KMIC Korea-Myanmar Industrial Complex

KOREA-MYANMAR INDUSTRIAL COMPLEX (KMIC) PROJECT IN HLEGU TOWNSHIP, YANGON REGION

ENVIRONMENTAL MONITORING REPORT FOR CONSTRUCTION PHASE

(2nd Report)

AUGUST 2023

KMIC Korea-Myanmar Industrial Complex

KMIC Development Co., Ltd.

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To
Director
Environmental Conservation Department, Yangon Region
Ministry of Natural Resources and Environmental Conservation

KMIC 2024-32
Date: 21st Mar 2024

Subject: Submission of Biannual Environmental Monitoring Report in respect of the Project for Korea-Myanmar Industrial Complex (KMIC) in Nyaung Hnitpin, Hlegu Township, Yangon Region by KMIC Development Co., Ltd.

Reference: Letter of Environmental Conservation Department (ECD), EIA Section (Notification Letter No. EIA/1/2 Approval (EIA) (1703/2022) on 5 August 2022)

We formally submit the Environmental Monitoring report, which was reviewed and supervised by the KMIC Development Co., Ltd. ("KMIC") and conducted the field survey monitoring and prepared by Myanmar Koei International Ltd., in accordance with Environmental Conservation Law, Rules and Procedures under the instruction of the Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation.

We hereby attached our Biannual Environmental Monitoring Report in English in 4 sets and 4 CDs.

Your Sincerely,

Lee Jung Wook
Managing Director of KMIC Development Co., Ltd.

CC
Deputy Director
Public Relation Section
Department of Urban and Housing Development

Staff Officer
Hlegu Township
Environmental Conservation Department

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EXECUTIVE SUMMARY

According to Section "L" of the EIA approval letter, KMIC is required to submit a biannual monitoring report to the Environmental Conservation Department (ECD) under the Ministry of Natural Resources and Environmental Conservation (MONREC). Thus, this environmental monitoring program is implemented under the oversight, direction, and comments of MONREC. KMIC contracted Myanmar Koei International Limited to prepare the comprehensive environmental monitoring report, and KMIC be the source of the necessary data and information for this report.

The biannual environmental monitoring report from March 2023 to August 2023 was prepared according to the Environmental Monitoring Plan of EIA report, which received approval from ECD (under MONREC) with the Notification Letter No. EIA/1/2 Approval (EIA) (1703/2022) on August 5, 2022. The EIA approval letter was issued to the Department of Urban and Housing Development (DUHD) under the Ministry of Construction (MOC), and KMIC received it from DUHD on August 26, 2022.

According to the approval notification letter for the environmental monitoring plan, the following activities should be followed:

1) Environmental monitoring of air quality, water quality, and noise level, measurement methodologies, sampling, analytical measurements, monitoring location, monitoring frequency, records with timeframe, and reporting should be planned and implemented. The above environmental monitoring should be reported to the Ministry of Natural Resources and Environmental Conservation (MOREC) every six months and should be disclosed to the public 10 days after submission to the ministry.
2) Rules and commitments of the contractor mentioned in the EIA report, mitigation, and monitoring measures described in the Environmental Management Plan (EMP) should be followed and implemented.
3) The project implementation activities that will have the minimum environmental impact mentioned in the report should be followed.

Additionally, KMIC received the Environmental Compliance Certificate (ECC No.346) on August 25th, 2023, issued by Ministry of Natural Resources and Environmental Conservation.

CHAPTER 1: INTRODUCTION

1.1 GENERAL INFORMATION

1)	**Company Name:**	KMIC Development Co., Ltd.
2)	**Location of the Yangon Office Address:**	Office Suite 2007, Pyay Garden Office Tower, 346-354, Pyay Road, San Chaung Township, Yangon Region, Myanmar
3)	**Contact of KMIC:**	
	Contact Person (Foreigner):	Mr. Lee Chang Min (General Manager)
	Contact Number:	+959 950110060
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	Contact Person (Local):	Ms. Thazin Nwe (Manager)
	Contact Number:	+959 974062888
	Email:	thazin.kmic@gmail.com
4)	**Approval of IEE/EIA:**	No. EIA/1/2 Approval (EIA) (1703/2022)
5)	**Environmental Compliance Certificate:**	ECC No. (346) on 25th August 2023
6)	**Date of Commencing Construction:**	December 24, 2021 (according to MIC permit letter)
7)	**Monitoring Period:**	From March 1, 2023 to August 31, 2023
8)	**Timing of Monitoring Report Submission for the year < 2022 ~ 2023 >:**	□ 1) First Submission (September ~ February) ■ 2) Second Submission (March ~ August)
9)	**Project Implementation Status:**	■ Construction □ Operation
10)	**Implementing Organization for Monitoring:**	
	Company Name:	Myanmar Koei International Ltd.
	Location of the Yangon Office Address:	No. 36 (A), 1st Floor, Grand Pho Sein Condo, Pho Sein Road, Tamwe Township, Yangon Region, Myanmar
	Contact of MKI:	
	Contact Person:	Dr. Phyo Thu Aung (Technical Manager)
	Contact Number:	+959 401595030
	Email**:**	phyo.thu.aung@myanmar-koei.com

1.2 OBJECTIVES

The environmental monitoring on the construction phase of Zone A of Korea-Myanmar Industrial Complex (KMIC) Project aims to support the implementation of environmental monitoring in accordance with the Environmental Management Plan of the Project. The purpose of this report is to observe the undertaken environmental management activities and environmental impacts as a result of project implementation, as well as identifying issues and suggesting actions.

