchase sufficient tarpaulins based on expected stockpiling activity, and make budgetary provision for regular replacement as needed</li> <li>- Strictly require the use of tarpaulins on all piles of mineral materials at all times, except during active handling of materials</li> <li>- Train personnel assigned to the minerals storage area</li> </ul> | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Thorough, competent use of tarpaulins on all materials stockpiles in minerals storage area observed to be standard procedure</li> <li>- Sediment traps in minerals storage area well maintained and functional</li> <li>- Runoff from minerals storage area is of sufficient quality not to cause violation of surface water standard (pH, BOD<sub>5</sub>, COD, DO, SS, total coliform, Total P, Total N, turbidity) in receiving water body; compare to the Environment Conservation Rules, 2023</li> </ul> | Quarterly                                                                               | (Proportion of NPI EHS Unit costs for sampling equipment over 20 years) |



| Parameter type  | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Monitoring entity                     | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                     | When to monitor | Estimated monitoring cost in BDT                                        |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------|
|                 | <ul style="list-style-type: none"> <li>in competent tarpaulin use</li> <li>Regularly monitor tarpaulin condition and use</li> <li>Regularly check and clean out sediment traps in minerals storage area</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                       |                                                                                                                                                                                                                                                                                                                                                                           |                 |                                                                         |
| 52. Air quality | <ul style="list-style-type: none"> <li>Ensure adequate staffing at peak times to help ensure that incoming trucks are processed efficiently and lines do not form</li> <li>Enforce a strict no-idling policy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>Ambient air quality (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>2</sub>) meets standards indicated in the Environment Conservation Rules, 2023</li> </ul>                                                                                                                                                       | Quarterly       | (Proportion of NPI EHS Unit costs for sampling equipment over 20 years) |
| 53. Air quality | <ul style="list-style-type: none"> <li>Purchase sufficient tarpaulins based on expected stockpiling activity, and make budgetary provision for regular replacement as needed</li> <li>Strictly require the use of tarpaulins on all piles of mineral materials at all times, except during active handling of materials</li> <li>Train personnel assigned to the minerals storage area in competent tarpaulin use</li> <li>Regularly monitor tarpaulin condition and use</li> <li>Ensure that appropriate basic misting equipment is purchased or purpose-built and kept in good working condition</li> <li>Train personnel assigned to the minerals storage area in proper procedure for misting during materials handling</li> <li>Strictly require misting as standard procedure during handling of dusty materials</li> <li>Strictly prohibit stone crushing activity on the site, including the minerals storage area</li> </ul> | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>Thorough, competent use of tarpaulins on all materials stockpiles in minerals storage area observed to be standard procedure</li> <li>Ambient air quality (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>2</sub>) meets standards indicated in the Environment Conservation Rules, 2023</li> </ul>                 | Quarterly       | NQC (air sampling cost accounted for in previous line)                  |
| 54. Air quality | <ul style="list-style-type: none"> <li>Strictly require all trucks entering the site to be equipped with tightly fitting tarpaulins</li> <li>Sweep and spray roadways within the site as needed to limit dust</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SOU-SDCMU,<br>ESFP-SDCMU,             | <ul style="list-style-type: none"> <li>All trucks entering site observed to be appropriately covered</li> <li>Roadways within the site swept and sprayed as needed to suppress dust</li> <li>Ambient air quality (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>2</sub>) meets standards indicated in the Environment Conservation Rules, 2023</li> </ul> | Quarterly       | NQC (air sampling cost accounted for in previous line)                  |



| Parameter type                                     | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                            | Monitoring entity                     | Monitoring parameters                                                                                                                                                                            | When to monitor                   | Estimated monitoring cost in BDT        |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------|
|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                | ESFP-NPI                              |                                                                                                                                                                                                  |                                   |                                         |
| 55. Soils                                          | <ul style="list-style-type: none"> <li>- Protect soils exposed by maintenance works with mulches and other protective coverings during works, and promptly re-establish vegetative cover when works have been completed</li> <li>- Regularly inspect site vegetation for loss of coverage and evidence of emerging gully erosion</li> </ul>                                                                                    | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Lack of evidence of gully erosion</li> </ul>                                                                                                            | Quarterly                         | NQC (Included in SDCMU and NPI budgets) |
| <b>(ii) SOCIOECONOMIC AND CULTURAL ENVIRONMENT</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                                                                                                                                                                                  |                                   |                                         |
| 56. Public safety                                  | <ul style="list-style-type: none"> <li>- Regularly monitor facility operations for emerging public safety issues, and devise appropriate corrective action, as needed</li> <li>- Proactively coordinate with RHD/LGED to ensure that safety features including sidewalks, pullout and turn lanes, road markings, signage and other safety features are planned for and implemented in future approach road upgrades</li> </ul> | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Safety features implemented</li> <li>- Accident risk low</li> </ul>                                                                                     | Quarterly                         | NQC (Included in SDCMU and NPI budget)  |
| 57. Public safety                                  | <ul style="list-style-type: none"> <li>- Pursue collaboration with RHD/LGED and local community leaders regarding durable solutions to safety risks from on-road and road-adjacent commerce, such as provision of alternative spaces outside the RoW for commercial and community activity</li> </ul>                                                                                                                          | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Low incidence of encroachment</li> <li>- Smooth traffic flow through settled areas</li> <li>- Low incidence of vehicle-pedestrian collisions</li> </ul> | Quarterly                         | NQC (Included in SDCMU and NPI budget)  |
| 58. Worker health and safety                       | <ul style="list-style-type: none"> <li>- Enforce a strict policy against engine idling</li> </ul>                                                                                                                                                                                                                                                                                                                              | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Low incidence of staff complaints about emissions exposure</li> </ul>                                                                                   | Quarterly                         | NQC (Included in SDCMU and NPI budget)  |
| 59. Worker health and safety                       | <ul style="list-style-type: none"> <li>- Integrate pandemic response measures in operations and maintenance manuals and operating protocols for the NPI site, to ensure prompt implementation when</li> </ul>                                                                                                                                                                                                                  | SOU-SDCMU,<br>ESFP-SDCMU,             | <ul style="list-style-type: none"> <li>- Pandemic response measures integrated in operations and maintenance manuals</li> </ul>                                                                  | Once prior to start of operations | NQC (Included in SDCMU and NPI budget)  |

| Parameter type                | Prescribed measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Monitoring entity                     | Monitoring parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | When to monitor                                                                                                                           | Estimated monitoring cost in BDT                                                                                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
|                               | emerging threats are identified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ESFP-NPI                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                           |                                                                                                                                      |
| 60. Worker health and safety  | <ul style="list-style-type: none"> <li>- Incorporate Emergency Response Plan in laboratory operating protocols, and provide regular training for technicians and support staff on its activation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Emergency Response Plan included in laboratory operating protocols</li> <li>- Regular training provided on activation of Emergency Response Plan</li> </ul>                                                                                                                                                                                                                                                                                                                                     | Once prior to start of operations (protocols)<br><br>Annually (training)                                                                  | NQC (Included in SDCMU and NPI budget)                                                                                               |
| 61. Livelihoods               | <ul style="list-style-type: none"> <li>- Give priority to local people and firms in selecting Contractors for maintenance works and selected permanent positions in operations and maintenance</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Local people well represented in construction workforce</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                              | Annually                                                                                                                                  | NQC (Included in SDCMU and NPI budget)                                                                                               |
| <b>(iii) WASTE MANAGEMENT</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                           |                                                                                                                                      |
| 62. Laboratory waste          | <ul style="list-style-type: none"> <li>- Integrate detailed Laboratory Waste Management Plan (developed by laboratory design specialist engaged during detailed design) into laboratory operations and maintenance manual</li> <li>- Develop detailed protocols for waste classification, documentation, segregation, temporary storage and safe transport of hazardous wastes, and integrate these protocols into operations and maintenance manuals (laboratory design specialist to be engaged by Contractor during detailed design)</li> <li>- Provide training to laboratory technicians and maintenance staff on correct implementation of waste management protocols, before the laboratory becomes operational and on an annual basis thereafter</li> <li>- Specify parameters, measurement, and reporting for annual waste audit in</li> </ul> | SOU-SDCMU,<br>ESFP-SDCMU,<br>ESFP-NPI | <ul style="list-style-type: none"> <li>- Detailed hazardous waste handling protocols specified in laboratory operations and maintenance manuals</li> <li>- Specifications for annual waste management audit integrated into laboratory waste management protocols</li> <li>- Annual waste management audit performed and reported</li> <li>- Discharges of liquid waste from laboratory meet standards indicated in Schedule 10 (Inland Surface Water) of the Environment Conservation Rules, 2023 (only if full-service lab)</li> </ul> | Once prior to start of operations (protocols including waste management plans)<br><br>Annually (waste audit)<br><br>Quarterly (discharge) | NQC (Included in SDCMU and NPI budget)<br><br>BDT 20,000 for quarterly water quality sampling and analysis for 20 years (NPI budget) |

| Parameter type  | Prescribed measures                                                                                                                                                   | Monitoring entity                             | Monitoring parameters                                                                                                                                                                                                                                | When to monitor | Estimated monitoring cost in BDT       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------|
|                 | laboratory waste management protocols<br>- Conduct an annual waste management audit and implement corrective action as needed to address problematic trends           |                                               |                                                                                                                                                                                                                                                      |                 |                                        |
| 63. Solid waste | - Ensure that appropriate waste management procedures for all components of the solid waste stream are specified in each facility's operations and maintenance manual | SOU-SDCMU,<br><br>ESFP-SDCMU,<br><br>ESFP-NPI | - Recyclable solid waste is consistently segregated and picked up by a reputable recycling business<br>- Non-recyclable solid waste is consistently taken to a legal landfill for disposal<br>- Lack of evidence of waste dumping or burning on site | Quarterly       | NQC (Included in SDCMU and NPI budget) |

b) Monitoring Plan for KWT:

| Environmental Aspect                                            | Monitoring Parameter                                              | Means of Monitoring                                      | Frequency                                     | Location                      | Responsible Agency |             |
|-----------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------|-------------------------------|--------------------|-------------|
|                                                                 |                                                                   |                                                          |                                               |                               | Implement          | Supervising |
| Pre-Construction Stage                                          |                                                                   |                                                          |                                               |                               |                    |             |
| Connection of gas pipe line, water supply and electricity       | Monitoring all prescribed mitigation measures in Mitigation Table | Visual inspection to ensure the shifting of the gas line | During site clearance operations              | Proposed building site        | KWT/Contractor     | SDCMU/SEIP  |
| Filling the nearest depressed Portion for building construction | Monitoring all prescribed mitigation measures in Mitigation Table | Visual inspection                                        | Once before starting of construction activity | Proposed building site in KWT | KWT/Contractor     | SDCMU/SEIP  |
| Removal of vegetation                                           | Monitoring all prescribed mitigation measures in Mitigation Table | Visual inspection                                        | Once before starting of construction activity | Proposed building site in KWT | KWT/Contractor     | SDCMU/SEIP  |
| Removal of Utilities                                            | Monitoring all prescribed mitigation measures in Mitigation Table | Visual inspection                                        | Once before starting of construction activity | Proposed building site in KWT | KWT/Contractor     | SDCMU/SEIP  |
| EMP Implementation Training                                     | Monitoring all prescribed mitigation measures in Mitigation Table | Visual inspection                                        | Once before starting of construction activity | Proposed building site in KWT | KWT/Contractor     | SDCMU/SEIP  |

| Environmental Aspect      | Monitoring Parameter                                                                                                              | Means of Monitoring                                                                                                                                                                                                                                                                                                                       | Frequency                                                                                                                                                                                   | Location                                                   | Responsible Agency |             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------|-------------|
|                           |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                             |                                                            | Implement          | Supervising |
| Construction Stage        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                             |                                                            |                    |             |
| Groundwater Quality       | pH, Total Hardness, Chloride, Turbidity, Total Dissolved Solids, TC, FC                                                           | Laboratory analysis against the baseline established <ul style="list-style-type: none"><li></li><li></li></ul>                                                                                                                                                                                                                            | During construction (Semi-annually)                                                                                                                                                         | Inside the boundary of the dormitory                       | KWT/Contractor     | SDCMU/SEIP  |
| Surface water Quality     | pH, Total Hardness, Chloride, Turbidity, Total Dissolved Solids, BOD, COD                                                         | Laboratory analysis against the baseline established                                                                                                                                                                                                                                                                                      | During construction (Semi-annually)                                                                                                                                                         | Closest to the boundary of the dormitory                   | KWT/Contractor     | SDCMU/SEIP  |
| Air Quality               | PM <sub>10</sub> , PM <sub>2.5</sub> , CO, SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> , Temperature, Wind Speed, Humidity | Laboratory analysis against the baseline established                                                                                                                                                                                                                                                                                      | During construction (Semi-annually)                                                                                                                                                         | At the construction site                                   | KWT/Contractor     | SDCMU/SEIP  |
| Noise and Vibration Level | Measurement of noise dB(A)                                                                                                        | <ul style="list-style-type: none"><li>- Laboratory analysis against the baseline established</li><li>- Visual inspection to ensure good standard equipment are in use,</li><li>- Visual inspection to ensure ear plugs are in use by the construction workers</li><li>- Inspection of vehicle and equipment maintenance records</li></ul> | During day time and whenever any complains are received about disturbance due to construction noise measurements and routine checks on maintenance records once in 6 months (Semi-annually) | Near residential area, mosque institutional area and site. | KWT/Contractor     | SDCMU/SEIP  |
| Soil Quality Analysis     | – Organic Matter, oil & Grease, pH, zinc, Iron.                                                                                   | Laboratory analysis against the                                                                                                                                                                                                                                                                                                           | During construction (Semi-annually)                                                                                                                                                         | At the construction site                                   | KWT/Contractor     | SDCMU/SEIP  |

| Environmental Aspect                               | Monitoring Parameter                                                                                                                                                                                                                                                                                                                                             | Means of Monitoring  | Frequency                          | Location                                                                                    | Responsible Agency |             |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------|---------------------------------------------------------------------------------------------|--------------------|-------------|
|                                                    |                                                                                                                                                                                                                                                                                                                                                                  |                      |                                    |                                                                                             | Implement          | Supervising |
|                                                    | Manganese, Potassium etc                                                                                                                                                                                                                                                                                                                                         | baseline established |                                    |                                                                                             |                    |             |
| Occupational health and Safety                     | <ul style="list-style-type: none"> <li>– Check of personal protective equipment (PPE) for workers at the sites</li> <li>– Check if Health, First-Aid facility, and staff trained in First Aid are available at the sites</li> <li>– Check health risk of construction workers to COVID-19.</li> <li>– Check if medical checkup of workers is on going</li> </ul> | Visual inspection    | Daily                              | Construction Site                                                                           | KWT/Contractor     | SDCMU/SEIP  |
| Community Health and Safety                        | <ul style="list-style-type: none"> <li>– Control movement of project traffics especially at densely populated areas such as school, bazars etc. to avoid any accident.</li> </ul>                                                                                                                                                                                | Visual inspection    | Regular                            | Construction Site, the surroundings including access roads and contractor-managed off sites | KWT/Contractor     | SDCMU/SEIP  |
| Other specified mitigation measures as per the EMP | <ul style="list-style-type: none"> <li>– Check if all requirements are adhered to</li> </ul>                                                                                                                                                                                                                                                                     | Visual inspection    | Weekly                             | Construction Site, the surroundings including access roads and contractor-managed off sites | KWT/Contractor     | SDCMU/SEIP  |
| Drainage Congestion                                | <ul style="list-style-type: none"> <li>– Maintain checklist</li> </ul>                                                                                                                                                                                                                                                                                           | Visual inspection    | Throughout the construction period | Construction Site, the surroundings including access roads and contractor-managed off sites | KWT/Contractor     | SDCMU/SEIP  |