1.3 DESCRIPTION

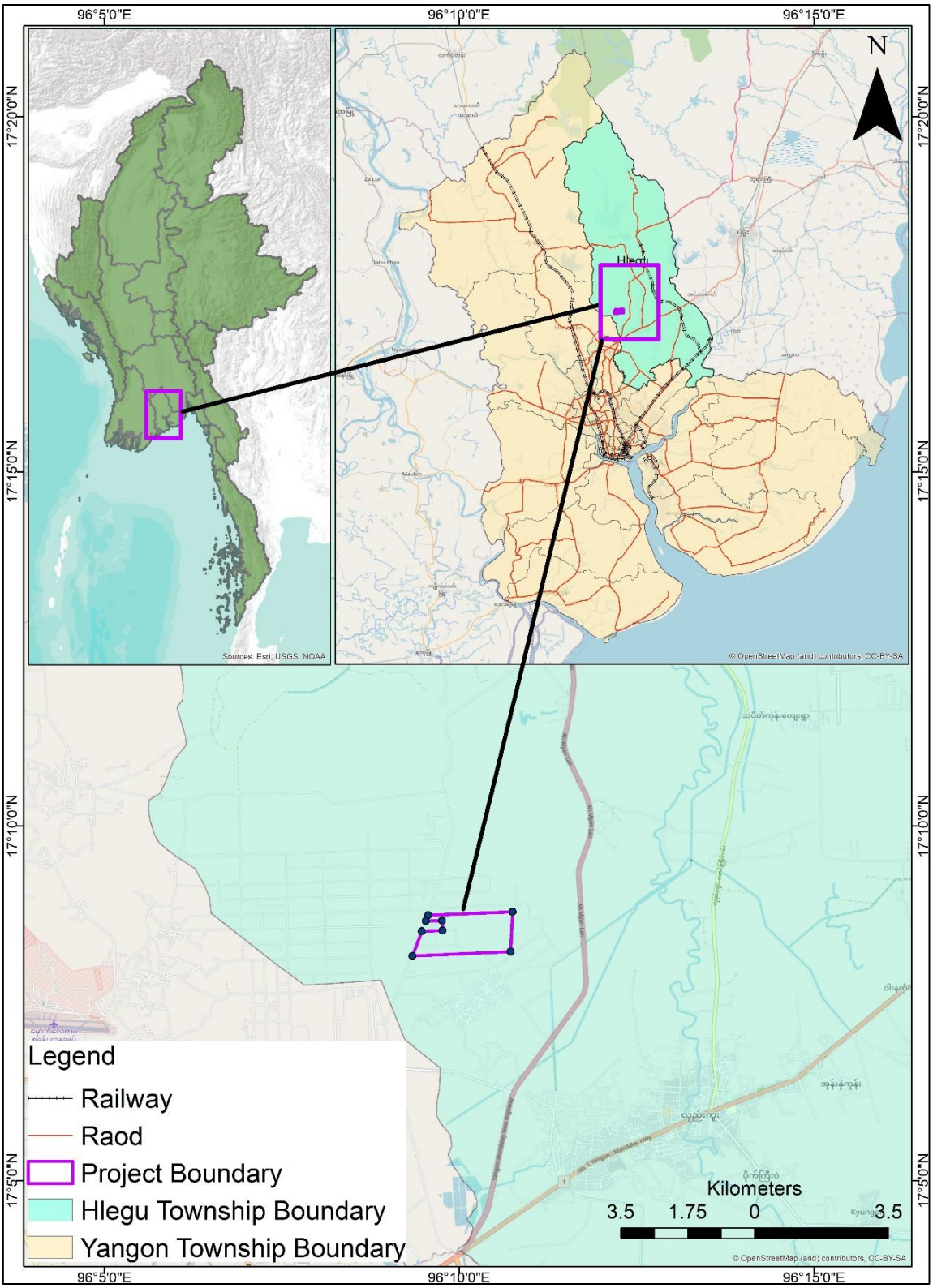
Under the Department of Urban and Housing and Development (DUHD), which is under the Ministry of Construction (MOC), Korea Land & Housing Corporation (LH) and Global Sae-a Co., Ltd. joined together to develop an industrial complex called Korea-Myanmar Industrial Complex (KMIC) Project on September 2015. The project is approved by the Myanmar Investment Commission (MIC).

The Environmental Impact Assessment (EIA) Report of the KMIC Project gained approval from Environmental Conservation Department (ECD) under the Ministry of Natural Resources and Environmental Conservation (MONREC) with the notification letter No. EIA/1/2 Approval (EIA) (1703/2022) on August 5, 2022. According to Section "L" of EIA approval letter, KMIC is required to submit a biannual monitoring report to ECD (under MONREC).

There were no construction activities during the monitoring period, the measurement of water quality, air quality and noise level were not conducted. Thus, this biannual environmental monitoring report is prepared by compiling and summarizing the information provided by KMIC, and this report covers the period from March 2023 to August 2023. This report is prepared in line with the items described in the approved EIA and section 109, Chapter IX of EIA Procedure Myanmar, 2015.

1.4 LOCATION

KMIC project is located near Nyaung Hnit Pin Livestock and Agricultural Zone No. 3 in Hlegu Township. It is also located 40 kilometers north of Yangon Port, 25 kilometers from Yangon International Airport, 35 kilometers from Hantharwaddy Airport (Bago Region), and 9 kilometers from the Yangon-Mandalay Expressway. This project site is 555.81 acres (2,249,288 square meter) wide flat land. The overview map of KMIC Industrial Complex is described in Figure 1-1.



Source: Myanmar Koei International Ltd.