| Environmental Aspect   | Monitoring Parameter                                                                                                                                                                                                                                                                                                                                      | Means of Monitoring | Frequency                          | Location                                                                                    | Responsible Agency |             |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------|---------------------------------------------------------------------------------------------|--------------------|-------------|
|                        |                                                                                                                                                                                                                                                                                                                                                           |                     |                                    |                                                                                             | Implement          | Supervising |
| Plantation             | <ul style="list-style-type: none"> <li>– Ensure that tree plantation plan is followed properly during planting seedlings</li> </ul>                                                                                                                                                                                                                       | Visual inspection   | Throughout the construction period | Construction Site, the surroundings including access roads and contractor-managed off sites | KWT/Contractor     | SDCMU/SEIP  |
| COVID-19 E&S           | <ul style="list-style-type: none"> <li>– Visual inspection &amp; consultation with KWT staff, and local people</li> <li>– Record of accidents</li> <li>– Obtain record of training</li> <li>– Provision of regular temperature check, using disinfectants and provision of time-to-time hand wash are required to limit the COVID-19 pandemic.</li> </ul> | Visual inspection   | Throughout the construction period | Construction Site, the surroundings including access roads and contractor-managed off sites | KWT/Contractor     | SDCMU/SEIP  |
| Traffic Congestion     | <ul style="list-style-type: none"> <li>– Traffic volume, composition, and speed</li> </ul>                                                                                                                                                                                                                                                                | Visual inspection   | Throughout the construction period | Construction Site, the surroundings including access roads and contractor-managed off sites | KWT/Contractor     | SDCMU/SEIP  |
| Waste Management       | <ul style="list-style-type: none"> <li>– Waste and effluents to be collected and disposed safely to the designated sites</li> </ul>                                                                                                                                                                                                                       | Visual inspection   | Throughout the construction period | Construction Site, the surroundings including access roads and contractor-managed off sites | KWT/Contractor     | SDCMU/SEIP  |
| <b>Operation Stage</b> |                                                                                                                                                                                                                                                                                                                                                           |                     |                                    |                                                                                             |                    |             |

| Environmental Aspect  | Monitoring Parameter                                                                                                              | Means of Monitoring                                  | Frequency     | Location                                                                                                                                                               | Responsible Agency |             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|
|                       |                                                                                                                                   |                                                      |               |                                                                                                                                                                        | Implement          | Supervising |
| Groundwater Quality   | pH, Total Hardness, Chloride, Total Dissolved Solids (TDS)                                                                        | Laboratory analysis                                  | Semi annually | Specialized Nurses' Dormitory building water supply system                                                                                                             | KWT/Contractor     | SDCMU/SEIP  |
| Surface water Quality | pH, Total Hardness, Chloride, Turbidity, Total Dissolved Solids, BOD, COD                                                         | Laboratory analysis against the baseline established | Semi-annually | Closest to the boundary of the dormitory                                                                                                                               | KWT/Contractor     | SDCMU/SEIP  |
| Noise Level           | Measurement of noise dB(A)                                                                                                        | Laboratory analysis                                  | Semi annually | Four corners of the site boundary, at 200 m and 300 m from the following locations: (i) residential, (ii) institutional (school, mosque), (iii) silent (hospital) area | KWT/Contractor     | SDCMU/SEIP  |
| Air Quality           | PM <sub>10</sub> , PM <sub>2.5</sub> , CO, SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> , Temperature, Wind Speed, Humidity | Laboratory analysis                                  | Semi annually | Inside the project boundary                                                                                                                                            | KWT/Contractor     | SDCMU/SEIP  |

c) Monitoring plan for Sylhet TTC

| No                        | Environmental Issues<br><br>/Parameters | Monitoring Method |             |                                    | Status |
|---------------------------|-----------------------------------------|-------------------|-------------|------------------------------------|--------|
|                           |                                         | Method            | Location    | Duration /<br>Frequency            |        |
| 1. Pre-Construction Phase |                                         |                   |             |                                    |        |
| 1.1                       | Tree plantation                         | Visual inspection | In the site | During the pre-construction period |        |

| No                    | Environmental Issues                                                     | Monitoring Method                                                                                                     |                                    |                                       | Status |
|-----------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------|--------|
|                       | /Parameters                                                              | Method                                                                                                                | Location                           | Duration / Frequency                  |        |
| 2. Construction Phase |                                                                          |                                                                                                                       |                                    |                                       |        |
| 2.1                   | Work condition (including work safety)                                   | Record of accidents                                                                                                   | Contractor's office                | Continuous Record                     |        |
| 2.2                   | Accidents                                                                | Record of accidents                                                                                                   | Contractor's office                | Continuous Record                     |        |
| 2.3                   | Disturbance to Community traffic and installation of proper road signage | Records of road signage implemented, visual inspection                                                                | Along the approach road            | Continuous record                     |        |
| 2.4                   | Infectious Diseases such as COVID-19, HIV/AIDS                           | Labor health record                                                                                                   | Related institutions               | Continuous Record                     |        |
| 2.5                   | Disturbance to Existing Social Infrastructure and Services               | Record of numbers construction vehicles                                                                               | Project site                       | Continuous Record                     |        |
| 2.6                   | Topography and Landscape Changes                                         | Inspection                                                                                                            | In the work site                   | Construction stage/ Weekly inspection |        |
| 2.7                   | Air Quality                                                              | Monitoring is suggested in Both construction sites. (BACI site contains a very sensitive location-E- passport office) | construction site                  | Bi-annual monitoring                  |        |
| 2.8                   | Noise Quality                                                            | Regular Monitoring                                                                                                    | Construction site                  | Daily monitoring                      |        |
| 2.9                   | Drinking water quality                                                   | Inspection                                                                                                            | Labor camp & engineers' room       | Bi-annual monitoring                  |        |
| 3.0                   | Wastes and drainage congestion                                           | Record of kinds and quantity of waste, and the disposal method                                                        | In the work site and Worker's camp | Daily                                 |        |
| 3. Operation Phase    |                                                                          |                                                                                                                       |                                    |                                       |        |



| No  | Environmental Issues<br>/Parameters | Monitoring Method                                              |                                    |                      | Status |
|-----|-------------------------------------|----------------------------------------------------------------|------------------------------------|----------------------|--------|
|     |                                     | Method                                                         | Location                           | Duration / Frequency |        |
| 3.1 | Accidents                           | Record of accidents and fire                                   | Along the road and buildings.      | Continuous Record    |        |
| 3.2 | Wastes and drainage congestion      | Record of kinds and quantity of waste, and the disposal method | In the work site and Worker's camp | Daily                |        |

## 2.3 Training and Capacity Building Activities

30. In this reporting period, no training /workshops on Environmental management and Site occupational Health & Safety for civil works were held as the works are not started yet.

## 2.4 Grievance Redress Mechanism (GRM)

31. A site-specific Grievance Redress Mechanism (GRM) will be designed to resolve affected people's (APs) concerns, complaints, and grievances about the subproject's social and environmental performance.

### 3 ENVIRONMENTAL MANAGEMENT

#### 3.1 Compliance with Environmental Mitigation and Management Plan (EMP)

32. The EMP Plan have been developed for 4 sites only such as STTL, NATI, Kumudining and Sylhet TTC. The project will ensure all the compliance related to EMP and mitigation measures as described in the IEE.

**Table 3-1: Status of Environmental Management Plan**

##### a) EMP for NATI and STTL

| Parameter                                                   | Potential impacts and/or issues                                                                                                | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                        | Compliance Status              |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>A. PRE-CONSTRUCTION PHASE</b>                            |                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                            |                                                                                                                                                                                                               |                                |
| <b>(i) IMPLEMENTATION READINESS</b>                         |                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                            |                                                                                                                                                                                                               |                                |
| 1. IEE and EMP update                                       | Impacts not accounted for due to post-approval modifications in alignment, design or local conditions                          | <ul style="list-style-type: none"> <li>- Review IEE and EMP to ensure any post-approval changes are properly accounted for and addressed, by addition of mitigation measures if necessary</li> <li>- EMP copied in the bid document and part of legal contract of the contractor</li> </ul>                                                                                                                                                                                                                                                                                                                                     | SDC MU                | SDCM U/PIU                 | <ul style="list-style-type: none"> <li>- IEE and EMP confirmed still fully applicable</li> <li>- New measures added to EMP if needed to cover any changes in alignment, design or local conditions</li> </ul> | Complied. IEE and EMP prepared |
| 2. Confirmation of NOCs from local agencies and authorities | Project works will not be granted clearances by DOE if NOCs are not obtained from relevant national and local authorities      | <ul style="list-style-type: none"> <li>- Confirm NOC has been obtained from NPI itself</li> <li>- Declare site clearance from NPI itself so that no conflict occurs in future, and DOE has legal documents that the site is owned by NPI</li> </ul>                                                                                                                                                                                                                                                                                                                                                                             | SDC MU                | SDCM U/PIU                 | <ul style="list-style-type: none"> <li>- NOCs granted by local municipal authorities</li> <li>- Self-declaration of ownership of land by the NPI</li> </ul>                                                   | Being complied.                |
| 3. Verification of environmental clearances                 | Project works will not be in compliance with national environmental laws if clearances are not obtained prior to site clearing | <ul style="list-style-type: none"> <li>- Confirm Site Clearance Certificate (SCC) and Environmental Clearance Certificate (ECC) have been granted, and that any conditions imposed by DOE on approval have been reflected in EMP and EMoP, as well as CEMP as applicable</li> </ul>                                                                                                                                                                                                                                                                                                                                             | SDC MU                | SDCM U/PIU                 | <ul style="list-style-type: none"> <li>- SCC and ECC granted</li> <li>- New measures added to EMP, EMoP and CEMP if needed to meet any condition of approval specified by DOE</li> </ul>                      | Being complied.                |
| 4. CEMP verification                                        | Mitigation will be inadequate if the CEMP is not fully specified                                                               | <ul style="list-style-type: none"> <li>- Review CEMP to ensure all primary Contractor responsibilities are fully reflected, including monitoring and reporting</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SDC MU /CS C          | SDCM U/PIU                 | <ul style="list-style-type: none"> <li>- Any necessary changes requested, and made by Contractor</li> <li>- CEMP confirmed adequate by reviewers</li> </ul>                                                   | To be complied (not timed)     |
| 5. Specialized plans verification                           | Mitigation will be inadequate if specialized plans have not been formulated to manage key impacts                              | Confirm that the following specialized plans have been prepared by the Contractor: <ul style="list-style-type: none"> <li>- site-specific Construction Camp Management Plan(s)</li> <li>- site-specific Waste Management Plans (embedded within CEMP)</li> <li>- site-specific Emergency Response Plans (embedded within CEMP)</li> <li>- Compensatory Tree Planting Plan</li> <li>- Construction Traffic Management Plan</li> <li>- Soil Erosion Prevention Plan</li> <li>- Site Reinstatement Plan</li> <li>- Occupational Health and Safety Plan (including COVID-19 measures stipulated by ADB and Government of</li> </ul> | SDC MU /CS C          | SDCM U/PIU                 | <ul style="list-style-type: none"> <li>- All required specialized plans prepared to adequate standard and approved by relevant authority (as required in some cases)</li> </ul>                               | To be complied (not timed)     |

| Parameter                       | Potential impacts and/or issues                                                                                                                              | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                                                                                                        | Compliance Status                                                                                                           |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                 |                                                                                                                                                              | Bangladesh Guidance for Social and Institutional Containment and Prevention)<br>- Waste Management Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                            |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| 6. Grievance Redress Mechanisms | Members of the public and workers require a fair and transparent means of getting resolution to complaints about some aspect of the project's implementation | - Confirm that a central GRM and workers' GRM have been established and publicized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SDC MU /CS C          | SDCM U/PIU                 | - Central GRM established and publicized<br>- Workers' GRM established and explained to workers before the start of construction                                                                                                                                                                                                                                                              | To be complied                                                                                                              |
| <b>(ii) DESIGN</b>              |                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                       |                            |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| 7. Climate change mitigation    | Generation of GHG from construction and operations contributes to global climate change problem                                                              | <ul style="list-style-type: none"> <li>- Integrate GHG-limiting measures into facility designs, including: <ul style="list-style-type: none"> <li>- substitute other materials for concrete where feasible</li> <li>- use low-carbon concrete as much as possible</li> <li>- maximize use of building materials available locally</li> <li>- integrate photovoltaic generation into the electrical plan</li> <li>- specify only high-efficiency electrical and mechanical equipment</li> <li>- Specify most fuel-efficient backup generator available</li> <li>- Maximize cross-ventilation by use of courtyards, openable windows and favorable building orientation</li> <li>- Prioritize shade in the landscaping plan, with plentiful wide-crowned shade trees on all parts of site</li> <li>- Incorporate hollow wall structures where feasible</li> <li>- Use overhangs above large windows to prevent excessive sun penetration</li> <li>- Maximize interior natural light by use favorable building orientation and courtyards</li> <li>- Specify water-saving toilets, faucets and showerheads</li> <li>- Design dedicated plumbing system for drinking and cooking water</li> <li>- Aim to meet all water heating needs with solar heaters</li> <li>- Specify high-intensity, full-time lighting only where strictly necessary</li> <li>- Specify solar-powered lighting in outdoor applications</li> <li>- Base landscape plan around drought-tolerant perennial native species</li> <li>- Design site layout and inspection process to minimize the length of time vehicles have their engines running</li> <li>- Incorporate green roofs wherever roof area is not needed for solar panels and solar water heaters</li> <li>- Maximize carbon sequestration potential, micro-climatic cooling and runoff retention by specifying a landscaping plan covering all site areas not occupied by structures, roadways or walkways, including ample shade trees</li> </ul> </li> </ul> | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- All feasible GHG-reduction design measures incorporated in facility detailed designs</li> <li>- Soft landscaping plan (covering all site areas not occupied by structures, roadways or walkways, and including ample shade trees and dense ground cover) included in detailed site design, with plantings specified in Bill of Quantities</li> </ul> | Complied. Climate change features- solar panel, Rain water system and energy efficient fittings are included in the design. |

| Parameter                    | Potential impacts and/or issues                                                              | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                              | Compliance Status                                                                                                           |
|------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                              |                                                                                              | (especially near buildings) and dense ground cover in open areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |                            |                                                                                                                                                                                                                                                                     |                                                                                                                             |
| 8. Climate change adaptation | Infrastructure use limitations, damage, and environmental hazards due to changing conditions | <ul style="list-style-type: none"> <li>- Integrate lightning arrester in building design</li> <li>- Design facilities so that critical components (including laboratory, backup generator and fuel tanks) are well above maximum flood level foreseen under climate change projections specified in Climate Risk and Adaptation Assessment (CRA) report and detailed hydrological study</li> <li>- Incorporate temperature-moderating features in NATI facility designs, including: <ul style="list-style-type: none"> <li>- green roofs where feasible</li> <li>- maximize use of wide-crowned shade trees in site landscaping plans, including around buildings and parking area medians</li> <li>- maximize cross-ventilation by use of courtyards, openable windows and favorable building orientation</li> </ul> </li> </ul> | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- All critical facility components above maximum expected flood level</li> <li>- All feasible temperature-moderating features incorporated in facility designs</li> </ul>                                                    | Complied. Climate change features- solar panel, Rain water system and energy efficient fittings are included in the design. |
| 9. Flora and fauna           | Unnecessary loss of trees during site development                                            | <ul style="list-style-type: none"> <li>- Incorporate existing trees into site designs to the greatest extent possible, including them in design drawings so they are protected during clearing and construction</li> <li>- When trees must be removed, specify planting of compensatory trees elsewhere on site, including these in drawings and in the Bill of Quantities, in accordance with the approved Compensatory Tree Planting Plan</li> </ul>                                                                                                                                                                                                                                                                                                                                                                            | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- Existing trees incorporated in designs to extent possible</li> <li>- Compensatory trees specified in design drawings and Bill of Quantities, in accordance with the approved Compensatory Tree Planting Plan</li> </ul>    | To be complied (not timed)                                                                                                  |
| 10. Groundwater resources    | Lack of effective water conservation contributes to local groundwater issues                 | <ul style="list-style-type: none"> <li>- Maximize opportunities to limit water consumption and increase groundwater recharge, including adoption of: <ul style="list-style-type: none"> <li>(i) rain capture on all roofs and use of stored water for non-potable uses in and around facilities</li> <li>(ii) high-efficiency faucets and toilets throughout the facilities</li> <li>(iii) plant species with low water needs in site landscaping plans</li> <li>(iv) stormwater infiltration swales for all runoff from paved and impervious surfaces (objective: zero site runoff)</li> </ul> </li> </ul>                                                                                                                                                                                                                       | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- All feasible and applicable water conservation measures incorporated in detailed designs for NATI facilities</li> </ul>                                                                                                    | To be complied (not timed)                                                                                                  |
| 11. Surface water quality    | Siltation, sedimentation and contamination of water bodies receiving runoff from the NATI    | <ul style="list-style-type: none"> <li>- Slightly raise surface of minerals storage area above level of rest of site to prevent runoff from other site areas from washing through stockpiles</li> <li>- Include sediment traps and porous drainage channels in final drainage design for minerals storage area, to limit discharge of sediments</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- Surface of minerals storage area designed to be slightly higher than rest of site</li> <li>- Adequately sized sediment traps and porous drainage channels included in detailed design for minerals storage area</li> </ul> | To be complied (not timed)                                                                                                  |
| 12. Air quality              | Elevated dust in minerals storage area                                                       | <ul style="list-style-type: none"> <li>- Include water supply to minerals storage area, with hose spigots in several locations around the perimeter to enable use of mobile misting apparatus</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- Detailed design includes water supply to minerals storage area, with multiple hose spigots spaced around perimeter</li> </ul>                                                                                              | To be complied (not timed)                                                                                                  |

| Parameter                           | Potential impacts and/or issues                                                              | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                          | Compliance Status          |
|-------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 13. Public health and safety        | Elevated risk of viral infection in NATI area                                                | <ul style="list-style-type: none"> <li>- Design internal layout of the NATI building to maximize space between users and prevent the formation of long lines in indoor spaces</li> <li>- Design NATI building ventilation system for maximum feasible turnover of indoor air</li> </ul>                                                                                                                                                                                                                                                                                                                                                                             | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- NATI building designed to maximize space between users and prevent formation of long indoor lines</li> <li>- NATI building ventilation system designed for maximum feasible turnover of indoor air</li> </ul>                                          | To be complied (not timed) |
| 14. Occupational health and safety  | Chronic exposure of facility staff to elevated engine emissions                              | <ul style="list-style-type: none"> <li>- Design canopies over areas used by vehicles with extra headroom and good cross ventilation or fans to evacuate emissions efficiently</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- Canopy designs enable efficient exhaust removal</li> <li>- site check booths designed with remote air intake and positive pressure ventilation</li> </ul>                                                                                              | To be complied (not timed) |
| 15. Occupational health and safety  | Elevated staff exposure to viral threats                                                     | <ul style="list-style-type: none"> <li>- Design interior layout of the NATI building to maximize space between users and prevent the formation of long lines in indoor spaces</li> <li>- Design NATI building ventilation system for maximum feasible turnover of indoor air</li> </ul>                                                                                                                                                                                                                                                                                                                                                                             | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- NATI building internal layout designed to maximize space between users and prevent formation of long indoor lines</li> <li>- NATI building ventilation system designed for maximum feasible turnover of indoor air</li> </ul>                          | To be complied (not timed) |
| 16. Occupational health and safety  | Exposure to hazardous releases in laboratory                                                 | <ul style="list-style-type: none"> <li>- Engage qualified laboratory specialist to contribute to design of laboratory and associated structures, as well as preparation of operation protocols including waste management plans, to adhere to international laboratory design standards and best practices</li> </ul>                                                                                                                                                                                                                                                                                                                                               | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- Suitable laboratory design specialist engaged to ensure design and operations of laboratory adhere to international laboratory design and operation standards and best practice</li> </ul>                                                             | To be complied (not timed) |
| 17. Waste management                | Pollution from inadequately managed wastes                                                   | <ul style="list-style-type: none"> <li>- Anticipate waste streams and incorporate design features to collect, sort and safely dispose of each class of waste</li> <li>- Specify segregated collection bins in strategic indoor and outdoor locations where wastes are generated</li> <li>- Include waste storage and sorting areas in facility designs</li> <li>- Incorporate easy access for waste and recyclables collection vehicles</li> <li>- Designate outdoor space for thermophilic composting of organic waste from kitchens and canteens</li> <li>- Design laboratory for appropriate segregation of hazardous and non-hazardous waste streams</li> </ul> | CSC Con               | MoF, SDCM U-ESFP           | <ul style="list-style-type: none"> <li>- Facility designs include spaces and features for waste management, including collection, sorting, composting, storage and out-shipment</li> <li>- Laboratory design provides for at-source segregation of hazardous liquid and solid wastes</li> </ul> | To be complied (not timed) |
| <b>(iii) PROCUREMENT</b>            |                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       |                            |                                                                                                                                                                                                                                                                                                 |                            |
| 18. Selection of CSC and Contractor | Contractors with low commitment to safeguards compliance limit success of EMP implementation | <ul style="list-style-type: none"> <li>- Prioritize selection of Contractor with strong compliance track record, as verified by references from previous CSCs</li> <li>- Select only Contractors registered with MOLE</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                    | SDC MU                | MoF                        | <ul style="list-style-type: none"> <li>- Selected CSC and Contractor has verified track record of good performance on safeguards compliance</li> </ul>                                                                                                                                          | To be complied             |
| 19. Labor                           | Use of non-local labor reduces positive impact of project on local livelihoods and triggers  | <ul style="list-style-type: none"> <li>- Hire exclusively or mostly local workers</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Con                   | MoF, SDCM U-ESFP,          | <ul style="list-style-type: none"> <li>- Workers from outside Chattagram represent less than 10% of total workforce</li> </ul>                                                                                                                                                                  | To be complied             |

| Parameter                                | Potential impacts and/or issues                                                                                                                    | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                                                                                                                                                  | Compliance Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|                                          | social conflict                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       | PIU                        |                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |
| 20. Materials sourcing                   | Gravel and sand obtained from environmentally damaging riverbed mining, hill cutting or farmland strip-mining                                      | - Obtain valid Certificate of BSTI from suppliers of bulk materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Con                   | MoF, SDCM U-ESFP, PIU      | - Certificate of BSTI obtained and filed for each purchase of bulk materials                                                                                                                                                                                                                                                                                                                                                            | To be complied    |
| 21. Materials sourcing                   | Undue GHG emissions from transport of materials sourced far from point of use                                                                      | - Prioritize bulk materials suppliers using less distant sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Con                   | MoF, SDCM U-ESFP, PIU      | - Materials sourced from within reasonable distance                                                                                                                                                                                                                                                                                                                                                                                     | To be complied    |
| 22. Materials Sourcing                   | Knock-on environmental effects of sourcing from unsustainable suppliers                                                                            | - Select suppliers with strong green credentials (verified by review of certifications received)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Con                   | MoF, SDCM U-ESFP, PIU      | - International suppliers of materials have favorable environmental certifications                                                                                                                                                                                                                                                                                                                                                      | To be complied    |
| <b>B. CONSTRUCTION PHASE</b>             |                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |
| <b>(i) BIOPHYSICAL ENVIRONMENT</b>       |                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |
| 23. Surface water                        | Siltation and sedimentation of watercourses from soil erosion and entrainment of fine materials, blockage of the surface drains near the NATI site | Implement approved Soil Erosion Prevention Plan, including (inter alia):<br>- Protect disturbed soil from rain by keeping exposed areas covered with mulches, fiber mats and other temporary coverings<br>- Keep all stockpiles of erodible materials covered with tarpaulins whenever they are not in active use<br>- Arrange work site drainage to prevent concentration of surface runoff in the vicinity of exposed soils and materials stockpiles<br>- Install and regularly maintain sediment traps in site runoff channels<br>- Promptly establish vegetative cover on soil surfaces in locations where construction activity has been completed<br>- Deploy silt curtains and sediment traps when earthworks are carried out near watercourses | Con                   | MoF, SDCM U-ESFP, PIU, CSC | - Prescribed soil protection measures effectively implemented at all work sites<br>- Sediment traps installed in appropriate places, and maintained properly<br>- Lack of evidence of elevated turbidity in water draining to adjacent water bodies<br>- Vegetative cover promptly established when construction activity complete on each part of work sites<br>- Silt curtains and sediment traps properly deployed where appropriate | To be complied    |
| 24. Surface water, groundwater and soils | Contamination from leaks and spills of noxious fluids used in construction process                                                                 | - Keep all motorized equipment in good repair<br>- Maintain a regiment of systematic daily checks to detect leaks, following up with prompt repair as needed<br>- Strictly require use of drip mats and pans during refueling and servicing to catch spills and drips<br>- Store fuels and other noxious fluids within roofed, rain-exclusive containment structures with capacity at least 115% of the volume of the largest container stored, constructed only in locations with zero probability of flooding during heavy rains<br>- Provide training in spill prevention and spill response to all workers involved in refueling or equipment servicing                                                                                            | Con                   | MoF, SDCM U-ESFP, PIU, CSC | - Fuels, lubricants and other noxious fluids stored in appropriate structure<br>- Lack of evidence of leaks from construction equipment<br>- Lack of oil patches on soil surface<br>- Lack of oily sheen on site runoff water                                                                                                                                                                                                           | To be complied    |
| 25. Surface water                        | Excessive enrichment of surface waters from raw sewage discharged by construction camps lacking adequate septic systems                            | - Install an adequate number of toilets to accommodate all workers, and septic systems of sufficient capacity for the expected effluent volume, in accordance with Construction Camp Management Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Con                   | MoF, SDCM U-ESFP, PIU, CSC | - At least one working toilet per 10 resident workers installed<br>- Absence of visual evidence of enrichment                                                                                                                                                                                                                                                                                                                           | To be complied    |

| Parameter       | Potential impacts and/or issues                                                                        | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Compliance Status |
|-----------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 26. Air quality | Dust from construction works create nuisance and health hazard for residents near work sites and roads | <ul style="list-style-type: none"> <li>- Implement a regimen of misting all dust-generating surfaces throughout the workday during dry weather</li> <li>- Tightly cover stockpiles of fine materials with tarpaulins whenever they are not in active use to prevent wind erosion</li> <li>- Equip all haul trucks with tightly fitting tarpaulins and enforce their use</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Levels of airborne dust are below nuisance level in roadside communities</li> <li>- No significant dust accumulation observed on roadside crops and structures</li> <li>- No complaints from public registered</li> <li>- Ambient air quality at perimeter of work sites and on main road near the NATI site meet the standard indicated in the Air Pollution (control) Rules 2022.</li> </ul>                                         | To be complied    |
| 27. Air quality | Emissions from equipment and vehicles used in construction degrades local air quality                  | <ul style="list-style-type: none"> <li>- Maintain all motorized equipment used in construction to a high standard</li> <li>- Use only fuel-efficient equipment</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Absence of black smoke in construction equipment exhaust</li> <li>- No complaints from public</li> <li>- Ambient air quality at perimeter of work sites and on the Police Plaza Road near NATI site meet the standard indicated in the Air Pollution (control) Rules 2022.</li> <li>- Emissions from motorized machinery used in construction should meet the standard indicated in the Air Pollution (control) Rules 2022.</li> </ul> | To be complied    |
| 28. Soil        | Loss of topsoil to erosion                                                                             | <ul style="list-style-type: none"> <li>- Implement approved Soil Erosion Prevention Plan, including (inter alia):               <ul style="list-style-type: none"> <li>o Protect disturbed soil from rain by keeping exposed areas covered with mulches, fiber mats and other temporary coverings</li> <li>o Arrange work site drainage to prevent concentration of surface runoff in the vicinity of exposed soils</li> <li>o Promptly establish vegetative cover on soil surfaces in locations where construction activity has been completed</li> </ul> </li> <li>- Implement approved Site Reinstatement Plan, including (inter alia):               <ul style="list-style-type: none"> <li>o Reserve topsoil and store separately for later use</li> <li>o Promptly prepare soil surfaces for plantings once construction work has been completed in each part of site</li> <li>o Establish vegetative cover in accordance with landscaping plan in detailed site design, Bill of Quantities and Compensatory Tree Planting Plan</li> </ul> </li> </ul> | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Prescribed soil protection measures effectively implemented at all work sites</li> <li>- Lack of evidence of soil erosion</li> <li>- Vegetative cover promptly established when construction activity complete on each part of work sites</li> </ul>                                                                                                                                                                                   | To be complied    |



| Parameter                                          | Potential impacts and/or issues                                                                                     | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Compliance Status |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|                                                    |                                                                                                                     | <ul style="list-style-type: none"> <li>Implement a watering and tending regimen to help ensure success of plantings</li> <li>Monitor progress of vegetation establishment until end of defects period, and implement infill planting as necessary to achieve full coverage</li> </ul>                                                                                                                                                                                                                                                                        |                       |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
| 29. Flora and fauna                                | Damage to trees                                                                                                     | <ul style="list-style-type: none"> <li>Clearly mark trees that are to be preserved prior to clearing</li> <li>Establish a fenced buffer around trees that are to be preserved to protect them from damage by equipment, excavation and materials stockpiles</li> </ul>                                                                                                                                                                                                                                                                                       | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>Trees clearly marked prior to site clearing</li> <li>Fenced buffers established, maintained and observed around preserved trees for duration of works</li> </ul>                                                                                                                                                                                                                                                                                                                                                                    | To be complied    |
| 30. Flora and fauna                                | Aquatic habitat in on-site watercourses degraded                                                                    | <ul style="list-style-type: none"> <li>There is natural water course near the site. The deep ditch adjacent to the site drains toward the main drainage system which is actually a canal.</li> <li>Establish a 10-m buffer with temporary fencing along any permanent or seasonal watercourses found on site, and enforce a prohibition on any construction-related activity within the buffer for the duration of the works</li> <li>Deploy silt curtains and temporary sediment traps where runoff from active work areas is directed to creeks</li> </ul> | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>10-m buffer established with temporary fencing along any permanent or seasonal watercourses on site</li> <li>Prohibition on construction-related activities within the buffer enforced</li> <li>Silt curtains and sediment traps deployed as appropriate to limit silt delivery to on-site watercourses</li> </ul>                                                                                                                                                                                                                  | To be complied    |
| 31. Flora and fauna                                | Loss of trees                                                                                                       | <ul style="list-style-type: none"> <li>Initiate a tree plantation plan. It is possible that within the NPI campus, more than one hundred trees can be planted. In this case native species should be chosen.</li> <li>Implement approved Compensatory Tree Planting Plan as soon as schedule of works permits</li> </ul>                                                                                                                                                                                                                                     | Con                   | MoF, SDCM U-ESFP, PIU, CSC | Compensatory Tree Planting Plan implemented as approved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | To be complied    |
| <b>(ii) SOCIOECONOMIC AND CULTURAL ENVIRONMENT</b> |                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
| 32. Acoustic environment                           | Noise and vibration from earthworks, pile-driving and materials hauling degrade quality of life for local residents | <ul style="list-style-type: none"> <li>Conduct work only during daylight hours</li> <li>Impose and enforce low speed limits on haul trucks through the Police Plaza Road</li> <li>Maintain all motorized equipment and haul trucks to a high standard, and inspect exhaust systems regularly</li> </ul>                                                                                                                                                                                                                                                      | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>Noise and vibration are below nuisance level for residents and tourism businesses along Police Plaza Road</li> <li>No construction work or hauling is conducted between dusk and dawn</li> <li>No complaints from the public registered</li> <li>Ambient noise levels outside the work sites meet the standard indicated in the Noise Pollution (control) Rules 2006.</li> <li>Noise emissions from individual pieces of machinery and vehicles meet the standard indicated in the Noise Pollution (control) Rules 2006.</li> </ul> | To be complied    |