Figure 1-1 KMIC Industrial Complex Location

1.5 PROJECT IMPLEMENTATION PROGRESS

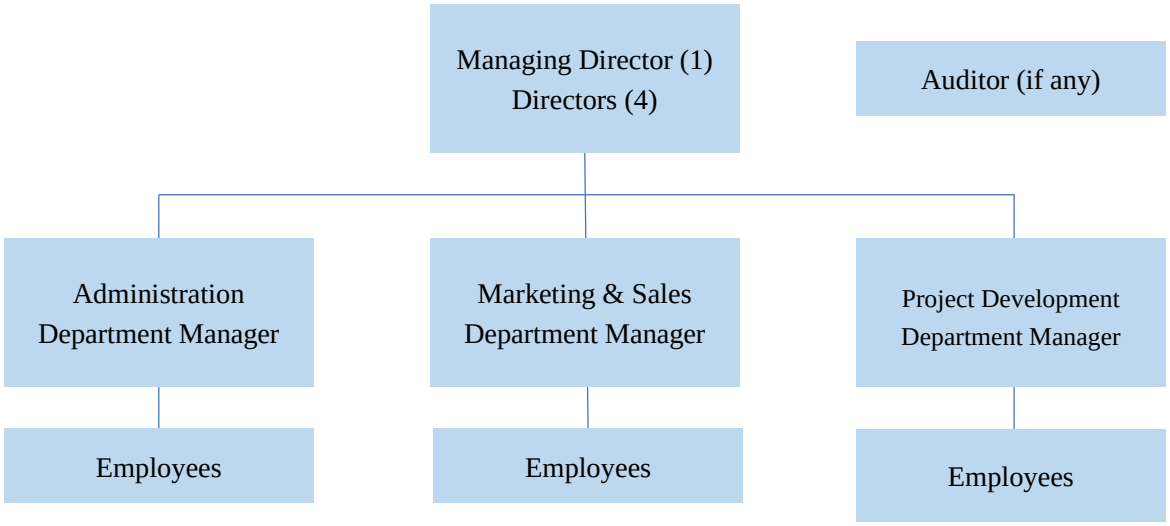
The joint venture (JV) establishment of KMIC Development Co., Ltd. started on February 2019 and construction started on December 24, 2021 according to the MIC permit letter.

However, during this monitoring period, no construction performance activities were carried out.

CHAPTER 2: INSTITUTIONAL SETUP AND RESPONSIBILITIES OF EMoP IMPLEMENTATION AND SUPERVISION

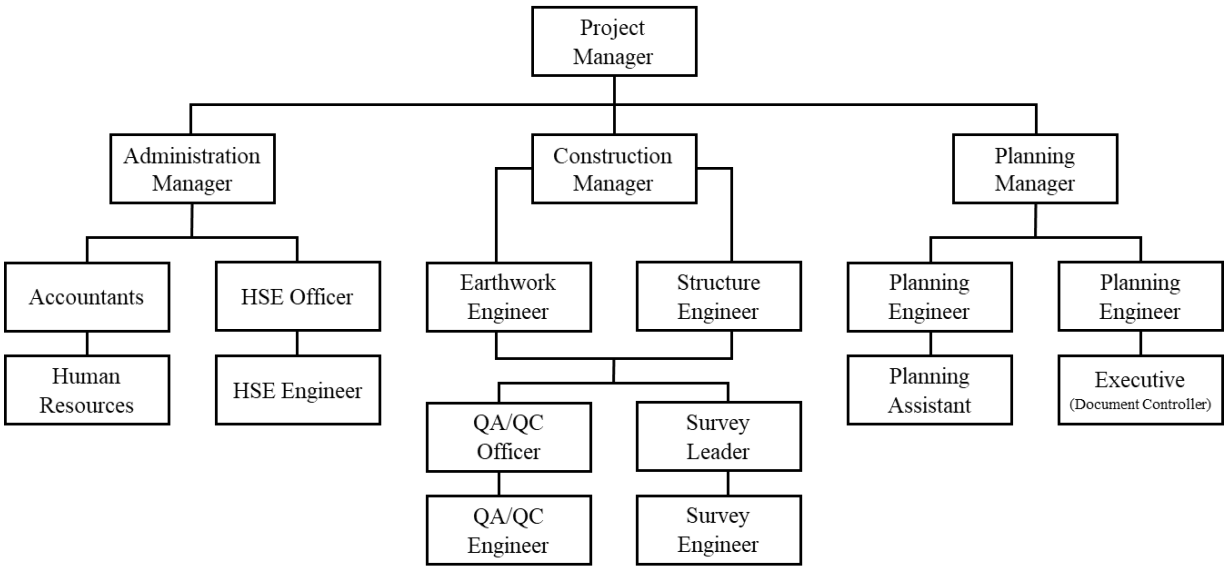
2.1 INSTITUTIONAL RESPONSIBILITIES FOR ENVIRONMENTAL MANAGEMENT

KMIC Development Co., Ltd. will implement and supervise the environmental management plan for both construction and operation phases, and the organization structure of KMIC is shown in Figure 2-1. During the construction phase, the contractor is fully responsible for overall construction activities. Thus, the organization structure of the contractor during the construction phase is shown in Figure 2-2.



Source: KMIC

Figure 2-1 Organization Structure of KMIC Industrial Zone



Source: KMIC, Monthly Progress Report

Figure 2-2 Organization Chart of the Contractor

The responsibility for the environmental management and implementation of environmental monitoring is described in Table 2-1.

Table 2-1 Roles and Responsibilities of the Environmental Management

Role	Responsibilities
Project Manager	▪ Oversee the implementation and maintenance of the environmental management plan (EMP) and environmental monitoring plan (EMoP) ▪ Monitor overall performance and work closely with HSE personnel
Administration Manager	▪ Assist the Project Manager in managing the implementation and maintenance of EMP and EMoP
Construction Manager	▪ Follow and supervise the environmental mitigation measures
HSE Officer HSE Engineer	▪ Monitoring and assessing hazardous and unsafe situations ▪ Developing measures to assure personnel safety ▪ Preventing or stopping unsafe acts when immediate action is required ▪ Participating in planning meetings to identify any HSE concerns inherent in the operations daily work-plan ▪ Ensuring preparation and implementation of site HSE plan ▪ Conducting toolbox meetings ▪ Reviewing and approving all workforces' safety plans ▪ Verifying that all tools and equipment are adequate and safe for personnel ▪ Promoting safe practices at the job site ▪ Training and carrying out drills and exercises on how to manage emergency situations ▪ Establishing safety standards and policies as needed ▪ Inspecting premises and the work of personnel to identify issues or non-conformity ▪ Preparing reports on occurrences and providing statistical information to the contractors

Source: Myanmar Koei International Ltd.

2.2 ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN FOR CONSTRUCTION PHASES AS DESCRIBED IN APPROVED EIA REPORT

The environmental management and monitoring plan for the construction phase of KMIC as described in the approved EIA report is explained in below table.

Table 2-2 Approved Environmental Management and Monitoring Plan

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
1	**Soil Degradation**	- Avoidance of unnecessary cutting and removing of trees and vegetation - Controlling earthwork and compacting loose soil - Installation and construction of drainage structure properly - Ensuring supervision of excavation activities - Keeping the removed topsoil and reusing to rehabilitate disturbed areas	Contractor	Construction	Daily	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
2	**Soil Contamination**	- Practicing hazardous and non-hazardous waste management - Construction of sedimentation basin for construction wastewater before disposal - Construction of sand traps to settle the sand at the bottom and store the deposited sand - Applying a proper sanitation system for the construction workers and project staff - Regular check and maintenance of construction machineries and vehicles to avoid oil, fuel, chemicals and lubricant spills or leaks - Readily available of the site – appropriate spill containment kit	Contractor	Construction	Daily	
3	**Soil Erosion**	- Construction of concrete drains at steep levels and proper gradient at temporary drain - Minimizing clearance of vegetation - Protecting areas susceptible to erosion with mulch or a suitable alternative	Contractor	Construction	Monthly	
4	**Topography**	- Designing and constructing buildings and structures as much as possible to maintain shape and features of land surfaces	Architect, Civil Engineer, Contractor	Construction	Once (Design Phase)	
5	**Dust Emission**	- Control speed and operation of construction vehicles - Proper cover of trucks carrying construction materials - Prohibition of idling of vehicles - Water should be sprayed on construction site and main roads	Contractor	Construction	Daily	
6	**Air Pollution**	- Regular maintenance of construction plants and equipment	Contractor	Construction	Monthly	
		- Engage sensitive workers - Provide masks and PPE - Worker to understand about hazardous gas emission	Contractor	Construction	Monthly	
		- Measuring air quality	Contractor	Construction	Every six months (Daily according to TDC)	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
7	**Greenhouse Gas Emission**	- Conducting training to raise the awareness of drivers, operators and concerned staff on greenhouse emissions and mitigation measures - Prohibiting unnecessary driving and moving at site and idling of vehicles and construction machineries as well - Regular maintenance of vehicles and machineries - Efficient use of vehicles (car-pooling and if possible, a truck will be used for two purposes at the same time – unloading of building materials and loading of construction wastes) and machineries - Formulating the construction management procedures including the efficient use of construction vehicles and machineries - Designing and construction of site offices as much as possible to get the natural light and ventilation	Contractor	Construction	Weekly	
8	**Surface Water/ Ground Water Contamination**	- Building sedimentation basin on a construction site to capture the disturbed soil which is washed off during rainfall - Construction of sand traps to settle the sand at the bottom and store the deposited sand - Systematic stacking and piling of materials on site, the regular solid waste disposal at the dumping site designated by the local municipality - Avoidance of hazardous wastes disposal in drinking-water sources - Adopting the proper waste management system - Regular maintenance and check of the machineries, vehicles and sources which can cause oil spill and hazardous chemical spills (if found, the immediate repair and cleansing will be conducted) - Systematic storage of fuels and filling station at construction site yard compound, handling and disposal of new oil and used oil waste - Provision of impervious basement at operation area to	Contractor	Construction	Monthly	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		prevent oil spill when heavy machineries are working - Daily checking to earth moving machines by motor transport officer before start engines - Providing a good pavement at machine workshop and garage - Applying the proper sanitation system for the construction workers and project staff - Checking sewer connections and pipes regularly to avoid any leaks				
		- Measuring water quality	Contractor	Construction	Every six months	
9	**Noise and Vibration**	- Training drivers and operators of construction vehicles and machineries to reduce the noise from their operations, and the construction activities will be restricted in night times - Regular maintenance of vehicles and machineries and wearing the ear mufflers (hearing protection devices) - Using sound absorb, sound proof engines at construction site and proper maintenance, enclosing noisy outdoor engines and generators in sound proof wall or buildings, regular checking and maintenance to silencers of engines and conserving trees around the site as some buffers against noise.	Contractor	Construction	Once (24hours)/ month	
		- Measuring noise and vibration level (The construction noise will be strictly maintained within the noise level (National Environmental Quality Emission Guidelines) set by Ministry of Natural Resources and Environmental Conservation)	Contractor	Construction	Every six months	
10	**Solid Waste Generation**	- Avoidance of unnecessary cutting and removing of vegetation plants - Developing drawing and land survey map to follow as drawing of landscaping procedure, producing a precise construction drawing to avoid unnecessary cutting and filling of earth work and excavation work - Ensuring calculation and estimation of materials requirement to avoid excessive purchase	Contractor	Construction	Monthly	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		- Ensuring purchase of materials and stacking at collection yard and ware houses - Providing dust bins at appropriate places for hazardous substances and non-hazardous substances - Providing facilities for proper handling and storage of construction materials to reduce the amount of waste caused by damage or exposure - Collection of solid waste by Pollution Control and Cleansing Department – PCCD (Urban Environmental Conservation and Cleansing) with the on-call system. - Whenever possible, reusing and recycling of solid waste will be done to reduce the amount and volume of construction debris. - Practicing Non-hazardous and Hazardous Solid Waste Management Plan				
11	**Hazardous Waste Generation**	- Practicing Hazardous Solid Waste Management Plan	Contractor	Construction	Monthly	
12	**Changes to Natural Resources**	- Ensuring calculation and estimation of material requirement to avoid excessive purchase - Ordering and collection of the accurate quantities of materials - Efficient use of fuel, electricity, water and office stationery - The reusable materials will be reused by the project. The recyclables will be sent to the local recyclers. (Adopting 3 R Practice)	Contractor	Construction	Monthly	
13	**Traffic Flow**	- Proper planning of transportation of construction materials - Provision of traffic management staff at site and junctions - Installation of road signs and traffic signals at along the way of work site, main road, cross roads, approach roads, to notify stakeholders of the development - Enforcing speed limit to all vehicles which are transporting materials and accessing the site - Discussion with the traffic police unit there to make necessary arrangements not to worsen the	Contractor	Construction	Daily	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		existing traffic condition in the town Traffic Safety: - Adoption of best transport safety practices across all aspects of project operations with the goal of preventing traffic accidents and minimizing injuries suffered by project personnel and the public. - Emphasizing safety aspects among drivers - Improving driving skills and requiring licensing of drivers - Adopting limits for trip duration and arranging driver rosters to avoid overtiredness - Avoiding dangerous routes and times of day to reduce the risk of accidents - Regular maintenance of vehicles and use of manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.				
14	**Destruction of Vegetation and Expelling of Wildlife**	- Making the proper demarcation of project area that would be affected by construction works - Controlling construction vehicles to ensure the avoidance of unnecessary disturbance of vegetation - Replantation with native species, leaving native trees/plants - Supporting Environmental Education and Public Participation and Environmental Protection activities through CSR programs	Contractor	Construction	Monthly	
15	**Changes To Terrestrial Flora and Fauna**	- Replantation of native species and leaving native trees/plants - Conservation of the restored natural habitat	Contractor	Construction	Monthly	
16	**Disturbance to Aquatic Organisms and Aquatic Habitats**	- Banning fishing in fish spawning season and electric shock catching	Contractor	Construction	Monthly	
17	**Existing Social Infrastructure and Services**	- Upgrading the existing social infrastructures, services and facilities and/or building new social infrastructures and services	Contractor (under CSR program of developer)	Construction		