| Parameter         | Potential impacts and/or issues                                                     | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Compliance Status |
|-------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 33. Public safety | Elevated risks to pedestrians on approach road and in the site                      | <ul style="list-style-type: none"> <li>- Ensure that the construction sites are adequately fenced and security is provided to prevent members of the public from entering the sites</li> <li>- Establish safe, marked routes for staff and facility users to continue to use the NPI facilities without having to cross active construction zones</li> <li>- Implement approved Construction Traffic Management Plan during hauling periods, including (inter alia):</li> <li>- Impose and enforce low speed limits on haul trucks through Police Plaza Road</li> </ul>                                                                                                                                                                                                                                                                                                                                                            | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Adequate fencing and security maintained at construction sites</li> <li>- Construction zone is configured to maintain safe access for NATI staff during construction works</li> <li>- Construction Traffic Management Plan prepared and observed to be implemented as appropriate</li> <li>- Haul trucks not observed or reported to speed through NATI site or elsewhere along Police Plaza Road near the work site</li> </ul> | To be complied    |
| 34. Public safety | Construction camps are locus of violence against women and girls                    | <ul style="list-style-type: none"> <li>- Give preference to local laborers to avoid the need for, or limit the size of, a construction camp</li> <li>- Implement approved Construction Camp Management Plan, including (inter alia):</li> <li>- Conduct proactive outreach with leaders of nearby communities to educate women and girls about the risks posed by an all-male camp in the neighborhood.</li> <li>- Give resident workers regular training on appropriate behavior in and around the camp</li> <li>- Adopt a zero-tolerance policy around aggression or violence against local women and girls</li> <li>- When women must enter the camp for employment or selling produce, limit their entry to times when resident workers are out at the work site</li> <li>- Prohibit prostitution on the site, and monitor activity in this regard and work with community leaders to address the problem as needed</li> </ul> | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Lack of reports of worker-involved abuse or harassment</li> <li>- Lack of complaints from public about violence or prostitution at camp</li> <li>- Female access to camp for employment allowed only when workers are out at work sites</li> </ul>                                                                                                                                                                              | To be complied    |
| 35. Public safety | Construction camps serve as source of social conflict, possibly leading to violence | <ul style="list-style-type: none"> <li>- Implement approved Construction Camp Management Plan, including (inter alia):</li> <li>- Provide regular training and enforcement to minimize bad worker behavior off site, including public drunkenness, sexual harassment, and theft of crops/foods</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Lack of complaints from public about behavior of resident workers</li> </ul>                                                                                                                                                                                                                                                                                                                                                    | To be complied    |
| 36. Public health | Construction camps act as vectors for spread of pathogens and disease               | <ul style="list-style-type: none"> <li>- Implement approved Construction Camp Management Plan, including (inter alia):</li> <li>- Install and maintain adequate toilet and septic systems to prevent discharge of raw sewage from camps to local water bodies or fields</li> <li>- Educate resident workers about sexually transmitted diseases and responsible sexual behavior</li> <li>- Work with local community leaders to prohibit prostitution in and around construction camps</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                  | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- At least one working toilet per 10 resident workers installed, with septic treatment</li> <li>- Absence of visual evidence of raw sewage discharge</li> <li>- Lack of reports of prostitution around camp</li> <li>- Lack of concerns expressed by local community leaders about workers' off-site behavior</li> </ul>                                                                                                          | To be complied    |

| Parameter                    | Potential impacts and/or issues                                              | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compliance Status |
|------------------------------|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 37. Worker health and safety | Risks to worker health and safety from improper work site practices          | <ul style="list-style-type: none"> <li>- Implement approved Occupational Health and Safety Plan, including (inter alia):</li> <li>- Provide regular safety training for all workers</li> <li>- Provide task-appropriate PPE to all workers and enforce its use</li> <li>- Closely monitor works at all times to ensure strong worker compliance with safety practices</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Low incidence of workplace injuries</li> <li>- Workers observed using appropriate PPE</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                 | To be complied    |
| 38. Worker health            | Risks to workers from viral illness                                          | <ul style="list-style-type: none"> <li>- Implement approved Occupational Health and Safety Plan, including (inter alia):</li> <li>- Institute temperature checks (at least daily) for all workers and supervisory personnel on site</li> <li>- Provide each worker with appropriate face mask daily or as needed, and require mask use at all times</li> <li>- Position hand washing and sanitizing stations at canteens and other eating areas, kitchens, and near toilets</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                        | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Temperature check regimen implemented consistently</li> <li>- Workers supplied with facemasks</li> <li>- Workers consistently use facemasks</li> <li>- Hand washing and sanitizing stations provided in appropriate locations and kept stocked at all times</li> </ul>                                                                                                                                                                                                                           | To be complied    |
| 39. Worker health and safety | Risks to worker health and safety from poor conditions in construction camps | <ul style="list-style-type: none"> <li>- Implement approved Occupational Health and Safety Plan, including (inter alia):</li> <li>- Conduct monthly safety audit of camp to identify fire risks, electrocution hazards and other unsafe conditions, and assess adequacy of fire extinguishers and first aid provisions</li> <li>- Institute a regular cleaning and disinfection regimen for camp kitchens, latrines, wash-up areas, eating areas and sleeping sheds</li> <li>- Provide adequate sleeping space for the number of workers to avoid overcrowding and consequent spread of communicable illnesses and infestations</li> <li>- Provide each worker with a raised sleeping platform with mattress or mat, bedding and mosquito netting</li> <li>- Test drinking water supplied to workers on a quarterly basis to ensure safety</li> <li>- Ensure adequate ventilation and light in all camp structures</li> </ul> | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Safety audit results included in monthly progress reports and quarterly monitoring reports</li> <li>- Lack of outbreaks of infectious illnesses (e.g., influenza, pneumonia, tuberculosis) and ailments associated with unsanitary conditions (e.g., dysentery, lice, scabies)</li> <li>- Living conditions meet standards specified in Construction Camp Management Plan</li> <li>- Drinking water test results meet standards indicated in the Environment Conservation Rules, 2023</li> </ul> | To be complied    |
| 40. Livelihoods              | Damage to property and livelihoods                                           | <ul style="list-style-type: none"> <li>- Fence perimeter of each work site prior to the start of construction and ensure maintenance of fencing for the duration of works</li> <li>- Prohibit all construction-related activity outside the site fences</li> <li>- Promptly remedy any property damage caused in consultation with the affected landowner(s), even if not formal grievance files</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Perimeter of each work site properly fenced prior to the start of construction, and fence maintained for duration of works</li> </ul>                                                                                                                                                                                                                                                                                                                                                            | To be complied    |
| 41. Livelihoods              | Employment for local people                                                  | <ul style="list-style-type: none"> <li>- Hire mostly or exclusively local workers on construction sites</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Con                   | MoF, SDCM U-ESFP, PIU, CSC | <ul style="list-style-type: none"> <li>- Workers from outside Chhattagram represent less than 10% of total workforce on site</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   | To be complied    |

| Parameter                          | Potential impacts and/or issues                                                                 | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                 | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                          | Compliance Status |
|------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 42. Physical cultural resources    | Damage to cultural heritage due to inappropriate treatment of unearthed artifacts               | - Train all workers and site managers in the use of the chance find procedure specified in the CEMP                                                                                                                                                                                                                                                                                                                                                             | Con                   | MoF, SDCM U-ESFP, PIU, CSC | - Workers are aware of the chance find procedure                                                                                                                                                                                                                | To be complied    |
| <b>(iii) WASTE MANAGEMENT</b>      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                            |                                                                                                                                                                                                                                                                 |                   |
| 43. Demolition waste               | Impacts from improper removal, processing and disposal of demolished structures                 | - If there is any reason to suspect presence of asbestos-containing materials (ACM), implement approved ACM Removal and Disposal Plan<br>- Ensure salvage of recyclable and reusable items<br>- Use rubble in site development or dispose of in a site identified and approved in accordance with the Waste Management Plan embedded within the CEMP                                                                                                            | Con                   | MoF, SDCM U-ESFP, PIU, CSC | - Any ACM assessed and removed and disposed of according to approved ACM Removal and Disposal Plan<br>- Recyclable materials salvaged.<br>- Rubble appropriately used as fill on site, or disposed of in accordance with Waste Management Plan embedded in CEMP | To be complied    |
| 44. Construction waste             | Pollution from improper management of solid waste generated at work sites and construction camp | - Implement all provisions in the Waste Management Plan embedded in CEMP, including (inter alia):<br>- Provide waste receptacles on the work sites and collect their contents daily or weekly as needed<br>- Recycle all recyclables through local providers of this service<br>- Compost organic wastes generated by construction camp kitchens<br>- Dispose of non-recyclable and non-organic wastes based on locally available and approved disposal options | Con                   | MoF, SDCM U-ESFP, PIU, CSC | - All classes of waste managed in accordance with Waste Management Plan                                                                                                                                                                                         | To be complied    |
| 45. Waste oils                     | Water pollution from waste oils and other fluids generated in maintenance yards                 | - Recycle waste oils through a reputable business providing this service, as identified in the Waste Management Plan embedded in the CEMP                                                                                                                                                                                                                                                                                                                       | Con                   | MoF, SDCM U-ESFP, PIU, CSC | - No evidence of waste oil dumping or burning<br>- Documentation of transfers to identified service provider available                                                                                                                                          | To be complied    |
| <b>C. OPERATION PHASE</b>          |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                            |                                                                                                                                                                                                                                                                 |                   |
| <b>(i) BIOPHYSICAL ENVIRONMENT</b> |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                            |                                                                                                                                                                                                                                                                 |                   |
| 46. Water quality                  | Contamination by noxious fluids used in facility operations and maintenance                     | - Store fluids only within dedicated indoor storage spaces with secondary containment capacity equaling or exceeding 115% of the volume of the largest container stored<br>- Routinely inspect storage spaces and tanks for leakage, and take immediate corrective action as needed                                                                                                                                                                             | SOU at NPI            | SDCM U at MoF              | - Proper storage observed.<br>- Absence of evidence of spills and leaks                                                                                                                                                                                         | To be complied    |
| 47. Water quality                  | Reduced effectiveness of wastewater treatment                                                   | - Remove sludge at least once per year from all septic tanks installed, and worked into the soil around on-site tree plantations for fertilization                                                                                                                                                                                                                                                                                                              | SOU at NPI            | SDCM U at MoF              | - Sludge removed from all septic tanks at least annually, and appropriately used to fertilize on-site tree plantations                                                                                                                                          | To be complied    |
| 48. Water quality                  | Spills of hazardous and noxious cargos in the site                                              | - Prepare a Spill Prevention and Response Plan for the site prior to the start of operations.                                                                                                                                                                                                                                                                                                                                                                   | SOU at NPI            | SDCM U at MoF              | - Spill Prevention and Response Plan prepared for the site                                                                                                                                                                                                      | To be complied    |

| Parameter         | Potential impacts and/or issues                                                                                   | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                                                                            | Compliance Status |
|-------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|                   |                                                                                                                   | <ul style="list-style-type: none"> <li>- Provide personnel training necessary for effective implementation of the plan before the start of operations and annually during operations</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |                            | <ul style="list-style-type: none"> <li>- prior to the start of operations.</li> <li>- Personnel training necessary for effective implementation of the Spill Prevention and Response Plan delivered before start of operations and repeated annually during operation phase</li> </ul>                                                                            |                   |
| 49. Water quality | Siltation, sedimentation and contamination of local water bodies by runoff from minerals storage area in the site | <ul style="list-style-type: none"> <li>- Purchase sufficient tarpaulins based on expected stockpiling activity, and make budgetary provision for regular replacement as needed.</li> <li>- Strictly require the use of tarpaulins on all piles of mineral materials at all times, except during active handling of materials</li> <li>- Train personnel assigned to the minerals storage area in competent tarpaulin use</li> <li>- Regularly monitor tarpaulin condition and use</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Thorough, competent use of tarpaulins on all materials stockpiles in minerals storage area observed to be standard procedure</li> <li>- Runoff from minerals storage area is of sufficient quality not to cause violation of surface water standard, as indicated in the Environment Conservation Rules, 2023</li> </ul> | To be complied    |
| 50. Air quality   | Emissions from vehicles using the site                                                                            | <ul style="list-style-type: none"> <li>- Ensure adequate staffing at peak times to help ensure that incoming trucks are processed efficiently, and lines do not form</li> <li>- Enforce a strict no-idling policy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Ambient air quality on site meets standards indicated in the Air Pollution (control) Rules 2022.</li> </ul>                                                                                                                                                                                                              | To be complied    |
| 51. Air quality   | Dust from handling of materials in minerals storage area                                                          | <ul style="list-style-type: none"> <li>- Purchase sufficient tarpaulins based on expected stockpiling activity and make budgetary provision for regular replacement as needed.</li> <li>- Strictly require the use of tarpaulins on all piles of mineral materials at all times, except during active handling of materials</li> <li>- Train personnel assigned to the minerals storage area in competent tarpaulin use</li> <li>- Regularly monitor tarpaulin condition and use</li> <li>- Ensure that appropriate basic misting equipment is purchased or purpose-built and kept in good working condition.</li> <li>- Train personnel assigned to the minerals storage area in proper procedure for misting during materials handling</li> <li>- Strictly require misting as standard procedure during handling of dusty materials</li> <li>- Strictly prohibit stone crushing activity on the site, including the minerals storage area</li> </ul> | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Ambient air quality on site meets standards indicated in the Air Pollution (control) Rules 2022.</li> </ul>                                                                                                                                                                                                              | To be complied    |
| 52. Air quality   | Dust from uncovered or improperly covered trucks hauling dusty materials such as stone, sand and coal             | <ul style="list-style-type: none"> <li>- Strictly require all trucks entering site to be equipped with tightly fitting tarpaulins.</li> <li>- Sweep and spray roadways within site as needed to limit dust</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- All trucks entering site observed to be appropriately covered.</li> <li>- Roadways within NATI site swept and sprayed as needed to suppress dust.</li> <li>- Ambient air quality on site meets standards indicated in the Air</li> </ul>                                                                                 | To be complied    |