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
18	**Landscape and Scenery**	- Developing the architectural design, height and color of the buildings and structures by taking the visual impacts of these structures into account - For visual impacts of electricity substation - Placing the structures in such a manner as to maximize the buffer zone between the structures and the roads - The retention of as much existing vegetation as possible, specifically the existing mature trees in the area - The re-establishment of some agricultural activity around the substation depending on the proposed land use - The establishment of climbing plants on sections of the perimeter fencing for safety and security considerations. Such planting will be done with specific viewpoints in mind and be used to break the monolithic nature or soften the visual impact of the development from those specific viewpoints. - All lighting, especially perimeter security lighting will be shielded to seen from outside the site. - Signage will be simple and unobtrusive	Contractor/ Architect/ Designer/ Engineer	Construction	Once	
19	**Risks for Infectious Diseases such as COVID-19 and AIDS/HIV**	- Following the general EHS guidelines set by IFC, World Bank Group. - Interventions for communicable diseases - Providing surveillance and active screening and treatment of workers - Preventing illness among workers in local communities (undertaking health awareness and education initiatives, training health workers in disease treatment, conducting immunization programs for workers in local community to improve health and guard against infection, providing health services) - Providing treatment through standard case management in on-site or community health care facilities	Contractor	Construction	Monthly	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		- Promoting collaboration with local authorities to enhance access of workers families and the community to public health services and promote immunization Interventions for vector-borne diseases - Prevention of larval and adult propagation through sanitary improvements and elimination of breeding grounds close to human settlements - Elimination of unusable impounded water, increase in water velocity in natural and artificial channels - Implementation of integrated vector control programs - Promoting use of repellents, clothing, netting and other barriers to prevent insect bites - Use of chemoprophylaxis drugs by non-immune workers and collaborating with public health officials to help eradicate disease reservoirs - Monitoring and treatment of circulating and migrating populations to prevent disease reservoir spread - Collaboration and exchange of in-kind services with other control programs in the project area to maximize beneficial effects - Educating project personnel and local residents on risks - Prevention and available treatment, monitoring communities during high-risk seasons to detect and treat cases - Distributing appropriate education materials and following safety guidelines for the storage, transport and distribution of pesticides to minimize the potential for misuse, spills, and accidental human exposure				
20	**Occupational Safety and Health**	- Company has guidelines and procedures and generally the following aspects are covered: - Guidelines and procedures for organizing the site (planning the work, organizing the work, common facilities to be provided, site access, public safety,	Contractor and Developer, Tenants	Construction, Operation	Monthly	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		lighting, site tidiness, storage areas, fire safety) - Preventive measures for accidents or injuries from excavations, working at height, moving, lifting and handling loads, site vehicles and mobile plants operation, chemicals use, handling and storage - Protective Equipment (Safety helmet, footwear, googles and safety spectacles, gloves and protective clothing, other protective equipment) - Emergency procedures and preparedness (company's emergency personnel contact information, evacuation plan including exit routes, evacuation signals and sirens, location of eyewash stations and showers, fire extinguishers) - Providing First Aid kits and training on how to use them - Accident/Injury Reporting procedures - Training (Orientation) for all employees and workers				
21	**Emergency Risk**	Company has guidelines and procedures (Please see in the Annex section) and generally the following aspects are covered: Fire Safety Management - Practical Fire Safety Arrangements, Planning, Organization and Control, Monitoring and Review Fire Emergency Plan - Training and Training Provision, Information Distribution, Procedures to follow when discovering a fire and hearing the fire alarm, Contacting Emergency Services, Identify processes, machines or power which must be shut down, Emergency Services Liaison Procedures, Specific Information for the Emergency Services, Escape Routes, Assembly Points, Identify Persons especially at risk, Evacuation Arrangement for disabled people, staff with specific responsibilities, firefighting, fire control panel, contingency plans and Re-entering the building. (Also including Fire Safety Maintenance Checklist, Fire	Contractor	Construction	Every three months	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		Safety Training Program) Emergency Response Plan for - Utility Failures (electrical outages, plumbing failure, gas leaks, steam line breaks, ventilation problems, elevator failures) - Earthquakes - Floods - Storms and Tornadoes - Medical Emergency - Shelter in place/Safe shelter				
22	**Community Health and Safety**	Following the general EHS guidelines set by IFC, World Bank Group. **Water Quality** - Drinking water sources – at all times be protected. - Delivery of water to the community or to users of facility infrastructure – water quality needs to comply with National Acceptability Standards (or in their absence the current edition of with WHO Drinking Water Guidelines) **Water Availability** - Potential effect of groundwater or surface water abstraction for project activities would be properly assessed accounting for seasonal variability and projected changes in demand in the project area. The higher demand of water use by health care facilities will be taken into account. **Structural Safety of Project Infrastructure** - Buffer strips or other methods of physical separation around project sites will be included to protect the public from major hazards associated with hazardous materials incidents or process failure, as well as nuisance issues related to noise, odor or other emissions. - The siting and safety engineering criteria will be incorporated to prevent failures due to natural disasters. - Myanmar National Building Code (2016) will be applied to ensure structures are designed and constructed in accordance with sound architectural and engineering practice, including	Contractor, Developer, Tenants	Construction	Monthly	

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		aspects of fire prevention and response. - Hazardous materials storage, handling and use will be managed to reduce or eliminate consequences of the potential off-site release. **Life and Fire Safety** - The new buildings and facilities which can be assessed by the public will be designed, constructed and operated in full compliance with Myanmar National Building Code (2016), Myanmar Fire Services Department regulations and other local legal/insurance requirements. **Traffic Safety** - Adoption of best transport safety practices across all aspects of project operations with the goal of preventing traffic accidents and minimizing injuries suffered by project personnel and the public. - Emphasizing safety aspects among drivers - Improving driving skills and requiring licensing of drivers - Adopting limits for trip duration and arranging driver rosters to avoid overtiredness - Avoiding dangerous routes and times of day to reduce the risk of accidents - Regular maintenance of vehicles and use of manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. **Transport of Hazardous Materials** - Project will have procedures ensuring the compliance with local laws and requirements applicable to the transport of hazardous materials. The procedures will be: - Proper labeling of containers, including the identity and quantity of the contents, hazards, and shipper contact information - Providing a shipping document (e.g., shipping manifest) describing the contents of the load and its associated hazards in				

No	Environmental Impact	Mitigation Measures and Aspects for Monitoring	Responsible Person	Mitigation and Monitoring Phase	Recommended Frequency of Monitoring	Remark
		addition to the labeling of the containers. - Ensuring that the volume, nature, integrity and protection of packaging and containers used for transport are appropriate for the type and quantity of hazardous material and modes of transport involved - Ensuring adequate transport vehicle specifications - Training employees involved in the transportation of hazardous materials regarding proper shipping procedures and emergency procedures - Using labeling and placarding (external signs on transport vehicles) as required - Providing the necessary means for emergency response **Disease Prevention** - Communicable Diseases and Vector-Borne Diseases – Please see in the "Risks for infectious diseases such as AIDS/HIV" section above. **Emergency Preparedness and Response** - If there is a risk to the local community from a potential emergency arising at the project site, the company will inform the community through the communication measures, namely, informing the local authorities, communicating details of the nature of emergency, communicating protection options (evacuation, quarantine), providing advices on selecting an appropriate option and vehicle mounted speakers.				

Source: Approved EIA Report

2.3 IMPLEMENTATION OF ENVIRONMENTAL MANAGEMENT MITIGATION MEASURES

Table 2-3 summarizes the essential mitigating activities that will be implemented to avoid or minimize severe adverse environmental effects related to the project's operation during the construction phase.

Table 2-3 Summary of Environmental Management Mitigation Measures during Construction Phase

Parameter	Environmental Mitigation Measures during Construction Phase
Air Pollution	▪ Water spraying, monitoring of fuel consumption, speed limit and wash deck checking, ▪ Covered construction items/ materials during transport ▪ Regular check/maintenance of construction machineries and vehicles ▪ Strictly prohibition of open fire burning
Water Pollution	▪ Proper control of the construction site runoff, Sump pits, and Sanitation system ▪ Avoidance of hazardous wastes disposal in drinking-water sources
Solid Waste	▪ Waste management system: collection, segregation, storage and disposal ▪ Avoid unnecessary purchase ▪ Designated waste storage area before collecting by Township Development Committee
Hazardous Materials	▪ Avoid unnecessary purchase to minimize the waste ▪ Substitution of a non or less hazardous materials when possible ▪ Hazardous materials will keep in the designated places ▪ Hazardous waste designated storage area
Noise and Vibration	▪ Avoid idling heavy vehicles and machineries ▪ Make a list of equipment that may cause the risk of exposure to whole body and hand arm vibration
Offensive Odor	▪ Visual checking of septic tank and food wastes ▪ Inspect whether the solid waste is properly collected and disposed
Soil Contamination	▪ To provide spill kit ▪ To improve sedimentation basin, sand traps, and sanitation system ▪ Installation/construction of proper drainage structure, and the supervision of excavation activities ▪ Regular check/maintenance of construction machineries and vehicles
Traffic Volume	▪ To control speed limit ▪ To implement traffic management ▪ To provide traffic signals ▪ To improve driving skills and provide licensing of drivers
Ground Subsidence	▪ Monitor groundwater consumption ▪ Regular inspections of the premises, with attention to pipework, gutters and drainage systems
Local Economy and Livelihood	▪ Job opportunities
Landscape and Greening	▪ Retention of existing vegetation and mature trees as much as possible ▪ Keeping the removed topsoil and reusing to rehabilitate disturbed areas ▪ Reduce light pollution, especially perimeter security lighting, and excessive use of illumination devices at night
Occupational Health and Safety	▪ Guidelines and procedures for organizing the site ▪ Preventive measures for accidents or injuries ▪ PPE (Personal Protective Equipment) ▪ Emergency procedures and preparedness ▪ Providing first aid kits and training on how to use them ▪ Accident/Injury reporting procedures ▪ Training/Orientation for all employees and workers

Parameter	Environmental Mitigation Measures during Construction Phase
	▪ Risk for infectious diseases ▪ Monthly checklist for pest control activities
Community Health and Safety	▪ Water quality and availability (if any) ▪ Structural safety of project infrastructure ▪ Life and fire safety ▪ Traffic safety ▪ Transport of hazardous materials ▪ Communicable disease prevention ▪ Emergency preparedness and response
Security	▪ Security Guard ▪ Security Procedures
Emergency	▪ Fire safety management and emergency plan ▪ Emergency response plan for utility failures, earthquakes, floods, storms, medical, and shelter
Biodiversity	▪ Banning fishing in fish spawning season and electric shock catching ▪ Replantation of native species and leaving native trees/plants ▪ Conservation of the restored natural habitat

Source: Approved EIA Report

CHAPTER 3: SUMMARY OF MONITORING ACTIVITIES AND RESULTS

During the monitoring period from March 2023 to August 2023, no construction activities were carried out. Therefore, environmental monitoring by measuring the air quality, water quality, and noise and vibration level were not conducted. Once major project implementation activities started, the measurement activities will be carried out.