| Parameter                                          | Potential impacts and/or issues                                                                                          | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                            | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                 | Compliance Status |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|                                                    |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                            |                       |                            | Pollution (control) Rules 2022                                                                                                                                                                                                         |                   |
| 53. Soils                                          | Erosion of soils during maintenance works involving excavation and/or deteriorated ground cover                          | <ul style="list-style-type: none"> <li>- Protect soils exposed by maintenance works with mulches and other protective coverings during works, and promptly re-establish vegetative cover when works have been completed.</li> <li>- Regularly inspect site vegetation for loss of coverage and evidence of emerging gully erosion</li> </ul>                                                                               | SOU at NPI            | SDCM U at MoF              | - Lack of evidence of gully erosion                                                                                                                                                                                                    | To be complied    |
| <b>(ii) SOCIOECONOMIC AND CULTURAL ENVIRONMENT</b> |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                            |                       |                            |                                                                                                                                                                                                                                        |                   |
| 54. Acoustic environment                           | Excessive noise due to increasing traffic                                                                                | <ul style="list-style-type: none"> <li>- Convene a workshop with participation of people living and operating businesses along polytechnic road, local council representatives, WASA, police and other government agencies to discuss feasibility of limiting vehicle horn use in the NPI zone and formulate action as appropriate</li> </ul>                                                                              | SOU at NPI            | SDCM U at MoF              | - Workshop convened and action plan formulated if consensus for action found                                                                                                                                                           | To be complied    |
| 55. Acoustic environment                           | Excessive noise due to stone processing activity within the site                                                         | <ul style="list-style-type: none"> <li>- Strictly prohibit stone crushing activity within the site, including in the minerals storage area</li> </ul>                                                                                                                                                                                                                                                                      | SOU at NPI            | SDCM U at MoF              | - No stone crushers or crushing activity observed anywhere within the site                                                                                                                                                             | To be complied    |
| 56. Public safety                                  | Elevated accident risk due to increased truck traffic and inadequate road safety provisions                              | <ul style="list-style-type: none"> <li>- Regularly monitor facility operations for emerging public safety issues, and devise appropriate corrective action, as needed.</li> <li>- Proactively coordinate with RHD to ensure that safety features including sidewalks, pullout and turn lanes, road markings, signage and other safety features are planned for and implemented in future approach road upgrades</li> </ul> | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Safety features implemented.</li> <li>- Accident risk low</li> </ul>                                                                                                                          | To be complied    |
| 57. Public safety                                  | Elevated accident risk due to community and commercial encroachment on approach road Right of Way (RoW) and road surface | <ul style="list-style-type: none"> <li>- Pursue collaboration with RHD/LGED and local community leaders regarding durable solutions to safety risks from on-road and road-adjacent commerce, such as provision of alternative spaces outside the RoW for commercial and community activity</li> </ul>                                                                                                                      | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Low incidence of encroachment</li> <li>- Smooth traffic flow through settled areas</li> <li>- Low incidence of vehicle-pedestrian collisions</li> </ul>                                       | To be complied    |
| 58. Worker health and safety                       | Chronic exposure to vehicle emissions                                                                                    | <ul style="list-style-type: none"> <li>- Enforce a strict policy against engine idling by trucks within NATI area</li> </ul>                                                                                                                                                                                                                                                                                               | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Low incidence of staff complaints about emissions exposure</li> <li>- Ambient air quality on NATI station site meets standards indicated in the Air Pollution (control) Rules 2022</li> </ul> | To be complied    |
| 59. Worker health and safety                       | Elevated risk of contracting dangerous viral illnesses                                                                   | <ul style="list-style-type: none"> <li>- Integrate pandemic response measures in operations and maintenance manuals and operating protocols for the NATI station, to ensure prompt implementation when emerging threats are identified</li> </ul>                                                                                                                                                                          | SOU at NPI            | SDCM U at MoF              | - Pandemic response measures integrated in operations and maintenance manuals                                                                                                                                                          | To be complied    |
| 60. Worker health and safety                       | Exposure of laboratory technicians and support staff to accidental hazardous releases                                    | <ul style="list-style-type: none"> <li>- Incorporate Emergency Response Plan in laboratory operating protocols, and provide regular training for technicians and support staff on its activation</li> </ul>                                                                                                                                                                                                                | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Emergency Response Plan included in laboratory operating protocols.</li> <li>- Regular training provided on activation of Emergency Response Plan</li> </ul>                                  | To be complied    |

| Parameter                     | Potential impacts and/or issues                                                              | Mitigation/enhancement measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Implementing entities | Supervision responsibility | Performance indicators                                                                                                                                                                                                                                                                                               | Compliance Status |
|-------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 61. Livelihoods               | Opportunities for employment in facility operations and maintenance                          | - Give priority to local people and firms in selecting Contractors for maintenance works and selected permanent positions in operations and maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SOU at NPI            | SDCM U at MoF              | - Local people well represented in local NATI workforce                                                                                                                                                                                                                                                              | To be complied    |
| <b>(iii) WASTE MANAGEMENT</b> |                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                            |                                                                                                                                                                                                                                                                                                                      |                   |
| 62. Laboratory waste          | Environmental contamination and public health risks from improperly managed hazardous wastes | <ul style="list-style-type: none"> <li>- Integrate detailed laboratory waste management plan (developed by laboratory design specialist engaged during detailed design) into laboratory operations and maintenance manuals.</li> <li>- Provide training to laboratory technicians and maintenance staff on correct implementation of waste management protocols, before the laboratory becomes operational and on an annual basis thereafter.</li> <li>- Specify parameters, measurement, and reporting for annual waste audit in laboratory waste management protocols.</li> <li>- Conduct an annual waste management audit and implement corrective action as needed to address problematic trends</li> </ul> | SOU at NPI            | SDCM U at MoF              | - Discharges of liquid waste from laboratory meet standards indicated in the Environment Conservation Rules, 2023 (only if applicable)                                                                                                                                                                               | To be complied    |
| 63. Solid waste               | Pollution from improper management of solid waste from NPI facility operations               | - Ensure that appropriate waste management procedures for all components of the solid waste stream are specified in each facility's operations and maintenance manual                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SOU at NPI            | SDCM U at MoF              | <ul style="list-style-type: none"> <li>- Recyclable solid waste is consistently segregated and picked up by a reputable recycling business.</li> <li>- Non-recyclable solid waste is consistently taken to a legal landfill for disposal.</li> <li>- Lack of evidence of waste dumping or burning on site</li> </ul> | To be complied    |



**b) EMP plan for Dormitory building at KWT:**

| Issue                                      | Potential Environmental Impacts                                                                                                                                                                                                  | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                  | Responsible Institutes |             | Compliance                                                                                                    |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|---------------------------------------------------------------------------------------------------------------|
|                                            |                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Implement              | Supervise   | Status                                                                                                        |
| Pre-Construction Stage                     |                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |             |                                                                                                               |
| Site survey and design of the new building | <ul style="list-style-type: none"><li>- Failure of the building to withstand climate change and natural hazards</li><li>- Potential safety and health risks to students and building users due to poor building design</li></ul> | <ul style="list-style-type: none"><li>• All project facilities are to be designed in accordance with the planning and design norms (BNBC) 2006 &amp; relevant provisions in the BNBC 2020.</li><li>• Earthquake hazard should be considered in the structural design of the dormitory building.</li></ul>                                                                                                                                                     | KWT/Contractor         | SDCMU/S EIP | Complied.<br><br>Codes were followed in the design                                                            |
|                                            | <ul style="list-style-type: none"><li>- Green Building Concept</li></ul>                                                                                                                                                         | <ul style="list-style-type: none"><li>• The building should be developed considering the fact that it should run on low energy demand,</li><li>• Rainwater harvesting system and use of recycled water system should be developed.</li><li>• The Materials for building construction should come from environmentally friendly materials.</li><li>• Sewage waste line should be connected with existing sewage treatment plant to reduce pollution.</li></ul> | KWT/Contractor         | SDCMU/S EIP | Complied.<br><br>-Energy efficient light, RWHS, Solar system, Septic treatment system included in the design. |
|                                            | <ul style="list-style-type: none"><li>- Invasion of privacy of students and staff of KWT</li></ul>                                                                                                                               | <ul style="list-style-type: none"><li>• Consider in the building design the location of data centers (or student-heavy activities) in the lower floors</li><li>• Have the firewall in the building and locate the windows accordingly</li></ul>                                                                                                                                                                                                               | KWT/Contractor         | SDCMU/S EIP | Complied.                                                                                                     |
| Lack of environmental specifications       | <ul style="list-style-type: none"><li>- Lack of proper environmental specifications in the tender documents will cause improper monitoring of environment issues during construction phase.</li></ul>                            | <ul style="list-style-type: none"><li>• Prepare relevant environmental sections in the tender documents for bidders.</li><li>• Prepare a bid evaluations section for environment, according to DoE bid evaluation format.</li><li>▪</li></ul>                                                                                                                                                                                                                 | KWT/Contractor         | SDCMU/S EIP | Complied.<br><br>EMPs included in the BOQ                                                                     |
| Removal of vegetation                      | <ul style="list-style-type: none"><li>- Loss of standing crops (if any), grass and bushes at project sites.</li></ul>                                                                                                            | <ul style="list-style-type: none"><li>• Provide adequate compensation to the owners on time before beginning vegetation clearing.</li></ul>                                                                                                                                                                                                                                                                                                                   | KWT/Contractor         | SDCMU/S EIP | Will be complied.                                                                                             |
| Removal of Utilities                       | <ul style="list-style-type: none"><li>- Disruption of services (short term).</li></ul>                                                                                                                                           | <ul style="list-style-type: none"><li>• Drawing from the consultant's visit, there was no utility or services found at the selected location. However, some lamp posts were observed along the boundary wall but those will not be impacted due to the construction.</li><li>• There is no vegetation within the proposed site. No impact is expected on flora and fauna.</li></ul>                                                                           | KWT/Contractor         | SDCMU/S EIP | Will be complied.                                                                                             |
| EMP Implementation Training                | <ul style="list-style-type: none"><li>- Irreversible impact to the environment, contractor representative/workers, KWT/SEIP officials</li></ul>                                                                                  | <ul style="list-style-type: none"><li>• Training will be required to undergo EMP implementation including waste management, Standard operating procedures (SOP) for construction works; health and safety (H&amp;S), core labor laws,</li></ul>                                                                                                                                                                                                               | KWT/Contractor         | SDCMU/S EIP | Will be complied.                                                                                             |

| Issue                                                               | Potential Environmental Impacts                                                                                                                                                                                                                           | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Responsible Institutes |             | Compliance        |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|-------------------|
|                                                                     |                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Implement              | Supervise   | Status            |
|                                                                     |                                                                                                                                                                                                                                                           | applicable environmental laws, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |             |                   |
| <b>Construction Stage</b>                                           |                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |             |                   |
| Complete construction management work plan                          | <ul style="list-style-type: none"> <li>- Avoid impacts of Contractor unplanned activities</li> <li>- Smooth work implementation</li> </ul>                                                                                                                | <ul style="list-style-type: none"> <li>• Spoils disposal and construction waste management plan</li> <li>• Noise and dust control plan</li> <li>• Drainage and stormwater management plan</li> <li>• Materials management plan</li> <li>• Emergency or disaster preparedness plan</li> <li>• Measures on COVID-19 preparedness</li> <li>• Provide list of contact details during emergency to workers or post on billboards at the construction site</li> </ul>                                                                                                | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
| Orientation of workers and staff                                    | <ul style="list-style-type: none"> <li>- Awareness to environmental requirements and their responsibility</li> <li>- Understanding the responsibility of Contractor in implementing the EMP, compliance to ADB requirements and the government</li> </ul> | <ul style="list-style-type: none"> <li>• Conduct briefing on EMP, records management, compliance, and reporting</li> <li>• Identify areas to be monitored and the required mitigation measures</li> <li>• Explain the Safe Work Procedure during COVID-19 Pandemic (Appendix F)</li> <li>• Introduction of green building concept with low energy</li> <li>• Low water footprint</li> <li>• Environment friendly material use</li> <li>• Rainwater harvesting</li> <li>• Cool roof</li> <li>• Climate and environment friendly building orientation</li> </ul> | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
| Prepare for emergency and potential incidence of COVID-19 infection | <ul style="list-style-type: none"> <li>- Create awareness of workers on emergency and COVID-19 risk of exposure and/or transmission</li> </ul>                                                                                                            | <ul style="list-style-type: none"> <li>• Designate Disaster Coordinator to guide during an emergency</li> <li>• Conduct mock drills regularly</li> <li>• Provide information like emergency hotline, evacuation routes, etc.</li> <li>• Provide training or orientation on proper response during emergency and COVID-19 incidence</li> </ul>                                                                                                                                                                                                                  | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
| Hiring of project staff and workers                                 | <ul style="list-style-type: none"> <li>- Dispute over transparency in hiring</li> </ul>                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Contractor will be required to give priority to local labor</li> <li>• Contractors will be required to provide negative results to COVID-19 and will ensure recruited staff and workers have been tested negative to COVID-19 as well</li> <li>• Contractors to keep a record of their contact details such as mobile telephone number, alternate telephone, email (if any) and address</li> </ul>                                                                                                                    | KWT/Contractor         | SDCMU/S EIP | Will be complied. |



| Issue                                   | Potential Environmental Impacts                                                                                                                                                                                                                                                                                                                                                                   | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Responsible Institutes |            | Compliance        |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------|
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Implement              | Supervise  | Status            |
| Site preparation and construction works | <ul style="list-style-type: none"> <li>- Disturbance and inconvenience to KWT students and staff and some residents due to traffic from construction vehicles, increased noise and dust levels, and disposal of waste</li> <li>- Emissions from heavy equipment machinery and construction vehicles</li> </ul>                                                                                    | <ul style="list-style-type: none"> <li>• CMP will be strictly implemented</li> <li>• Use of proper safety clothes/personal protective equipment</li> <li>• Provide temporary enclosures (at least 2 meters high or high enough to protect students and staff of KWT) to contain dust and minimize noise</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | KWT/Contractor         | SDCMU/SEIP | Will be complied. |
|                                         | <ul style="list-style-type: none"> <li>- Potential chance find during site excavation</li> </ul>                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Chance find procedures will be followed (Appendix L)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | KWT/Contractor         | SDCMU/SEIP | Will be complied. |
|                                         | <ul style="list-style-type: none"> <li>- Potential occupational health and safety risks to workers</li> </ul>                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>• Provide workers with hard hat, safety shoes, and belts</li> <li>• Set up first aid at construction site</li> <li>• Comply with relevant safety measures required by law and best engineering practices</li> <li>• Provide signs on COVID-19 safety measures to ensure workers are aware and understand the consequences of noncompliance</li> <li>• Workers to observe social/physical distancing at all times</li> <li>• Require workers and staff the mandatory use of non-medical masks and gloves if social distancing is not possible</li> <li>• Daily temperature checks before workers enter work sites</li> <li>• Any worker that shows cough and cold symptoms will not be allowed entry to work sites, and will be advised to stay home and quarantine</li> <li>• Install handwashing and sanitation stations at designated places</li> <li>• Implement H&amp;SP and monitor compliance</li> </ul> | KWT/Contractor         | SDCMU/SEIP | Will be complied. |
|                                         | <ul style="list-style-type: none"> <li>- Heavy equipment and construction vehicles may increase vehicular emissions</li> <li>▪</li> <li>- Transport of materials to construction site may increase dust level</li> <li>▪</li> <li>- Earthmoving works and opened land areas increase dust levels</li> <li>▪</li> <li>- Increase in noise level and vibration from excavation and heavy</li> </ul> | <ul style="list-style-type: none"> <li>• Construction vehicles will be maintained to minimize vehicular emissions</li> <li>• Provision of temporary enclosures</li> <li>• Provide space on-site for construction materials to reduce trips of material delivery</li> <li>• Contractor will be required to maintain construction vehicles, equipment, and machineries regularly to reduce emissions, avoid smoke belching, and reduce noise</li> <li>• Spray water in opened land areas or in sources of dust</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                               | KWT/Contractor         | SDCMU/SEIP | Will be complied. |