CHAPTER 4: IMPLEMENTATION OF ENVIRONMENTAL MANAGEMENT PLAN

4.1 AIR POLLUTION

During the monitoring period, no construction activities took place, leading to intermittent utilization of heavy equipment, machinery, and vehicles. Once construction activities commence, the following measures will be implemented during the construction period:

- Regular maintenance of construction plants, equipment, and vehicles.
- Occupational health and safety management for the workforce.
- Installation of a ventilation system at the site office.
- Minimization of dust dispersion (e.g., vehicle washing area) from the construction site and activities.
- Implementation of continuously air quality monitoring at the construction site.
- Awareness and signage installations for air quality management.
- Limitation of vehicle speed.

4.2 WATER POLLUTION

To mitigate the impacts of water pollution, a sedimentation basin has been constructed on the construction site before disposal. If there are construction activities, wastewater is released into the sedimentation basin, which is used as a grit chamber during the monitoring period. The establishment of a vehicle washing area and sanitation facilities is crucial to minimize water pollution.

However, no construction activities during the monitoring period occurred, there was no discharge of water from the project area. Regular monitoring of water quality is imperative once project construction activities are underway.

4.3 SOLID WASTE

During the monitoring period, there was no discharge of solid waste due to the absence of construction activities. However, once project activities commence, the mitigation measures will be implemented to manage solid waste effectively. Provisions will be made for the placement of dust bins, encompassing waste collection, segregation, storage, and disposal. Adequate facilities will be established for the handling and storage of construction materials. The collection of solid waste will be carried out by Township Development Committee near the project site with the on-call system. These initiatives aim to address solid waste management comprehensively and responsibly during the project's active phases.

4.4 HAZARDOUS MATERIALS

There were no construction activities during this monitoring period, resulting in no discharge of hazardous waste from the project site.

4.5 SOIL CONTAMINATION

No substances causing soil contamination were stored during the monitoring period as there is no construction activities.

4.6 NOISE AND VIBRATION

Since there were no project related activities during this monitoring period, no noise and vibration levels were produced.

Once construction begins, the monitoring of noise and vibration levels will be implemented. To mitigate the impact, the contractor will conduct the following activities during the construction period:

- regular maintenance and avoidance of idling heavy vehicles and machineries,
- noise and vibration level monitoring at the project site.

4.7 OFFENSIVE ODOR

The project construction activities did not release offensive odors into the surrounding environment due to the absence of construction during this monitoring period.

4.8 TRAFFIC VOLUME

There were very few vehicle utilizations during the monitoring period. Since there were no construction activities, the specific construction vehicles were not utilized at the project compound.

4.9 GROUND SUBSIDENCE

During the monitoring period, the project's construction activities did not contribute to ground subsidence. Thus, there were no activities relating to ground subsidence during this monitoring period.

4.10 LOCAL ECONOMY AND LIVELIHOOD

During the monitoring period, no project construction activities were carried out. Consequently, KMIC contributed to the local economy and livelihood by hiring two local workers as security officers.

4.11 LANDSCAPE AND GREENING

Due to the absence of construction activities, environmental monitoring for landscape and greening, including light pollution, was not conducted during this period.

4.12 OCCUPATIONAL HEALTH AND SAFETY

The project has developed emergency response procedures and preventive measures for accidents or injuries for workforce. Despite the absence of project activities, first-aid kits and personal protective equipment are placed at the project site and undergo regular inspections.

4.13 COMMUNITY HEALTH AND SAFETY

The project has developed emergency response procedures and preventive measures for accidents or injuries for the communities such as traffic safety, fire safety, and communicable disease prevention.

4.14 SECURITY

During the monitoring period, two security guards were assigned at the KMIC site office for observing, patrolling and reporting. The security guards are provided night sticks, emergency lights, flashlight and whistles.

4.15 EMERGENCY RISK

Throughout the monitoring period, no emergency risks were identified. Due to the absence of project activities, both emergency risk training and safety awareness training were not conducted for the workforce.

4.16 BIODIVERSITY

No activities related to biodiversity were involved throughout the monitoring period.

CHAPTER 5: TRAINING AND CAPACITY BUILDING ACTIVITIES

The project manager and HSE officer primarily organize capacity-building and awareness training for the construction workforce. Basic awareness training and on-the-job training on occupational health and safety will be conducted before the commencement of construction activities and subsequently on a monthly basis for the construction workforce. As there are no major project activities during this monitoring period, there have been no training and capacity-building activities.

CHAPTER 6: CORPORATE SOCIAL RESPONSIBILITY

The KMIC has embraced corporate social responsibility (CSR) for the communities residing near the project. The donated assets capitalized by KMIC include the installation of a boundary fence between KMIC and Union Hall (Nyaung Hnit Pin). The budget allocated for the fence installation work is 602,300,000 MMK. The completion record is outlined in the figure below.