| Issue                                                                 | Potential Environmental Impacts                                                                                                                                                                                                                                                                                                                                                                                  | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Responsible Institutes |            | Compliance        |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------|
|                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Implement              | Supervise  | Status            |
|                                                                       | equipment and construction vehicles                                                                                                                                                                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Transport of dust generating materials will be covered</li> <li>Observance of low speed by vehicles to reduce noise</li> <li>Noise-generating works will be done between 6 a.m. and 11 p.m. only.</li> <li>No blowing of horns will be allowed</li> <li>Comply with traffic management plan</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |            |                   |
| Clean up of construction sites after completion of construction works | - Improper disposal of construction debris                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Restore or reinstate all the areas potentially damaged during construction works</li> <li>Workers will be provided with proper safety gear and equipment</li> <li>Dispose remaining waste and debris at designated sites</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | KWT/Contractor         | SDCMU/SEIP | Will be complied. |
| Air Pollution                                                         | <ul style="list-style-type: none"> <li>Construction vehicular traffic: Air quality can be affected by vehicle exhaust emissions and combustion of fuels.</li> <li>Construction machinery: Air quality can be adversely affected by emissions from machinery and combustion of fuels.</li> <li>Construction activities: Dust generation from construction sites, material stockpiles and access roads.</li> </ul> | <ul style="list-style-type: none"> <li>Impose speed limits (maximum 20 km/hr) on all vehicle movement at the worksite and through access roads to reduce dust emissions.</li> <li>Control the movement of construction traffic in the access road.</li> <li>Water spray to the construction materials (especially sand &amp; boulder/brick chips) prior to loading and transport.</li> <li>Focus special attention on containing the emissions from generators</li> <li>Machinery causing excess pollution (e.g., visible smoke) should be banned from construction sites or fixed immediately prior to further usage.</li> <li>Provide filtering systems, dust collectors or humidification or other techniques (as applicable) to the concrete mixing plant to control the particle emissions at all its stages, including unloading, collection, aggregate handling, cement dumping, circulation of trucks and machinery inside the installations.</li> <li>Water spray to the material stockpiles, access roads and bare soils as and when required to minimize the potential environmental nuisance due to dust. Increase the watering frequency during periods of high risk (e.g., high winds and dry periods). Stored materials such as boulders and sand should be covered and confined to avoid them being wind-drifted.</li> </ul> | KWT/Contractor         | SDCMU/SEIP | Will be complied. |

| Issue                          | Potential Environmental Impacts                                                                                                                                                                                                                                                                                                                       | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Responsible Institutes |            | Compliance        |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------|
|                                |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Implement              | Supervise  | Status            |
|                                |                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Erect dust barriers along the boundary of the land to reduce dust movement to the surrounding areas.</li> <li>Minimize the extent and period of exposure of the bare surfaces.</li> <li>Reschedule earthwork activities when practical, if necessary, to avoid during periods of high wind and if visible dust is blowing off-site.</li> <li>Restore disturbed areas as soon as possible by vegetation/grass-turfing.</li> <li>Establish adequate locations for storage, mixing and loading of construction materials, in a way that dust dispersion is prevented because of such operations.</li> <li>The SEMP approved by PD will include measures to minimize dust levels and emissions from construction vehicles, equipment and machineries.</li> <li>Work safety procedures will be implemented by the contractors and monitored by SDCMU/SEIP for compliance.</li> </ul>                                                                                                                                               |                        |            |                   |
| Noise and Vibration Management | <ul style="list-style-type: none"> <li>Construction vehicular traffic: Noise quality will be deteriorated due to increased vehicular traffic.</li> <li>Construction machinery: Noise and vibration will have an impact on adjacent surrounding residents.</li> <li>Construction activity: Noise will have an impact on adjacent residents.</li> </ul> | <ul style="list-style-type: none"> <li>Maintain all vehicles in order to keep them in good working order in accordance with manufacturers maintenance procedures.</li> <li>Make sure all drivers will comply with the traffic codes concerning maximum speed limit, driving hours, etc. (20 km/hr during night time).</li> <li>Organize the loading and unloading of trucks, and handling operations for the purpose of minimizing construction noise on the work site.</li> <li>Appropriately site all noise generating activities to avoid noise pollution to local residents.</li> <li>Maintain all equipment in order to keep it in good working conditions in accordance with manufacturers' maintenance procedures. Equipment suppliers and contractors shall present proof of maintenance register of their equipment.</li> <li>Install acoustic enclosures around generators to reduce noise levels.</li> <li>Fit high efficiency mufflers to appropriate construction equipment.</li> <li>Avoid the unnecessary use of alarms, horns and sirens.</li> </ul> | KWT/Contractor         | SDCMU/SEIP | Will be complied. |

| Issue                                  | Potential Environmental Impacts                                                                                                                    | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Responsible Institutes |            | Compliance        |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------|
|                                        |                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Implement              | Supervise  | Status            |
|                                        |                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Notify adjacent landowners prior any typical noise events outside of daylight hours.</li> <li>• Educate the operators of construction equipment on potential noise problems and the techniques to minimize noise emissions.</li> <li>• Employ best available work practices on-site to minimize occupational noise levels.</li> <li>• Install temporary noise control barriers where appropriate.</li> <li>• Notify affected people if high noisy activities will be undertaken, e.g., pile driving.</li> <li>• Plan activities on site and deliveries to and from site to minimize impact.</li> <li>• Monitor and analyze noise and vibration results and adjust construction practices as required.</li> <li>• Appropriately site all noise generating activities to avoid noise pollution to workers, KWT, SEIP officials etc.</li> <li>• Install temporary noise barriers by screen, tin, wood around generators to reduce noise levels.</li> <li>• Employ best available work practices on-site to minimize occupational noise levels. Use ear plugs in noisy areas of the construction activities.</li> <li>• Maintain all equipment in order to keep it in good working order in accordance with manufactures maintenance procedures.</li> </ul> |                        |            |                   |
| Sewage Pollution/<br>Sanitation Hazard | - Lack of proper sanitation facilities will increase pressure on health hazards of workers.                                                        | <ul style="list-style-type: none"> <li>• Provide hygienic sanitary facilities and sewerage system. The toilets and domestic waste water will be collected through a common sewerage. Provide separate latrines and bathing places for males and females with total isolation by wall or by location. The minimum number of toilet facilities required is one toilet for every ten persons.</li> <li>• Ensure the sanitary facilities are kept clean and without any odor.</li> <li>• Educate the workers of using the facilities.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | KWT/Contractor         | SDCMU/SEIP | Will be complied. |
| Drainage Congestion                    | - Construction of the proposed building will significantly impact upon the existing drainage pattern through impedance to natural flow conditions. | <ul style="list-style-type: none"> <li>• Temporary drainage congestion (TDC) in the foundation trench due to rainwater to be removed by pumping. Avoid monsoon period for foundation works.</li> <li>• TDC in construction yard &amp; camp of the proposed building area to be removed by</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | KWT/Contractor         | SDCMU/SEIP | Will be complied. |

| Issue                 | Potential Environmental Impacts                                              | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Responsible Institutes |            | Compliance        |
|-----------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------|
|                       |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Implement              | Supervise  | Status            |
|                       |                                                                              | temporary earth or RCC drains.<br>• All vehicle exit points from the construction site shall have a wash down or shakedown area where mud and earth can be removed from a vehicle before it enters the public road system. All wash down areas are to drain to a sediment basin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |            |                   |
| Solid Waste Pollution | - Solid waste pollution will increase pressure on health hazards of workers. | • Organize disposal of all wastes generated during construction in an environmentally acceptable manner. This will include consideration of the nature and location of disposal site, so as to cause less offsite environmental impacts. The disposal site should be approved by KWT prior to usage and should be rehabilitated after usage to ensure the land is not exposed to soil erosion, wind and water stagnation.<br>• Minimize the production of waste materials by 3R (Reduce, Recycle and Reuse) approach.<br>• Segregate and reuse or recycle all the wastes, wherever practical.<br>• Prohibit burning of solid waste.<br>• Train and instruct all personnel in waste management practices and procedures as a component of the environmental induction process.<br>• Provide refuse containers at worker camps.<br>• Request suppliers to minimize packaging where practical.<br>• Place a high emphasis on good housekeeping practices.<br>• Maintain all construction sites in a cleaner, tidy and safe condition and provide and maintain appropriate facilities as temporary storage of all wastes before transportation and final disposal by municipality.<br>• Ensure proper collection and disposal of wastes within the construction camps from where municipal will take by their truck and dispose at their dumping area.<br>• Insist on waste separation and store by source; organic wastes, inorganic wastes and recyclables in separate containers.<br>• Clear wastes on daily basis to waste collectors. Establish | KWT/Contractor         | SDCMU/SEIP | Will be complied. |

| Issue                              | Potential Environmental Impacts                                                                                                                                                   | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Responsible Institutes |            | Compliance        |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------|
|                                    |                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Implement              | Supervise  | Status            |
|                                    |                                                                                                                                                                                   | <p>waste collection, transportation and disposal at the dumping site in adequate sizes of concrete chambers/boxes.</p> <ul style="list-style-type: none"> <li>Dispose organic wastes in a designated safe place and should be kept covered so that flies, mosquitoes, dogs, cats, rats, etc. are not attracted. Encourage composting of organic waste that can be used for tree planting purposes.</li> <li>Locate the garbage pit/waste disposal site away from the residence so that peoples are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste dumping places. Encompass the waste dumping place by fencing and tree plantation to prevent children from entering and playing.</li> <li>Do not establish site specific landfill sites. All solid waste will be collected and removed from the work camp and disposed in approved waste disposal sites.</li> <li>Contractors will be required to have a waste management plan covering hazardous waste approved by the PD prior to construction works. The waste management plan will be part of the SEMP.</li> </ul> |                        |            |                   |
| Landscape                          | - Construction activities especially earthworks, stock piling of construction materials, parking of vehicles etc. will change the local landscape temporarily.                    | <ul style="list-style-type: none"> <li>Ensure the topography of the construction yard is conducive to enhance natural draining of rainwater at all times.</li> <li>Parking of construction vehicles and stockpiling of construction materials should be done in systematic way to avoid any drainage blockages, to enhance the aesthetics of the site.</li> <li>Duration of stockpiling should be minimized as much as possible.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | KWT/Contractor         | SDCMU/SEIP | Will be complied. |
| Access Road/<br>Traffic Congestion | - Construction vehicular traffic: Increased use of narrow access road by construction vehicles will affect the movement of normal road traffics and the safety of the road-users. | <ul style="list-style-type: none"> <li>Prepare and submit a traffic management plan to the SEIP for approval at least 30 days before commencing work on any project component involving traffic diversion and management.</li> <li>Include measures in the traffic management plan to ensure uninterrupted traffic movement during construction: detailed drawings of traffic arrangements showing all detours, access roads,</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | KWT/Contractor         | SDCMU/SEIP | Will be complied. |

| Issue                        | Potential Environmental Impacts                                                                                                                                                                             | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Responsible Institutes |             | Compliance        |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|-------------------|
|                              |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Implement              | Supervise   | Status            |
|                              |                                                                                                                                                                                                             | necessary barricades, warning signs / lights, road signs, etc. <ul style="list-style-type: none"> <li>• Install and maintain a display board at each important road intersection on the roads to be used during construction, which shall clearly show the information in Bangla.</li> <li>• Operate construction vehicles to non-peak periods (night) to minimize traffic disruptions.</li> <li>• Enforce on-site and access road speed limits.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |             |                   |
| Liquid/ hazardous waste      | - Improper storage and handling of fuels, lubricants, chemicals and hazardous liquid on-site, and potential spills from these liquid materials may harm the environment and health of construction workers. | <ul style="list-style-type: none"> <li>• Train the relevant construction personnel in handling of fuels and spill control procedures.</li> <li>• Store dangerous goods in enclosed areas with a covering of a sealed plastic sheet away from watercourses.</li> <li>• Refueling shall occur only within enclosed areas.</li> <li>• Provide protective clothing, safety boots, helmets, masks, gloves, goggles, to the construction personnel, to handle construction materials.</li> <li>• Make sure all containers, drums, and tanks that are used for storage are in good condition and are labeled with expiry date. Any container, drum, or tank that is dented, cracked, or rusted might eventually leak. Check for leakage regularly to identify potential problems before they occur.</li> <li>• Put containers and drums in temporary storages in clearly marked areas, where they will not be run over by vehicles or heavy machinery. The project area shall be established in higher ground, if possible, preferably with a slope or drain to a safe collection area in the event of a spill.</li> <li>• Put containers and drums in permanent storage areas on an impermeable floor.</li> <li>• Take all precautionary measures when handling and storing fuels and lubricants, avoiding environmental pollution.</li> <li>• Ensure basic firefighting equipment is in place outside these storage areas in case of a fire.</li> </ul> | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
| Construction Camp Management | - Siting and location of construction camps: Campsites for construction workers are the important locations that have                                                                                       | <ul style="list-style-type: none"> <li>• Locate the construction camp inside the proposed construction area.</li> <li>• Consider the location of construction camp away from communities in order to avoid social conflicts in using the</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | KWT/Contractor         | SDCMU/S EIP | Will be complied. |

| Issue | Potential Environmental Impacts                                                                                                                                                                                                               | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Responsible Institutes |            | Compliance        |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------|
|       |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Implement              | Supervise  | Status            |
|       | significant impacts such as health and safety hazards on local resources and infrastructure of nearby communities.                                                                                                                            | <p>natural resources such as water or to avoid other possible adverse impacts such as unsuitable interactions with the surrounding communities.</p> <ul style="list-style-type: none"> <li>• Submit to the SEIP for approval a detailed layout plan for the development of the construction camp showing the relative locations of all temporary buildings and facilities that are to be constructed together with the location of site roads, fuel storage areas (for use in power supply generators), solid waste management and dumping locations, and drainage facilities, prior to the development of the construction camps.</li> <li>• Local authorities responsible for health, religious and security shall be duly informed on the set up of camp facilities so as to maintain effective surveillance over public health, social and security matters.</li> <li>• Create awareness among the camp users on health and safety requirements to be maintained and code of conduct.</li> </ul> |                        |            |                   |
|       | - Construction Camp Facilities: Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will increase pressure on the local services and generate substandard living conditions and health hazards. | <ul style="list-style-type: none"> <li>• Adequate housing for all workers should be provided avoiding overcrowding.</li> <li>• Provide safe and reliable water supply.</li> <li>• Hygienic sanitary facilities and sewerage system. The toilets and domestic waste water will be collected through a common sewerage. Provide separate latrines and bathing places for males and females with total isolation by wall or by location. The minimum number of toilet facilities required is one toilet for every ten persons.</li> <li>• Treatment facilities for sewerage of toilet and domestic waste.</li> <li>• Storm water drainage facilities.</li> </ul>                                                                                                                                                                                                                                                                                                                                        | KWT/Contractor         | SDCMU/SEIP | Will be complied. |
|       | - Disposal of waste: Management of wastes is crucial to minimize impacts on the environment.                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Ensure proper collection and disposal of solid wastes within the construction camp</li> <li>• Insist on waste separation and store by source; organic wastes, inorganic wastes and recyclables in separate containers.</li> <li>• Store inorganic wastes in a safe place and clear organic wastes on daily basis to waste</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | KWT/Contractor         | SDCMU/SEIP | Will be complied. |



| Issue | Potential Environmental Impacts                                                                                                                                                                                                                                | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Responsible Institutes |             | Compliance        |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|-------------------|
|       |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Implement              | Supervise   | Status            |
|       |                                                                                                                                                                                                                                                                | <p>collector or compost the waste.</p> <ul style="list-style-type: none"> <li>Dispose organic wastes in a designated safe place on daily basis. At the organic wastes should be always covered with a thin layer of sand so that flies, mosquitoes, dogs, cats, rats, etc. are not attracted.</li> <li>Locate the garbage pit/waste disposal site min 500 m away from the resident area so that people are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste dumping places.</li> <li>Do not establish site specific landfill sites. All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |                        |             |                   |
|       | - Health and Hygiene: There will be a potential for diseases to be transmitted including malaria, exacerbated by inadequate health and safety practices. There will be an increased risk of work crews spreading sexually transmitted infections and HIV/AIDS. | <ul style="list-style-type: none"> <li>Provide adequate health care facilities within the construction site.</li> <li>Provide first aid facility round the clock. Maintain stock of medicines in the facility and appoint fulltime designated first aider or nurse.</li> <li>Provide ambulance facility for the labors to be transported to nearest hospitals during emergency.</li> <li>Conduct an initial health screening of the laborers coming from outside areas.</li> <li>Train all construction workers in basic sanitation and health care issues and safety matters, and on the specific hazards of their work.</li> <li>Provide HIV awareness program, including STI (sexually transmitted infections) and HIV information, education and communication for all workers on regular basis.</li> <li>Establish a code of conduct for the contractor staff.</li> <li>Provide adequate drainage facilities throughout the camps to ensure that disease vectors such as stagnant water bodies and puddles do not form.</li> <li>Carry out regular mosquito repellent spraying during monsoon periods.</li> </ul> | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
|       | - Safety: Inadequate safety facilities to the construction camps may create security problems and fire hazards.                                                                                                                                                | <ul style="list-style-type: none"> <li>Provide appropriate security personnel (police / home guard or private security guards) and enclosures to prevent unauthorized entry into the camp area.</li> <li>Maintain register to keep a track on a head count of</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | KWT/Contractor         | SDCMU/S EIP | Will be complied. |

| Issue                      | Potential Environmental Impacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Responsible Institutes |             | Compliance        |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|-------------------|
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Implement              | Supervise   | Status            |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>persons present in the camp at any given time.</p> <ul style="list-style-type: none"> <li>Encourage use of flameproof material for the construction of labor housing / site office. Also, ensure that these houses/rooms are of sound construction and capable of withstanding wind storms/cyclones.</li> <li>Provide appropriate type of firefighting equipment suitable for the construction camps.</li> <li>Display emergency contact numbers clearly and prominently at strategic places in camps.</li> <li>Communicate the roles and responsibilities of laborers in case of emergency in the monthly meetings with contractors.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |             |                   |
| Worker's Health and Safety | <p>- Construction work may pose health and safety risks to the construction workers and site visitors leading to severe injuries and deaths. The population in the proximity of the construction site and the construction workers will be exposed to a number of (i) biophysical health risk factors, (e.g., noise, dust, chemicals, construction material, solid waste, waste water, vector transmitted diseases etc.), (ii) risk factors resulting from human behavior (e.g., STD, HIV etc.) and (iii) road accidents from construction traffic.</p> | <ul style="list-style-type: none"> <li>Implement suitable safety standards for all workers and site visitors which shall not be less than those laid down on the international standards (e.g., International Labor Office guideline on 'Safety and Health in Construction; World Bank Group's 'Environmental Health and Safety Guidelines') and contractor's own national standards or statutory regulations, in addition to complying with the national standards of the Government of Bangladesh (e.g., 'The Bangladesh Labor Code, 2006').</li> <li>Provide the workers a safe and healthy work environment, taking into account inherent risks of this particular construction activity and specific classes of hazards in the work areas,</li> <li>Provide personal protection equipment (PPE) for workers, such as safety boots, helmets, masks, gloves, protective clothing, goggles, full-face eye shields, and ear protection. Maintain the PPE properly by cleaning dirty ones and replacing them with the damaged ones.</li> <li>Safety procedures include provision of information, training and protective clothing to workers involved in hazardous operations and proper performance of their job.</li> <li>Appoint an environment, health and safety manager to look after the health and safety of the workers</li> </ul> | KWT/Contractor         | SDCMU/S EIP | Will be complied. |

| Issue | Potential Environmental Impacts                                                                                                                     | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Responsible Institutes |             | Compliance        |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|-------------------|
|       |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Implement              | Supervise   | Status            |
|       |                                                                                                                                                     | <ul style="list-style-type: none"> <li>Inform the local authorities responsible for health, religious and security before commencement of civil works and establishment of construction camps so as to maintain effective surveillance over public health, social and security matters</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |             |                   |
|       | - Child and pregnant labors.                                                                                                                        | <ul style="list-style-type: none"> <li>Not hire children of less than 14 years of age and pregnant women or women who delivered a child within 8 preceding weeks, in accordance with the Bangladesh Labor Code, 2006</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
|       | - Accidents: Lack of first aid facilities and health care facilities in the immediate vicinity will aggravate the health conditions of the victims. | <ul style="list-style-type: none"> <li>Provide health care facilities and first aid facilities are readily available. Appropriately equipped first-aid stations shall be easily accessible throughout the place of work</li> <li>Document and report occupational accidents, diseases, and incidents and actions taken.</li> <li>Prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, so far as reasonably practicable, the causes of hazards in a manner consistent with good international industry practice.</li> <li>Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures.</li> <li>Provide awareness to the construction drivers to strictly follow the driving rules.</li> <li>Provide adequate lighting in the construction area and along the roads.</li> </ul> | KWT/Contractor         | SEIP/ADB    | Will be complied. |

| Issue                       | Potential Environmental Impacts                                                                                                                                                                                                    | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Responsible Institutes |             | Compliance        |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|-------------------|
|                             |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Implement              | Supervise   | Status            |
|                             | - Construction Camps: lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will increase pressure on the local services and generate substandard living standards and health hazards. | <ul style="list-style-type: none"> <li>Adequate ventilation in all facilities.</li> <li>Safe and reliable water supply. Water supply from deep tube wells that meets the national standards.</li> <li>Hygienic sanitary facilities and sewerage system. The toilets and domestic waste water will be collected through a common sewerage.</li> <li>Treatment facilities for sewerage of toilet and domestic waste before releasing into common systems.</li> <li>Storm water drainage facilities.</li> <li>Recreational and social facilities.</li> <li>Safe storage facilities for petroleum and other chemicals.</li> <li>Solid waste collection and disposal system.</li> <li>Arrangement for trainings.</li> <li>Paved internal roads.</li> <li>Security fence at least 2 m high.</li> <li>Sick bay and first aid facilities.</li> </ul> | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
|                             | - Water and sanitation facilities at the construction sites: lack of Water sanitation facilities at construction sites cause inconvenience to the construction workers and affect their personal hygiene.                          | <ul style="list-style-type: none"> <li>The contractor shall provide portable toilets at the construction sites, if about 25 people are working the whole day for a month.</li> <li>Contractor shall provide bottled drinking water facilities to the construction workers at all the construction sites.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
|                             | - Other management: potential risks on health and hygiene of construction workers and general public.                                                                                                                              | <ul style="list-style-type: none"> <li>Liquid Waste Mitigation Measures.</li> <li>Air Pollution Mitigation Measures.</li> <li>Noise Mitigation Measures.</li> <li>Road/Road Traffic Management.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
|                             | - Trainings: lack of awareness and basic knowledge in health care among the construction workforce, make them susceptible to potential diseases.                                                                                   | <ul style="list-style-type: none"> <li>Train all construction workers in basic sanitation and health care issues (e.g., how to avoid malaria and transmission of sexually transmitted infections (STI) and HIV/AIDS).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
| Community Health and Safety | - Construction works will impede the access of visitors and officials in limited cases. The impacts are minor negative but short-term, site-specific within a relatively small area and reversible by mitigation                   | <ul style="list-style-type: none"> <li>Provide safety signage at construction sites visible to public</li> <li>Provide safety barriers near any trenches, and cover trenches with planks during non-work hours.</li> <li>Contractor's activities and movement of staff will be restricted to designated construction areas.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | KWT/Contractor         | SDCMU/S EIP | Will be complied. |

| Issue | Potential Environmental Impacts                                                                                                | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Responsible Institutes |           | Compliance |
|-------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|------------|
|       |                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Implement              | Supervise | Status     |
|       | measures. Poor safety signage and lack of barriers at work site and trenches will create hazard to the visitors and officials. | <ul style="list-style-type: none"> <li>Consult with local authority on the designated areas for stockpiling of, soils, gravel, and other construction materials.</li> <li>If the contractor chooses to locate the work camp/storage area on private land, he must get prior permission from the environment specialist.</li> <li>Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged.</li> <li>A general regard for the social and ecological well-being of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following general rules: (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction staff are to make use of the facilities provided for them, as opposed to ad hoc alternatives (e.g. fires for cooking, the use of surrounding bushes as a toilet facility); (iv) no fires permitted on site except if needed for the construction works; (v) trespassing on private/commercial properties adjoining the site is forbidden; (vi) other than pre-approved security staff, no workers shall be permitted to live on the construction site; and (vii) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do.</li> <li>Interested and affected parties need to be made aware of the existence of the complaints book and the methods of communication available to them. The contractor must address queries and complaints by: (i) documenting details of such communications; (ii) submitting these for inclusion in complaints register; (iii) bringing issues to the Environmental Safeguard Specialist's attention immediately; and (iv) taking remedial action as per specialist's instruction.</li> <li>The contractor shall immediately take the necessary remedial action on any complaint/grievance received by him and forward the details of the grievance along with the action taken to the national/regional environmental specialist within 48 hours of receipt of such complaint/grievance.</li> </ul> |                        |           |            |

| Issue                               | Potential Environmental Impacts                                                                                                                                                               | Proposed Mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Responsible Institutes |             | Compliance        |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|-------------------|
|                                     |                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Implement              | Supervise   | Status            |
| Plantation                          | - Lack of proper care (e.g., watering, securing with fence) by the respective authority will also hinder the process of proper growth of the planted trees.                                   | <ul style="list-style-type: none"> <li>Maintenance is the key to the establishment of the plantation and therefore regular monitoring of plantation will be carried out by the executing agency.</li> <li>The compact plantation shall be effective live screens against night glare, dust, noise, and pollutant emissions. These vegetated strips shall develop into a complete ecosystem. Flowering and fruiting shrubs can be planted along the road to beautify the landscape. Planting should however be done keeping in view the principles of landscape designing.</li> </ul> | KWT/Contractor         | SDCMU/S EIP | Will be complied. |
| <b>Operational Stage</b>            |                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |             |                   |
| Drainage congestion                 | - Local drainage system may get clogged due to improper management of Solid waste, and other materials.                                                                                       | <ul style="list-style-type: none"> <li>Maintain drains regularly as and when required.</li> <li>Solid wastes should not be dumped into the drain.</li> <li>Blocked drains should be cleaned properly and debris disposed at approved sites on a regular basis.</li> </ul>                                                                                                                                                                                                                                                                                                            | KWT                    | SDCMU/S EIP | Will be complied. |
| Solid Waste Generation and Disposal | <ul style="list-style-type: none"> <li>Water, air and land pollution cause diseases</li> <li>Public health, eyesore, odor</li> <li>Disease vector proliferation, sanitary problems</li> </ul> | <ul style="list-style-type: none"> <li>Setting up of separate waste collectors at different points.</li> <li>Regular cleaning and replacing of waste collectors.</li> <li>Waste disposal at a safe place.</li> <li>Encourage waste sorting by the facility users.</li> </ul>                                                                                                                                                                                                                                                                                                         | KWT                    | SDCMU/S EIP | Will be complied. |
| Sewage waste                        | <ul style="list-style-type: none"> <li>Prohibition of water uses for intended purposes</li> <li>Water borne diseases</li> </ul>                                                               | <ul style="list-style-type: none"> <li>Maintenance of Septic tanks, soak wells, pipes, etc. as and when required.</li> <li>Connects the existing sewerage network for sewerage treatment from existing STP inside KWT premises</li> <li>Regular monitoring of water quality.</li> </ul>                                                                                                                                                                                                                                                                                              | KWT                    | SDCMU/S EIP | Will be complied. |
| Traffic Safety                      | <ul style="list-style-type: none"> <li>Increased local congestion around the project area</li> <li>Long-term increase in traffic volume</li> </ul>                                            | <ul style="list-style-type: none"> <li>Extensive barricades of the construction zone will be provided so that pedestrians do not come into direct contact with the machines, tools, material and other accessories;</li> <li>Provision of barricading will be done so that these do not create traffic safety problems. Supplementary aids / tools such as signboards, reflectors and night lighting will be used to avoid possible accidents.</li> </ul>                                                                                                                            | KWT                    | SDCMU/S EIP | Will be complied. |
| Socioeconomic Impact                | <ul style="list-style-type: none"> <li>Deterioration of community health and safety</li> <li>Loss of aesthetic view</li> </ul>                                                                | <ul style="list-style-type: none"> <li>The community health and safety will be improved</li> <li>Improved drainage and sanitation facilities</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                              | KWT                    | SDCMU/S EIP | Will be complied. |
| Emergency Response and              | <ul style="list-style-type: none"> <li>Loss of business</li> <li>Loss of life</li> <li>Environmental deterioration</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>Mock drill and training session</li> <li>Arrangement of fire prevention system maintaining standard operating procedure (SoP)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                      | KWT                    | SDCMU/S EIP | Will be complied. |

| Issue                 | Potential Environmental Impacts | Proposed Mitigation measures | Responsible Institutes |           | Compliance |
|-----------------------|---------------------------------|------------------------------|------------------------|-----------|------------|
|                       |                                 |                              | Implement              | Supervise | Status     |
| Disaster Preparedness |                                 |                              |                        |           |            |

**d) Environmental Management and Monitoring Matrix for Sylhet TTC**

| Activity                                       | Environmental Impact                           | Mitigation/Benefit Enhancement Measures                                                                                                                                                                                         | Responsibility | Monitoring Agency                                                                              | Compliance Status |
|------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------|-------------------|
| Construction Phase                             |                                                |                                                                                                                                                                                                                                 |                |                                                                                                |                   |
| Construction work/use of equipment/materials   | Impact on air quality                          | Regular watering should be done.                                                                                                                                                                                                | Contractor     | TTC authority , CSC, EO and contractor, Env. Expert (EE)-SEIP will monitor mitigation measures | Will be complied. |
|                                                | Noise/vibration hazard                         | All soil, sand, and aggregate piles should be covered (whether on the site or on trucks).                                                                                                                                       | Contractor     |                                                                                                | Will be complied. |
|                                                | Waste management                               | The sand and other such dispersible material must be removed after completion of work.                                                                                                                                          | Contractor     |                                                                                                | Will be complied. |
| Influx of workers                              | Impact on health and safety                    | The workers should wear PPE (Personal Protective Equipment), safety goggles, and other necessities.                                                                                                                             | Contractor     |                                                                                                | Will be complied. |
|                                                | Sanitation hazard and impact on drinking water | Set up warning signs, signals and provide helmets for workers in accordance with relevant accident prevention and work safety procedure.                                                                                        | Contractor     |                                                                                                | Will be complied. |
|                                                |                                                | Restrict access to the construction site.                                                                                                                                                                                       |                |                                                                                                | Will be complied. |
|                                                |                                                | Supply good quality drinking water to the workers by installing tube well.<br>Provide well-planned sanitary facilities.<br>Provide regular health inspection among workers.<br>Promote health education campaign among workers. |                |                                                                                                | Will be complied. |
|                                                | Impact on employment and family finance        | Employ local people wherever possible.<br>Ensure child labor is not employed.                                                                                                                                                   | Contractor     |                                                                                                | Will be complied. |
| Increased vehicle and pedestrian traffic       | Traffic congestion, impact on safety           | Avoid carrying of materials in peak hours of road traffic.<br>Provide adequate parking for vehicles.<br>Raise awareness among all users to follow traffic rules.                                                                | Contractor     |                                                                                                | Will be complied. |
| Climate extremities due to geographic location | Impact on design consideration                 | Raise the plinth level of building to prevent from flood.Use appropriate materials in design.                                                                                                                                   | Contractor     |                                                                                                | Will be complied. |
|                                                |                                                |                                                                                                                                                                                                                                 |                |                                                                                                |                   |



| Activity                                      | Environmental Impact                                  | Mitigation/Benefit Enhancement Measures                                                                                                                                                                                                                             | Responsibility                  | Monitoring Agency | Compliance Status |
|-----------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------|-------------------|
| Increased demand of electricity and water     | Impact on water and electricity supply                | Install solar PV panels for electricity generation. Introduce "Rain water Harvesting" system. Energy efficient lights can be used. Electric fan, light and other appliances should be checked periodically and if problem is found, it should be fixed immediately. | Principal/<br>TTC<br>management | SEIP              | Will be complied. |
| Generation of more consumables                | Impact due to Solid Waste                             | Collect all solid wastes properly, recycle where possible and dispose in proper place.                                                                                                                                                                              |                                 |                   |                   |
|                                               | Impact due to liquid discharge                        | Dispose all domestic waste water through existing septic tank or sewer.                                                                                                                                                                                             |                                 |                   |                   |
| Increased vehicle and pedestrian traffic      | Additional need for parking, impact on safety         | Provide adequate parking for vehicles. Raise awareness among all users to follow traffic rules.                                                                                                                                                                     |                                 |                   |                   |
| Need for proper sanitation and drinking water | Impact on sanitation and drinking water               | Supply good quality drinking water to the students and teachers. Check the quality of drinking water. Provide well-planned sanitary facilities. Separate washrooms for boys' and girls' should be available maintaining proper privacy.                             |                                 |                   |                   |
| Socioeconomic impact                          | Impact on skilled training                            | Training programs should be reported and continuously monitored                                                                                                                                                                                                     | Principal/<br>TTC<br>management | SEIP              | Will be complied. |
|                                               | Impact on employment & family finance                 | Employ local people wherever possible. Avoid child labor employment.                                                                                                                                                                                                |                                 |                   |                   |
| Landscaping                                   | Enhancing visual aesthetics and environmental quality | Plant trees around the project site.                                                                                                                                                                                                                                |                                 |                   |                   |
|                                               | Enhancing visual aesthetics and environmental quality | Plant trees around the project site.                                                                                                                                                                                                                                |                                 |                   |                   |
| Emergency management                          | Fire hazard or any medical emergency                  | First aid facilities should be available. Firefighting equipment must be present. Fire safety management training and mock drill should be practiced periodically                                                                                                   |                                 |                   |                   |

### 3.2 Compliance with ADB SPS 2009 policies

33. The compliances including IEE, CEMP and OHS plans of the civil works under SICIP program are being listed and updated in the following table.