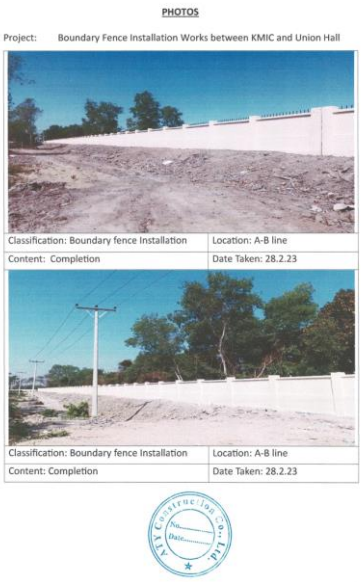
Completion Report

1. Title : Boundary Fence Installation Works Between KMIC and Union Hall
2. Contractor : ATY Construction Co., Ltd.
3. Contract Amount : 602,300,000 (MMK) (including CT)
4. Contract Date : 8th November 2022
5. Commencement Date: 15th November 2022
6. Completion Date : 1st March 2023
7. Progress Rate : 90.90 % (Reason: Calculated based on the actual money usage. The construction was 100% finished without contingency expenses.)
8. Attachment : 1. Summary of Final payment Claim
   2. Photo and Drawings etc.

In the implementation of the above construction contract, we confirm that the construction has been completed according to the design book, task details, and other agreements, it defects are found in the construction, we pledge to compensate or re-construction.

1st March 2023

U Ye Tun Aung
Managing Director
ATY Construction Co., Ltd.



PHOTOS

Project: Boundary Fence Installation Works between KMIC and Union Hall

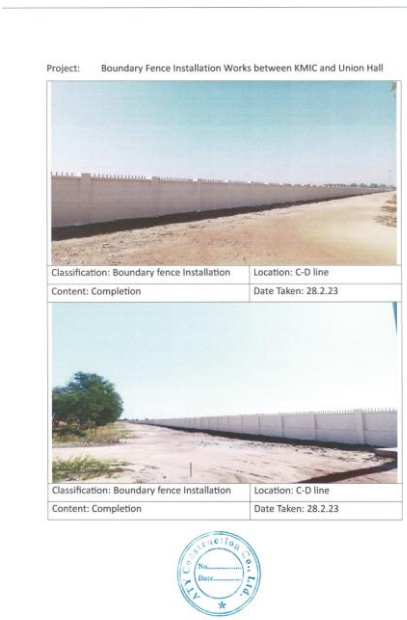
Classification: Boundary fence Installation	Location: A-B line
Content: Completion	Date Taken: 28.2.23

Classification: Boundary fence Installation	Location: A-B line
Content: Completion	Date Taken: 28.2.23

Project: Boundary Fence Installation Works between KMIC and Union Hall

Classification: Boundary fence Installation	Location: B-C line
Content: Completion	Date Taken: 28.2.23

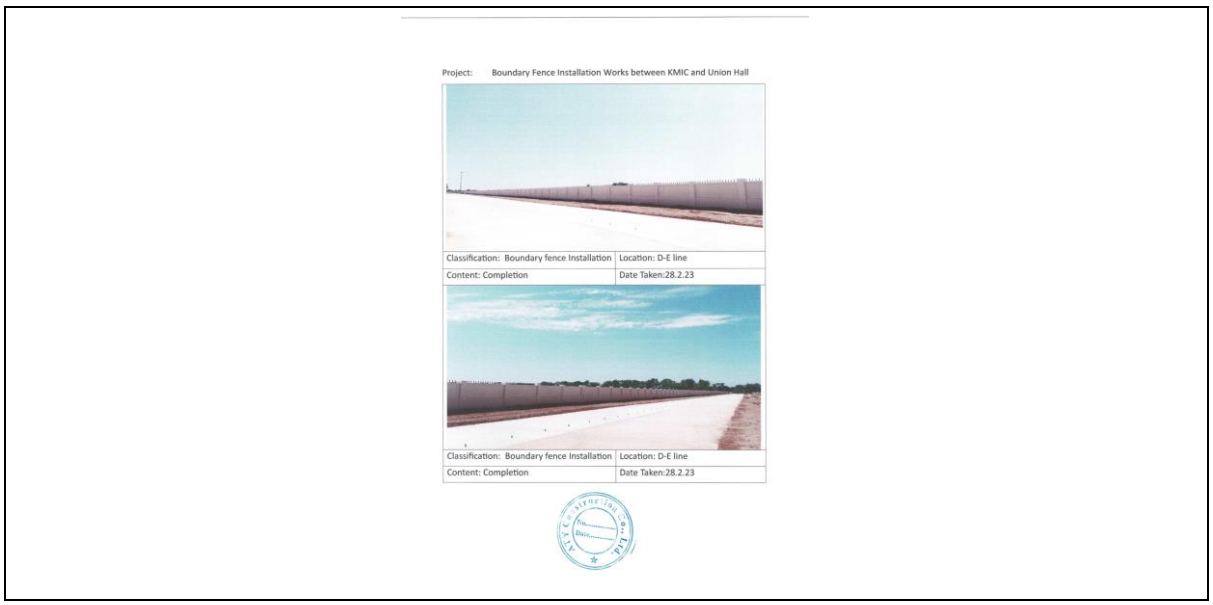
Classification: Boundary fence Installation	Location: B-C line
Content: Completion	Date Taken: 28.2.23



Project: Boundary Fence Installation Works between KMIC and Union Hall

Classification: Boundary fence Installation	Location: C-D line
Content: Completion	Date Taken: 28.2.23

Classification: Boundary fence Installation	Location: C-D line
Content: Completion	Date Taken: 28.2.23


Project: Boundary Fence Installation Works between KMIC and Union Hall

Classification: Boundary fence Installation	Location: D-E line
Content: Completion	Date Taken:28.2.23

Classification: Boundary fence Installation	Location: D-E line
Content: Completion	Date Taken:28.2.23

Source: KMIC

Figure 6-1 Completion Report of Boundary Fence Installation Works

CHAPTER 7: FINDINGS AND RECOMMENDATION

During the monitoring period from March 2023 to August 2023, no environmental monitoring survey was conducted due to no construction activities. Measurement activities will be initiated once major project construction activities commence. However, it should be noted that the construction activities are currently suspended, and hence no particular impact at project site are excepted.

During the construction phase, the project proponent should implement the environmental monitoring activities, and adhere to the activities mentioned in *Table 2-3 Summary of Environmental Management Mitigation Measures during* Construction Phase once the major construction activities are initiated.