**Table 3-2: The compliance status of SICIP with respect to ADB SPS 2009**

| ADB Safeguard Policy Statement                                                                                                                                                                                                                                       | Contract Package Status                                                                                  |                  |                  |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------|------------------|------------------|
|                                                                                                                                                                                                                                                                      | NATI                                                                                                     | STTL             | SylTTC           | KWT              |
| (i) Environmental Assessment (Category B: Requires IEE) done and disclosed                                                                                                                                                                                           | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | IEE done for all packages                                                                                |                  |                  |                  |
| (ii) Environmental Management Plan drafted                                                                                                                                                                                                                           | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | EMP plan drafted for all the above packages.                                                             |                  |                  |                  |
| (iii) Information disclosed                                                                                                                                                                                                                                          | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | EMR will be disclosed in SICIP website                                                                   |                  |                  |                  |
| (iv) Consultation and participation have been done and public opinion has been used in project design phase.                                                                                                                                                         | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | Consultations were done during IEE development.                                                          |                  |                  |                  |
| (v) Establishment of GRC and notes of grievances                                                                                                                                                                                                                     | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | GRCs yet to be established for each package.                                                             |                  |                  |                  |
| (vi) Monitoring and reporting: client will document regular monitoring results, in case of adverse significant affects external NGO will be involved as third party monitoring                                                                                       | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | 1 <sup>st</sup> time Semi-annual environmental monitoring report submitted for Jan to June 2024.         |                  |                  |                  |
| (vii) Unanticipated environmental impacts                                                                                                                                                                                                                            | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | Unanticipated environmental impacts not found yet                                                        |                  |                  |                  |
| (viii) <b>Biodiversity Conservation and Sustainable Natural Resource Management:</b> The borrower/client will assess the significance of project impacts and risks on biodiversity and natural resources as an integral part of the environmental assessment process | Complied                                                                                                 | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                      | The assessment was done during the development of IEE. The project does not impact any critical habitat. |                  |                  |                  |
| (ix) <b>Pollution presentation:</b> During the design, construction, and operation of the project the borrower/client will apply pollution prevention and control                                                                                                    | Will be Complied                                                                                         | Will be Complied | Will be Complied | Will be Complied |
|                                                                                                                                                                                                                                                                      | Contractors yet to develop their own site-specific CEMPs                                                 |                  |                  |                  |

| ADB Safeguard Policy Statement                                                                                                                                                                                                                                                                                             | Contract Package Status                                                                          |                  |                  |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------|------------------|------------------|
|                                                                                                                                                                                                                                                                                                                            | NATI                                                                                             | STTL             | SyITTC           | KWT              |
| technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines.                                                                                                                     |                                                                                                  |                  |                  |                  |
| (x) <b>Health and safety:</b> The borrower/client will provide workers with a safe and healthy working environment, taking into account risks inherent to the particular sector and specific classes of hazards in the borrower's/client's work areas, including physical, chemical, biological, and radiological hazards. | Will be Complied                                                                                 | Will be Complied | Will be Complied | Will be Complied |
|                                                                                                                                                                                                                                                                                                                            | Contractors will develop OHS plan in the respective site.                                        |                  |                  |                  |
| (xi) <b>Physical and cultural resources:</b> The borrower/client is responsible for siting and designing the project to avoid significant damage to physical cultural resources                                                                                                                                            | Complied                                                                                         | Complied         | Complied         | Complied         |
|                                                                                                                                                                                                                                                                                                                            | The project design considered the important cultural and physical resources in the project sites |                  |                  |                  |

### 3.3 Compliance with loan covenants

34. The compliance with loan covenants with status are presented in the following table.

**Table 3-3: The compliance status with respect to loan covenants**

| SI No | Status of Loan Covenants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Status of Compliance |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1     | <b>Environment</b><br>The Borrower shall ensure, and cause each of the Project Implementing Agencies to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project and all project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health and safety; (b) the Environmental Safeguards; and (c) all measures and requirements set forth in the IEEs, the EMPs, and any corrective or preventative actions set forth in a Safeguards Monitoring Report. | Will be complied     |

| SI No | Status of Loan Covenants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Status of Compliance |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 2     | <b>Small Ethnic Community Peoples</b><br>The Borrower shall ensure, and cause each of the Project Implementing Agencies to ensure, that the preparation, design, construction, implementation and operation of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to small ethnic community peoples; (b) the Small Ethnic Community Peoples Safeguards; and (c) all measures and requirements set forth in the SECPP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Will be complied     |
| 3     | <b>Involuntary Resettlement</b><br>The Borrower shall ensure, and cause each of the Project Implementing Agencies to ensure, that the Project does not have any involuntary resettlement impacts within the meaning of the Safeguard Policy Statement. In the event that the Project does have any such impact, the Borrower shall take all steps required to ensure that the Project complies with the applicable laws and regulations of the Borrower, the Safeguard Policy Statement, the RF and any corrective or preventative actions set forth in a Safeguard Monitoring Report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Will be complied     |
| 4     | <b>Human and Financial Resources to Implement Safeguards Requirements</b><br>The Borrower shall make available, or cause each of the Project Executing Agencies to make available, necessary budgetary and human resources to fully implement the EMPs and the SECPP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Will be complied     |
| 5     | <b>Safeguards Related Provisions in Bidding Documents and Works Contracts</b><br>The Borrower shall ensure, and cause each of the Project Implementing Agencies to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to: (a) comply with the measures and requirements relevant to the contractor set forth in any safeguards documents (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report; (b) make available a budget for all environmental and social measures; (c) provide the Borrower with a written notice of any unanticipated environmental, resettlement or small ethnic community peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEEs, the EMPs and SECPP; (d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and (e) fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction. | Will be complied     |

| SI No | Status of Loan Covenants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Status of Compliance |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 6     | <p><b>Safeguards Monitoring and Reporting</b></p> <p>The Borrower shall do the following, or shall cause each of the Project Implementing Agencies to do the following:</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and</p> <p>(c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMPs and the SECPP promptly after becoming aware of the breach.</p> | Will be complied     |

#### 4 STRATEGY FOR COVID-19 PANDEMIC AND H&S GUIDELINE

35. In the COVID-19 pandemic, the DSC expert has completed all design, drawings, technical specifications and BoQ through using different virtual meetings, site visit, analysis after allowing International Flight following safety guidelines as suggested by GoB and ADB. Safeties' included hand hygiene, respiratory hygiene & physical distancing. Individual transports were used during the site visits and virtual media were used for communications.

**Table 4-1: The compliance status of SICIP with respect to COVID-19**

| COVID-19 Response questions                                                                                                                                                                                                                                                                                           | NATI             | STTL-CTG         | Kum Dorm         | Sylhet TTC       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------------|------------------|
| <b>Site re-opening and entry protocol</b>                                                                                                                                                                                                                                                                             |                  |                  |                  |                  |
| Locate the closest medical establishment equipped with COVID -19 response facilities.                                                                                                                                                                                                                                 | Will be complied | Will be complied | Will be complied | Will be complied |
| Engage a full time EHS professional at site                                                                                                                                                                                                                                                                           | Will be complied | Will be complied | Will be complied | Will be complied |
| Purchase thermometer gun, soap, hand sanitizer, disinfectants and PPEs (mask, hand gloves, hard shoes etc.) and keep it at worksite office.                                                                                                                                                                           | Will be complied | Will be complied | Will be complied | Will be complied |
| Establish site entrance protocol. Redesign the site safety notices/signboards/protocol according to the ADB guidelines                                                                                                                                                                                                | Will be complied | Will be complied | Will be complied | Will be complied |
| Arrange washbasin, soap and clean water at the entrance of every worksite/campsite. Also keep either a disinfectant tub for shoes or keep disinfectant spray that must be sprayed under the boots/hard shoes of the persons entering worksite.                                                                        | Will be complied | Will be complied | Will be complied | Will be complied |
| Provide every personnel working in the site with mask, hand gloves and hard shoes for their personal use.                                                                                                                                                                                                             | Will be complied | Will be complied | Will be complied | Will be complied |
| Everyone entering the worksite must wear a mask, gloves and hard shoes                                                                                                                                                                                                                                                | Will be complied | Will be complied | Will be complied | Will be complied |
| <b>Daily worksite protocol</b>                                                                                                                                                                                                                                                                                        |                  |                  |                  |                  |
| A designated EHS and medical person should stay all time during work. The EHS/Medical person should also monitor campsite. He/she will be in charge of ensuring physical distances (minimum 1m) among workers, disinfecting surfaces that are commonly used and investigate workers/site personnel health and safety. | Will be complied | Will be complied | Will be complied | Will be complied |
| At the start and end of the day disinfect the total worksite.                                                                                                                                                                                                                                                         | Will be complied | Will be complied | Will be complied | Will be complied |
| Encourage site personnel/camp dwellers to not touch their eyes, mouth or nose if not washed thoroughly with soap recently. Also discourage hand shaking or hugs.                                                                                                                                                      | Will be complied | Will be complied | Will be complied | Will be complied |
| Arrange a mandatory site brief on COVID awareness in the morning. The session must be conducted by the EHS/medical professional.                                                                                                                                                                                      | Will be complied | Will be complied | Will be complied | Will be complied |
| While worksites are commonly well ventilated (if not make sure the work sites are well ventilated), ensure that the camp sites including the rooms designated for the camp dwellers are well ventilated and spacious.                                                                                                 | Will be complied | Will be complied | Will be complied | Will be complied |
| Before sharing common tools/machines at worksite, ensure to disinfect.                                                                                                                                                                                                                                                | Will be complied | Will be complied | Will be complied | Will be complied |

| COVID-19 Response questions                                                                                                                                                                                                                                                                                                                                                     | NATI             | STTL-CTG         | Kum Dorm         | Sylhet TTC       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------------|------------------|
| <b>Site re-opening and entry protocol</b>                                                                                                                                                                                                                                                                                                                                       |                  |                  |                  |                  |
| Discourage site personnel to gather and gossip at any time, rather encourage physical distance while chatting/discussing.                                                                                                                                                                                                                                                       | Will be complied | Will be complied | Will be complied | Will be complied |
| Restrict worksite personnel to go outside unnecessarily. Also restrict campsite personnel to go outside without any valid cause.                                                                                                                                                                                                                                                | Will be complied | Will be complied | Will be complied | Will be complied |
| If any person related at worksite/campsite fall victim to COVID-19 or being kept isolated for pre-caution, consider paid leave with no exception allowed.                                                                                                                                                                                                                       | Will be complied | Will be complied | Will be complied | Will be complied |
| <b>Every day training</b>                                                                                                                                                                                                                                                                                                                                                       |                  |                  |                  |                  |
| Train workers on how to properly put on, use/wear, and take off protective clothing and equipment. The on-site EHS/Medical person should be in-charge of these trainings. These trainings must maintain the WHO's social distancing protocol. Make these trainings mandatory at worksites. Provide 10-15 minutes of a workday for such 'training and encouragement' activities. | Will be complied | Will be complied | Will be complied | Will be complied |

## **5 CONCLUSION AND RECOMMENDATION**

36. SICIP program will ensure the environmental compliances during the construction works. The EMPs along with environmental cost will be incorporated in the bidding and contract documents, implemented by contractors and monitored by SDCMU. The EARF will also ensure that grievance redress mechanism is in place and EMP implementation is monitored. Following the country system, an environmental clearance certificate for the eligible subprojects will be obtained from the Department of Environment with necessary documentation. Although there is no threat of hampering resettlement of small ethnic community people, or agricultural land due to project, SDCMU will ensure all applicable laws and regulations, relating to environment, health and safety, involuntary resettlement and small ethnic communities' safeguards as stated in the SPS 2009. COVID-19 safety practice orientations were provided to construction labors, contractor and his staffs along with occupational health safety orientation following ADB and GoB guidelines. Respective Contractor will maintains safety plans on prevention of COVID-19 for construction workers in line with ADB COVID-19 interim guidelines. In addition, SDCMU also will take care of the issues relating to the IEE and EMP, RF and any other corrective or preventative actions set forth in Environmental Monitoring Report during implementation of civil works.



## Annex-1: pictures



Site Picture-NATI



Narsingdi Auto Technology Institute(Proposed)



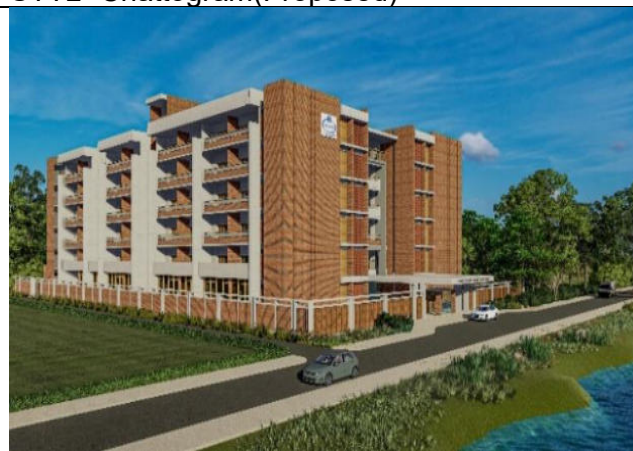
Site Picture-STTL



STTL- Chattogram(Proposed)



Site Picture- KWT



Kumudini Nursing Hostel (Proposed)



|                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| <p>Site Pic-Sylhet TTC</p>                                                         | <p>Sylhet TTC(Proposed)</p>                                                          |
|  |   |
| <p>Site visit picture-KWT</p>                                                      | <p>Site visit picture-CTG</p>                                                        |
|  |  |
| <p>Site visit picture-Gazipur</p>                                                  | <p>Site visit picture-NATI</p>                                                       |